northern ireland water

Delivering what matters

Annual Information Return 2019

for Public Domain

Annual Information Return 2019

for

Public Domain

Table of Contents

Section 1 – The Board's Overview

Section 2 – The Annual Information return

Key outputs

Bad debt

Non financial measures

Sewerage explanatory factors

Regulatory accounts - historical cost accounting

Regulatory accounts - current cost accounting

Financial measures

30 Capital Investment – Summary Report and General Guidance
32 Analysis of fixed asset additions and asset maintenance by asset type
33 Depreciation charge by asset type
34 Analysis of non-infrastructure fixed asset additions by life categories
35 Capital investment – public expenditure statement
36 Capital investment – gross capital investment summary
36a Capital investment – expenditure comparison by service and purpose
37 Capital investment – capital grants and contributions
38 Capital investment – additional opex from capex
40 Capital Investment Monitoring

Outputs

40a Nominated outputs delivered by PC13 capital projects and programmes of work

Health and safety

41 Health and safety – policy and performance

PPP

42 PPP costs and activity
43 PPP reporting - operational costs

Overall performance assessment (OPA)

44 OPA input data

Carbon accounting

45 Energy consumption and greenhouse gas accounting

Serviceability

46 Serviceability return

Development Outputs

47 Development Outputs

Social and Environmental Guidance priorities for Water and Sewerage Services (2015-21)

48 Social and Environmental Guidance priorities for Water and Sewerage Services (2015-21)

Section 3 – Level of Service Methodologies

DG2 Low Pressure
DG3 Supply Interruptions
DG5 Flooding
DG6 Response to Billing Contacts
DG7 Response to Written Complaints
DG8 Bills for Metered Customers
DG9 Telephone Contact

Section 4 – Customer Research Appendix

Annual Information Return 2019

Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's Annual Information Return (AIR), its board of directors is required by the Utility Regulator to prepare a statement on the compilation of AIR, explaining that it has satisfied itself as to the accuracy and completeness of the information provided.

The directors consider that the AIR provides a true and fair view of the state of affairs of NI Water for the financial year 2018/19. With respect to the preparation of the AIR, subject to any departure and explanation described in the commentary, the directors confirm:

- suitable accounting policies have been selected and applied consistently;
- judgements and estimates that have been made are reasonable and prudent;
- UK Accounting Standards and applicable law (IFRS) have been followed, subject to any material departures disclosed and explained in the financial statements.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that its financial statements comply with the Companies Act 2006.

The directors who held office at the date of approval of this Board's Statement confirm that, so far as they are each aware, there is no relevant audit information of which the company's auditors are unaware and each director has taken all reasonable steps they should have taken as a director to make themselves aware of any relevant audit information and to establish that the company's auditors are aware of that information.

The Board's Statement sets out how NI Water's Board has satisfied itself that the information provided in the AIR is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

The AIR has been compiled in accordance with NI Water's AIR Completion Manual, which ensures clear ownership of AIR data, evidence of peer review and procedural documentation covering the compilation processes were followed in completing the AIR submission.

The AIR Completion Manual details roles, responsibilities and governance procedures, and provides guidance and templates for the completion of AIR methodologies, data tables and company commentaries.

Project Governance

The AIR project was coordinated by the Regulation Manager and representatives (senior managers) from relevant functional areas, i.e. those functions which contribute data to the AIR submission.

The Regulation Manager ensured:

1. information was disseminated to and from functional working groups;
2. adherence to the AIR submission programme;
3. implementation of Reporter's recommendations.

Senior managers from across NI Water were responsible for:

- ensuring that the Utility Regulator's AIR reporting requirements were understood and followed;
- ensuring that relevant AIR line methodologies were updated in accordance with the reporting requirements;
- coordinating the population of data tables and the drafting of associated company commentaries in accordance with line methodologies and reporting requirements in compliance with the AIR programme;
- ensuring that relevant line methodologies, data tables and company commentaries were reviewed and approved in accordance with the AIR Completion Manual's roles and responsibilities matrix.

In order to maintain accuracy, consistency and a clear audit trail, roles and responsibilities for each element of the AIR submission were defined for the three key components of AIR, namely:

- line methodologies,
- data tables, and
- company commentaries.

Population of data tables and drafting of associated company commentaries was in accordance with the Utility Regulator's AIR reporting requirements. In addition, company-specific methodologies (line methodologies), explaining how raw data is collected, processed and input to the data tables, were updated and adhered to when populating data tables and drafting company commentaries.

Authors, reviewers and approvers of line methodologies, data tables and company commentaries were designated for all data in the AIR submission. To ensure consistency of reporting for AIR, every item of data provided in the AIR tables had a designated author, reviewer and approver. In all cases, the approver was an appropriate senior manager.

Independent Review

Audit plans were developed by the Reporter and external Auditor. The Reporter's audit plan was developed in accordance with the Utility Regulator's Reporter Protocol and AIR reporting requirements, and was agreed with NI Water and the Utility Regulator.

Audits were undertaken by the company's Auditor and the Reporter in May and June. Feedback from the Reporter and Auditor was used to amend the tables and commentaries where appropriate.

The complete AIR was endorsed by NI Water's Executive Committee and Board on 12th and 20th June 2019 respectively.

Board Involvement
In summary, the involvement of NI Water's Board in the completion of the AIR included:

- Reviewing monthly company business performance updates;
- Considering the findings of the Reporter and Auditor as presented in June 2019;
- Reviewing, commenting on and approving the Board's Overview;
- Reference to NI Water's Executive Committee and senior management team to verify corporate information;
- Executive Directors received regular reports on progress and reviewed, challenged, commented and influenced the content of the AIR.

The following measures help to ensure that the AIR complies with the Utility Regulator's reporting requirements and provides some assurance with respect to material assumptions and judgements included in the AIR commentaries:

- Clear accountability at senior management level for the ownership of all elements of AIR. NI Water has established an accountability trail from the information providers to the line owners through to heads of function.
- Every item of data in AIR has a designated author, reviewer and approver.
- Every provider of data produces a written methodology documenting the method used for the derivation of the data reported.
- Every item of financial data is prepared and reviewed by separate individuals and reconciled to the chart of accounts.
- Before each item of data is included in the AIR it is reviewed and approved by senior management in the data provider's business area.
- NI Water facilitates access to allow the Reporter and Auditor to review all relevant information required to discharge their duties.
- The Board receives regular presentations during the course of the year on key performance indicators, regulatory performance and key issues reported in the AIR.
- The Auditor presents to NI Water's audit committee and the Reporter presents to the Board at the conclusion of the AIR audit process.
- Directors may challenge the production and content of the AIR to satisfy themselves that their duties are fulfilled.
- In any case of uncertainty regarding data, commentary or line methodology, NI Water seeks advice and clarification from the Utility Regulator, the Reporter or the Auditor as appropriate.

Directors' Endorsement

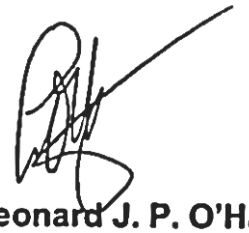
NI Water's board believes that it has developed and applied processes, governance and systems of internal control sufficient to meet its obligations for the provision of information contained in the Annual Information Return.

Each director is satisfied that:

a) so far as he/she is aware, there is no relevant audit information of which NI Water's auditors or reporters are unaware;
b) He/she has taken all reasonable steps as a director to make himself/herself aware of any relevant audit information and to establish that NI Water's auditors and reporters are aware of the information.

For and on behalf of NI Water:

Sara Venning
Chief Executive, Northern Ireland Water



Dr Leonard J. P. O'Hagan CBE
Chairman, Northern Ireland Water

Chapter 1
PC15 Outputs
Tables A and B

1.1 Improvements to Drinking Water and Environmental Quality

Drinking Water

Delivery of clean, safe drinking water is central to what we do. It underpins the public health and economy of Northern Ireland. Being able to rely on and have confidence in the quality of water that we supply is a fundamental expectation of our customers. Every day we produce more than 570 million litres of clean safe drinking water in order to supply 860,000 households and businesses. Nearly half a million water quality tests are undertaken by us every year to check that our drinking water meets the required standards. We are delighted we have delivered our best ever drinking water quality in 2018.

The water leaving our water treatment works and in the distribution systems contains only trace amounts of lead. Over the PC15 period, we have committed to proactive replacement of over 11,000 lead communication pipes at consumer properties in addition to lead pipe replacement as part of a wider water main rehabilitation programme and in response to sample failures. So far in PC15 we have delivered 7,626 lead pipe replacements under the proactive replacement programme against a target of 7,376. However, where lead has been used for supply pipes between the water main and the kitchen tap or in domestic plumbing, there is a risk of non-compliance at consumers' taps. So even with the removal of all lead pipes within our network there will be a risk to lead compliance from lead pipes remaining within customer properties.

We have developed a strategic approach to address supply systems with higher risk of trihalomethane (THM) formation. THMs are a group of chemicals that are formed, along with other disinfection byproducts, when chlorine (used to control microbial contaminants in drinking water) reacts with naturally occurring organic and inorganic matter in water pipes. Our approach will inform operational practices and capital investment over PC15 and PC21. We are employing a range of measures which include improved operational practices, service reservoir cleaning and reduced storage time in the network.

Water Supply

We look after a water supply network extending to over 26,000km in length – the same length as Northern Ireland's entire road network. Ensuring that customers receive a near-uninterrupted supply of clean and safe drinking water is paramount. We achieved our targets for supply interruptions in 2018/19 despite Storm Emma (nicknamed the 'Beast from the East') at the start of the year, followed by the hot weather experienced in the summer, which caused higher levels of bursts across our network.

We faced a 25% surge in demand for drinking water over summer 2018, requiring a hosepipe ban. The problem was not due to the levels of fresh water sources – our customers were simply using the water quicker than we could treat and supply it (known as a demand surge). During the demand surge, we increased the production of drinking water from normal levels of around 570 million litres per day to a high of around 700 million litres. That meant that each of us was using approximately 200 litres per day compared to the normal 150 litres per day.

We set up our major incident teams to manage the surge in demand. The teams kept water treatment works running virtually 24/7, rezoned supplies, attended refill points, tankered water to stressed reservoirs, managed the increased customer contacts and prioritised bursts and leaks. Throughout the hosepipe ban period, we provided regular updates to customers through a wide range of channels, including TV and radio interviews, news releases, our website and social media. A combination of our major incident response, a change in the weather and reduced levels of consumption allowed the ban to be lifted in July 2018.

We are using a combination of new app technology and business analytics to provide more accurate information on customers affected by interruptions. This has been complemented by a new 'CALM' network training facility for our staff, contractors and potentially other users, such as the Northern Ireland Fire and Rescue Service. The training aims to provide participants with more understanding about the causes of transient pressure surges in the water network, and it will contribute to our ambitious targets of minimising interruptions to supply and reducing leakage.

Wastewater

We deal with around 15,000 blockages each year. Three quarters of all blockages are caused by inappropriate items being put in the sewers. Blockages are also caused by deterioration in the condition of pipes, collapses and equipment failure.

During 2018/19, we invested in new state of the art vans designed to aid staff in resolving customer complaints for blocked sewers. These new vans have had specialist bespoke fit-outs and are equipped with high pressure jetting and CCTV equipment in order to identify any faults, blockages or repairs straight away.

Flooding and the risk of flooding can constrain economic development and increase the cost of insurance. Most of the urban areas of Northern Ireland, including road surfaces, are served by combined sewers that carry both sewage and surface water. Such a system would never be built today as it is inefficient and results in pollution and flooding. We will gradually transform the sewerage network by taking every economically viable opportunity to disconnect surface areas from existing combined sewers, for example when laying a new storm sewer to service a new development. In many locations this will help free up capacity in combined sewers for new connections without having to lay new sewers.

In 2018/19, we removed around 32,000m^2 of impermeable areas. This included 24,000m^2 for a new housing development on a brownfield site in Bangor, County Down and 8,000m^2 for new hotel, office and student accommodation in Belfast city centre.

In preparing our PC15 Business Plan, we identified over 70 wastewater treatment works where capacity issues existed. Around £60m was identified to upgrade 19 treatment works between 2015 and 2021. We started 2015 with a constrained total capital programme of £990m against a requirement of £1.7bn. We estimate that the investment needed to address wastewater capacity issues alone will exceed £0.5bn in PC21. Without adequate investment, there will be further impacts on service delivery, the local economy and the natural environment.

1.2 Delivering Service to Customers

Changing customer expectations, the digital revolution, demographic and lifestyle changes are all leading NI Water to embrace new ways to meet our customer needs, now and in the future. Our customer satisfaction surveys tell us we are improving and, as part of our vision to be world class, we plan to provide customers with more self-service options such as web and mobile self-service, interactive voice response or chatbots. Our 'Knowledge Base' tool has proved to be very popular with our customers over 2018/19. The tool uses chatbot technology and artificial intelligence to help guide customers through a structured dialogue, providing answers to a wide range of their questions across all our service areas.

We collect a wealth of data from our customers and our assets. Customers surveyed have increased from around 2,000 to 10,000 each year. Automated, semi-automated and human-assisted channels enable our situational awareness team to detect issues that may affect our service, so our skilled operatives can intervene early and prevent the service failure. When a service failure cannot be prevented, we use our data to issue updates to affected customers (for example by text messaging and social media), thereby removing the need for our customers to contact us.

Our ambition is to become one of the leading utilities in the UK in the use of smart technologies. Smart metering technology presents an opportunity to reduce customer contacts, complaints and ultimately assist in the transformation into a next generation utility company. Over 2018/19 we introduced further functionality that will allow those customers with smart meters to obtain high consumption alarms to mitigate leakage. We are also piloting a range of other smart technologies to identify opportunities to deploy smart technology across our asset base.

1.3 Delivering Sustainable Services

Carbon Footprint

As the largest user of electricity in Northern Ireland we have an opportunity to take advantage of the huge changes to the electricity market. These changes include more generation at source, a smart grid to support energy trading and improved battery storage. We are targeting an increased use of renewable energy from 13% in 2012/13 to 40% by 2021.

Our goal is to fully exploit innovative approaches to energy and new technology to reduce our carbon footprint and ultimately become carbon neutral. We will achieve this by a wide range of actions that will affect almost every aspect of our business, including:

- improved instrumentation, automation and control of plant and equipment;
- investing in new treatment processes and pumping systems to reduce their energy demand and the emission of other greenhouse gasses;
- increasing our self-generation of renewable energy; and
- procurement of more renewable energy.

The majority of our carbon emissions are from grid electricity, with the remaining emissions being attributed to areas such as sludge emissions and transport. The annual carbon emissions resulting from activities of NI Water have decreased by 15%, decreasing from 106,816 t/CO2e in 2017/18 to 90,364 t/CO2e in 2018/19. This equates to 0.139 tonnes of carbon dioxide equivalent per million litres of treated water in 2018/19 (2017/18: 0.176 tCO2e/Ml) and 0.432 tonnes of carbon dioxide equivalent per million litres of treated wastewater in 2018/19 (2017/18: 0.611 tCO2e/Ml).

The annual carbon emissions resulting from the purchase of electricity have decreased by 20%, decreasing from 103,307 t/CO2e in 2017/18 to 81,876 t/CO2e in 2018/19.

The main influencing factors include: overall reduction in kWhrs; reduction in emission factors; and changes in how green electricity purchased from the grid has been accounted for in the Carbon Accounting Workbook (CAW). The emissions data is calculated using the CAW developed through UKWIR and WRc with participation from many of the UK water companies including NI Water.

We completed a number of energy audits to identify energy saving opportunities. Some of the energy saving measures identified included the implementation of real time control technology and process control measures at wastewater treatment works. Various chemicals are used in the secondary treatment stage process to remove harmful substances from the water. Real time control technology enables modifications to the process, such as altering the levels of dissolved oxygen, to minimise the energy usage whilst ensuring compliance with discharge consents.

Proof of concept trials were completed at two of our wastewater treatment works. Initial results from both sites are encouraging. Energy savings were demonstrated, along with the ability for the treatment works to quickly respond to any change in demand, to ensure compliance is not compromised. We plan to roll out this technology at a number of other treatment works over the PC15 period.

'Source to Tap' INTERREG VA Project

Some of the land management practices in water catchments are damaging to both the natural environment and the economy. Sediment and herbicides run off the land and drain into the raw water; the same raw water, which we use to produce drinking water. NI Water spends millions of pounds removing these materials in our water treatment works to produce drinking water that meets strict drinking water quality standards. These pollution costs are borne by water consumers. It is more cost effective for us to address these pressures at source and at the same time revitalise our rivers and lakes.

We continue to progress the 'Source to Tap' cross-border partnership project: a €5.3m, four year, cross-border partnership project to improve water quality in rivers and lakes in the Erne and Derg catchment areas. We are working closely with Irish Water, The Rivers Trust, Ulster University, Agri Food and Bioscience Institute (AFBI) and East Border Region.

Activities have initially focused on raising awareness of the importance of protecting our drinking water supplies and the connection between our rivers and lakes and what comes out of our taps. These activities have included a series of roadshows and information exchange events and an education programme being delivered to schools in the Erne and Derg catchments. In addition, as part of the citizen science element of the project, volunteers have been trained to carry out 'health checks' on their local rivers using the 'Riverfly' technique, adding to the legacy element of the project.

A pilot land incentive scheme was developed and a launch event subsequently held in Castlederg in 2018. The pilot scheme is open to farmers in the Derg catchment upstream of the water treatment works and offers funding to landowners to adopt sustainable land management practices that help reduce herbicide residue and soil escaping from the land into the River Derg catchment. Monitoring stations are also in place to assess the effectiveness of the mechanisms being trialled.

The Water Catchment Partnership

Herbicides used in agriculture can pollute raw water collected in our reservoirs. Over 2017 and 2018, we have been undertaking a pilot project at Seagahan water treatment works, which supplies drinking water to our customers in the Markethill area, County Armagh. Routine monitoring of raw water in the dam showed elevated levels of the grassland herbicide MCPA, which was used to control rushes. MCPA can reach surface water through run-off from agricultural activity, such as pesticide application via a boom-sprayer.

The Water Catchment Partnership (NI Water, Ulster Farmers Union NIEA, DAERA, College of Agriculture, Food and Rural Enterprise and the Voluntary Initiative) is working closely with the farming industry as part of the innovative pilot project to help reduce levels of MCPA in the Seagahan catchment area. A free 'weed-wiping' service was offered to local farmers as an alternative to a boom-sprayer. The service used the comparable herbicide Glyphosate rather than spraying MCPA.

The results have been very positive and show that partnership working with the farming community can sustainably restore our natural capital (raw water quality), without the need for resource intensive investment at the water treatment works. The initiative is being rolled out further to the Eden Burn catchment area in Ballymoney, County Antrim over 2019/20. The results of the pilots will inform our asset management planning for PC21.

1.4 Health and Safety

We strive towards 'zero harm' for employees, contractors and customers. We will maintain our sector-leading performance in health and safety and deliver on our zero accidents ambition. In addition to our legal obligations to successfully manage our work-related health and safety risks, our wellbeing programmes promote employee health, improve staff attendance, and ensure we attract and retain great people.

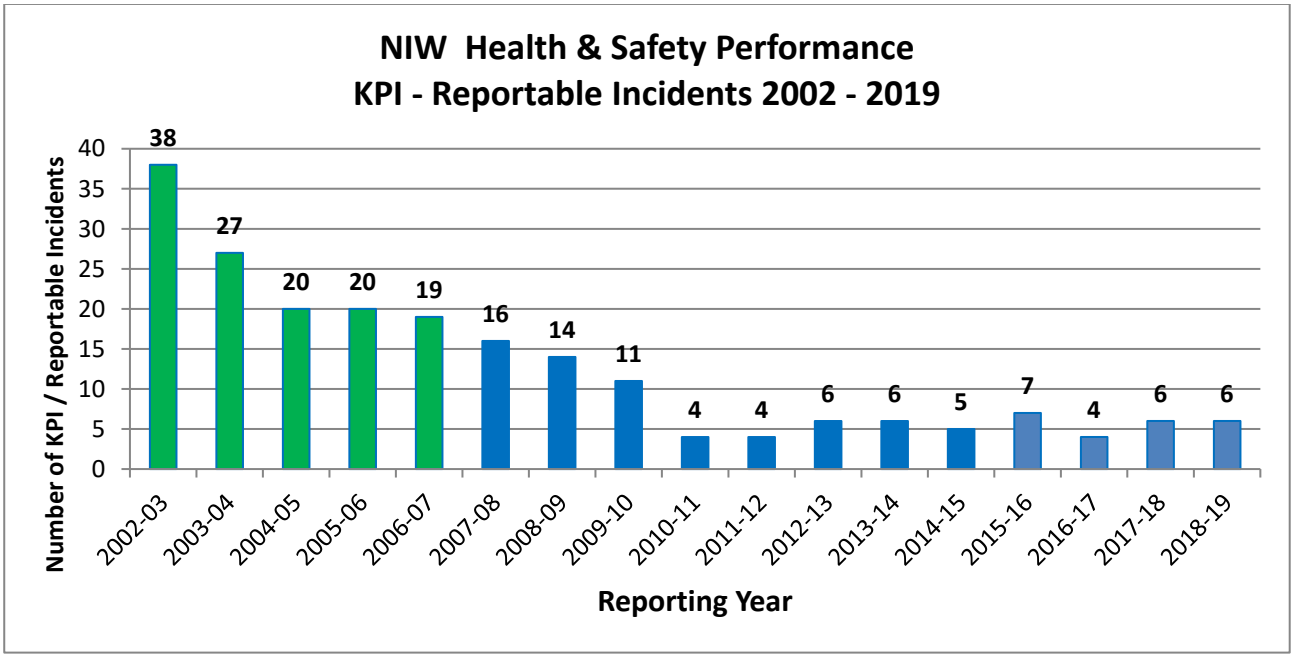
We continue to focus on 'Zero Harm', through appropriate training, strong management, senior management safety visibility and good contract management. This includes demonstration of, and commitment, to best practice: not only by those within NI Water but also by our contractor partners.

We plan to develop and improve safety, health and wellbeing in the workplace with introduction of new IT and technical solutions which will assist all staff in assessing, monitoring and managing risk, thereby keeping our staff, contractors and customers safe.

During 2018/19, we had six reportable incidents which resulted in more than three days' absence from work. This was within our corporate H&S target of not more than seven work-related incidents. Each lost time incident at NI Water is reviewed by both our SHE Team and our Health & Safety Focus Group with a view to seeking new learning and safety improvement.

During 2018 NI Water was 'Commended in the Water Industry' in one of the Competitive Sector categories of the annual ROSPA Occupational Safety & Health Awards. This was a most encouraging result, reflecting continual safety improvement across our business.

The table below illustrates our annual safety performance on 'Reportable Incidents' since 2002.



1.5 PC15 Funding

NI Water was subject to public expenditure capital budget reductions in the first three years of PC15. The Project Alpha acquisition in 2017/18 further reduced gross capital expenditure. Although the impact of these budget adjustments was somewhat mitigated by lower than expected inflation, the real terms budget reduction at the start of PC15 led to delays in capital output delivery which have continued to impact the PC15 programme.

In total, by the end of 2018/19 NI Water has received approximately £29m less gross capital funding than was assumed in the Utility Regulator's PC15 final determination. This is broadly in line with the level of funding needed to deliver the capital outputs identified in NI Water's PC15 business plan, but not enough to deliver the 'additional outputs' proposed in the final determination.

NI Water recently advised DfI and principal stakeholders of the funding profile necessary in 2019/20 and 2020/21 to enable completion of PC15 nominated outputs. Whilst this does not exceed the total anticipated funding envelope for PC15, it necessitates a capital budget in 2019/20 of c.£171m and c.£123m in 2020/21.

In the event that this level of funding is not available in 2019/20, it will not be possible for all nominated outputs to achieve beneficial use in the PC15 period. The biggest impact is likely to be on the delivery of wastewater treatment outputs, the removal of flood risks and UIDs.

1.6 PC15 Targets for 2018/19

Tables 1.1 and 1.2 below provide a tabular summary of NI Water's delivery of services and outputs in 2018/19.

Due to funding uncertainty at the start of 2018/19, it was not possible for adjusted outputs to be formally agreed with the Utility Regulator and other key stakeholders. Therefore, Tables 1.1 and 1.2 also include the PC15 Year 4 Final Determination targets. Where appropriate, these have been adjusted to take into account variations resulting from PC15 change controls and carry-over from PC13.

The majority of adjusted output targets (which take account of budget reductions in the early years of PC15) have been achieved, with the following exceptions:

1. **Leakage:**
   We failed to meet the target level of 157 million litres per day, with an actual level of leakage of 160 million litres per day in 2018/19. The increase in leakage was caused primarily by Storm Emma at the start of the year, followed by the hot weather experienced in the summer, which caused higher levels of bursts on our network. We are undertaking enhanced reporting and collaboration with our contractors to achieve the PC15 target of 153 million litres per day by 2021. We are also developing a new leakage strategy for PC21.

2. **Properties receiving pressure below reference level:**
   Whilst we are ahead of our target to remove properties from the low pressure register through company action, more properties have been added to the register than anticipated through better information about our network. These additions have resulted in a higher number of properties on the register than anticipated in the PC15 business plan.

   Whilst NI Water's PC15 capital programme includes the removal of properties through company action, properties can be removed from, and added to, the low pressure register through better information gathered through a variety of non-capital activities. These include:
   - pre/post-rehabilitation logging and analysis,
   - routine pressure logging,
   - operational changes (eg rezoning, etc),
   - RAPID property updates (eg new/unknown properties, etc)
   - customer contact (eg low pressure complaints, etc).

3. **Catchment Management Plans:**
   By the end of 2018/19, all catchment management plans for NI Water's operational catchments have been completed, with the exception of two catchments which are being undertaken through EU INTERREG VA funded projects.

   A PC15 change control submission is planned to amend the PC15 target for catchment management plans. It is proposed to exclude 21 out-of-service catchments and the two INTERREG schemes from the PC15 target – bringing the total for PC15 to 13.

4. **Service reservoir sample taps:**
   A total of 286 sample taps were installed by the end of 2018/19, compared to a target of 291. The five outstanding sample taps could not completed due to operational issues on these sites. It is anticipated that the remaining sample taps will be installed by the end of 2019/20.

5. **Small WwTW:**
   A total of 13 small WwTW completed construction 2018/19. Three of these sites had not concluded their sampling and testing regime by the end of March 2018 and, therefore, have not been reported as achieving beneficial use in AIR19.

Table 1.1 – 2018/19 Targets and Outputs: Customer Service and Water

	Units	Adjusted Outputs Target	FD Target #	2018/19 Outturn
DG2 Properties at risk of low pressure removed from the risk register by company action *	nr	545	516	562
DG2 Properties receiving pressure below the reference level at end of year	nr	616	616	719
DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	0.16	0.16	0.04
DG3 Supply interruptions (overall performance score)	nr	1.00	1.00	0.44
DG6 % billing contacts dealt with within 5 working days	%	99.90	99.90	99.99
DG7 % written complaints dealt with within 10 working days	%	99.50	99.50	100.00
DG8 % metered customers received bill based on a meter reading	%	99.00	99.00	99.67
DG9 % Calls not abandoned	%	99.00	99.00	99.45
DG9 % calls not receiving the engaged tone	%	99.90	99.90	99.99
Overall Performance Assessment (OPA) score (11 Measures)	nr	227	227	245
Total Leakage	Ml/d	157	157	160
Security of supply index	nr	100	100	100
Percentage of NI Water's power usage derived from renewable sources	%	35.0	35.0	39.4
% overall compliance with drinking water regulations	%	99.79	99.79	99.90
% compliance at consumers tap	%	99.69	99.69	99.83
% iron compliance at consumers tap	%	97.10	97.10	98.94
% Service Reservoirs with coliforms in >5% samples	%	0.00	0.00	0.00
Water mains activity - Length of new, renewed or relined mains *	km	582	570	582
Completion of nominated trunk main schemes *	nr	3	3 [1]	3
Completion of nominated water treatment works schemes *	nr	1	2	1
Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks *	nr	1	1	1
Water infrastructure serviceability	Text	Stable	Stable	Stable
Water non-infrastructure serviceability	Text	Stable	Stable	Stable
Number of Catchment Management Plans *	nr	15	26	13
Number of lead communication pipes replaced under the proactive lead replacement programme *	nr	7,400	7,376	7,626
Number of school visits *	nr	929	704	999
Number of other education events *	nr	248	228	257
% Service Reservoirs where sample taps have been assessed and are to required standard *	%	100	100	98

* PC15 cumulative target / outturn
# FD targets amended to reflect PC15 change controls and PC13 carry-over.

[1] Includes 1 PC13 carry-over trunk main (Castor Bay – Belfast) added to Final Determination target

Table 1.2 – 2018/19 Targets and Outputs: Sewerage

	Units	Adjusted Outputs Target	FD Target #	2018/19 Outturn
DG5 Properties at risk of flooding - number removed from the 2 in 10, 1 in 10 and 1 in 20 risk register by company action *	nr	39	46	40
DG5 Properties on the 2 in 10, 1 in 10 and 1 in 20 risk register at the end of the year	nr	128	128	124
% of WwTWs discharges compliant with numeric consents	%	94.1	94.1	94.8
% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	99.1	99.1	99.4
Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	87.1	91.9	86.6
Number of high and medium pollution incidents attributable to NI Water	nr	25	25	16
Sewerage activity - Length of sewers replaced or renovated *	km	52[1]	47	52
Delivery of improvements to nominated UIDs as part of a defined programme of work *	nr	56	76 [2]	56 [3]
Delivery of improvements to nominated WwTWs as part of a defined programme of work *	nr	11	13 [4]	12 [5]
Small wastewater treatment works delivered as part of the rural wastewater investment programme *	nr	26	29 [6]	25
Sewerage infrastructure serviceability	Text	Stable	Stable	Stable
Sewerage non-infrastructure serviceability	Text	Stable	Stable	Stable
CSO and EO discharges at which event and duration monitoring equipment has been installed *	nr	95	231	115
WwTWs upgraded to comply with PPC Regulations *	nr	0	0	6
Impermeable surface water collection area removed from the combined sewerage network *	m^2	232,624	120,000	236,727
Number of sustainable WwTW solutions delivered (p.e. ≥ 250) *	nr	4	2	4
Number of sustainable WwTW solutions delivered (p.e. < 250) *	nr	1	1	1

* PC15 cumulative target / outturn
# FD targets amended to reflect PC15 change controls and PC13 carry-over.

[1] May not agree to table B due to rounding
[2] Includes UIDs added to 2018/19 Final Determination target via Change Control
[3] Excludes PC15 UIDs completed in PC13
[4] Includes 3 WwTW added to Final Determination target: 2 PC13 carry-over (Artigarvan, Castle Archdale) + Loup (via Change Control)
[5] Excludes Annacloy WwTW: delivered in PC13
[6] Excludes 1 WwTW (Loup) removed from Final Determination target via Change Control

Chapter 2
Financial Performance Measures
Table C

2.1 Financial Performance

The financial performance section refers to NI Water (the Group) unless otherwise indicated.

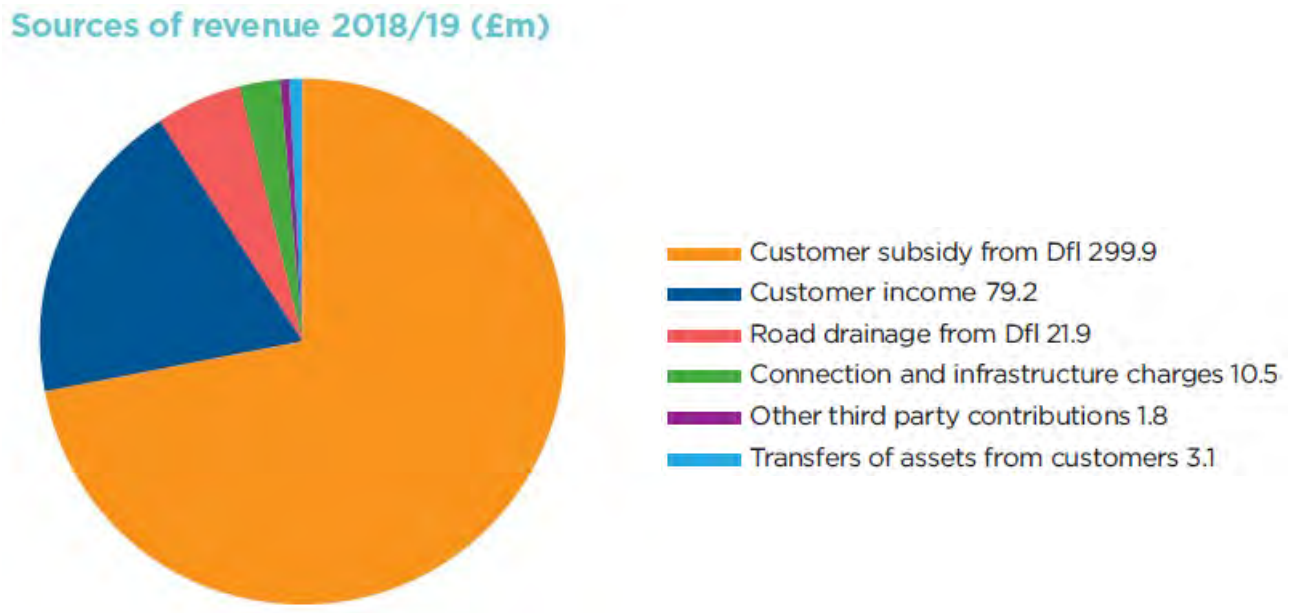
Summary Consolidated Statement of Comprehensive Income

	Year to 31 March 2019 £m	Year to 31 March 2018 £m (restated)
Revenue	**416.4**	403.6
Results from operating activities	**141.7**	128.4
Net finance charges	**(61.0)**	(62.2)
Profit before tax	**80.7**	66.2
Income tax expense	**(14.5)**	(13.3)
Profit for the year	**66.2**	52.9
Other comprehensive (income) / expenditure, net of income tax	**(9.4)**	41.2
Total comprehensive income for the period	**56.8**	94.1

Revenue

Domestic consumers are not charged directly for water and wastewater services. As a result, NI Water is dependent on Government subsidy for around 72% of its total revenue.

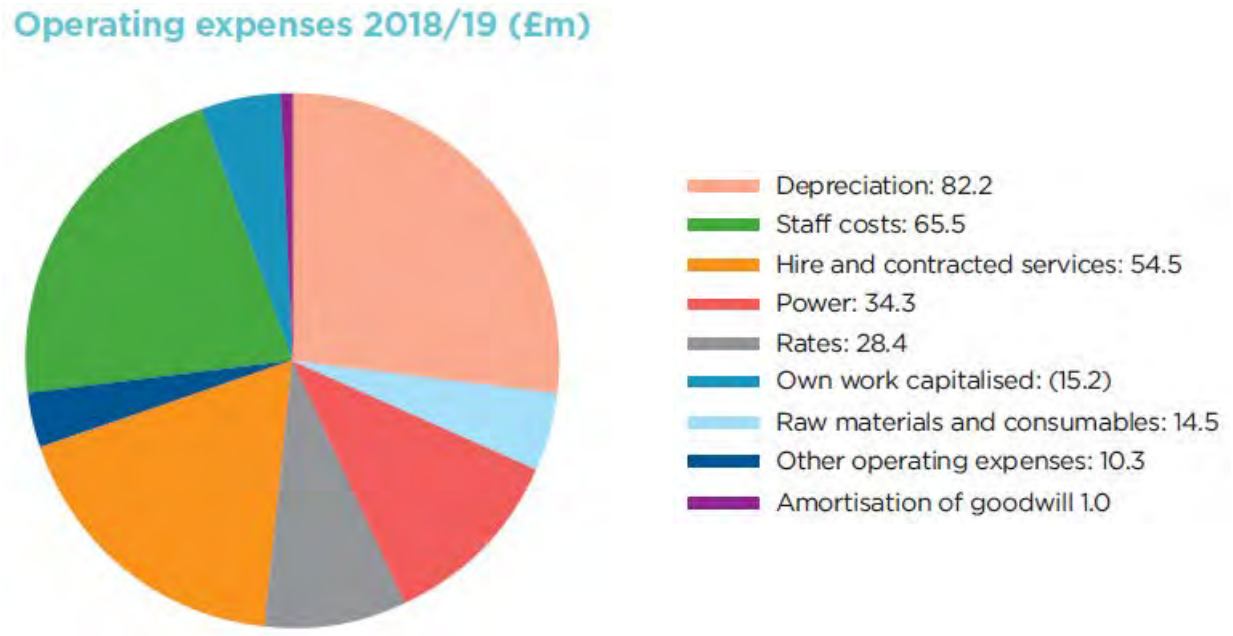
Revenue was £416.4m for the year to 31 March 2019 (2018: £403.6m). Included in revenue was £321.8m (2018: £311.5m) received from DfI, being subsidy of £299.9m (2018: £290.5m) and road drainage charges of £21.9m (2018: £21.0m). All the revenue was in relation to NI Water Limited as subsidiary revenue was all within the Group.



2.2 Costs (capital and operating) against expectations

Operating activities

Operating expenses in 2018/19 of £275.5m (2018: £276.2m) decreased from last year. The decrease primarily resulted from the 2017/18 write-down on acquisition of £9.8m to recognise the effective settlement of the pre-existing PPP contract between NI Water Limited and Dalriada Water Limited. This was partially offset by higher costs in 2018/19 of power and materials. Results from operating activities before interest for the year was £141.7m (2018: £128.4m).



Finance income and costs

The net finance costs are primarily due to interest on our borrowings of £49.3m (2018: £44.7m) and on our Public Private Partnership (PPP) liabilities of £12.6m (2018: £17.0m) and net finance costs on the pension fund of £0.5m (2018: £1.6m) partly offset by £1.1m (2018: £1.1m) fair value increase in the value of derivative financial instruments and bank interest received of £0.2m (2018: £0.1m).

Taxation

The tax charge for the year was £14.5m (2018: £13.3m). The effective tax rate for the year to 31 March 2019 was (18%) (2018: 20.1%).

Distributions

The Board will consider a proposal to declare a dividend of £28.3m in August 2019 (2018: £26.5m).

Capital Structure

The Consolidated Statement of Financial Position at 31 March 2019 is summarised below. Due to the adoption of IFRS 15 and the change in accounting treatment of adopted assets the Financial position at 31 March 2018 has been restated.

- Total assets increased by 4.5% to £3,210.5m (2018: £3,074.5m).
- Our net debt figure was £1,333.1m at 31 March 2019 (2018: £1,283.6m).
- Gearing (the ratio of net debt to equity and net debt) was 54.7% (2018: 54.5%).

Summary Consolidated Statement of Financial Position

	At 31 March 2019 £m	At 31 March 2018 £m
Total non-current assets	**3,152.1**	3,022.6
Total current assets	**58.4**	51.9
Total Assets	**3,210.5**	3,074.5
Equity	**1,102.5**	1,393.9
Total non-current liabilities	**1,975.0**	1,543.5
Total current liabilities	**132.2**	137.1
Total liabilities	**2,108.0**	1,680.6
Total equity and liabilities at 31 March	**3,210.5**	3,074.5

Liquidity

Operating activities generated a net cash inflow of £222.7m (2018: £204.7m). Net cash outflows of £185.6m (2018: £168.3m) related to investing activities. Net financing activities created a cash outflow of £30.8m (2018: £28.2m).

Our working capital requirements are met from a committed working capital facility of £20m and from available positive cash balances. Interest is accrued on the working capital facility at floating interest rates based on London Inter-bank Offered Rates (LIBOR).

Investing activities included the acquisition of property, plant and equipment of £187.9m (2018: £160.4m), acquisition of subsidiaries net of cash acquired of £nil (2018: £9.7m), proceeds from the sale of property, plant and equipment of £0.6m (2018: £1.5m) and interest received of £0.2m (2018: £0.1m) and grants received of £1.5m (2018: £0.1m).

Pension funding

The pension scheme was valued at a liability of £35.6m at 31 March 2019 (2018: liability of £22.8m). This was made up of a total market value of assets of £238.3m (2018: £233.4m) less actuarial value of liabilities £273.9m (2018: £256.2m). The increase in the liability has been driven primarily by the effects of changes to demographic and financial assumptions including higher inflation and lower discount rates.

Capital

We have invested £2.3 billion in Northern Ireland's water and sewerage infrastructure since our formation in 2007/08.

Around £171m of capital investment was delivered during 2018/19. £97m was invested in maintaining the current assets and a further £74m was invested to deliver quality enhancements, improve service and accommodate growth. Investment of £176m is planned for 2019/20.

2.3 PPP contracts

Kinnegar Wastewater Treatment Works

A contract with Coastal Clear Water Limited was signed on 30 April 1999 for the provision of sewage treatment, which covered the upgrading of the Kinnegar Waste Treatment Works with a capital cost in the region of £11 million. The contract is for 25 years with an end date of 30 April 2024. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2019 is £12.0m and £5.23m respectively (2018: £12.0m and £5.56m). The amount included in PPP Creditors at 31 March 2019 is £2.53m (2018: £3.02m).

Alpha

A contract with Dalriada Water Limited was signed on 30 May 2006 for the provision of bulk drinking water supplies. This has a capital cost in the region of £111 million. The service provision commenced roll-out from November 2008. The contract is for 25 years with an end date of 29 May 2031. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2019 is £123.45m and £86.53m respectively (2018: £120.36m and £87.24m). The amount included in PPP Creditors at 31 March 2019 is £85.35m (2018: £88.00m). With the acquisition by the Group of Dalriada Water Limited during 2017/18 the PPP creditor at group level is eliminated on consolidation.

Omega

A contract with Glen Water Limited was signed on 6 March 2007 for the provision of sewage treatment / sludge disposal at six sites with a capital cost in the region of £132 million. The contract is for 25 years with an end date of 5 March 2032. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2019 is £146.95m and £104.50m respectively (2018: £144.99m and £106.78m). The amount included in PPP Creditors at 31 March 2019 is £110.12m (2018: £112.69m).

On Balance Sheet ***Alpha***	**Alpha** **£k**	**Omega** **£k**	**Kinnegar** **£k**
Opex	9,721	9,789	1,118
Interest	6,232	11,875	719
Total P&L Impact	**15,953**	**21,664**	**1,837**
Capital Repayment	2,650	2,568	488
Life Cycle Maintenance	1,516	2,018	124
Total Balance Sheet Impact	**4,166**	**4,586**	**612**
Total PPP Payments	**20,119**	**25,250**	**2,449**
Effective Interest Rate used to calculate Alpha finance charge	**7.14%**	**10.60%**	**24.75%**
Estimated Residual Value at End of Contract	£84m	£113.5m	£5.98m

2.4 Regulatory Capital Value (RCV)

The Regulatory Capital Value (RCV) has been developed for regulatory purposes and represents the capital base established for the purposes of setting price limits.

In line with Regulatory Accounting Guideline (RAG) 1.04, this note is compiled using figures assumed in setting prices during the Price Control (PC) process. Figures in 2018/19 are therefore consistent with figures contained within the Water and Sewerage Service Price Control 2015-2021 (PC15) published by the Utility Regulator in December 2014.

Within the RCV, the prior year balance and in year capital expenditure have been indexed by the average Retail Price Index (RPI) over the year to March.

	At 31st March 2019 £'m	At 31st March 2018 £'m
Prior Year Closing RCV	**2,396.1**	2,244.9
Indexation and other adjustments	**73.2**	84.0
Opening RCV	**2,469.3**	2,328.9
Capital expenditure	**135.9**	132.8
Infrastructure renewals expenditure	**26.4**	25.7
Infrastructure renewals charge	**-26.4**	-25.7
Grants & contributions	**-6.5**	-6.5
Depreciation (including capital grants)	**-59.5**	-57.8
Disposal of assets	**-1.3**	-1.3
Closing RCV (pre regulatory adjustments)	**2,537.9**	2,396.1
Regulatory adjustments	**-**	-
Closing RCV	**2,537.9**	2,396.1
Average RCV	**2,467.0**	2,320.5

Chapter 3
Efficiencies

The PC15 final determination set NI Water the target of closing the gap to the most efficient companies by 80%. We have made good progress so far but we believe our strong performance to date greatly reduces the scope for further efficiency in PC21.

NI Water is in the unique position of being the only publicly funded, regulated utility in the UK. While this has some benefits in relation to access to low cost debt financing for example, it is posing challenges in relation to being able to support a sustainable funding model.

As a Government Owned Company and a Non-Departmental Public Body, NI Water is subject to public expenditure cuts and uncertainty over funding. While this may be manageable for a short period, the continued underfunding of the Utility Regulator's regulatory settlements places further progress on efficiencies at risk and could result in tangible impacts on service delivery, the local economy and the environment.

Over the past 15 years the capital budget made available for investment in sewerage services has not been able to keep pace with the investment required to provide increased capacity to facilitate growth or achieve more stringent discharge standards. As a result, many of our sewerage networks and treatment plants are now having to operate at or beyond their design capacity, limiting opportunities for new connections and constraining economic development. We are working with principal stakeholders to agree a capacity framework against which future applications for new connections will be assessed. This includes communicating these constraints spatially so that this can inform development plans by others.

A sustainable long-term business model for NI Water is essential for the economy of Northern Ireland. It is vital if we are to continue to invest efficiently in infrastructure and improve the essential services we deliver to our customers to ensure they are on a par with our counterparts in England and Wales.

We continue to work with principal stakeholders to identify a more efficient funding model and continue to highlight the disadvantages of the current model.

Some of the measures undertaken in 2018/19 to deliver a reduction in day to day running costs are set out below.

Business Improvement Initiatives

Production Lines

- The new Water Production Line Operating Model has been introduced which is designed to deliver an unrivalled customer experience, increase our resilience and build capability.
- New processes and equipment for sewer blockages has enabled proactive targeting of repeats and reduced blockage numbers.
- The Situational Awareness Team has been established to deliver a holistic approach to water and wastewater networks and customer channels, while utilising dashboards to gain greater analytical insight.

Energy

- This year the Dunore Solar Farm generated over £600,000 in savings as well as enabling the organisation to export spare capacity back to the grid.

Capital Efficiencies

- The Capital Programme Management Office (CPMO) has been established to prioritise risk, value, cost, performance management and programme planning.
- Developing our Integrated Partnerships is enabling a more collaborative approach with our supply chain.

Customer Experience / Digital

- Continuing to prioritise our digital programme, we have increased our web-enabled services, making it easier for our customers to pay bills, request septic tank services and access information through multiple channels of choice.
- Having now embedded Interactive Voice Response (IVR) and our self-service capability, we have approximately 370 septic tank transactions (41%) and approximately 360 bill payments (30%) are now automated every week.

Commercial Excellence

- We have developed a new Commercial Operating model which focuses on enhancing our existing procurement and contract management structures. We are innovating how we work with our supply chain, driving greater value from every pound we spend and invest.
- In 2019/20 a single Contract Management team will be fully embedded within the organisation and will be responsible for all strategic and key operational contracts.

Supply Chain Efficiencies

NI Water's procurement teams, in partnership with InterTrade Ireland, hosted their most successful Supplier Engagement event to date. This showcase event attracted over 200 existing and potential new suppliers across the full range of goods and services procured by NI Water. The event offered companies the opportunity to meet members of the procurement teams and four of NI Water's strategic contractors.

A new feature at this year's event was the opportunity for potential suppliers to hear first-hand from some of our incumbent suppliers what it is like to work with NI Water and how winning a contract with NI Water has benefitted their businesses.

Another feature of this year's event was the 'training zone'. This was well attended and was aimed at helping companies better understand the tendering process, the eTendersNI portal and NI Water's approach to contract management.

Chapter 4
Competition

There are no developments to report in respect of inset appointment proposals, common carriage or water supply licensing proposals. NI Water has made no requests for common carriage or wholesale water supplies.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE A - WATER SERVICE - KEY OUTPUTS AND SERVICE DELIVERY (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	3 REPORTING YEAR 2014-15	4 REPORTING YEAR 2015-16	5 REPORTING YEAR 2016-17	6 REPORTING YEAR 2017-18	7 REPORTING YEAR 2018-19	8 REPORTING YEAR 2019-20	9 REPORTING YEAR 2020-21
A	**Consumer Service**											
1	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	297	132	186	171	40	175	176		
2	DG2 Properties receiving pressure below the reference level at end of year	nr	0	1420	1257	1082	900	862	711	719		
3	DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	2	0.32	0.14	3.10	0.10	0.06	0.10	0.04		
4	DG3 Supply interruptions (overall performance score)	nr	2	1.98	0.97	11.72	1.14	0.66	0.81	0.44		
5	DG6 % billing contacts dealt with within 5 working days	%	2	100.09	99.92	99.97	99.96	99.98	99.97	99.99		
6	DG7 % written complaints dealt with within 10 working days	%	2	99.78	99.72	99.96	99.87	100.00	99.87	100.00		
7	DG8 % metered customers received bill based on a meter reading	%	2	98.73	99.11	99.11	99.23	99.52	99.67	99.67		
8	Call Handling Satisfaction	nr	2	4.54	4.63	4.65	4.59					
9	DG9 % calls not abandoned	%	2	98.45	98.40	97.99	99.43	99.54	99.51	99.45		
10	DG9 % calls not receiving the engaged tone	%	2	100.00	100.00	99.99	99.92	99.97	99.99	99.99		
11	Overall Performance Assessment (OPA) score (11 Measures)	nr	0	198	216	206	230	228	236	245		
12	Total Leakage	Ml/d	0	162	167	166	162	163	162	160		
13	Security of supply index	nr	0	100	100	100	100	100	100	100		
14	Percentage of NI Water's power usage derived from renewable sources	%	1	13.4	33.1	51.4	39.8	35.5	36.9	39.4		
B	**Quality Water**											
15a	% overall compliance with drinking water regulations	%	2	99.77	99.81	99.86	99.83	99.86	99.88	99.90		
15b	% compliance at consumers tap	%	2	99.63	99.74	99.78	99.74	99.77	99.81	99.83		
16	% iron compliance at consumers tap	%	2	97.25	98.08	98.95	98.40	98.66	98.85	98.94		
17	% Service Reservoirs with coliforms in >5% samples	nr	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
C	**Water Outputs**											
18	Water mains activity - Length of new, renewed or relined mains	km	0	326	226	223	117	172	126	167		
19	Completion of nominated trunk main schemes	nr	0	2	0	1	2	1	0	0		
20	Completion of nominated water treatment works schemes	nr	0	0	0	3	1	0	0	0		
21	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0	1	0	1	0	0	1	0		
D	**Serviceability**											
22	Water infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable	Stable	Stable		
23	Water non-infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable	Stable	Stable		
E	**New Output Measures**											
24	Number of Catchment Management Plans	nr	0		3	5	3	7	3	0		
25	Number of lead communication pipes replaced under the proactive lead replacement programme	nr	0		0	401	1922	1867	1767	2070		
26	Number of school visits	nr	0	138	150	209	277	257	219	246		
27	Number of other education events	nr	0	35	38	59	65	64	62	66		
28	% Service Reservoirs where sample taps have been assessed and are to required	%	1				0.0	0.0	72.9	98.3		

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE B - SEWERAGE SERVICE - KEY OUTPUTS AND SERVICE DELIVERY - WATER SERVICE (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	3 REPORTING YEAR 2014-15	4 REPORTING YEAR 2015-16	5 REPORTING YEAR 2016-17	6 REPORTING YEAR 2017-18	7 REPORTING YEAR 2018-19	8 REPORTING YEAR 2019-20	9 REPORTING YEAR 2020-21
A	**Consumer Service Sewerage**											
1	DG5 Properties at risk of flooding - number removed from 2 in 10, 1 in 10 and 1 in 20 risk register by company action.	nr	0	66	11	28	7	7	17	9		
2	DG5 Properties on the 2 in 10, 1 in 10 and 1 in 20 risk register at the end of the year	nr	0	193	190	179	160	156	134	124		
B	**Quality Sewerage**											
3	% of WwTWs discharges compliant with numeric consents	%	1	93.3	92.0	92.4	92.8	93.6	93.5	94.8		
4	% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	1	98.8	98.0	98.4	98.6	98.9	98.7	99.4		
5	Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	2				80.72	83.99	87.21	86.64		
6	Number of high and medium pollution incidents attributable to NI Water	nr	0	18	26	25	21	22	20	16		
C	**Sewerage Outputs**											
7	Sewerage activity - Length of sewers replaced or renovated	km	0	24	25	21	17	9	15	11		
8	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	38	11	17	26	11	11	8		
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	nr	0	12	17	16	3	2	1	6		
10	Small wastewater treatment works delivered as part of the rural wastewater investment programme	nr	0	14	7	18	4	8	3	10		
D	**Serviceability**											
11	Sewerage infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable	Stable	Stable		
12	Sewerage non-infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable	Stable	Stable		
E	**New Output Measures**											
13	CSO and EO discharges at which event and duration monitoring equipment has been installed	nr	0				0	0	0	115		
14	WwTWs upgraded to comply with PPC Regulations	nr	0				0	0	0	0		
15	Impermeable surface water collection area removed from the combined sewerage network	m^2	0				28,560	54,864	119,200	34,103		
16	Number of sustainable WwTW solutions delivered (p.e. ≥ 250)	nr	0				1	1	1	1		
17	Number of sustainable WwTW solutions delivered (p.e. < 250)	nr	0				0	1	0	0		

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE C - EXPENDITURE & FINANCIAL PERFORMANCE MEASURES (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	3 REPORTING YEAR 2014-15	4 REPORTING YEAR 2015-16	5 REPORTING YEAR 2016-17	5 REPORTING YEAR 2017-18	6 REPORTING YEAR 2018-19	7 REPORTING YEAR 2019-20	8 REPORTING YEAR 2020-21
A	**TOTAL EXPENDITURE**											
1	Total operating expenditure - water service (NI Water only)	£m	3	71.882	70.914	69.932	76.947	80.362	84.765	90.334		
1a	Total operating expenditure (PPP) - water service	£m	3	1.845	8.234	8.431	8.225	9.062	9.323	9.721		
2	Total capital expenditure (excl. adopted and nil cost assets) - water service	£m	3	69.303	71.809	86.920	63.796	67.719	62.807	70.162		
3	Total operating expenditure - sewerage service (NI Water only)	£m	3	72.113	73.300	71.330	73.126	71.950	74.758	76.367		
3a	Total operating expenditure (PPP) - sewerage service	£m	3	26.488	24.896	24.323	25.096	25.377	25.693	10.908		
4	Total capital expenditure (excluding adopted and nil cost assets) - sewerage service	£m	3	92.709	95.548	71.881	79.692	86.551	89.721	100.824		
B	**CURRENT COST ACCOUNTS - PROFIT & LOSS**											
5	Total Turnover	£m	3	366.398	361.313	364.407	367.287	372.854	381.099	409.662		
	Lines 6 & 7 not used											
C	**CAPITAL BASE & POST TAX RETURN**											
8	Capital Value Year - End (outturn)	£m	3	1,812.80	1,948.80	2,045.50	2,133.30	2,244.90	2,396.10	2,537.90		
9	Total net debt	£m	3	868.158	909.323	946.748	980.545	1010.647	1079.329	1330.886		
10a	Post tax return on capital	%	2	1.12	1.05	2.96	2.57	2.60		5.718		
10b	Pre tax return on capital	%	2	1.12	1.05	2.96	2.57	2.60		5.718		
D	**KEY FINANCIAL INDICATORS**											
11	Cash interest cover (funds from operations; gross interest)	ratio	2	3.34	3.60	3.52	3.38	3.45	3.50	3.20		
12	Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	-0.03	0.27	0.91	0.83	0.91	1.98	1.61		
13	Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	1.70	1.67	2.00	1.76	1.58	1.74	1.78		
14	Funds from operations: debt	ratio	2	0.15	0.13	0.13	0.12	0.12	0.12	0.10		
15	Retained cash flow: debt	ratio	2	0.12	0.12	0.12	0.09	0.10	0.07	0.08		
16	Gearing: D/RCV	%	2	47.89	46.66	46.74	46.24	47.46	45.86	53.61		
17	Gearing: D/RCV (adjusted for PPP liability)	%	2		49.12	49.09	48.47	49.45	47.78	56.96		

Annual Information Return 2019

Section 2

Tables and Commentary

Chapter 1 - Promoting the Efficient Use of Water

This report examines a range of water efficiency activities undertaken by Northern Ireland Water for household and non-household customers over the course of this reporting period. The company is committed to promoting and improving water efficiency for all its customers.

These efforts have included using the methods that have been successful to date i.e. education schemes, distribution of water saving devices and working in partnership with other organisations on current/new projects, and by designing and introducing new strategies.

The Water Education Team (WET) consists of two full time employees who visit schools, community, specialist groups and organisations and working in partnership with stakeholders and other partners. Approximately 60% of the Educator's time is spent promoting water efficiency.
The key elements of our strategy are as follows:

1. Efficient use of water in the home
   a) ensuring no leaks from taps, toilets, pipe joints etc.
   b) cistern displacement devices used where necessary
   c) efficient use of domestic appliances e.g. full load for washing machine, dishwasher and selecting water saving option's on appliances
   d) use of showers rather than baths, and using a shower timer to reduce time spent in the showers
   e) shower head and water tap aerators are recommended

2. Efficient use of water in the garden
   a) awareness of the amount of water used through garden hoses and sprinklers
   b) encourage the use of water gun if using a hose
   c) encourage the use of water butts
   d) use water retaining gels for plant containers
   e) encourage use of mulch
   f) plant drought resistant plants

WET have attended a variety of external public events:-

- Castlecaulfield Horticultural Society (April)
- Keep NI Beautiful (April)
- Balmoral Agricultural Show (May)
- Disability Action (June)
- Rostrevor Men's Shed (June)
- Ark Community Garden (August)
- Alzheimer Society (August)
- Health Fair, Houba Centre (August)
- Ulster University (September)
- NILGA Conference (September)
- Lisburn Probas Group (November)
- Ballynature Horticulture Event (February)
- Women's Guild Society (March)

Events that were attended on request:

- Dunbia Meats, June 2018
- Belfast City Council Winter Event, December 2018

- Queens University, February 2019
- NI Science Week, February 2019

Staff who attended these events promoted the practice of water conservation by means of distributing leaflets, promotional items and giving advice on using water wisely.

During this reporting year NI Water treatment sites have been utilised as an academic resource by Queens University Belfast, Ulster University, North West Regional College, St Joseph's College and Methodist College Belfast. The reason for this was to help provide student engineers a better understanding of the significant importance of water treatment processes and usage.

The WET promotes water efficiency at NI Water's Educational Centres at the Heritage Centre and Silent Valley along with specific classroom talks on conservation are given to primary school children supporting the Eco Schools initiative. Requested educational visits to the Wastewater and Water Treatment Centres for both schools and the community groups are organised by the team.

We have seen demand continue for Key Stage 3 classroom visits, through the Home Economics, Geography, and science departments over the last reporting period. We do expect this growth to continue into the new school term.

A variety of water efficiency promotional items are used whilst delivering all the above talks which include:

- Water-butt leaflets
- Waterwise Leaflet
- Promotional and educational leaflets
- School water audits
- Interactive games encouraging conservation
- Save-a-Flush
- Shower timers (5mins)
- Water cycle poster (teacher's aide)

Water efficiency leaflets are available for download from the NI Water website along with a printable poster "Stop those drips".

Household

1. Cistern Displacement Devices (CDD's)

These can be requested by the customer directly through NI Water's Customer Service Centre (CSC) or from the Education Team. For 2018/19 NI Water has distributed 1895 CDD's at school visits, community talks, shows and at the request of organisations. All teachers were also issued with a sample. Community Groups receiving presentations on water conservation also received save-a-flush.
The calculation for the water savings achieved in 2018/19 report year is as follows:

S*O*F*(D*I) = Savings in litres

S= Savings per flush, O= Occupancy rate, F= Flushing frequency per person per day, D= Number distributed, I= Installation rate.

Values derived from the Ofwat Water Efficiency Targets were used to estimate the number of CDD's installed. Using the Ofwat Efficiency Report the volume displaced per flush was

recorded as 2.5 l/per flush and flushes per person per day as recorded as five. This figure is the average savings per flush achieved through the installation of save-a-flush, which are the CDD distributed by NI Water. An installation rate of 70% was due to the distribution method used i.e. through requests, schools and community groups. Occupancy rate was 2.5 from NISRA

Calculation:
2.5*2.5*5*(1895*0.7) = 41,453.125 l/per day = 0.0414531 Ml/d

2. Distribution of Water Butts

During this reporting period, NI Water distributed water butts to community groups, schools and allotment groups. The total for this year is 61.

The calculation for the water savings achieved in 2018/19 report year is as follows:

S=V*F*1*N

S= savings per butt, V=volume of water butt, F= fills per year I= instillation rate, N= number of Water butts Using the Ofwat Efficiency Report the volume (190L) is company based (NI Water) and the fills per year is estimated at 6 and the installation rate is 100%.

Calculation:
190*6*1*61 = 69,540 l per year:
69,540/365 days = 190.52054 l per day = 0.0001905 Ml/day

3. Household Water Audits

During 2018/19 the self-water audit for domestic households, which can be accessed through the company's website, have been 856 hits to the online audit. An advantage of the website self-water audit is that as soon as the customer completes the form the information is emailed directly to WET and this data can then be collated in a spreadsheet to accumulate water usage across NI Water's customer base.

D*A*S = Savings in litres

D = Number water audits carried out by company, A = Likelihood acted upon, S = Savings in litres per water audit.

From the figures supplied by IT division of the Corporate Affairs Team, 856 hits have been recorded for observations of the online water audit.

To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets). The percentage acted upon is assumed at 10% saving 10 litres per property per day:

The number of online audits recorded
Calculation: 856* 0.10* 10 = 856 l/per day = 0.000856 Ml/d

4. Shower Timers

Over the reporting year, 2522 shower timers were distributed at schools, shows, events and presentations by NI Water staff. The installation rate of these can be assumed at 23% (Ofwat Water Efficiency Targets) a saving of 5 litres per property per day can also be assumed. The calculation for the savings achieved in 2018-19 report year is as follows:

D*I*S = Savings in litres

D = Number of shower timers distributed, I = Likelihood installed, S = Savings in litres per property per day.

Calculation: 2522* 0.23* 5 = 2,900.30 l/per day = 0.0029003 Ml/d

D*I *S= Savings in litres

5. Gel Bags

There were 18 gel bags distributed as part of the allotment group talks and shows. Using the Ofwat Water Efficiency Targets a saving of 0.1 litres per property per day can also be assumed. Installation percentage would be 25% due to their distributed method

The calculation for the savings achieved in 2018/19 report year is as follows:

D*I *S= Savings in litres

D = Number of gel bags distributed, I = Likelihood installed, S = Savings in litres per property per day.

Calculation 18*0.25*0.1= 0.45 l/per day= 0.0000004 Ml/d

6. Trigger Guns

There were 20 trigger guns were distributed through allotment talks and at staff water efficiency stands.

Using the Ofwat Water Efficiency Targets a saving of 2 litres per property per day can also be assumed and 100% installation if requested i.e. at staff stands or through CRC.

The calculation for the savings achieved in 2018/19 report year is as follows:

D*I *S= Savings in litres

D = Number of trigger guns distributed, I = Likelihood installed, S = Savings in litres per property per day.

Calculation 20*1* 2 = 40 l/per day= 0.00004 Ml/d

7. Shower Heads

Shower heads were distributed as requested with 9 in total being given out during the reporting period.
Using the Ofwat Water Efficiency Targets, a saving of 29 litres per property per day can also be assumed and 100% installation if requested.

The calculation for the savings achieved in 2018-19 report year is as follows:

D*I *S= Savings in litres

D = Number of trigger guns distributed, I = Likelihood installed, S = Savings in litres per property per day.
Calculation 9*1* 2 = 18 l/per day= 0.000018 Ml/day

8. Water Audits Completed by Company

No audits were completed in the homes of customers 2018/19

Presently in Northern Ireland domestic customers do not pay for their water and wastewater services and customers are not metered. Therefore, the only way to help foster change in attitude and behaviour is by demonstrating to the customer how they can financially benefit i.e. save money on electricity, for example by reducing time spent in the shower or reducing the number of showers they have in a week and the number of times the washing machine and or dishwasher is used.

Non-household

NI Water operates a larger user discount scheme which is dependent on the commitment of the customer to water efficiency. The customer will have to provide evidence of promoting water efficiency; this may be through changes in procedure, installing water saving devices, installation of recycling plants and the review of water efficiency by an independent industry expert. (www.niwater.com/largeusertariff.asp)

The NI Water website is updated and reviewed on a regular basis. The site has been developed to encourage water efficiency within the commercial customer sector. The areas included are:

- Why Save Water?
- What is Normal Water Use?
- What is a Water Balance?
- Water Efficient Plumbing Appliances?

The website is accessible to all customers with internet access enabling them to source information to assist them in making decisions about water efficiency.

9. Water Audits

During 2018/19 reporting period, 602 Water Audits for Schools were distributed by WET through Teachers Packs.
To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets). The percentage acted upon is assumed at 20% saving 10 litres per property per day:

D*A*S = Savings in litres

D = Number water audits carried out by company, A = Likelihood acted upon,
S = Savings in litres per water audit.

Calculation: 602*0.20*10 = 1204 l/per day = 0.001204 Ml/d

No Commercial Audits were distributed during this reporting period. The document is available on line as an advice leaflet for business customers titled “Advice for Business Customers” with an additional document “Business Water Audit”. Due to cost restrictions, these leaflets have not been published but are easily available on the NI Water website.

Savings and Costs

These savings have been achieved by adding together

- Household-Water Efficiency Methods
- Non Household-Water Efficiency Methods
- Other Water Efficiency Methods

Leakage: No savings or costs are sustained by NI Water through supply pipes being repaired, as NI Water does not operate a free/subsidised repair/replacement scheme. If NI Water repairs any leaking supply pipes, this will only happen after a leakage notice has been issued and the customer has failed to carry out sufficient work to rectify the problem. NI Water will then repair the supply pipe and any cost will be then charged to the customer.

Water Efficiency Methods

The majority of NI Water's other Water Efficiency Methods are education based. As already mentioned NI Water has a dedicated Water Education Team (WET) consisting of two full time employees. These Education Officers deliver presentations to a variety of community and youth groups, organise/attend external events as well as attending educational establishments at all levels. During this reporting period the WET facilitated 66 community visits/events delivering our key message on water conservation. There were also Conservation classroom presentations delivered over this past year, with the majority of these being provided on a weekly basis and working in conjunction with the Eco Schools Award scheme. The double decker Waterbus, a mobile educational classroom provides presentations, displays, experiments, quiz, demonstrations, multimedia and computer facilities. This mobile classroom facility aims to make children aware of the range of water topics and issues such as the water cycle, water for health, water sources, water/wastewater cleaning and water efficiency. The Waterbus programmes has been designed for Key Stage 2 (P5-P7) and we work closely within the revised curriculum. This service has been well received by the Education Authority (EA) and we have reached 48,005 KS2 and KS3 pupils during 2018-19 school year with our key messages on water conservation.

NI Water has a Wastewater Heritage Centre site at Duncrue Street, Belfast. This location provides an insight into the history of water supply and removal of waste water along with the importance of why we should not waste water. We consider contact with schoolchildren to be the vital link with parents, bringing news and promotional items home and encouraging them to become more water efficient and be aware of the value of water management. Key Stage 3 talks by NI Water's Education Team have also continued during this reporting period and have seen a sharp increase in delivery with demand for visits reaching an all-time high second year running, so much so that we are unable to meet this demand and have had to draw up a waiting list for delivery in the new 2019-20 school year. One of the recommendation from the last two reporting periods was for NI Water to consider an additional resource in assisting with the expanding educational programme and promoting the efficient use of water including the KS3 area. At present this is still being considered and in the meantime we are availing of other resources within NI Water such as Environmental Champions to help assist in meeting the ever increasing demand.

Interactive Education & the Community section on NIWater.com

NI Water has dedicated website pages with advice on household and commercial water efficiency. Included in these pages is a domestic self- water audit, which allows domestic customers to calculate their average daily consumption per resident. This audit has the added benefit of doing calculations automatically and provides NI Water with completed audits instantly once the customer has submitted it. The website also includes guidance on the types of appliances that could be installed into houses and business, which would help them to be more efficient in the future.

Education And The Community - Northern Ireland Water

Over this past year we have continued to update the Education & Community section with rich, informative content focused on informing water users about our key messages.

The extensive interactive content is used to not only educate users but also to position NI Water as a key stakeholders in the community, addressing important water use issues with a slightly more informal tone of voice.

The content is primarily targeted at school pupils with an animated design but is equally accessible by adults. It has been benchmarked against other leading water companies' equivalent sections and has been built with future proofing in mind by using non-native code platforms.

Main interactive sections:

- **Bag It & Bin**

Bag it And Bin it - Northern Ireland Water

Scrolling content building on the key "Bag it and Bin it" message and the importance of not flushing the "dirty dozen" down the toilet.

- **Water Saving Calculator – How much water do you use?**

Why Save Water? - Northern Ireland Water

The calculator is designed to provoke awareness and thought on how much water households are wasting.

- **Silent Valley**

Silent Valley - Northern Ireland Water

This sub section sells Silent Valley as a visitor destination for families, groups and schools:

- Image Gallery
- Walking trails map
- How to get there - embedded Google map for users to find directions from their address
- Visitor information, downloads, podcasts.

Print, Broadcast and Online Media Value

Throughout the year NI Water have been proactive in promoting water efficiency through educational and community campaigns. Another mechanism of raising the importance of water efficiency has been through the use of media. These NI Water campaigns have generated **436** media (print, broadcast and online) items with an overall financial value of **£3,073,000** and has reached a potential audience of over **1.8m**.

The summer of 2018 was exceptional with regards the weather we experienced. With prolonged sustained spells of hot weather coincided with the absence of any continual rainfall, NI Water was placed in the unfortunate position of introducing a 'Hose Pipe' ban. This give us the opportunity to raise awareness with the general public of the significance of conserving water and how best to achieve same. We believe through our educational and community campaigns during this period that we have succeeded in reaching many of those hard to reach within society with regards changing their behaviour towards the use of water. Ni Water also organised their annual "Winter Preparation Campaign" during this period. This Campaign generated **41** media items between 1 September 2018 and the 28 February 2019 and highlighted the issue of water efficiency and in particular the potential for frozen pipes as part of its winter preparation campaign. Some of the campaigns were:-

- Frozen Pipes Can Flood Homes / Insulate Your Pipes

- Water continues to ‘flo’ freely through our pipes all winter long
- ‘Wrap up warm’
- Utilities Winter Readiness Campaign
- Winter Campaign Launch or ‘Don’t wait insulate’
- Watersafe website address
-

Efficiency Method	**Total**	**Cost £**	**Savings per Ml/ day**
Household			
Measurable Methods			
Cistern Devices (0.57p each)	**1895**	**1080.15**	**0.0414531**
Water butts (£38.16 each)	**61**	**2327.76**	**0.0001905**
Self-audit (On Line)	**856**		**0.0008560**
Total		**3407.91**	**0.0424996**
Other Measurable Methods			
Shower timers (£1.10 each)	2522	2774.20	0.0029003
Gel Bags (£4.75 each)	18	85.50	0.0000004
Trigger Guns (£4.83 each)	20	96.60	0.0000400
Shower Heads (£27.90 each)	9	251.10	0.0000180
Education Depart (UKWIR)		57,326.75	0.7820000
Total		**60534.15**	**0.7849587**
Leaflets			
How water wise are you (0.10peach)	13988.00	1398.80	
Freezing Pipe (0.017p each)	7773	1321.41	
Total leaflets		**2720.21**	
PR items			
Bookmark- “Flo” kids (0.07p each)	16599	1161.93	
Game: Snakes and Ladders (0.18p each)	892	160.56	
Stop Tags (0.43p each)	8813	3789.59	
Tap cover (£4.66 each)	0	0.00	
Ice scraper (0.73p each)	212	154.76	
Thermometer (0.76p each)	660	501.60	
Total PR	**27,176**	**5768.44**	
Non Household			
School Audits(0.19p each)	602	114.38	0.0012040
Total		**72,545.09**	**0.8286623**

NI Water has a large range of leaflets that promote water efficiency, the distribution of these may also lead to increased water savings but at present these savings cannot be calculated, but the costs for this year is £2720.21

Assumed Savings

Household-Water Efficiency Methods = 0.0424996
Other Water Efficiency Methods = 0.7849587
Non Household-Water Efficiency Methods = 0.0012040
The total recorded savings are **= 0.8286623** Ml/d

The work of the Education Department has continued to significantly improve NI Water's water efficiency figure. This can be demonstrated through the behavioural chance activity which has led to our customers becoming more efficient in their use of water and the UKWIR method is now being used to quantify the water saving benefits for "softer measures" (2010 Reporters recommendation 1, (document reference)T1niw.R10 P1 S2).

The UKWIR spreadsheet WR25 "Estimating water saving calculator for baseline water efficiency" has been used. These activities have been apportioned between Medium and High Levels of engagement.

This is summarised in the following table:

Level of Engagement	**Ml/day**
High	0.487
Medium	0.295
Totals	**0.782**

Using the UKWIR Methodology, which as previously mentioned was recommended by the Reporter, has resulted in a general improvement in water efficiency measurement for the company.

Year	**Assumed Savings**
2009/10	0.048 Ml/day
2010/11	0.216 Ml/day
2011/12	0.264 M/lday
2012/13	0.227 M/lday
2013/14	0.219 Ml/day
2014/15	0.304 Ml/day
2015/16	0.299 Ml/day
2016/17	0.517 MI/day
2017/18	0.502 MI/day
2018/19	0.782 MI/day

NI Water as in previous years concentrated on the activity of the Waterbus which attributes to a continued high level of engagement and also a high level of savings for this element.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 2 KEY OUTPUTS
WATER SERVICE - 2 (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL**																				
1	Total connected properties at year end	000	1	818.0	A2	825.0	B2	828.1	A2	839.7	A2	852.4	A2	863.0	A2	874.3	A2				
2	Properties below reference level at start of year	nr	0	1,748	B3	1,420	B3	1,257	B3	1,082	B3	900	B3	862	B3	711	B3				
3	Properties below reference level at end of year	nr	0	1,420	B3	1,257	B3	1,082	B3	900	B3	862	B3	711	B3	719	B3				
4	Properties receiving low pressure but excluded from DG2	nr	0	0	B3	0	B3	0	B3	0	B3	0	B3	0	B3	0	B3				
4a	DG2 Properties with pressure below a surrogate level of 7.5m at end of year	nr	0	176	B2	169	B2	137	B2	126	B2	124	B2	103	B2	125	B2				
4b	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	297	B3	132	B3	186	B3	171	B3	40	B3	175	B3	176	B3				
4c	Average capex cost of permanent solutions to DG2 problems	£000/prop	1	0.8	C4	9.1	C4	8.2	B2	13.9	B2	26.8	B2	9.8	B2	4728.5	B2				
B	**DG3 PROPERTIES AFFECTED BY SUPPLY INTERRUPTIONS**																				
	(i) UNPLANNED INTERRUPTIONS																				
5	More than 3 hours	nr	0	53,458	B3	41,412	B3	112,653	B3	105,235	A3	90,094	A3	108,386	A3	58,816	A3				
6	More than 6 hours	nr	0	10,487	B3	6,742	B3	43,767	B3	8,699	A3	5,128	A3	6,097	A3	3,509	A3				
7	More than 12 hours	nr	0	2,607	B3	1,195	B3	25,693	B3	841	A3	494	A3	861	A3	308	A3				
8	More than 24 hours	nr	0	1,554	B3	12	B3	13,788	B3	32	A3	0	A3	0	A3	0	A3				
	(ii) PLANNED AND WARNED INTERRUPTIONS																				
9	More than 3 hours	nr	0	50,096	B3	35,468	B3	47,216	B3	33,929	A3	35,484	A3	38,225	A3	38,289	A3				
10	More than 6 hours	nr	0	20,674	B3	18,454	B3	19,127	B3	13,767	A3	13,247	A3	14,809	A3	7,313	A3				
11	More than 12 hours	nr	0	0	B3	0	B3	44	B3	0	A3	0	A3	0	A3	0	A3				
12	More than 24 hours	nr	0	0	B3	0	B3	0	B3	0	A3	0	A3	0	A3	0	A3				
	(iii) INTERRUPTIONS CAUSED BY THIRD PARTIES																				
13	More than 3 hours	nr	0	1,778	B3	2,452	B3	4,710	B3	4,739	A3	12,691	A3	4,078	A3	12,089	A3				
14	More than 6 hours	nr	0	561	B3	121	B3	974	B3	476	A3	842	A3	1,145	A3	2,780	A3				
15	More than 12 hours	nr	0	1	B3	33	B3	1	B3	0	A3	30	A3	193	A3	0	A3				
16	More than 24 hours	nr	0	0	B3	0	B3	0	B3	0	A3	0	A3	0	A3	0	A3				
	(iv) UNPLANNED INTERRUPTIONS (OVERRUNS OF PLANNED INTERRUPTIONS)																				
17	More than 6 hours	nr	0	311	B3	1,004	B3	2,521	B3	1,141	A3	1,611	A3	1,630	A3	159	A3				
18	More than 12 hours	nr	0	60	B3	20	B3	16	B3	159	A3	417	A3	1,107	A3	0	A3				
19	More than 24 hours	nr	0	0	B3	5	B3	0	B3	140	A3	0	A3	0	A3	0	A3				
C	**POPULATION**																				
20	Population (winter) (total)	000	2	1,842.61	C2	1,850.54	C2	1,862.72	C2	1,874.73	C2	1,887.10	C2	1,896.46	C2	1,900.66	C2				
D	**DG4 RESTRICTIONS ON USE OF WATER**																				
21	% population - hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	93.4	B2				
22	% population - drought orders	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	B2				
23	% population - sprinkler/unattended hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	93.4	B2				

Table 2 – Key Outputs - Water Service – 2

Line 1 - Total Connected Properties at Year End

NI Water's data on property counts and classifications is reported monthly from RapidXtra within the Rapid Property Summary (RPS). The data is extracted from the Diamond Warehouse via Microsoft SQL Server to produce the RPS report.

Our AIR19 methodology has remained consistent with previous years – using the automated Property Model tool to populate Table 2 figures (this was first introduced in AIR12 – the RPS as the input).

The RPS provides us with a snapshot at the end of each month in terms of net movement; however it currently does not support us in the explanation of gross movements within the data. The CSD Services MI & Data Team are currently exploring the use of Power BI to determine the gross movement.

Customer/Property information is updated through:

- BAU ('business as usual') customer contacts, such as new connection requests, customer move in/move outs, or
- through Data Quality initiatives/Projects, and/or
- Metering work streams e.g. UNHH (Selectives), Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water were required to install meters on all new household connections from April 2007. This practice has stopped as directed by a change in legislation, which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NI Water of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

The difference between the AIR18 and the AIR19 figures is 11,319. The breakdown can be explained as follows:

1. New Connections during the 2018/19 reporting year. The figures are based on data supplied by our Customer Connections Team and represent completed connections during the reporting year. The projections for New Connections remain in line with the agreed PC15 forecasts, however we have noted a downturn and will review mid-year (during the draft Principle Statement) to ascertain if projections should be changed.
2. Added as a result of a customer contact. i.e. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    (a) The adding of properties NI Water allegedly did not know about
    (b) The adding of duplicates as the customer's address could not be found on Rapid. Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time of New Connection to that of customer contact (street names can change in the early stages of site development).

3. Removal/reclassification of properties as a result of data quality initiatives/projects
    a. Duplicate properties
    b. Reclassification of properties that were recorded in error
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.

For NI Water, accurate property data is fundamental for many systems and processes, including customer service, metering, billing, consumption, leakage and Major Incident Planning & Response. The Rapid Customer Contact System contains the master property data for NI Water.

As Data Owner for Property Standing Data, The Head of CSD Services is responsible for the property standing data held by NI Water; this is monitored and managed through the Property Information Group (PIG). The CSD Services MI & Data Team chairs this group.

The role of PIG is to ensure that there is appropriate governance, controls and reporting for changes made to core data on the system. As Property Data Owners, we need to ensure the processes around creation, maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. Control is key for us; as such we have identified the systems, processes and people using property information across the business, alongside confirming data accuracy and endeavouring to reduce the opportunities for erroneous data entry and creation (such as the inability to recreate demolished properties or duplicate properties).

The issues under consideration were identified as of corporate relevance, therefore to ensure appropriate direction and governance the PIG was formalised. Key objectives include:

1. To agree a single consistent source of property data.
2. To ensure the source property data represents accurate, up-to-date information appropriate for use by the business.
    a. To understand and agree data primacy in respect of data updates from NI Water and external (Land & Property Services - LPS) sources
    b. To ensure the processes around creation (i.e. New Connections), maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. i.e. through CBC Data Validation (Phase 1, Phase 2, Phase 3, 105 Days DV)
    c. To co-ordinate property reconciliations between NI Water & external sources i.e. Data Sharing Agreements between NI Water & LPS, NI Water & Belfast City Council (BCC) etc. and understand the reasons and validity of any differences
    d. To understand and ensure the adequacy of long term procedures for database maintenance, including the updating of data standards and associated CDE M&M Plans
3. To ensure the reporting requirements for the business are met relating to data held on Rapid, particularly, but not exclusively, in respect of tariffs, leakage, Annual Information Returns (AIR) & Principle Statement (PS) returns.
4. Challenge the data in the areas of
    a. Data categorisation & structure
    b. Data robustness – i.e. where is our data good and where is there opportunity for improvement? Identify projects that could aid improvement
    c. Data alignment – both internally and externally. Internally between systems such as Rapid, Ellipse, GIS, Diamond, Netbase, IMS etc. Externally through data reconciliations, such as LPS above.

5. To agree measures to improve the quality and integrity of the data, particularly the key CDEs as monitored by IMU
6. To agree the content and frequency of reports required by NI Water.
7. To agree the quality checking criteria for the above data and reporting and develop a Quality Plan including the determination of responsibilities and audit trails.
8. To produce & circulate an 'operate and maintain' programme for property data to the business.

During 2018/19, the focus for PIG included analysis and action on:

- Volume of properties coming onto the Rapid billing system on a monthly basis
    - new connections
    - customer contact
    - project work
- Volume of properties coming off the Rapid billing system (demolished)
    - sample check to ensure reason for demolition has been noted and on system audit trail recorded
- Volume of properties amended on the Rapid billing system
    - In particular, address fields -> building number, street name, town and postcode
    - sampling to identify if the data changes are data improvement or data regression
    - if data regression, further analysis into the process is undertaken
- Review of access privileges
    - Rapid audit
    - Through monthly audit samples
    - Internal CRs require sign off from PIG as BAU
    - Working with Echo to review access privileges on an ongoing basis
- Interruptions to supply notices – returned mail
    - This returned mail was brought to the attention of LPS and include properties that LPS have classified as live properties despite being returned as 'no such address' etc.
    - The 2 way communication with LPS will help underpin our governance work and provide direction to the business on practices
- Car Parking Spaces
    - The group identified that 'car parking' spaces were being added to Rapid as properties. One of the project teams added them because they were live on LPS, however they are not physically a property, nor do they require a water supply, therefore this practice has now ceased.
    -

The PIG Strategy for 2019/20 will include the following:

- New Connections - A move to on-system reporting following the Business Improvement New Connections Review
- Rapid-POINTER Reconciliation - follow on actions to be worked through and benefits realised. i.e. Uploading of UPRNs from POINTER where a property can move from an A match to an A* match
- Running of a mini data cleanse project within the CSD Services MI & Data Team to prepare the Rapid property data for the switch on of system validations. There were 4 phases of system validation functionality introduced to Rapid as part of the CBC Implementation Project. Off system data cleanse is required before some of the system validation rules can be applied. The data will need prepared offline to ensure

accuracy and that it conforms to the system validation rules. It will then need tested before being uploaded to Rapid through the bulk upload tool. There will be some further testing to ensure all has uploaded correctly before the functionality is switched on.

- Data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – NDA has been signed off, data sharing project to commence during June 19 for a 12 month period.
- Continuation of the 2 way communication with LPS - This will help underpin our governance work and provide direction to the business on practices that will work alongside LPS
- Student Accommodation – further case studies on student accommodation re-development sites. How does Rapid hold these properties? Liaise with Belfast City Council to understand at what stage they can inform NI Water of properties that are to be re-developed as student accommodation.
- Test Meters – follow up on 'retain for review meters'
- Properties with 'no water supply' (no water/well water) – review and validate on a monthly basis

Annex A details the Line Methodology followed by the figure for Table 2 Line 1.

Line 2 – Properties below the reference level at start of year

The number of properties on the Register at the start of the year was 711, as reported in line 3 of the AIR17 submission.

Line 3 – Properties below the reference level at end of year

As per the regulatory guidance, as issued and directed by Utility Regulator, this line includes properties within a 10m height of service reservoirs, there are currently 65 DG2 properties located within 10m of the supplying SR.

It should be noted that NI Water will not be able to provide such properties with adequate pressure through normal hydraulics; however they will be included in the DG2 register. The final number of properties recognised as being below the reference level at year end is 719.

The year-end figure is the direct result of removals due to Company Action as well as additions identified throughout the year. Throughout this process a surrogate pressure of 15m head in the adjacent water main has been adopted as the reference level. All properties removed from the Register during the reporting period are supported by a report and appropriate logged data. The removals process is as per NI Water's methodology and is consistent with previous AIR submissions.

The reductions arising from capital schemes are captured within reports received following the completion of water main rehabilitation or infrastructure improvements. In total NI Water processed 3 DG2 Investigation Reports (DIR) resulting in 176 properties being removed from the DG2 register due to company action in AIR19, see Table 1 and scheme summaries below.

Regular updates of DG2 properties continue to be uploaded onto the CartoMAP system ensuring that this information is readily available throughout the company. This has proved to be of particular benefit to the Contact Centre to assist in the handling of low pressure complaints.

Table 1

Company Action Removal Scheme	DG2 Properties Removed
Mouchel DIR 2	44
Cornahaltie Lisnaskea	59
Cavanacaw Road	73
Total	**176**

Mouchel DIR2 – Mouchel DIR 2 work package covers Ballyhoy to Armagh DMA. This DMA consists of a total area of 12km^2 and contain 23.52km of mains length on the outskirts of the Armagh City. The area contained 44 DG2 properties which were investigated for successful improvement of pressure owing to works delivered via the MIMP South Watermains Rehabilitation Works Package. This Rehab resulted in the removal of 44 properties from the register.

Cornahaltie Lisnaskea DIR – This work package identified 60 properties on the DG2 register within 3 DMA's covering an area of 79km^2 and including mains length of 167km. As a result of works delivered through the WP40 Castor Bay Armagh, WP106 MIMP West and WP141 South East Phase 1 Watermains Rehabilitation Programme Works Packages the total number of 59 properties were removed from the register.

Cavanacaw Road DIR – This work package identified 81 properties on the DG2 register within 1 DMA covering an area of 37km2 and including a mains length of 86km. As a result of works delivered through the WP49 Armagh City and WP41 Seagahan Ph 1 Watermains Rehabilitation Programme Works Packages a number of 73 properties were removed from the register.

During AIR19 there were no instances of DG2 Properties being removed as a result of Better Information following investigation and logging, meaning all removals were completed as a result of operational improvements in the network.

There were a number of additions made to the register this year following information received from colleagues regarding a number of properties suffering from low pressure within multiple DMA's across the country. A selection of the DMAs affected included Ally hill Ednasop, Divernagh District, Edenaveys to Drumgaw and Brootally to Killylea. Following logging procedure 184 properties were added to the register.

The total DG2 movements during the year are summarised in Table 3 below.

Table 3

Year Start	**711**
Additions due to Better Information	184
Removals due to Company Action	176
Removals due to Better Information	0
DG2 Properties Remaining	**719**

Line 4 – Properties receiving low pressure but excluded from DG2

As per the Utility Regulator determination, properties within 10m are no longer excluded from the DG2 Register. Therefore there are currently zero properties that are justifiably covered by the exclusions as per the current guidance notes.
It should be noted that NI Water will not be able to provide such properties with adequate pressure through normal hydraulics.

Line 4a – DG2 properties with pressure below a surrogate level of 7.5m at end of year

A query of the DG2 register confirms that 125 properties experience a pressure below the 7.5m surrogate level.

Line 4b – DG2 properties at risk of low pressure removed from the risk register by Company Action

Calculation of the total number of properties removed as a direct result of Company Action is generally achieved by adding the properties identified by removal reports resulting from both Rehabilitation schemes and Infrastructure improvements.

Table 4

Removals Due to Company Action	Number
Rehabilitation Schemes	176
Infrastructure Improvements	0
Total	**176**

The final number of properties removed due to Company Action is recorded in Table 4 above as 176. This number alongside an exceedance of 29 on the AIR18 target means that NIW has surpassed the cumulative PC15 Target of 357 by 46.

Lag in Confirming Removal from Register

There is a time lag of approximately one year between the completion of the construction phase of a Work Package and confirmation that properties can be removed from the register, in general. There will be a longer lag in areas where there are multiple phases in a Work Package under construction, or a neighbouring Work Package that has a significant effect on the normal operation of the system. In general, the PPRA report for a multi-phase Work Package will be completed one year after the final phase of the Work Package is constructed.

Work Packages awaiting PPRA

Documentation listing the Work Packages awaiting the completion of PPRA reports identifies a number of DG2 properties to be removed during 2019/20 using predicted pressure from Hydraulic Modelling. The actual pressure will be confirmed by logging before formal removal of properties from the register. Table 5 below lists the Work Packages and the predicted number of properties identified for removal.

Table 5

Work Package Name	No. of Props to be Removed
Killylane	7
Dungonnell	3
Tardree	11
Tully	9
Lisburn South	35
Portavoe Donaghadee	33
Slieve Gullion	3
Divernagh	6
Purdys Lane Belfast	29
Altnahinch/Ballycastle	22
Total	**158**

Removals Pending

The total number of properties planned for removal during the 19/20 reporting year from work packages awaiting PPRA is 158.

Work Packages Outstanding

Table 6

Work Packages Outstanding	No. of Props to be Removed
South_South East	26
Foy Lane Portadown	5
Total	**31**

There are currently outstanding Work Packages to be completed with the possibility of removal in the 19/20 reporting year. This includes the areas detailed in table 6. The completion of these packages would bring the total removals during the 18/19 year to 189. Any removals (Planned or outstanding) however are subject to the completion of rehabilitation works, collation of pressure data and submission of completed reports.

The cumulative PC15 target going into 19/20 is 675; minus the 46 which had has surpassed that target to date means a 19/20 removal target of 113.

With reference to previous discussions with the reporter, future planning includes ongoing development of a pressure management structure for the network with increased pressure monitoring. This will in turn fulfil the company strategy to enhance understanding and create a dynamic system which will provide companywide benefits.

Lines 5-19 - DG3 Properties Affected by Supply Interruptions

The rules governing the recording and collation of data for the DG3 Register are explained in the DG3 Levels of Service Methodology. DG3 procedures were established and implemented by NI Water in April 2007.

Note: This commentary includes figures based on a Total Connected Properties at Year End figure of **874,307** as confirmed by CSD Services in AIR19 Table 2 Line 1.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figures

Unplanned, Unwarned Interruptions

AIR	DG3 Properties Affected	2016/17	2017/18 (inc. Aug severe flooding)	2017/18 (exc. Aug severe flooding)	2018/19
Table 2: Line 5	More than 3 hours	90,094	108,386	104,696	**58,816**
Table 2: Line 6	More than 6 hours	5,128	6,097	4,643	**3,509**
Table 2: Line 7	More than 12 hours	494	861	190	**308**
Table 2: Line 8	More than 24 hours	0	0	0	**0**

The AIR19 number of properties affected by unplanned, unwarned interruptions that lasted more than 3 hours was the lowest since the AIR14 outturn of 41,412. The main reason for this significant reduction was a change in methodology. In the past, unplanned interruption events that lasted 6 hours or less were not always reviewed to the same extent as those events used to determine the Company's DG3 KPI performance i.e. events lasting more than 6 hours. But during 2018/19, NI Water undertook a detailed review of its unplanned interruption events with durations of between 3 hours and 6 hours and property counts in excess of 500.

The review was primarily aimed at improving the accuracy of the Company's Minutes of Lost Supply per Property outturn, as well as establishing an accurate starting point on which to base future target reductions. The review involved a total of 41 events and the original combined >3hr property count for those events was 55,720. Following review, the combined property count for the 41 events was 21,668, a reduction of 34,052 *(61%)*. 16 of the 41 events remained unchanged.

The reduction is likely to be typical of the degree to which this measure has been over-reported since the introduction of the Incident Management System (IMS) in July 2014 and goes some way towards explaining why the last three outturns have been so high. As the Company intends to continue with the review process, the issue should be addressed and the accuracy of future outturns should improve.

If a review had not been carried out, the AIR19 outturn would have been 58,816 + 34,052 = 92,868 and would have been similar to the average outturn of 100,008 for the previous 3 years. If a review had been carried out ahead of reporting the historical outturns, they are more likely to have been as listed in the following table.

	2014/15 Inc. Ind Action	2014/15 Exc. Ind Action	2015/16	2016/17	2017/18 Inc. Aug Flooding	2017/18 Exc. Aug Flooding
Events Reviewed	27	19	41	31	38	38
Original Properties	32,152	23,467	56,238	34,208	40,214	40,214
Correction Factor	-61.11%	-61.11%	-61.11%	-61.11%	-61.11%	-61.11%
Estimated Reduction	-19,649	-14,341	-34,369	-20,905	-24,576	-24,576
Original Outturn	112,653	72,859	105,235	90,094	108,386	104,696
Revised Outturn	**93,004**	**58,518**	**70,866**	**69,189**	**83,810**	**80,120**

Having applied a reduction to the historical outturns excluding atypical factors, the in-year variances can be more reliably assessed and attributed to their associated causes. The 2018/19 outturn of 58,816 was similar to the 2014/15 outturn with the impact of industrial action removed. In 2015/16, the Company dealt with a number of difficult repairs in rural areas with no options to rezone. The increase in 2018/17 was due in part to the severe flooding event in August but also, to the cold weather experienced at the start of March and to several events that occurred outside normal working hours in May.

17% of the 'no water' complaints received in the last 5 years were received in 2018/19 compared to 16% of properties affected by unplanned interruptions that lasted more than 3 hours. As these two percentages are similar and the data sources are different, this is good evidence that the 2018/19 outturn number of properties is consistent with expectations.

As well as the introduction of a detailed review process for unplanned interruption events with durations of between 3 hours and 6 hours and property counts in excess of 500, NI Water also trialled a new valving app in 2018/19. The purpose of the valving app is to enable repair crews to provide real-time information through their mobile phones, such as the valve-off/valve-on times associated with the isolation and repair of burst mains. Information communicated in this way should help to improve the accuracy of interruption durations and strengthen the audit trail associated with DG3.

The Company also opened a new training facility at its Learning and Development Centre in Antrim. The purpose of the training facility is to educate NI Water staff and contractors alike who carry out work on the distribution network in the importance of adopting a 'calm' method of working to reduce the risk of airlocks and hence, restoration delays.

Progress is also being made through ACE projects aimed at repair improvements, non-disruptive repair techniques, process/system improvements, Rehab improvements, asset/technical improvements and ITS Strategy. And the Company continues to review its Service Failure Analysis Reports with a view to improving methods of working and assets.

In 2018/19, 3,509 properties experienced an unplanned, unwarned interruption that lasted more than 6 hours and 308 properties experienced an unplanned, unwarned interruption that lasted more than 12 hours. Both outturns were the lowest since regulatory reporting commenced in 2007/08. It was an unexceptional year in terms of major incidents and the majority of interruptions relating to the summer high demand were limited to within 6 hours' duration. The annual number of supply interruption events identified from a review of upward reports was lower than usual, 27 compared to an average of 42 for the previous 4 years. In the past, atypical events have had a significant impact on these measures.

For the third year in succession, no properties experienced an unplanned, unwarned interruption of more than 24 hours.

Planned and Warned Interruptions: Number of Events (All inc. WMRP)

DG3 Interruption Events	2016/17	2017/18	2018/19
More than 3 hours	450	354	**269**
More than 6 hours	221	108	**33**
More than 12 hours	0	0	**0**
More than 24 hours	0	0	**0**

The table above relates to annual numbers of planned and warned interruption events.

In 2018/19, 269 planned and warned interruptions lasted more than 3 hours of which 124 (46%) were related to the Water Mains Rehabilitation Programme (WMRP). During the same period, 33 planned and warned interruptions lasted more than 6 hours of which 24 (73%) were associated with mains rehabilitation.

Planned and Warned Interruptions: Properties Affected (All inc. WMRP)

AIR	DG3 Properties Affected	2016/17	2017/18	2018/19
Table 2: Line 9	More than 3 hours	35,484	38,225	**38,289**
Table 2: Line 10	More than 6 hours	13,247	14,809	**7,313**
Table 2: Line 11	More than 12 hours	0	0	**0**
Table 2: Line 12	More than 24 hours	0	0	**0**

The table above relates to annual numbers of properties affected by planned and warned interruption events.

In 2018/19, 38,289 properties were affected by planned and warned interruptions that lasted more than 3 hours of which 25,721 (67%) were related to the Water Mains Rehabilitation Programme (WMRP). During the same period, 7,313 properties were affected by planned and warned interruptions that lasted more than 6 hours of which 6,059 (83%) were associated with mains rehabilitation.

The three most recent 'more than 3 hours' outturns are very similar but the 2018/19 'more than 6 hours' outturn is around half that of the previous two years, indicating that the average

duration of interruption events has reduced. In 2016/17 and 2017/18, 37% and 39% of properties that experienced an interruption of between 3 and 6 hours went on to experience an interruption of between 6 and 12 hours. But in 2018/19, this percentage reduced to 19%. This demonstrates NI Water's continued commitment to reducing the impact of interruptions on its customers. The 2018/19 'more than 6 hours' outturn of 7,313 was the lowest since regulating reporting commenced in 2007/08.

Planned and Warned Interruptions: Properties and Events (WMRP only)

Time Band		**2016/17**	**2017/18**	**2018/19**
More than 3 hours	Properties	20,828	14,863	**25,721**
	Events	332	168	**124**
	Properties per Event	63	88	**207**
More than 6 hours	Properties	10,119	7,076	**6,059**
	Events	202	81	**24**
	Properties per Event	50	87	**252**

The table above relates to planned and warned interruptions associated only with the Water Mains Rehabilitation Programme.

The increase in the last year in the annual number of properties affected for more than 3 hours is consistent with an increase in overall meterage installed under the Water Mains Rehabilitation Programme. The water main distribution meterage installed in 2018/19 was 167km compared to 126km in 2017/18, 163km in 2016/17 and 112km in 2015/16.

The Company's ongoing policy to minimise disruption to its customers' water supply has resulted in a reduction in the annual number of events lasting more than 6 hours and more interruptions to supply less than 6 hours.

Increases in the number of properties affected per event for more than 3 hours and more than 6 hours were related to interruptions associated with the completion of work packages in densely populated urban areas.

For the fourth year in succession, no properties experienced a planned and warned interruption of more than 12 hours. Whenever possible, NI Water tries to avoid planned and warned interruptions exceeding 12 hours.

No properties have experienced a planned and warned interruption of more than 24 hours since regulatory reporting commenced in 2007/08.

Interruptions caused by Third Parties

AIR	**DG3 Properties Affected**	**2016/17**	**2017/18**	**2018/19**
Table 2: Line 13	More than 3 hours	12,691	4,078	**12,089**
Table 2: Line 14	More than 6 hours	842	1,145	**2,780**
Table 2: Line 15	More than 12 hours	30	193	**0**
Table 2: Line 16	More than 24 hours	0	0	**0**

In 2018/19, 12,089 properties experienced an unplanned interruption caused by a third party that lasted more than 3 hours. It was the second highest outturn since regulatory reporting commenced in 2007/08. The outturn was similar to the 2016/17 outturn of 12,691. The outturn number of 41 events was also similar to the 2016/17 outturn of 42. As NI Water has no control over such events, the numbers continue to reflect the amount of work undertaken by third parties around the province that presents a risk of damage to the water mains.

This year, the Company can offer the added assurance that any events involving more than 500 properties have been subject to a detailed review to validate the property counts and durations. 6 of the 41 events in the year involved more than 500 properties, accounting for 9,246 properties *(76%)* of the outturn.

2 of the 6 events occurred in June 2018 and related to hydrant abuse which continues to be a problem for the Company, particular during periods of good weather. Of the remaining 4 events, the most significant in terms of minutes of lost supply per property occurred on 17 August 2018 when a building contractor damaged a main in Dromore. 1,594 properties were affected by the incident and the event was the subject of Upward Report 007.

In 2018/19, 2,780 properties experienced an unplanned interruption caused by a third party that lasted more than 6 hours. It was the highest outturn since regulatory reporting commenced in 2007/08 and more than double that of the 2017/18 outturn of 1,145. 11 events lasted more than 6 hours, the most significant of which occurred on 14th January 2019 when a building contractor damaged a main in Clough. 1,250 properties were affected by the incident, 45% of the outturn.

For the first year since 2015/16, no properties experienced an unplanned interruption caused by a third party than lasted more than 12 hours.

For the eighth year in succession, no properties experienced an unplanned interruption caused by a third party that lasted more than 24 hours.

Unplanned Interruptions (Overruns of Planned Interruptions)

AIR	DG3 Properties Affected	2016/17	2017/18	2018/19
Table 2: Line 17	More than 6 hours	1,611	1,630	**159**
Table 2: Line 18	More than 12 hours	417	1,107	**0**
Table 2: Line 19	More than 24 hours	0	0	**0**

In 2018/19, the number of properties that experienced an overrun of a planned and warned interruption that lasted more than 6 hours (159) was the lowest since regulating reporting commenced in 2007/08. This reflects the amount of planning that goes on in advance of warned events to ensure that enough time is allocated to their completion and that they do not overrun thus causing an inconvenience to customers.

	2016/17			2017/18			2018/19		
	Planned >6hrs	Planned Which Overran	%	Planned >6hrs	Planned Which Overran	%	**Planned >6hrs**	**Planned Which Overran**	**%**
Events	238	18	7.14	390	11	2.82	**37**	**5**	**13.16**
Properties	14,858	1,611	10.84	16,439	1,630	9.92	**7,472**	**159**	**2.13**

The table above provides a summary of the outturn numbers of planned and warned interruption events in the last 3 years, including those that overran, and the corresponding numbers of affected properties. The reduction in outturn reflects a significant decrease in the number of events that lasted more than six hours, itself a result of the Company's ongoing policy to minimise disruption to the water supply.

For the first year since regulating reporting commenced in 2007/08, no properties experienced an overrun of a planned and warned interruption that lasted more than 12 hours.

For the third year in succession, no properties experienced an overrun of a planned and warned interruption that lasted more than 24 hours.

Additional information on performance against alternative standards

NI Water has three Key Performance Indicators relating to Supply Interruptions (DG3):-

Number of properties experiencing unplanned, unwarned interruptions (expressed as a percentage of households) in excess of:
1a) 6 hours, 1b) 12 hours, 1c) 24 hours. KPIs 1a and 1c were first introduced in April 2007.

The following table provides details of the outturns for the last three years together with the corresponding yearend targets.

Interrupt Category	16/17 Outturn		16/17 KPI Target		17/18 Outturn		17/18 KPI Target		**18/19 Outturn**		**18/19 KPI Target**	
	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	**(Props)**	**(%)**	**(Props)**	**(%)**
>6 hrs	5,128	0.602	7,148	0.839	6,097	0.706	7,073	0.820	**3,509**	**0.401**	**6,973**	**0.798**
>12 hrs	494	0.058	1,450	0.170	861	0.100	1,400	0.162	**308**	**0.035**	**1,350**	**0.154**
>24 hrs	0	0.000	80	0.009	0	0.000	80	0.009	**0**	**0.000**	**80**	**0.009**

Note: Percentage outturns in above table are based on total connected properties as follows: 852,399 (AIR17); 862,988 (AIR18); 874,307 (AIR19)

The 2018/19 outturns for properties affected by unplanned, unwarned interruptions confirm that for the third year in succession, NI Water has achieved all three DG3 KPI targets. The >6hrs outturn of 3,509 was the lowest since regulating reporting commenced in 2007/08. The >12hrs outturn of 308 was also the lowest since regulating reporting commenced. And for the third year in succession, no properties experienced an unplanned, unwarned interruption of more than 24 hours. Apart from the summer increased demand, 2018/19 was an unexceptional year in terms of major incidents involving supply interruptions. The number of upward reports relating to such incidents was lower than in previous years and this is reflected in the Company's favourable outturns and hence, performance against its targets.

Although June and July 2018 saw an increase in demand associated with the summer weather, the impact was limited to the >3hrs time band and 2018/19 remained insignificant in terms of atypical performance. *(For further details, see section of commentary on Major Incidents during the Report Year.)*

In 2017/18, heavy rainfall in August in the North West of the province and heavy snowfall and cold temperatures in March in parts of Northern Ireland had an impact on performance.

Properties which suffered an interruption to supply where NI Water considers that customers would not have noticed the loss of service, for example because it occurred at night

Assumption: For the purposes of reporting on this requirement of the commentary, NI Water has considered only those interruptions lasting longer than 3 hours and has assumed that 'night' falls between the hours of 12 midnight and 7am.

The following table provides a summary of those interruption records in 2018/19 whose Interruption Start Date/Time and Supply Restored Date/Time fell within the hours of 12 midnight and 7am.

	Interrupt Type	Interrupt No.	Interruption Start		Supply Restored		Duration	Properties Affected		
			Date	Time	Date	Time		>0 hrs	>3 hrs	>6 hrs
1	Unplanned	Event 243967; DG3 171703	08/05/18	00:00	08/05/18	04:00	4 Hrs 0 Mins	35	35	0
2	Unplanned	Event 244025; DG3 171755	15/05/18	01:50	15/05/18	05:30	3 Hrs 40 Mins	45	45	0
3	Unplanned	Event 244454; DG3 172087	27/06/18	03:00	27/06/18	06:15	3 Hrs 15 Mins	160	160	0
4	Unplanned	Event 244997; DG3 172503	17/08/18	01:00	17/08/18	05:20	4 Hrs 20 Mins	105	105	0
5	Unplanned	Event 245012; DG3 172517	20/08/18	00:10	20/08/18	04:45	4 Hrs 35 Mins	48	48	0
6	Planned	CAD018	22/11/18	23:00	23/11/18	02:30	3 Hrs 30 Mins	99	99	0
7	Planned	CAD009	13/12/18	01:10	13/12/18	04:50	3 Hrs 40 Mins	835	835	0
8	Unplanned	Event 256208; DG3 183398	17/12/18	00:19	17/12/18	03:20	3 Hrs 1 Min	37	37	0
9	Unplanned	Event 256878; DG3 183701	01/02/19	00:30	01/02/19	03:40	3 Hrs 10 Mins	36	36	0
10	Unplanned	Event 256908; DG3 183719	03/02/19	00:00	03/02/19	03:20	3 Hrs 20 Mins	23	23	0
11	Unplanned	Event 256917; DG3 183723	04/02/19	03:00	04/02/19	06:30	3 Hrs 30 Mins	12	12	0
12	Unplanned	Event 257467; DG3 184102	30/03/19	00:42	30/03/19	05:25	4 Hrs 43 Mins	44	44	0
			30/03/19	01:38	30/03/19	05:25	3 Hrs 47 Mins	5	5	0

Both Customer Field Services and the Leakage function are responsible for interruptions to supply that are of a relatively short duration. Interruptions lasting less than 1 hour are not, as a rule, recorded by NI Water. Routine step tests are carried out at night to reduce the impact of loss of supply to customers and normally last no longer than 3 hours.

10 unplanned interruption records and 2 planned and warned interruption records have been identified where customers would not have noticed the loss of service because it occurred at night. All 12 of the interruptions lasted 6 hours or less. The number of properties affected by the unplanned interruptions was 550 representing 0.94% of the total number of properties that experienced an unplanned interruption lasting more than 3 hours in 2018/19. The number of properties affected by planned and warned interruptions was 934 representing 2.44% of the total number of properties that experienced a planned and warned interruption lasting more than 3 hours in 2018/19.

Unplanned: (550 / 58,816) x 100 = **0.94%**
Planned and Warned: (934 / 38,289) x 100 = **2.44%**

NI Water reported in its AIR18 commentary that there were 4 unplanned interruptions and 1 planned and warned interruption where customers would not have noticed the loss of service because it occurred at night. The number of properties affected by unplanned interruptions was 258 representing 0.24% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2017/18. The number of properties affected by planned and warned interruptions was 11 representing 0.03% of the total number of properties experiencing planned and warned interruptions lasting more than 3 hours in 2017/18.

Number of overruns of planned and warned interruptions lasting between 3 and 6 hours

The following table provides a summary of the **2** overruns of planned and warned interruptions lasting between 3 and 6 hours in 2018/19.

	Interrupt. No.	Month	Duration	Properties Affected		Duration Of Overrun
				> 0 hrs	> 3 hrs	
1	Event 245081; DG3 ID 172572	Aug 18	4 Hrs 45 Mins	24	24	0 Hrs 45 Mins
2	CAD009	Feb 19	5 Hrs 25 Mins	16	16	1 Hr 10 Mins

In 2018/19, there were **2** overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these interruptions was:
24 + 16 = **40**

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (30,976).

T2: L9 = 38,289; T2: L10 = 7,313; 38,289 - 7,313 = **30,976**

NI Water reported in its AIR18 commentary that there were 5 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 195.

Number of properties affected by interruptions caused by loss of electrical supply

Interrupt. No.	Date of Incident	Duration	Properties Affected					Interruption Type	Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs		
Event 243615; DG3 ID 171468	05/04/18	5 Hrs 30 Mins	9	9	0	0	0	Planned & Warned	Planned power outage
Event 244342; DG3 ID 171999	14/06/18	3 Hrs 49 Mins	194	194	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 255134; DG3 ID 182623	05/09/18	9 Hrs 0 Mins	17	17	17	0	0	Planned & Warned	Planned power outage
Event 255187; DG3 ID 182653	10/09/18	5 Hrs 30 Mins	165	165	0	0	0	Unplanned, Unwarned	Planned power outage
Event 255273; DG3 ID 182727	20/09/18	3 Hrs 11 Mins	27	27	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 255276; DG3 ID 182730	20/09/18	3 Hrs 25 Mins	196	196	0	0	0	Unplanned, Unwarned	Planned power outage
Event 255312; DG3 ID 182763	25/09/18	6 Hrs 44 Mins	4	4	4	0	0	Unplanned, Unwarned	Electricity supply failure
		3 Hrs 30 Mins	6	6	0	0	0		
		2 Hrs 30 Mins	6	0	0	0	0		
		2 Hrs 30 Mins	6	0	0	0	0		
		2 Hrs 0 Mins	13	0	0	0	0		
		2 Hrs 0 Mins	5	0	0	0	0		
		2 Hrs 0 Mins	2	0	0	0	0		
		1 Hrs 0 Mins	7	0	0	0	0		
		1 Hrs 30 Mins	1	0	0	0	0		
Event 255545; DG3 ID 182924	17/10/18	4 Hrs 20 Mins	33	33	0	0	0	Unplanned, Unwarned	Planned power outage
Event 255790; DG3 ID 183106	07/11/18	5 Hrs 1 Min	2,409	2,409	0	0	0	Unplanned, Unwarned	Planned power outage
Event 256151; DG3 ID 183367	12/12/18	10 Hrs 25 Mins	15	15	15	0	0	Unplanned, Unwarned	Electricity supply failure
Event 256824; DG3 ID 183665	27/01/19	6 Hrs 20 Mins	30	30	30	0	0	Unplanned, Unwarned	Planned power outage

Interrupt. No.	Date of Incident	Duration	Properties Affected					Interruption Type	Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs		
Event 257009; DG3 ID 183783	08/02/19	8 Hrs 58 Mins	2	2	2	0	0	Unplanned, Unwarned	Electricity supply failure
		7 Hrs 48 Mins	14	14	14	0	0	Unplanned, Unwarned	
Event 257334; DG3 ID 184002	12/03/19	5 Hrs 53 Mins	99	99	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 257343; DG3 ID 184006	13/03/19	8 Hrs 42 Mins	6	6	6	0	0	Unplanned, Unwarned	Electricity supply failure

The table on the previous page provides a summary of the 7 records in 2018/19 relating to unplanned, unwarned water supply interruptions caused by electricity supply failures lasting more than 3 hours. Also included are 7 records relating to planned electricity supply outages, 2 of which resulted in planned and warned water supply interruptions and 5 of which resulted in unplanned water supply interruptions, each with durations of more than 3 hours.

No properties experienced an interruption of more than 12 hours as a result of any of the incidents.

The most significant incident in terms of numbers of properties affected occurred following a planned power outage when telemetry was lost to Carrigenagh SR from 09:00 to 17:00 on 7th November. The water in the reservoir dropped to a very low level as the inlet valve had remained closed. As a result of the incident, 2,409 properties experienced an unplanned interruption of around 5 hours. The event was the subject of **Upward Report 015**.

The two events on 20th September were related to Storm Ali.

Percentage impact of interruptions caused by loss of electrical supply on annual outturns

	>3 Hrs	>6 Hrs	>12 Hrs	>24 Hrs
Number of Properties Affected by Unplanned, Unwarned Water Supply Interruptions caused by Electricity Supply Failures	367	41	0	0
Number of Properties Affected by Unplanned, Unwarned Interruptions	58,696	3,509	308	0
Percentage Impact	0.63%	1.17%	0.00%	0.00%

The impact of the electricity supply failures was greatest on the >6hr outturn, accounting for 1.17% of the total number of properties affected by unplanned interruptions. The 2017/18 percentage was 0.05%.

Percentage impact of interruptions caused by loss of electrical supply on target compliance

	>6 Hrs	>12 Hrs	>24 Hrs
Percentage of Connected Properties Affected by Electricity Supply Failures	0.005%	0.000%	0.000%
KPI Target	0.808%	0.156%	0.009%
Percentage of Annual Target	0.006%	0.000%	0.000%

The impact of the electricity supply failures on KPI target compliance was insignificant. The 2017/18 impact was negligible.

Major incidents during the report year that NI Water believes adversely affected its DG3 performance

The following table provides a summary of the **27** supply interruption incidents during 2018/19 that lasted more than 3 hours and were mentioned in the Company's Upward Reports. *For full details of these incidents, please refer to the Upward Reports.*

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
001	Event 243895; DG3 171648	29/04/18	Burst main, Ballyculter Road, Downpatrick	10 Hrs 30 Mins	13	13	13	0	0	3
				8 Hrs 58 Mins	14	14	14	0	0	
002	Event 244001; DG3 171821	13/05/18	Two burst mains in same DMA in 12 hour period - Drumramer Road, Ahoghill and Glebe Road, Ahoghill	4 Hrs 48 Mins	7	7	0	0	0	3
				4 Hrs 41 Mins	28	28	0	0	0	
				4 Hrs 30 Mins	4	4	0	0	0	
				3 Hrs 52 Mins	35	35	0	0	0	
				3 Hrs 38 Mins	34	34	0	0	0	
				2 Hrs 29 Mins	3	0	0	0	0	
				2 Hrs 2 Mins	25	0	0	0	0	
				1 Hrs 5 Mins	27	0	0	0	0	
				0 Hrs 57 Mins	29	0	0	0	0	
	Event 244004; DG3 171881			Varies – Max. 4 Hrs 34 Mins	328	216	0	0	0	
003	Event 244151, DG3 171845	26/05/18	Burst main on three consecutive days, Brookmount Road, Moneymore	4 Hrs 12 Mins	29	29	0	0	0	Precautionary
	Event 244152, DG3 171847	27/05/18		2 Hrs 15 Mins	39	0	0	0	0	
	Event 244155; DG3 171848	28/05/18		4 Hrs 13 Mins	30	30	0	0	0	
004	Event 244212; DG3 171900	02/06/18	Burst main, Meenan Drive, Edenballymore	20 Hrs 22 Mins	13	13	13	13	0	3
005	Event 244215; DG3 172264	03/06/18	Burst main, Whisker Road, Sion Mills	3 Hrs 15 Mins	1	1	0	0	0	3
006	**Various**	**June 18 / July 18**	**Increased demand due to summer weather** *(excluding related bursts)*	**Various**	**2,374**	**1,538**	**28**	**0**	**0**	**1**
			(All burst events >3hrs of which a proportion were related to		8,351	7,869	156	13	0	

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
			pressure increases around the network)							
007	Event 245004; DG3 172512	17/08/18	Third party damaged main, Ballymacormick Road, Dromore	5 Hrs 45 Mins	1,594	1,594	0	0	0	3
008	Event 245011; DG3 172516	19/08/18	Burst main, Blunnick Road, Enniskillen	3 Hrs 26 Mins	429	429	0	0	0	Precautionary
009	**Event 245019; DG3 172530**	**21/08/18**	**Three bursts on Killylane – Glenburn trunk main**	**Varies – Max. 11 Hrs 37 Mins**	**1,086**	**1,079**	**1,016**	**0**	**0**	**3**
	Event 245033; DG3 172534			**Varies – Max. 7 Hrs 12 Mins**	**647**	**632**	**97**	**0**	**0**	
010	Event 255181; DG3 182644	08/09/18	Third party damaged main, Farriter Road, Dungannon	5 Hrs 25 Mins	46	46	0	0	0	3
011	Event 255184; DG3 182647	09/09/18	Burst main, Yellow Road, Hilltown	5 Hrs 40 Mins	784	784	0	0	0	3
012	Event 255151; DG3 182625	05/09/18	Burst main, Sperrin View, Magherafelt	11 Hrs 10 Mins	1	1	1	0	0	Precautionary
013	**Event 255291; DG3 182743**	**22/09/18**	**Two bursts on main in Dunmurry – Stewartstown Road and Helens Wood**	**15 Hrs 41 Mins**	**225**	**225**	**225**	**225**	**0**	**3**
				8 Hrs 36 Mins	**11**	**11**	**11**	**0**	**0**	
				7 Hrs 24 Mins	**7**	**7**	**7**	**0**	**0**	
	Event 255296; DG3 182745			**15 Hrs 41 Mins**	**36**	**36**	**36**	**36**	**0**	
				4 Hrs 47 Mins	**7**	**7**	**0**	**0**	**0**	
014	Event 255608; DG3 183255	23/10/18	Third party damaged main, Aughrim Road, Magherafelt	7 Hrs 36 Mins	422	422	422	0	0	3
015	Event 255790; DG3 183106	07/11/18	Power outage, Hillside Drive, Kilkeel	5 Hrs 1 Min	2,409	2,409	0	0	0	3
016	Event 255973; DG3 183247	23/11/18	Burst main, Towncastle Road, Strabane	5 Hrs 45 Mins	10	10	0	0	0	3
017	Event 255978; DG3 183251	25/11/18	Burst main, Gortmerron View, Dungannon	7 Hrs 0 Mins	28	28	28	0	0	3
018	Event 256067; DG3 183310	04/12/18	Burst main, Mulnavoo Road, Draperstown	3 Hrs 46 Mins	268	268	0	0	0	3

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
019	Event 256287; DG3 183460	27/12/18	Burst main, Tullyvar TWPS - Tullywinny Road, Ballygawley	7 Hrs 53 Mins	144	144	144	0	0	3
020	Event 256289; DG3 183466	28/12/18	Burst main, Castle Meadows, Carrowdore	5 Hrs 50 Mins	43	43	0	0	0	3
021	Event 256690; DG3 183568	16/01/19	Burst main, Loughries Road, Newtownards	3 Hrs 40 Mins	10	10	0	0	0	3
022	Event 257112; DG3 183859	18/02/19	Burst main, Moneyneany Road, Draperstown	4 Hrs 45 Mins	185	185	0	0	0	3
023	**Event 257108; DG3 183860**	**18/02/19**	**Burst main, Manse Road, Newtownabbey**	**8 Hrs 0 Mins**	**648**	**648**	**648**	**0**	**0**	**3**
	Event 257113; DG3 183858	**18/02/19**		**4 Hrs 40 Mins**	**62**	**62**	**0**	**0**	**0**	
024	Event 257132; DG3 183870	20/02/19	Burst main, Newry Road, Hilltown	4 Hrs 0 Mins	662	662	0	0	0	Precautionary
025	Event 257277; DG3 183966	07/03/19	Burst main, Stewartstown Road, Belfast	5 Hrs 30 Mins	65	65	0	0	0	Precautionary
026	Event 257337; DG3 184000	12/03/19	Burst main, Moydamlaght Road, Draperstown	4 Hrs 10 Mins	240	240	0	0	0	3
027	Event 257343; DG3 184006	13/03/19	Electricity Supply Failure, Carrickmannon Road, Ballygowan	8 Hrs 42 Mins	6	6	6	0	0	3

In the years prior to 2017/18, NI Water assumed a monthly target allowance of one seventeenth of the full year target from April to October and a monthly target allowance of two seventeenths of the full year target from November to March. The allowance was doubled from November to March to account for freeze-thaw conditions and an associated rise in the numbers of bursts.

Following a review of annual performance profiles, the decision was taken in 2017/18 to opt for a straight-line target profile i.e. the same monthly target allowance every month. The target profile remained straight for 2018/19.

The 2018/19 KPI targets are listed below as percentages and numbers of total connected properties, together with the corresponding monthly target allowances.

KPI	2018/19 Target		Monthly Target Allowance Apr to Mar	
	%	Properties	%	Properties
>6hrs	0.798	6,973	0.066	581
>12hrs	0.154	1,350	0.013	113
>24hrs	0.009	80	0.001	7

In order to determine the unplanned interruption events that had the greatest negative impact on performance in 2018/19, the Company compared the monthly actuals with the three KPI target profiles and identified **3** instances where a target was exceeded. These instances are highlighted in bold text in the table below.

		Aug 18	Sep 18	Feb 19
>6 hour	Actual	**1,135**	304	**809**
	Target	581	581	581
>12 hour	Actual	0	**261**	0
	Target	113	113	113
>24 hour	Actual	0	0	0
	Target	7	7	7

The Company then reviewed its DG3 Register and identified the incidents responsible for the underperformance. The incidents are summarised below.

Major Incidents

Three bursts on Killylane – Glenburn trunk main

(*Ref: IMS Event ID 245019; DG3 ID 172530 & IMS Event ID 245033; DG3 ID 172534)*

On 21st August 2018, during the early hours of the morning, a burst occurred on the Killylane-Glenburn 10" SI trunk main. Re-zoning was not an option. This was the first of three separate bursts to occur on the main over a 15 hour-period. Approximately 70% of properties in Killylane-Glenburn DMA were affected.

The first burst was in a field and difficult to locate. The second burst was located in the middle of a small forest and trees had to be cleared before the repair could be carried out. The area was difficult to reach with the repair equipment. It was not possible to check the soundness of the first repair until the second repair was complete.
Throughout the incident, properties in Ballybracken SR supply zone were kept in supply, due to tankering operations. The first burst was repaired at around 13:30, the second at

around 16:30 and the third at around 20:30. It took 2 to 3 hours for supplies to return to normal, once recharging of the main commenced. The incident was the subject of **Upward Report 009**

The impact of this incident in terms of percentages of connected properties affected was 0.129% >6hrs.

Two bursts on main in Dunmurry – Stewartstown Road and Helens Wood

(Ref: IMS Event ID 255291; DG3 ID 182743 & IMS Event 255296; DG3 ID 182745)

On 22nd September 2018, two bursts involving split pipes occurred at separate locations on a 150mm PVC main at Stewartstown Road, Dunmurry.

The first burst occurred around 06:00, close to the Glider bus lane and restricted how work could be carried out. Rezoning capabilities were also hampered. Repairs commenced around 9am and involved the replacement of approximately 7 metres of pipe. Repairs were completed by 19:30 and the main recharged. The majority of properties were back in supply by 20:00 with approximately 30 properties in the Helens Wood area remaining off supply.

The second burst occurred during valving off of the original burst. Repairs commenced around 18:30 and involved the replacement of approximately 9m section of pipe. Repairs were completed at 22:15 with supplies being restored to properties in the Helens Wood area.

The incident was the subject of **Upward Report 013**.

The impact of this incident in terms of percentages of connected properties affected was 0.032% >6hrs and 0.030% >12hrs.

Burst main, Manse Road, Newtownabbey

(Ref: IMS Event ID 257108; DG3 ID 183860 & IMS Event 257113; DG3 ID 183858)

On 18th February 2019, a burst on an 8" PVC main occurred at Manse Road, Templepatrick. The burst affected properties in Westgrove DMA which is supplied by Lylehill South SR. The area was rezoned with adjacent supplies from Michelin Rd and Ballyearl Estate DMAs to minimise the number of properties affected.

The defect was difficult to locate as water was not visible. Also, the main was split which reduced the pressure and noise on the main. Sluice valve's had to be fitted in a 500m section of the main and a number of test holes dug to assist the location of the burst.

Supply in downstream section of Westgrove DMA was slow to re charge and the repair was not completed until around 1am. The incident was the subject of **Upward Report 023.**

The impact of this incident in terms of percentages of connected properties affected was 0.075% >6hrs.

Increased Demand in June and July 2018 during a Prolonged Period of High Temperatures and Low Rainfall

The good weather experienced throughout June and July 2018 led to an unprecedented increase in the demand for water, so much so that at times, the demand could not be met and operational difficulties arose as the Company struggled to keep its customers in supply.

At its height, the decision was taken to introduce a hosepipe ban. The hosepipe ban was in place from 6pm on Friday 29th June until midday on Thursday 19th July. The purpose of the hosepipe ban was to reduce demand thus encouraging the distribution input to return to its normal level and allowing reservoir levels to recover. The statistics show that as demand for water fell and the DI began to return to normal, so the numbers of burst mains also reduced as pressures in the network stabilised.

Properties Affected by Unplanned Interruption Events due to High Demand

Date	>0hrs (Props)	>3hrs (Props)	>6hrs (Props)	>12hrs (Props)	>24hrs (Props)
25/06/18	468	468	0	0	0
26/06/18	717	211	3	0	0
28/06/18	425	104	0	0	0
29/06/18	12	12	0	0	0
30/06/18	748	743	25	0	0
01/07/18	4	0	0	0	0

The figures above confirm that although there were instances when the volume of water entering the distribution network was not sufficient to meet the increased demand, the impact was not significant in terms of both numbers of events and numbers of properties affected and that the action taken to mitigate the severity of the situation was successful.

Properties Affected by Unplanned Interruption Events lasting more than 3 hours caused by Burst Mains/Main Repairs

Date Range	Events	Events per Day	>0hrs (Props)	>3hrs (Props)	>6hrs (Props)	Props per Day
1st to 31st May 18	54	1.742	2,779	2,583	73	83
1st to 3rd Jun 18	7	2.333	185	185	13	62
w/c 4th Jun 18	15	2.143	1,095	1,095	20	156
w/c 11th Jun 18	9	1.286	929	929	0	133
w/c 18th Jun 18	13	1.857	563	174	0	25
w/c 25th Jun 18	**18**	**2.571**	**636**	**543**	**31**	**78**
w/c 2nd Jul 18	**16**	**2.286**	**468**	**468**	**42**	**67**
w/c 9th Jul 18	**20**	**2.857**	**2,420**	**2,420**	**0**	**346**
w/c 16th Jul 18	**18**	**2.571**	**1,452**	**1,452**	**34**	**207**
w/c 23rd Jul 18	10	1.429	379	379	0	54
30th to 31st Jul 18	4	2.000	224	224	16	112
1st to 31st Aug 18	53	1.710	5,466	5,444	1,135	176

It is not possible to distinguish between burst main events attributed to increases in water pressure as the Company increased the volume of water entering the distribution network to meet demand, and burst main events that would have occurred regardless of the mitigating action taken. However, the figures indicate a notable increase in unplanned interruption events caused by burst mains/main repairs during the period 27th June to 18th July. The figures also indicate a notable increase in the numbers of properties affected by unplanned interruption events caused by burst mains/main repairs during this time.

As the majority of interruption events associated with the increased demand were of less than 6 hours duration, the impact on the Company's KPIs was minimal.

Justification of the assigned confidence grades including an explanation for any changes in confidence grades from previous years

The AIR09 Reporter recommended the use of consistent confidence grades across all lines relating to DG3. In 2015/16, NI Water increased its DG3 confidence grade from 'B3' to 'A3' because it was the first full year in which the Incident Management System (IMS) had been used by the Company in place of the Operations Management Information System (OMIS) to capture data relating to supply interruptions. The new system has now captured four complete years' worth of data and again, the decision has been taken to assign a confidence grade of 'A3' across all lines relating to DG3.

In September 2016, the Company tested and implemented an updated version of IMS, the first major update of the system since its launch on 4 July 2014. The modifications improved the usability and functionality of the system and enabled more time to be spent on improving the accuracy of the information. In 2017/18, the system underwent a further series of upgrades. In 2018/19, the system underwent yet more upgrades.

Justification of Reliability Band 'A'

IMS is regarded as a better system than OMIS and has the following benefits:

- Improved customer response times
- Improved consistency of methodology across all work streams
- Improved accuracy of information through:
    - the recording of start times by Work Controllers/Telemetry Operators
    - the recording of individual start and restoration times for each property as opposed to each event
    - the recording of times to the nearest minute
- Improved utilisation of other key systems e.g. the GIS as a source of address information
- Improved auditability of information through query, change and approval status tracking
- Better management of approval chains through the automatic generation of e-mailed reminders
- Improved report generation
- Improved accessibility and sharing of information across the business
- Enhanced effectiveness of the DG3 Register through the capture of additional information such as pipe material and diameter and the GIS co-ordinates of bursts

IMS is working exactly as it should by ensuring the capture of a greater number of interruption events and a greater number of affected properties associated with those events. All interruption events are fully documented to a consistent standard. Every interruption record includes the category, cause, key dates and times, address details, and property counts necessary to meet the regulatory reporting requirements of a DG3 Register. The cause of interruptions is identified by experienced field staff or contractors.

Justification of Accuracy Band '3'

The 'no water' complaints are an invaluable, independent source of information that when compared with the numbers of properties affected by unplanned interruption events, can be used to validate and verify associated annual trends.

A relationship exists between the number of properties affected by an unplanned interruption event and the number of 'no water' complaints received, with more affected properties than

complaints because not everyone complains. In 2015, the Company looked at a sample of 23 unplanned interruption events that had lasted more than 6 hours and found that although the ratio of 'no water' complaints to affected properties varied for each event, 10% of customers on average tended to complain.

In 2018/19, 'no water' complaints were received from 20,153 properties, an average of 11% of the 176,505* properties that experienced an unplanned interruption in the year, including those caused by a third party. The Company believes this is good evidence to support the assigned confidence grading as there appears to be an expected degree of correlation between the two independent data sources.

***Note:** A correction factor was applied to the unaudited property counts for events lasting 3 hours or less involving more than 500 properties. The correction factor was typical of the confirmed amount by which property counts reduced following a detailed review of unplanned interruption events with durations of between 3 hours and 6 hours in 2018/19.

Audit Checks

NI Water carries out a number of audit checks, aimed at ensuring that the data in its Annual Information Return is both reliable and accurate and that the confidence grade is justified. The audit checks ensure that affected properties have been reported under the correct category of interruption and that reporting is in accordance with the regulatory guidance and definitions.

During the year, Networks Water generated a total of 833 records of interruption events lasting more than 3 hours. All records were checked for accuracy and completeness by the Customer Field Managers. Following the extraction of data to spreadsheets, checks were carried out by CSD Services to ensure that the data remained consistent with IMS and that no records had been inadvertently deleted or duplicated during migration between worksheets.

During the year, Capital Asset Delivery generated a total of 135 records of interruption events lasting more than 3 hours. A random sample of 46 records, averaging 4 per month, was checked against the corresponding Interruption Record Sheets to ensure that the details had been accurately transcribed. This represents 34% of records.

Throughout 2017/18, the Company has continued to review its records of 'no water' complaints when determining the details of supply interruptions. And the Company has carried out checks to ensure consistency between IMS and the Upward Reporting process relating to unplanned interruption events lasting more than 3 hours.

Update on AIR17 Reporter Recommendation

Following AIR17, the Reporter made the following recommendation in relation to DG3:

'We recommend the Company continues to monitor the warning notification process by its contractors for planned and warned interruptions.'

Throughout 2018/19, NI Water carried out sample checks to confirm that its Mains Rehab contractors were providing customers with at least 48 hours warning in advance of planned and warned interruptions to supply.

The Company also reviewed a random sample of 600 Loss of Supply (LoS) notices, generated by Water Distribution contractors and returned to NI Water by Royal Mail because

they were unable to be delivered. In the majority of cases, the difference between the date of non-delivery (as confirmed by Royal Mail) and the planned start date on the associated LoS notice was at least 2 days.

Where the difference was less than 2 days, it was generally evident that other properties associated with the same interruption had received sufficient warning and the non-delivery date may not therefore have represented the first attempt by Royal Mail to deliver the LoS notice.

Instances in December where the difference was less than 2 days were most likely attributed to delays in confirming the delivered status, due to the Christmas holiday period.

Line 20 - Population (winter)

Note: All calculations relating to Line 20 were originally performed with the aid of a spreadsheet. For the purposes of the commentary, figures have been rounded and may give rise to rounding errors if used.

Estimation of Non-Resident Visitor Nights in 2018

The AIR19 methodology involves three separate applications of the monthly occupancy figures for hotels and guest houses/B&Bs. The first involves an application of the monthly occupancy figures for the period April 2017 to March 2018 *(see table below)* along with the number of non-resident visitor nights for the same period *(the last available published figure)* in order to determine the relationship between the two datasets.

Ref: Table 1.3 of the NISRA publications '*Northern Ireland Tourism Statistics Tables (2011 – 2018)'* dated 07/02/2019*.*

- *NI Hotel Rooms and Beds Sold by Month*
- *NI Guesthouse, Bed & Breakfast and Guest Accommodation Rooms and Beds Sold by Month*

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED-SPACES SOLD	TOTAL BED-SPACES SOLD
Apr-17	298,782	64,905	363,686
May-17	306,292	76,759	383,051
Jun-17	331,694	79,686	411,380
Jul-17	363,219	84,923	448,142
Aug-17	395,309	106,535	501,845
Sep-17	332,307	80,174	412,481
Oct-17	310,435	54,341	364,776
Nov-17	262,953	39,116	302,070
Dec-17	264,688	36,507	301,194
Jan-18	233,882	22,975	256,858
Feb-18	244,160	34,991	279,152
Mar-18	280,205	46,944	327,150
Total	**3,623,927**	**727,858**	**4,351,784**

Total bed-spaces sold (Apr 17 to Mar 18) = 4,351,784

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2017 – March 2018)'* dated 23/08/2018.

- *'Estimated number of overnight trips, nights and expenditure in NI (excluding NI residents) for the 12 months to March 2017 and March 2018'*

Non-resident visitor nights (Apr 17 to Mar 18) = 11,680,995

11,680,995 / 4,351,784 = 2.684

Based on data for the period April 17 to March 18, the number of non-resident visitor nights was found to be 2.684 times that of the number of bed spaces sold for hotels and guest houses/B&Bs.

The second application of the monthly occupancy figures for hotels and guest houses/B&Bs involves an application of the data for the period January 2018 to December 2018 *(see table below)* and the relationship determined above in order to estimate the number of non-resident visitor nights for the same period.

Ref: Table 1.3 of the NISRA publication *'Northern Ireland Tourism Statistics (2011 – 2018)'* dated 07/02/2019.

- *NI Hotel Rooms and Beds Sold by Month*
- *NI Guesthouse, Bed & Breakfast and Guest Accommodation Rooms and Beds Sold by Month*

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED-SPACES SOLD	TOTAL BED-SPACES SOLD	PERCENTAGE OF BED-SPACES SOLD IN 2017
Jan-18	233,882	22,975	256,858	5.71%
Feb-18	244,160	34,991	279,152	6.20%
Mar-18	280,205	46,944	327,150	7.27%
Apr-18	280,744	54,370	335,114	7.45%
May-18	336,284	86,267	422,552	9.39%
Jun-18	350,213	91,934	442,147	9.82%
Jul-18	363,194	101,783	464,977	10.33%
Aug-18	408,415	104,983	513,398	11.41%
Sep-18	341,263	80,554	421,817	9.37%
Oct-18	322,353	57,962	380,315	8.45%
Nov-18	278,349	41,337	319,686	7.10%
Dec-18	294,916	42,535	337,451	7.50%
Total	**3,733,979**	**766,636**	**4,500,616**	**100.00%**

Total bed-spaces sold (Jan 18 to Dec 18) = 4,500,616

Estimated non-resident visitor nights (Jan 18 to Dec 18) =

4,500,616 x 2.684 = 12,080,487

Having estimated number of non-resident visitor nights in 2018, all components of the Winter Population calculation are now available and remainder of the methodology is similar to previous years.

The third and final application of the monthly occupancy figures for hotels and guest houses/B&Bs involves an application of the data for the period January 2018 to December 2018 *(see table above)* in order to calculate the percentages of bed-spaces sold per month in 2018 and hence, the percentage of bed-spaces sold during the winter months.

Assumption: The regulatory guidance for AIR Table 2 Line 20 does not define the meaning of *'winter'*. For the purposes of this calculation, the winter months are deemed to be the six months in the year with the lowest percentage bed-spaces sold i.e. January, February, March, April, November and December. The percentage bed-spaces sold during the winter is the summation of the percentages for these six months.

Based on the above table of percentages of bed-spaces sold per month in 2018, the percentage of bed spaces sold during the winter was:

5.71 + 6.20 + 7.27 + 7.45 + 7.10 + 7.50 = 41.23%

Assumption: There is a direct relationship between bed-spaces sold and non-resident visitor nights.

Estimated non-resident winter visitor nights in 2018 =

(12,080,487 / 100) x 41.23 = 4,980,264

According to AIR19: Table 7: Line 17, the baseline resident population was 1,873.14 x 10^3.

Using the baseline resident population and the estimated non-resident winter visitor nights above, the winter population was estimated as follows:

Estimated average non-resident winter visitors per night =

4,980,264 / (31 + 28 + 31 + 30 + 30 + 31) = 27,515

Population (winter) = 1,873,140 + 27,515 = **1,900,655**.

Changes in Methodology

Background

The Winter Population is the resident population (water) plus the average non-resident population on any given day during the six winter months of the year. The methodology for calculating the average non-resident population relies heavily on the ability to source a figure from available tourism statistics for the number of **non-resident visitor nights**. In the past, this figure has been available for either the most recent calendar year *(as in the case of AIR17)* or the first three quarters of the most recent calendar year *(as in the case of AIR18)* but not the financial year in question.

These limitations have caused NI Water to base its reporting of the Winter Population on a calendar year and to estimate the number of non-resident visitor nights in the calendar year when the figure has not been readily available. Estimates are based on the assumption that there is a direct relationship between the number of non-resident visitor nights and the occupancy figures for hotels and guest houses/B&Bs.

AIR19 Methodology

This year, NISRA has identified delays in both the provision of key data from the Central Statistics Office (CSO) and in the assessment of that data to determine its quality. The data from CSO provides information on residents from the Republic of Ireland taking overnight trips in Northern Ireland. This information is an important part of the overall statistical picture of tourism in Northern Ireland and is used to determine amongst other things, the number of

non-resident visitor nights. As of 14/05/19, NISRA were in a position to confirm that the publication of quarterly and annual tourism statistics would resume on 06/06/19.

In view of the circumstances highlighted above, NI Water has used the last available published figure *(for the 12-month period from April 2017 to March 2018)* and has estimated the annual number of non-resident visitor nights in 2018.

Impact of Change in AIR19 Methodology on Reported Outturn

The change in methodology described is not believed to have had a significant impact on the reported outturn. This can be illustrated as follows:

Ref: Table 1.3 of the NISRA publication *'Northern Ireland Tourism Statistics (2011 – 2018)'* dated 07/02/2019.

Total bed-spaces sold (Apr 16 to Mar 17) = 4,218,445

Estimated non-resident visitor nights (Apr 16 to Mar 17) =

4,218,445 x 2.684 = 11,323,087

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2017 – March 2018)'* dated 23/08/2018.

Actual non-resident visitor nights (April 16 to March 17) = 11,405,498

Difference between actual and estimate =

11,405,498 - 11,323,087 = 82,411

Percentage difference = 82,411 / 11,405,498 = 0.72%

As the difference between the actual and estimate is less than 1%, this is deemed to be a suitable method for estimating the number of non-resident visitor nights and the result is still within the tolerance of any previously assigned confidence grading for this measure.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figures

AIR17	Confidence Grade	AIR18	Confidence Grade	AIR19	Confidence Grade
1,887.10 x 10^3	C2	1,896.46 x 10^3	C2	**1,900.66 x 10^3**	**C2**

Update on AIR18 Reporter Recommendation

At the time of reporting on AIR18, a non-resident visitor nights figure was available for only the first nine months of 2017 and a figure for the entire twelve months had to be estimated. In accordance with the AIR18 Reporter Recommendation, NI Water has recalculated the AIR18 outturn using a figure now published for the entire twelve months. The recalculation is as follows:

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Annual Tourism Statistics (January – December 2017)'* dated 07/06/2018.

- *'Estimated number of overnight trips, nights and expenditure in NI (excluding NI residents) 2011-2017'*

Non-resident visitor nights (Jan 17 to Dec 17) = 11,645,693

Estimated non-resident winter visitor nights =

11,645,693 x 41.72* = 4,858,964 *(*also recalculated)*

Winter nights = 181

Estimated average non-resident winter visitors per night =

4,858,964 / 181 = 26,845

AIR18: Table 7: Line 17: Baseline resident population = 1,869,170

AIR18: Table 2: Line 20: Population (winter) =

26,845 + 1,869,170 = **1,896,015**

The recalculated AIR18 outturn of 1,896,015 is only 442 properties (0.02%) lower than the original AIR18 outturn of 1,896,457. This is well within the tolerance of the assigned confidence grading.

Last year, the Company reported a Table 2 Line 20 outturn of 1,896.46 x 10^3. Based on the AIR19 outturn, the estimated winter population has increased by 4.20 x 10^3 *(0.22%)*. This slight increase can be attributed to changes in the component figures that make up this figure.

The estimated number of hotel bed-spaces sold in 2018 *(3,733,979)* was higher than the revised estimate for 2017 *(3,601,019)*. The estimated number of guesthouse and B&B bedspaces sold in 2018 *(766,636)* was higher than the revised estimate for 2017 *(726,052)*. And the estimated number of non-resident visitor nights in 2018 *(12,080,487)* was higher than the published figure for 2017 *(11,645,693)*.

Despite the absence of information relating to Q2 to Q4 of 2018, a comparison of the statistics for Q2–2016 to Q1–2017 and Q2–2017 to Q1–2018 reveals an increase in tourism and hence, an increase in winter population.

	Visitor Nights (Q2–2016 to Q1–2017)	**Visitor Nights (Q2–2017 to Q1–2018)**
GB Visitors	5,605,283	5,733,746
RoI Visitors	1,005,492	1,102,196
Visitors from outside UK & RoI	4,794,723	4,845,053
All Visitors (excluding NI)	**11,405,498**	**11,680,995**

The statistics show that external visitors are on average staying longer, leading to an increase in overall visitor nights. The increase has been driven largely by increases in visitors from GB and the Republic of Ireland.

Confidence Grade

Population (winter) is an estimate based on several sources of information:

1. The NISRA publications *'Northern Ireland Tourism Statistics (2011 – 2018)'* provide only an estimate of the monthly numbers of bed-spaces sold, based on the extrapolation of data for a representative sample group of establishments.
2. The NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2017 – March 2018)'* provides only an estimate of the quarterly numbers of non-resident visitor nights, based on sample surveys. The estimate therefore has an associated degree of sampling error, determined both by the sample design and by the sample size. Sample surveys include the Northern Ireland Passenger Survey (NIPS) conducted by the Northern Ireland Statistics and Research Agency (NISRA), the Survey of Overseas Travellers (SOT) conducted on behalf of Fáilte Ireland and the Household Travel Survey (HTS) conducted by Central Statistics Office (CSO).

NI Water has assigned a confidence grade of **C2** to account for known deficiencies in the reliability and accuracy of the reported figure. Although there have been changes in the methodology, data confidence is still believed to be comparable to previous years.

The "2" has been assigned because even if all visits occurred in the winter, the difference in the calculated winter population would only be 39,228 *(+2.06%)*. *(see calculation below)*

12,080,487 / (31 + 28 + 31 + 30 + 30 + 31) = 66,743 non-resident visitors
1,873,140 + 66,743 = 1,939,883 residents + non-resident visitors
1,939,883 - 1,900,655 = 39,228
(39,228 / 1,900,655) x 100 = 2.06%

At the time of reporting on AIR19, a non-resident visitor nights figure was available for only the first quarter of 2018 and a figure for the entire 12-month period had to be estimated. When reporting on AIR20, NI Water will recalculate the AIR19 outturn using the figure published for the entire 12-month period.

Lines 21-23 DG4 Restrictions on use of water

Hosepipe restrictions are defined as applying to those area(s) where legal notification has been published restricting the use of hand held hosepipes. This will normally be via notifications in the press that the use of hosepipes is banned.

Drought Orders: The population affected by Drought Orders shall include all areas where Drought Orders under Part V Chapter 1 and Schedule 5 of the Water and Sewerage Services (NI) Order 2006 have been approved by the Minister and implemented by the company.

Sprinkler/unattended hosepipe restrictions are defined as applying to those area(s) where legal notification has been published restricting the use of sprinklers/unattended hosepipes. This will normally be via notifications in the press that the use of sprinklers/unattended hosepipes is banned.

Outturns and Confidence Grades

Following a prolonged dry spell during the first half of 2018 and, an unprecedented demand across the water network, NI Water introduced a temporary hosepipe ban, coming in to force at 18:00hrs on 29/06/18. The event was managed as a Category 1 Incident from the 27th June 2018 and was the first time since 1995 that a similar ban had been instigated.

On review of response from the general public and improving storage levels within the system NI Water removed the restrictions at 12:00hrs on 19/07/18. The duration of the restrictions was calculated at 2.82 weeks.

Exercising the power conferred upon it by Article 116(1) of the Water and Sewerage Services (Northern Ireland) Order 2006, the restrictions applied Province wide, were targeted primarily at domestic users, and covered use of water for the following purposes:

- Watering a garden using a hosepipe
- Watering outdoor plants on domestic or other non-commercial premises using a hosepipe;
- Drawing water, using a hosepipe for domestic recreational use;
- Filling or maintaining a domestic swimming or paddling pool using a hosepipe;
- Filling or maintaining a domestic pond using a hosepipe;
- Cleaning a private leisure boat using a hosepipe;
- Cleaning a private motor vehicle using a hosepipe;
- Cleaning walls or windows of domestic premises using a hosepipe;
- Cleaning paths or patios of domestic or other non-commercial premises using a hosepipe.

Drought Orders were neither imposed nor applied for and therefore the figure for this line (Line 22) is zero.

Other calculations are based on connected population figures supplied in Table 7, Lines 13-16 but excluding Lines 14 & 16 for the Billed and Measured population. The total population is taken from Table 2 Line 20 (winter population).

As the restrictions applied Province wide there was no necessity to break the figures down into individual water resource zone areas.

Line	Description	Calculation
21	% population - hosepipe restrictions	population hosepipe restrictions x 100 total population
22	% population - drought orders	population drought orders x 100 total population
23	% population- sprinkler/unattended hosepipe restrictions	population sprinkler/unattended hosepipe restrictions x 100 total population

Line	Value	Calculation
21	93.4%	1,776,040 x 100 1,900,660
22	0.0% population - drought orders	0 x 100 1,900,660
23	93.4%	1,776,040 x 100 1,900,660

The reliability assessments of “B” are based on the established procedures for the making of any order to prohibit or restrict the use of water. The accuracy assessments of “2” are a

reflection that the affected population is taken directly from figures provided in Table 7 (Lines 13 & 15) and mirrors the Confidence Grading for that table.

Hose pipe restrictions

Area affected	All Areas
Population affected (000s)	1776.04
Date imposed	29/06/18 @18:00hrs
Date lifted	19/07/18 @12:00hrs
Total duration (weeks)	2.82

Sprinkler/unattended hosepipe restrictions

Area affected	All Areas
Population affected (000s)	1776.04
Date imposed	29/06/18 @18:00hrs
Date lifted	19/07/18 @12:00hrs
Total duration (weeks)	2.82
Licensed users	n/a*

*n/a – company does not operate a sprinkler licence system

Future Reporting

Northern Ireland Water will continue to develop a series of revised DG4 procedures which clarifies the reporting requirements and definitions and the responsibilities of those involved in the reporting process. An IMS project Board and team is currently further developing existing reporting systems to capture DG4 events on a standalone basis. This will provide a more detailed breakdown of areas affected if restrictions are not Province wide.

The following documents outline in more detail the monitoring and recording processes that are currently in place:

1. NIW – DG4 Procedures May 2019
2. Drought Order Process Guidelines v.9
3. DG4 – Recording of Affected Populations and Durations for AIR 19.

Annex A – Line Methodology for Table 2

A) Properties Receiving Pressure/Flow Below Reference Level

Line 1 – Total Connected Properties at Year End

The total number of properties (domestic and non-domestic) connected to the distribution system at the end of the 2018/2019 reporting year. This includes properties, which are connected but not billed (for example, temporarily unoccupied), but excludes properties which have been permanently disconnected (for example logical demolitions).

This figure is calculated from the Rapid Property Summary for AIR19 (dated 31st March 2019) as attached.

RPS March YE 2019.xlsx

Total Connected Properties at Year End	AIR19
Non-Household Unmeasured	13976
Non-Household Measured	75872
Household Unmeasured	733723
Household Measured - Not Charged (Test)	150
Household Measured	48279
Household Measured - no meter	0
Household - Site Meters	2291
Household Unmeasured - Not Charged	16
Total Connected Properties at Year End	**874307**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 3 KEY OUTPUTS
SEWERAGE SERVICE - INTERNAL FLOODING (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**DG5 ANNUAL FLOODING SUMMARY**																				
1	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630.03	A2	638.1	A2	648.6	A2	657.9	A2	668.3	A2				
	(I) OVERLOADED SEWERS																				
2	Properties flooded in the year (overloaded sewers)	nr	0	189	B3	6	B2	28	B2	3	B2	3	B2	0	B2	0	B2				
3	Flooding incidents in the year (overloaded sewers)	nr	0	189	B3	6	B2	29	B3	4	B2	3	B2	0	B2	0	B2				
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	181	B3	5	B2	3	B4	1	B2	2	B2	0	B2	7	B2				
4a	Properties flooded in the year attributed to severe weather	nr	0	181	B3	5	B2	3	B5	1	B2	2	B2	0	B2	7	B2				
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0	0	B3	0	B2	0	B6	0	B2	0	B2	0	B2	0	B2				
	(ii) OTHER CAUSES																				
6	Properties flooded in the year (other causes)	nr	0	41	B3	55	B2	52	B2	38	B2	47	B2	33	B2	23	B2				
7	Properties which have flooded more than once in the last ten years (other causes)	nr	0	15	B3	26	B2	8	B2	11	B2	21	B2	20	B2	21	B2				
8	Flooding incidents (other causes - equipment failures)	nr	0	15	B3	14	B2	2	B2	1	B2	1	B2	0	B2	2	B2				
9	Flooding incidents (other causes - blockages)	nr	0	22	B3	36	B2	38	B2	34	B2	38	B2	26	B2	17	B2				
10	Flooding incidents (other causes - collapses)	nr	0	4	B3	5	B2	12	B2	3	B2	8	B2	7	B2	4	B2				
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0	0	B3	0	B2	0	B2	0	B2	0	B2	0	B2	0	B2				
B	**DG5 PROPERTIES ON THE AT RISK REGISTER**																				
	(i) SUMMARY																				
12	2 in 10 register at end of year	nr	0	30	B3	62	B2	60	B2	59	B2	61	B2	57	B2	57	B2				
13	1 in 10 register at end of year	nr	0	10	B3	8	B2	8	B2	7	B2	6	B2	4	B2	2	B2				
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr	0	40	B3	70	B2	56	B2	66	B2	67	B2	61	B2	59	B2				
15	1 in 20 register at end of year	nr	0	153	B3	120	B3	108	B2	94	B2	89	B2	73	B2	65	B2				
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category	nr	0	0	B2	0	B2	0	B2	1	B2	2	B2	0	B2	1	B2				
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr	0	32	B3	33	B3	23	B2	22	B2	27	B2	26	B2	11	B2				
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0	0	B2	0	B2	0	B2	0	B2	0	B2	0	B2	1	B2				
	(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS																				
22	Removed by company action	nr	0	1	B3	3	B2	18	B2	3	B2	3	B2	6	B2	4	B2				
23	Removed because of better information	nr	0	2	B3	0	B2	0	B2	2	B2	1	B2	0	B2	2	B2				
24	Added because of better information (actually flooded)	nr	0	16	B3	33	B2	0	B2	3	B2	3	B2	0	B2	1	B2				
25	Added because of better information (modelled)	nr	0	0	A1	0	B2	4	B2	0	B2	2	B2	0	B2	3	B2				
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/prop	1	168.8	B3	233.7	B2	68.5	B2	230.0	B2	32.8	B2	184.5	B2	577	B2				
	(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER																				
30	Removed by company action (1 in 20)	nr	0	65	B3	8	B2	10	B2	4	B2	4	B2	11	B2	5	B2				
31	Removed because of better information (1 in 20)	nr	0	24	B3	45	B2	16	B2	11	B2	1	B2	5	B2	5	B2				
32	Added because of better information (actually flooded - 1 in 20)	nr	0	53	B3	3	B2	25	B2	1	B2	0	B2	0	B2	0	B2				
33	Added because of better information (modelled - 1 in 20)	nr	0	0	A1	17	B3	4	B2	0	B2	0	B2	0	B2	2	B2				
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/prop	1	45.1	B3	143.6	B2	80.9	B2	272.9	B2	38.8	B2	216.6	B2	482	B2				

Table 3 - Key Outputs – Sewerage Service – Internal Flooding

Line 1 – Number of Domestic Properties Connected to the Sewerage System

NI Water's data on property counts and classifications is reported monthly from RapidXtra within the Rapid Property Summary (RPS). The data is extracted from the Diamond Warehouse via Microsoft SQL Server to produce the RPS report. The RPS provides us with a snapshot at the end of each month in terms of net movement; however it currently does not support us in the explanation of gross movements within the data. The CSD Services MI & Data Team are currently exploring the use of Power BI to determine the gross movement.

Our AIR19 methodology has remained consistent with previous years – using the automated Property Model tool to populate Table 3 figures (this was first introduced in AIR12 – the RPS as the input).

Customer/Property information is updated through:

- BAU ('business as usual') customer contacts, such as new connection requests, customer move in/move outs, or
- through Data Quality initiatives/Projects, and/or
- Metering work streams e.g. UNHH (Selectives), Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water were required to install meters on all new household connections from April 2007. This practice has stopped as directed by a change in legislation, which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NI Water of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the winter months based on information published by the Department for Economy (DFE) and the Central Statistics Office (CSO), Ireland.

The difference between the AIR18 and the AIR19 figure is 10,400. The breakdown can be explained as follows;

1. New Connections during the 2018/19 reporting year. The figures are based on data supplied by our Customer Connections Team and represent completed connections during the reporting year. The projections for New Connections remain in line with the agreed PC15 forecasts, however we have noted a downturn and will review mid-year (during the draft Principle Statement) to ascertain if projections should be changed.
2. As a result of a customer contact, e.g. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    (a) The adding of properties NI Water allegedly did not know about
    (b) The adding of duplicates as the customer's address could not be found on Rapid. Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time

of New Connection to that of customer contact (street names can change in the early stages of site development).

3. Removal/reclassification of properties as a result of data quality initiatives/projects
    a. Duplicate properties
    b. Reclassification of properties that were recorded in error
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.

For NI Water, accurate property data is fundamental for many systems and processes, including customer service, metering, billing, consumption, leakage and Major Incident Planning & Response. The Rapid Customer Contact System contains the master property data for NI Water.

As Data Owner for Property Standing Data, The Head of CSD Services is responsible for the property standing data held by NI Water; this is monitored and managed through the Property Information Group (PIG). The CSD Services MI & Data Team chairs this group.

The role of PIG is to ensure that there is appropriate governance, controls and reporting for changes made to core data on the system. As Property Data Owners, we need to ensure the processes around creation, maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. Control is key for us; as such we have identified the systems, processes and people using property information across the business, alongside confirming data accuracy and endeavouring to reduce the opportunities for erroneous data entry and creation (such as the inability to recreate demolished properties or duplicate properties).

The issues under consideration were identified as of corporate relevance, therefore to ensure appropriate direction and governance the PIG was formalised. Key objectives include:

1. To agree a single consistent source of property data.
2. To ensure the source property data represents accurate, up-to-date information appropriate for use by the business.
    a. To understand and agree data primacy in respect of data updates from NI Water and external (Land & Property Services - LPS) sources
    b. To ensure the processes around creation (i.e. New Connections), maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. i.e. through CBC Data Validation (Phase 1, Phase 2, Phase 3, 105 Days DV)
    c. To co-ordinate property reconciliations between NI Water & external sources i.e. Data Sharing Agreements between NI Water & LPS, NI Water & Belfast City Council (BCC) etc. and understand the reasons and validity of any differences
    d. To understand and ensure the adequacy of long term procedures for database maintenance, including the updating of data standards and associated CDE M&M Plans
3. To ensure the reporting requirements for the business are met relating to data held on Rapid, particularly, but not exclusively, in respect of tariffs, leakage, Annual Information Returns (AIR) & Principle Statement (PS) returns.
4. Challenge the data in the areas of
    a. Data categorisation & structure
    b. Data robustness – i.e. where is our data good and where is there opportunity for improvement? Identify projects that could aid improvement

c. Data alignment – both internally and externally. Internally between systems such as Rapid, Ellipse, GIS, Diamond, Netbase, IMS etc. Externally through data reconciliations, such as LPS above.

5. To agree measures to improve the quality and integrity of the data, particularly the key CDEs as monitored by IMU
6. To agree the content and frequency of reports required by NI Water.
7. To agree the quality checking criteria for the above data and reporting and develop a Quality Plan including the determination of responsibilities and audit trails.
8. To produce & circulate an 'operate and maintain' programme for property data to the business.

During 2018/19, the focus for PIG included analysis and action on:

- Volume of properties coming onto the Rapid billing system on a monthly basis
    - new connections
    - customer contact
    - project work
- Volume of properties coming off the Rapid billing system (demolished)
    - sample check to ensure reason for demolition has been noted and on system audit trail recorded
- Volume of properties amended on the Rapid billing system
    - In particular, address fields -> building number, street name, town and postcode
    - sampling to identify if the data changes are data improvement or data regression
    - if data regression, further analysis into the process is undertaken
- Review of access privileges
    - Rapid audit
    - Through monthly audit samples
    - Internal CRs require sign off from PIG as BAU
    - Working with Echo to review access privileges on an ongoing basis
- Interruptions to supply notices – returned mail
    - This returned mail was brought to the attention of LPS and include properties that LPS have classified as live properties despite being returned as 'no such address' etc.
    - The 2 way communication with LPS will help underpin our governance work and provide direction to the business on practices
- Car Parking Spaces
    - The group identified that 'car parking' spaces were being added to Rapid as properties. One of the project teams added them because they were live on LPS, however they are not physically a property, nor do they require a water supply, therefore this practice has now ceased.

The PIG Strategy for 2019/20 will include the following:

- New Connections - A move to on-system reporting following the Business Improvement New Connections Review
- Rapid-POINTER Reconciliation - follow on actions to be worked through and benefits realised. i.e. Uploading of UPRNs from POINTER where a property can move from an A match to an A* match
- Running of a mini data cleanse project within the CSD Services MI & Data Team to prepare the Rapid property data for the switch on of system validations. There were 4 phases of system validation functionality introduced to Rapid as part of the CBC Implementation Project. Off system data cleanse is required before some of the system

validation rules can be applied. The data will need prepared offline to ensure accuracy and that it conforms to the system validation rules. It will then need tested before being uploaded to Rapid through the bulk upload tool. There will be some further testing to ensure all has uploaded correctly before the functionality is switched on.

- Data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – NDA has been signed off, data sharing project to commence during June 19 for a 12 month period.
- Continuation of the 2 way communication with LPS - This will help underpin our governance work and provide direction to the business on practices that will work alongside LPS
- Student Accommodation – further case studies on student accommodation re-development sites. How does Rapid hold these properties? Liaise with Belfast City Council to understand at what stage they can inform NI Water of properties that are to be re-developed as student accommodation.
- Test Meters – follow up on 'retain for review meters'
- Properties with 'no water supply' (no water/well water) – review and validate on a monthly basis

Annex A details the Line Methodology followed by the figure calculated for Table 3 Line 1.

Internal sewer flooding

Objective/Aim

To maintain a verifiable DG5 register with the aim to provide an auditable method for identifying the specific properties which are affected by flooding or are at risk of flooding and the cause of flooding.

Internal Flooding Process

In line with the regulators instructions, an end-to-end review of the internal flooding process has been carried out. This process went live in April 2012. Wastewater Business Unit (WWBU) carries out extensive robust investigations to determine the cause of every individual internal flooding incident. Any internal flooding that does not fall into these Flooding Other Causes (FOC) categories is passed to Asset Performance for them to carry out full Hydraulic Capacity evaluations and record them under the appropriate sections of the register. The evidence gathered is brought to an expert panel (the DG5 Panel) who examine the evidence presented for each incident and govern the addition of properties to and removal of properties from the register. All properties where actual internal flooding has occurred are recorded in the appropriate sections of the DG5 register i.e. In the Excluded section: FOC due to Blockages, Collapses, Equipment Failure or Severe Weather, or on the register in the 1:20, 1:10 or 2:10 Sections.

The register is held on an Oracle database represented on the Corporate Asset Register as GIS layer on CARtomap. Although the Internal Flooding process is now in place, the process itself continues to be refined.

Problems as yet Undiscovered

A process has been established to allow problems as yet unreported to be included in the register through field managers flooding incident reports (FIR). In addition flooding incident field investigations now include concentric circle surveys to pick up unreported flooding and modeling provided by Drainage Area Plan consultant.

Assumptions

For the purpose of AIR19, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days. '3 days' was chosen on the basis that a noticeable volume of repeat calls tend to be received within three days of an incident occurring. There is then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

An incident of internal flooding is assumed to be where a property has been flooded internally. If two adjacent properties are flooded at the same time they are classed as two properties and two incidents.

Where a single property floods internally on two separate occasions then this is recorded as one property and two incidents.

Calculation Process - Lines 2 to 11,15a & 17

Data gathering and calculation is as described below.

Sources/Primary Process

Lines 2 – 11, 15a & 17 Properties and flooding incidents

A download of internal flooding records was obtained from the Ellipse system for the period April 2018 to March 2019 on a month by month basis. Investigations were carried out for each reported incident and those properties found not to be flooded after investigation, using information from the Sewer Maintenance Contractor, Flood Incident Report (FIR) Forms, Field Manager reports, Customer Field Manager reports, modelling provided by Drainage Area Plan consultant and contacting the Customers directly, were removed. The remaining properties were recorded as Flooding Incidents.

Sources/Secondary Process

1. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of every internal flooding incident.
2. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence, closure details provided by the contractor and modelling provided by Drainage Area Plan consultant.
3. WWBU determines if the cause of the flooding incident was hydraulic incapacity or flooding other cause, i.e. Blocked Sewer, Equipment Failure, Collapsed Sewer or Severe Weather. This is done by a number of methods including site visits, concentric circle surveys, Customer Field Manager reports, customer interviews, field manager interviews and review of existing incident information. WWBU have also set up a formal InterDirectorate route to get copies of recorded Customer calls made available for record purposes.
4. If hydraulic incapacity is confirmed NIW now run a Hyrad Weather radar system report which is used to determine if the incident is as a result of severe weather (Line 4).
5. These properties were then recorded on a spreadsheet under the appropriate categories for lines 2, 3, 4, 4a, 5, 6, 8, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports, Drainage Area Plan consultant and contacting the Customers directly. All incidents of internal flooding attributed to severe weather are included in the total in Table 3 Line 3. A folder of evidence was created for all confirmed cases and this was brought to the monthly DG5 Panel for approval and addition to the appropriate section of the register. At the end of the reporting year this was the data used for AIR 19 returns.

6. The figure for line 7 was obtained by getting a report ran in the DG5 Oracle Database which holds the information as a DG5 layer in the GIS system.
7. Line 15a relates to properties which have not been fully investigated and categorized i.e. 1 for 2018/19 ([redacted], Belfast, [redacted] which is awaiting further investigation by AP).
8. The required information to populate Line 17 is extracted directly from the monthly spreadsheet completed by the contractor. This year (18/19) there have been none reported.

Changes in Methodology over the Previous Year

As result of on-going meetings with MUL contractors, NIW now have direct access to the MUL Dashboard where all flooding jobs that have been sent to the contractor and their current status are visible. If the job has been completed NIW can view the data being provided and if there are any discrepancies they can be addressed immediately. The Business Unit proactively ensures that the FIR is fully completed by continual liaison between the MUL Contracts Manager and the Customer and Regulation manager (NIW) where queries/ problems are discussed and then resolved/ rectified by MUL. NIW has set up formal quarterly meetings with the Head of Function, the Business unit Manager, the Customer and Regulation manager and OCMC (Operations Contract Management Centre) (all NIW) and the MUL Contracts Manager to ensure all parties are fully aware of what is happening. On any alleged internal flooding incident where there is ambiguity, the Customer Field Manager attends to resolve the issue. WwBU also complete a monthly quality report to OCMC (Operations Contract Management Centre) which is used to assess if the contractor is penalised for not providing accurate data. (See Appendix B for example of a completed FIR.)

Confidence Grading for Table 3 lines 2 - 11, 15a and 17

Every reported incident of internal flooding is thoroughly investigated and cross-checked with the returned Flooding Incident Report Forms, Operations Staff, Customer Field Managers and the Customer where appropriate. The data is then recorded in the appropriate lines therefore the confidence grade on the figures reported for lines 2, 3, 4,4a, 5, 6, 7, 8, 9, 10, 11, 15A and 17 is deemed to be B2.

Lines 12 - 34 DG5 Properties on the at Risk Register and Annual Changes

PC15 Outputs Year 4

The PC15 Business Plan included a target for removal of properties from the DG5 Internal Flooding Register by company action, which was 62:

The number of removals achieved in 18/19 was 9.

KR441 [redacted] Belfast Flood Alleviation

- [redacted] Belfast [redacted] (2 in 10)
  The project included a tank sewer and new CSO to limited surface flooding & reduce and screen spillages from 4 UIDs and meet NIEA requirements including.
- 165m of 450mm diameter sewer
- 205m 525mm diameter sewer,
- 202m 900mm diameter sewer,
- 238m 1350mm diameter sewer,
- 195m 1500 diameter sewer,
- 207m 1500mm diameter tunnel,
- 175 m 1050 diameter twin overflow pipes,

- 175m of 375mm diameter relining of existing combined sewer. Upgrade of CSO 21 with 6mm mechanical screens and removal of CSO 27, 28 & 29. Removal of flooding from Thales Air Defence Missile Factory
  Scheme cost £1,685 completed in 2012 but not claimed till February 2019 due to Rivers Agency upgrades only now being completed.

KS930 Millisle DAP Stage2 Phase 2

- [redacted], Millisle [redacted] (1 in 20)
  The project included the construction of replacement WwPS with associated new inlet sewers, emergency overflow sewer, pumping sewer and M & E installation.
  Scheme cost £931,000 ESL only 1% = £930

KC474 [redacted], Portrush Flood Alleviation.

- [redacted], Portrush [redacted] (1 in 20)
  The project included the laying of 72m of 110mm diameter and 150mm diameter foul/combined sewer and re-line 12m of 100mm dia clayware foul/combined sewer to remove a DG5 internal flooding property from the DG5 register.
  Scheme cost £52,000 ESL 60% = £31,200

KR539 [redacted], Castledawson Flood Alleviation

- [redacted], Castledawson [redacted] (1 in 20)
  The project included a new tank sewer, 140 m of 600mm dia pc concrete pipe, (to replace 140m of 150mm dia foul sewer), which was constructed as part of the DfI Roads scheme and we understand that the pipeline cost around £100k.
  Scheme cost £100,000 ESL 65% = £65,000

KR500 Greystown Ave, Upper Malone Rd, Belfast Flood Alleviation.

- [redacted], Belfast [redacted] (2 in 10)
- [redacted], Belfast [redacted] (2 in 10)
- [redacted], Belfast [redacted] (2 in 10)
- [redacted], Belfast [redacted] (1 in 20)
- [redacted], Belfast [redacted] (1 in 20)
  This project required approx. 800m of new sewers to be constructed within Greystown Avenue, Upper Malone Road, Upper Malone Park and Malfin Drive conveying the flow to a new 2.4m*2.4m online culvert extending 110m along Finnis Close (630m3 of storage required to attenuate storm flows). Flow control would restrict draw down of the tank sewer following a storm event by restricting pass forward flow to 600l/s, thus preventing detriment in the downstream network.
  Scheme cost £4,230,000 ESL 91% for 5 DG5s = £3,849,300.

[redacted]

It should be noted 7 properties were also removed due to better information, giving a total of 15 properties being removed from the DG5 Register.

- [redacted], Lurgan (1 in 20)
- [redacted], Lurgan(1 in 10)
- [redacted], Lurgan (1 in 20)
- [redacted], Lurgan (1 in 10)
  These properties have been removed due to the outcome of modelling and no flooding taken place in last 10 years.

- [redacted], Belfast [redacted] (1 in 20)
  Upgrade 0f network back in 2011 has meant this property has not flooded since that time.
- [redacted], Portadown [redacted] (1 in 20)
  Removal due to network repairs being completed.
- [redacted], Londonderry [redacted] (1 in 20)
  Removal due to network repairs being completed and downstream network being upgraded.

[redacted]

Additions to the Register

In year 18/19, 6 properties where added to the flooding register.

- [redacted], Ballymoney [redacted] (1 in 20)
- [redacted], Ballymoney [redacted] (1 in 20)
  These two properties have been added to the DG5 register because the modelling at a present scheme at this location states they are at risk of flooding.
- [redacted], Ballymena [redacted] (2 in 10)
- [redacted], Ballymena [redacted] (2 in 10)
- [redacted], Ballymena [redacted] (2 in 10)
  These three properties have been added to the DG5 register, because the modelling at a present scheme at this location states they are at risk of flooding
- [redacted], Londonderry [redacted] (2 in 10)
  After discussions with the house Owner it was established that this property had restricted toilet use during heavy flows within the combined system.

[redacted]

Line 17 Restricted Toilet use

One property was added to DG5 Register for restricted toilet use, in the past NI Water have not been notified of restricted toilet problems but the public are now starting to report this problem.

- [redacted], Londonderry [redacted] (2 in 10)

The tables below is how the DG5 properties additions and removals are tracked, throughout the financial year.

[redacted]

Properties on the 2 in 10 and 1 in 10 register which have not flooded in the last 10 years.

There are 11 properties on the Register which have not flood in the last 10 years see uploaded file below.

Lines 26 and 34 – Average capex cost of permanent solutions

Calculation summary for Lines 26 and 34 regarding average price for properties removed by company action from the DG5 Register. This calculation is the ESL expenditure calculation for each of the capital schemes divided by the number of DG5s removed from each of the categories.

Mitigation Measures

NI Water normally do not carry out mitigation measures as this programme of work is carried out by Rivers Agency as instructed by Local Government. In certain case's NI Water would fit non-return valves.

Approval of Projects

Approval of all projects for expenditure is approved by the Internal DG5 Panel.

There were no cases of 'Unknown cause' of flooding of internal flooding being added to the DG5 Register in 18/19.

Confidence grades

Confidence grades for lines 12–16, 22–26 and 30–34 remain at B2.

Annex A – Line Methodology for Table 3

Line 1 – Number of Domestic Properties Connected to the Sewerage System

The total number of domestic properties (including voids) connected to the sewerage system at the end of the reporting year (31st March 2019).

This figure is based on the 31st March 2019 Rapid Property Summary for AIR19, as attached.


RPS March YE 2019.xlsx

The figure is the total domestic properties (gross) connected for sewerage (including site meters, as these are not being billed)

Domestic Properties Connected to the Sewerage System	End March 2019
Household Unmeasured	630987
Household Sewerage only	7
Household Measured - Not Charged (Test)	104
Household Measured	35289
Household Measured - no meter	0
Household Site meters	1882
Household Unmeasured - Not Charged	13
Number of Domestic Properties Connected to the Sewerage System	**668282**

APPENDIX B – Incident Report Form Contractor

Northern Ireland Water – Flooding Incident Report

Work Order Ref No: 06208857 Name: [redacted]

Location: [redacted] PORTRUSH [redacted]

Date: 11/11/2018 Arrival time: 20:24:00

1) Conversation with Home Occupier: Yes Access Refused: No

2) Photographs Taken: Inside

3) Internal Flooding: Yes

Main Sewer	☐	Lateral Sewer	☒
Adjacent properties flooded	☐	Attached garages flooded	☐
Basements/Cellar flooded	☐	Restricted Toilet use	☐
Kitchen	☐	Hallway	☐
Living room	☐	Dining room	☐
Shop/integral store	☒	Downstairs bathroom	☐

4) External Flooding: No

Main Sewer	☐	Lateral Sewer	☐
Public road/footpath	☐	Public area	☐
Agricultural land	☐	Curtilage	☐
Detached garage flooded	☐	Detached shed or store flooded	☐

5) Comments on cause of reported incident: (Select only one category below)

Blockage	☒	Collapsed sewer	☐
Defective road gulley	☐	Defective private drain	☐
M&E equipment failure	☐	Further investigation by NIW required	☐
Other:			

6) Clean up operations:

Not Required ☒ Further Action Required ☐ Completed ☐

7) Previous History:

Yes ☒ No ☐ Not Aware ☐

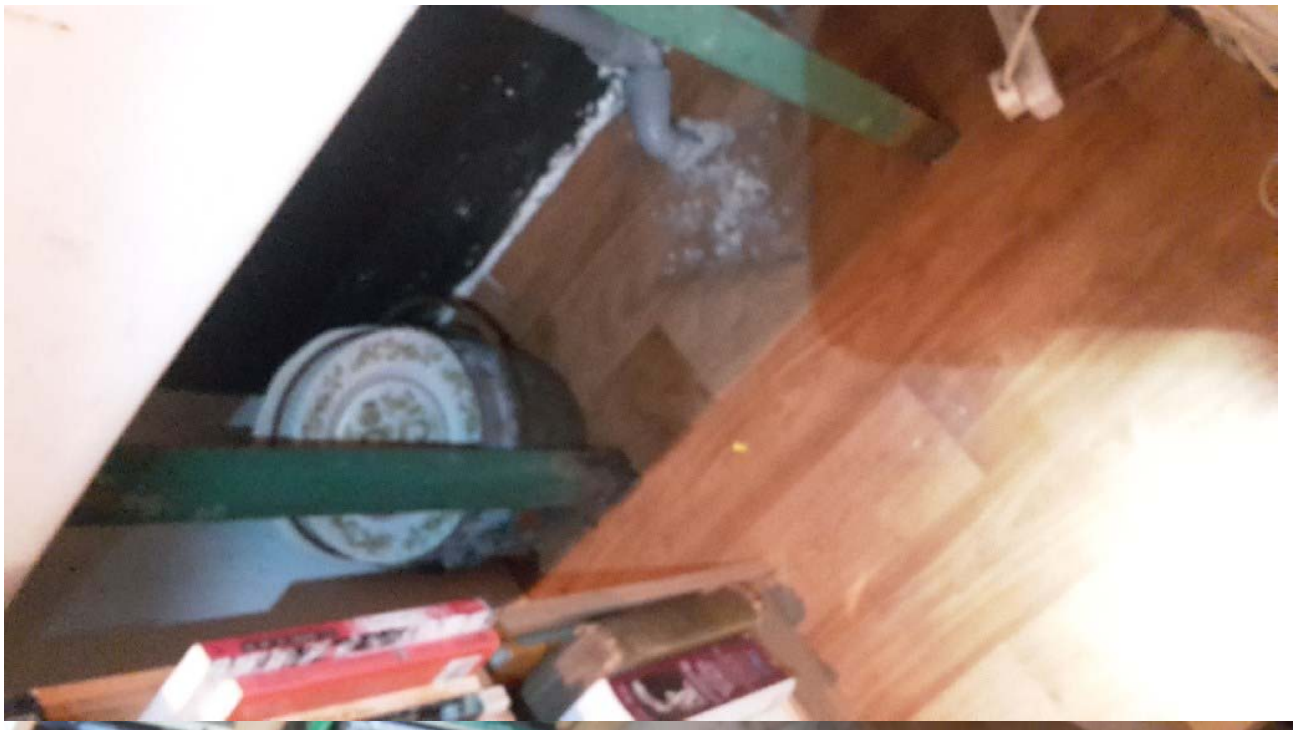
8) Weather Conditions:

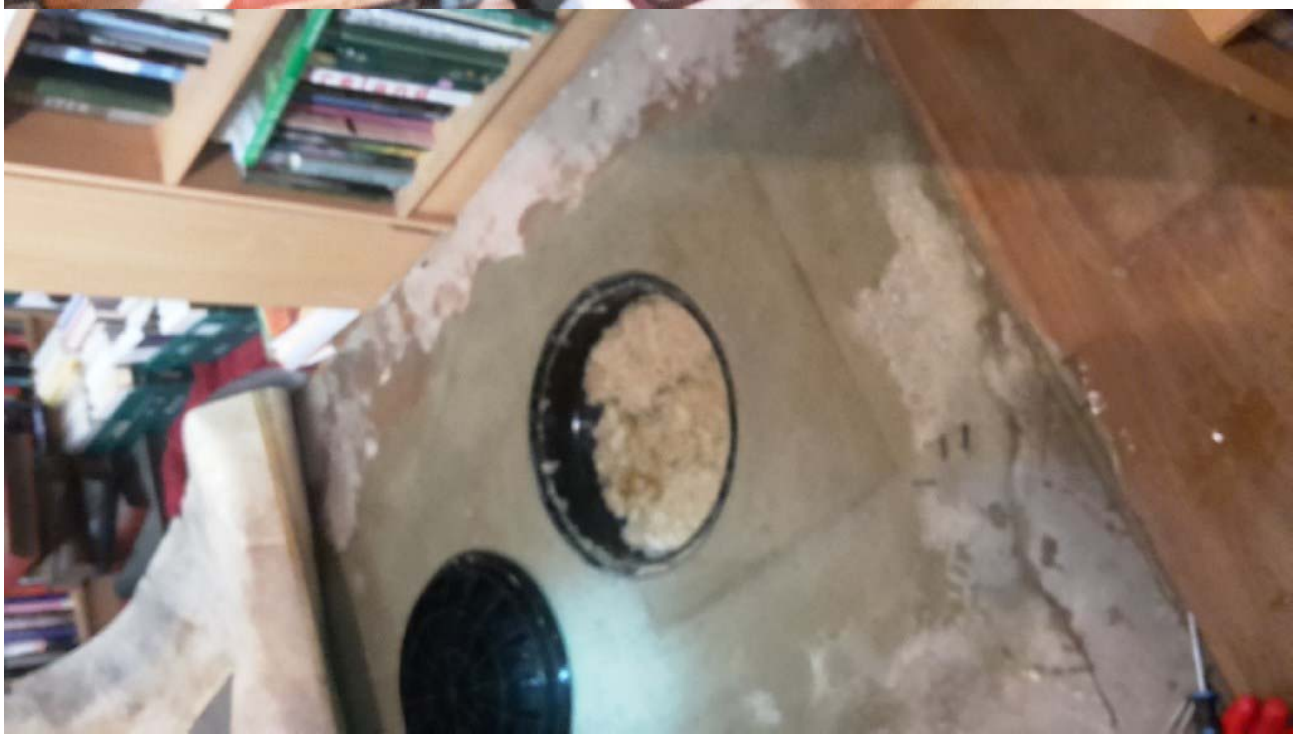
Dry ☐ OR Wet ☒: Heavy ☐ Medium ☐ Light ☒

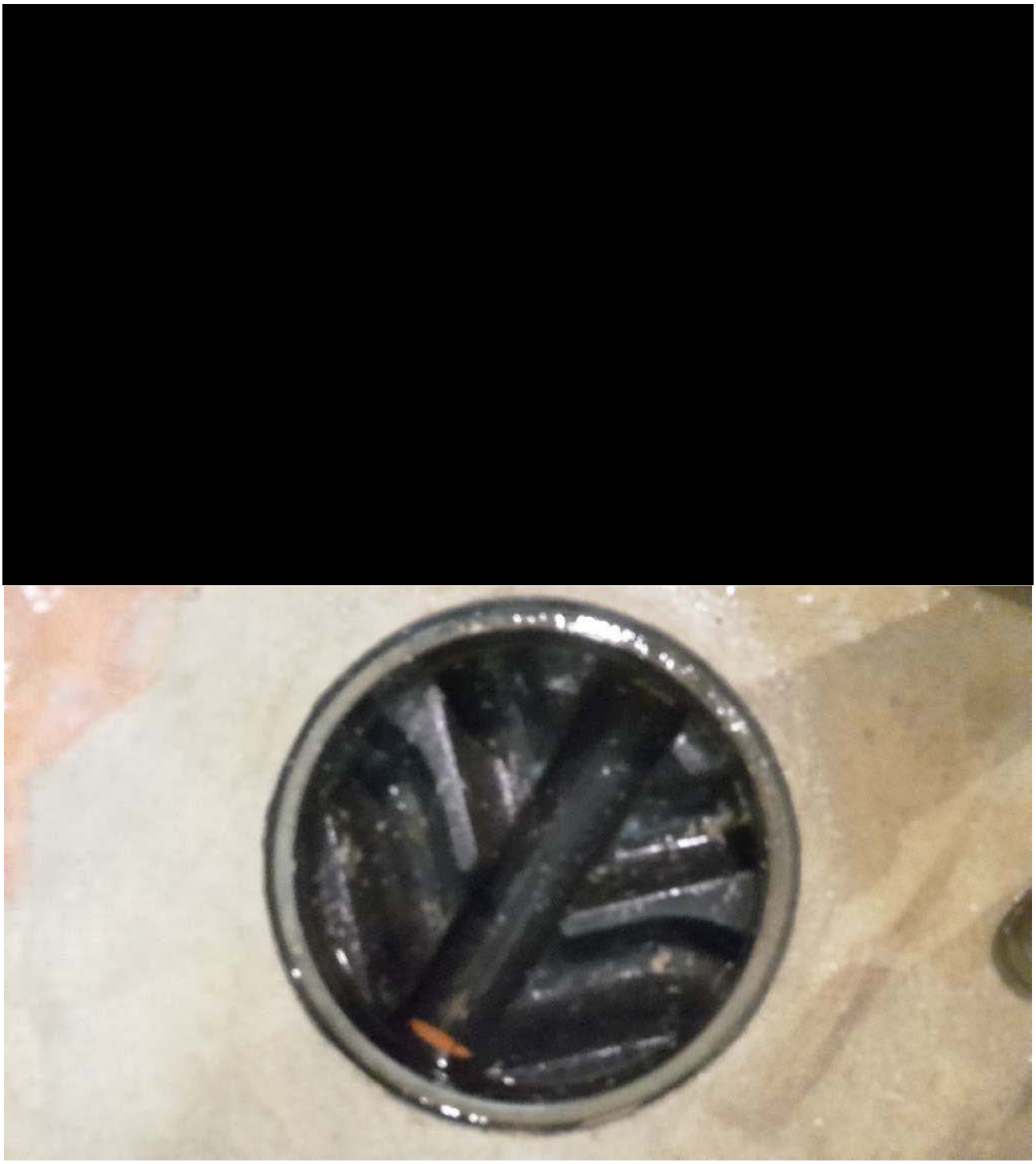
Comments: Especially for Flooded jobs or Follow on jobs

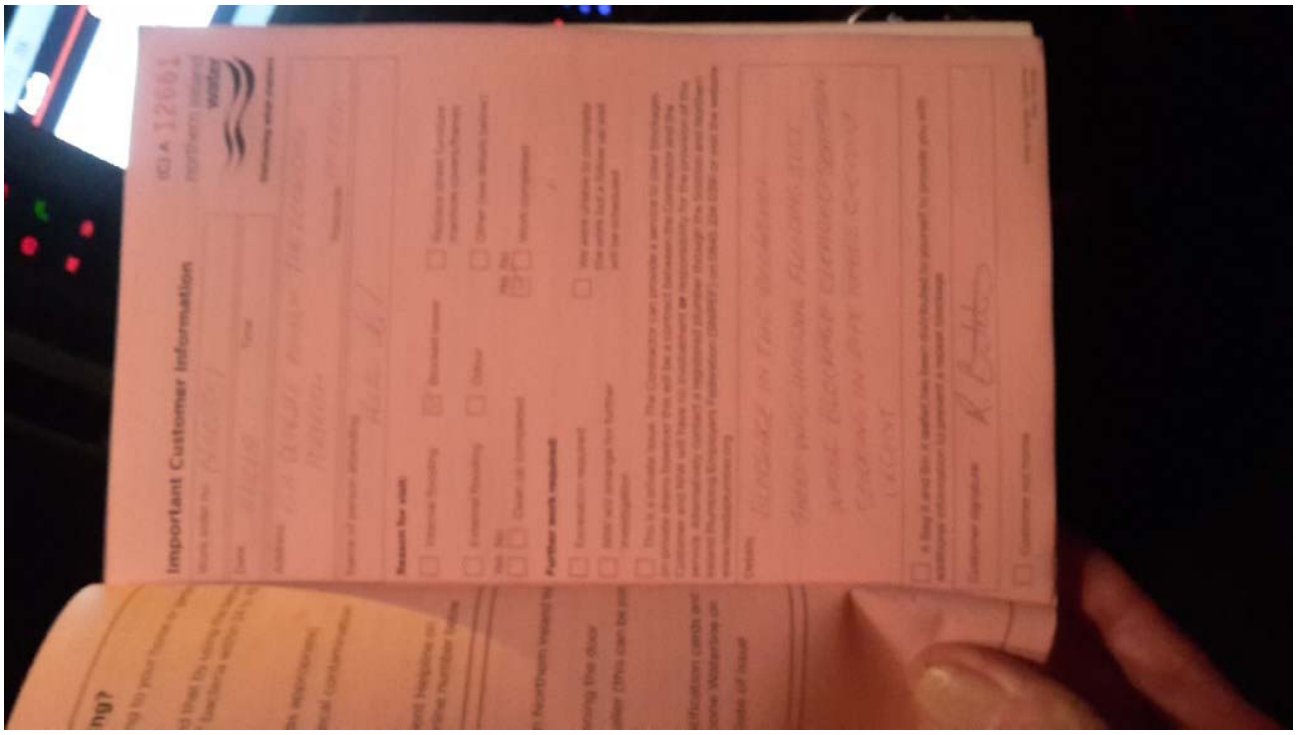
No contact was made with a field manager. NIW came out about 4 years ago and put in new pipes - manhole in shop all clear needs c c t v urgent.

PHOTO FOR FLOODED JOBS:








Important Customer Information

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 3A KEY OUTPUTS
SEWERAGE SERVICE - EXTERNAL FLOODING (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**ANNUAL FLOODING SUMMARY**																				
	(I) OVERLOADED SEWERS																				
1	Areas flooded externally in the year (overloaded sewers)	nr	0	225	D6	92	D6	117	D6	23	D6	20	D6	15	D6	57	D6				
2	Curtilege flooding incidents in the year (overloaded sewers)	nr	0	97	D6	70	D6	86	D6	17	D6	16	D6	11	D6	46	D6				
3	Highway flooding incidents (overloaded sewers)	nr	0	32	D6	23	D6	26	D6	6	D6	4	D6	4	D6	9	D6				
4	Other flooding incidents (overloaded sewers)	nr	0	96	D6	22	D6	20	D6	0	D6	0	D6	0	D6	2	D6				
5	Total flooding incidents (overloaded sewers)	nr	0	225	D6	115	D6	132	D6	23	D6	20	D6	15	D6	57	D6				
6	External flooding incidents (overloaded sewers attributed to severe weather)	nr	0	29	D6	1	D6	14	D6	6	D6	3	D6	3	D6	41	D6				
6a	Areas flooded externally attributed to severe weather	nr	0	29	D6	1	D6	14	D6	6	D6	3	D6	3	D6	41	D6				
	(ii) OTHER CAUSES																				
7	Areas flooded externally in the year (other causes)	nr	0	3,212	D6	3,348	D6	4,379	D6	3,889	D6	3,819	D6	3,466	D6	4,273	D6				
8	Areas which have flooded more than once in the last 10 years (other causes)	nr	0	N/C		N/C		N/C		N/C		N/A		N/C		0	D6				
9	Flooding incidents (other causes - equipment failure)	nr	0	19	D6	23	D6	25	D6	19	D6	8	D6	3	D6	4	D6				
10	Flooding incidents (other causes - blockages)	nr	0	3,526	D6	3,293	D6	4,269	D6	3,773	D6	3,543	D6	3,155	D6	3,962	D6				
11	Flooding incidents (other causes - collapses)	nr	0	31	D6	73	D6	85	D6	97	D6	268	D6	308	D6	307	D6				
B	**AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER**																				
	(I) SUMMARY																				
12	2 in 10 register at end of year	nr	0	0	D6	190	D6	212	D6	226	D6	232	D6	237	D6	251	D6				
13	1 in 10 register at end of year	nr	0	213	D6	7	D6	20	D6	20	D6	20	D6	20	D6	20	D6				
14	1 in 20 register at end of year	nr	0	0	D6	16	D6	84	D6	86	D6	87	D6	87	D6	87	D6				
15	Total on the 1:10, 2:10, 1:20 register at end of year	nr	0	213	D6	213	D6	316	D6	332	D6	339	D6	344	D6	358	D6				
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category	nr	0	N/C		0	D6	N/C		N/C		N/A		N/C		N/A	0				
	(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER																				
20	Removed by company action (external only)	nr	0	0	A1	0	A1	0	A1	0	A1	1	A1	0	B2	0	B2				
21	Removed by company action (external linked)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	2	B2	0	B2				
22	Removed because of better information	nr	0	0	A1	113	A1	0	A1	0	A1	0	A1	2	B2	0	B2				
23	Added because of better information (actually flooded)	nr	0	213	A1	113	A1	103	A1	16	A1	7	A1	9	B2	14	B2				
24	Added because of better information (modelled)	nr	0	0	A1	0	A1	0	A1	0	A1	1	A1	0	B2	0	B2				
25	Transferred from external to internal register	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	B2	0	B2				

Table 3a - Key Outputs – Sewerage Service – External Flooding

Introduction

The processing of external flooding incidents has continued as it did in year 2017-18. The in-house resource devoted to this processing and analysis continues to be extremely limited. As a consequence, the process continues to be heavily dependent upon the accuracy of the information provided by the external maintenance contractor. Throughout the year, analysis of external flooding incidents is based upon monthly spreadsheets and Flooding Incident Report sheets, submitted by the external maintenance contractor. Each incident which is classified by the contractor as potentially 'hydraulic' – i.e. which does not have an 'other cause' identified - is subject to an investigation by the Asset Performance section. The investigation will either recommend that the incident is confirmed as hydraulic, or recommend that the incident is excluded.

Each incident is classified by the contractor as affecting one of curtilage, highways or 'other'. An analysis is carried out to define the total number of areas affected.

Those incidents classified by the contractor as 'other causes' are defined, (by the contractor), as due to one of 'equipment failure', blockage or collapse.

Lines 1-11 - Annual Flooding Summary

The analysis of external flooding incidents is summarised in the spreadsheet 'Reported External Flooding for 2018-19'; the figures within Table 3a have been transferred from that spreadsheet.

The total number of 'overloaded sewers' incidents for the year 2018-19 was 57.

The total number of 'other causes' incidents has increased from 3466 in 2017/2018 to 4273, in 2018/2019.

As there is reliance upon the information supplied by the external contractor, a low confidence grade, of D6, continues to be attached.

Line 8 – Areas which have flooded more than once in the last 10 years (other causes)

This line cannot be populated as the processing of external incidents has only been properly executed for six years.

Lines 12-25 - At Risk Register

The total number of areas, on the Register at the start of year 2018/19 was 344.

The processing of external flooding incidents has continued as it did in year 2017/18, resulting in 14 areas being added to the Register, in the assigned categories (2 in 10, 1 in 10, 1 in 20).

This brings the total number of areas on the Register to 358.

Capital schemes which address external flooding only are, in general, not funded – hence no properties were removed by company action.

As the primary input to the register is the processing of annual flooding incidents, the same confidence grade (D6) is assigned.

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 4 KEY OUTPUTS
CUSTOMER SERVICE - 1 (TOTAL)

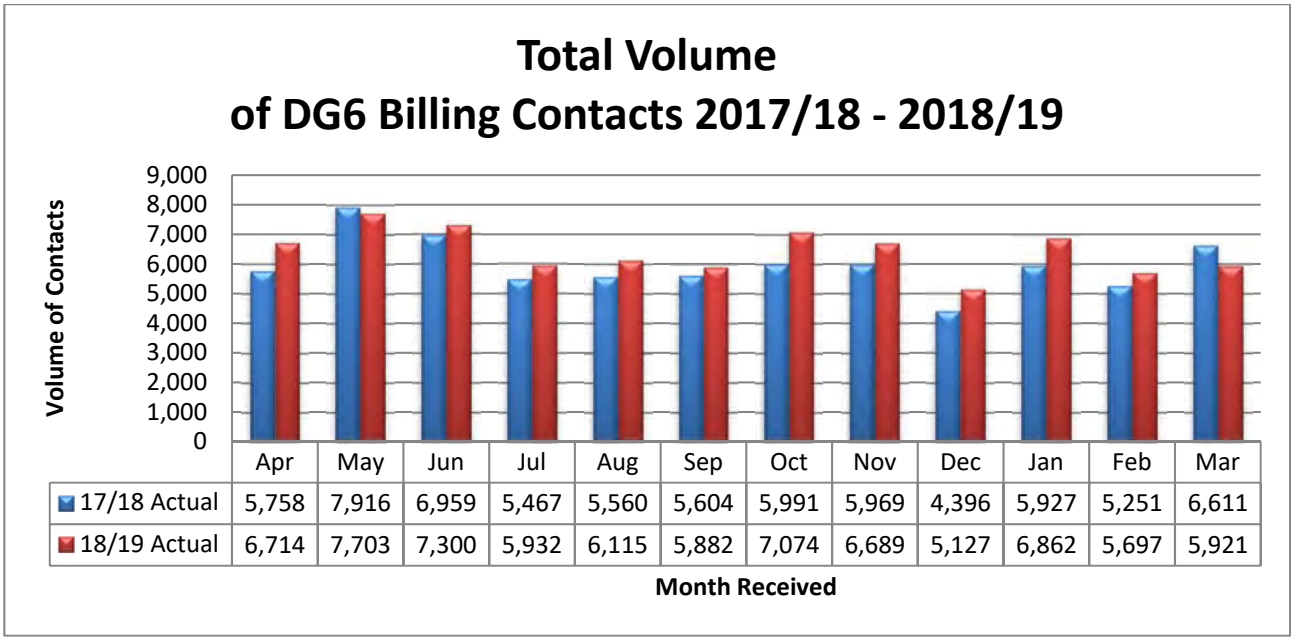
	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	DG6 RESPONSE TO BILLING CONTACTS - GENERAL																				
1	Total billing contacts	nr	0	77,051	B2	78,463	B2	75,545	B2	75,490	B2	77,698	B2	71,409	B2	77,016	B2				
2	Number dealt with within 5 working days	nr	0	77,118	B2	78,398	B2	75,520	B2	75,462	B2	77,679	B2	71,386	B2	77,010	B2				
3	Number dealt with in more than 10 working days	nr	0	26	B2	30	B2	9	B2	11	B2	4	B2	5	B2	3	B2				
4	DG6 Percentage dealt with within 5 working days	%	2	100.09	B2	99.92	B2	99.97	B2	99.96	B2	99.98	B2	99.97	B2	99.99	B2				
5	Percentage dealt with in more than 10 working days	%	2	0.03	B2	0.04	B2	0.01	B2	0.01	B2	0.01	B2	0.01	B2	0.00	B2				
B	CONNECTED PROPERTIES																				
6	Number of properties connected for water supply only	nr	0	152,771	A2	155,064	B2	157,260	A2	160,991	A2	163,246	A2	164,695	A2	165,152	A2				
7	Number of properties connected for water and sewerage services	nr	0	665,189	A2	669,910	B2	670,800	A2	678,719	A2	689,153	A2	698,293	A2	709,155	A2				
8	Number of properties connected for sewerage services only	nr	0	25	A2	24	B2	25	A2	24	A2	25	A2	25	A2	25	A2				

Table 4 – Customer Service 1 (Lines 1-5)

DG6 – Response to Billing Contacts

This was the eleventh year of non-domestic billing by Northern Ireland Water (NIW). Following the decision of Northern Ireland Executive, domestic charges continued to be deferred for 2018/19 charging year.

No material changes, other than tariff changes, were made to billing in 2018/19.
The chart below shows the DG6 received volumes during 17/18 – 18/19.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
17/18 Actual	5,758	7,916	6,959	5,467	5,560	5,604	5,991	5,969	4,396	5,927	5,251	6,611
18/19 Actual	6,714	7,703	7,300	5,932	6,115	5,882	7,074	6,689	5,127	6,862	5,697	5,921

Chart 1 – DG6 Billing Contacts Received 2018/19

The increased volume during quarter one was due to the annual bill run whereby unmeasured bills were issued for the start of April with recovery notices being issued as per policy, 28 days later where bills remained unpaid. This reflects the normal profile expected following the annual bill run.

Top Reasons for Customer Contact

Table 1 lists the top 5 reasons for billing contacts in 2018/19

Debit / Credit Card Payment	31%
Promise Of Payment	9%
Checking Payment Recd	8%
BI Request Copy Bill	5%
High Cons Advice Given	4%

Table 1 – Top 5 DG6 contact types 2018/19

Analysis of DG6 Received CMS Types in 17/18 against 18/19 highlights that the Top 3 CMS Types relate to payments. The increase in contacts is a direct result of focussed 'Collections' campaigns in FY18/19, which have resulted in an improved performance in cash, collected and reduced debtor days. A customer-centric and strategic account management approach to billing query resolution, collections activity and debt management throughout the year has produced the following results:

- Aged Debt is 23% lower than at this stage last year.
- Total Debt has decreased by 11.7% since 17/18.
- Debtor Days for March 2019 – at 46 days has significantly exceeded the target of 66 and performance last year.

Measures to reduce the volume of customer billing contacts relating to payments include:

- promotion of the online Quick Pay facility as well as the NI Water Self Service portal where customers can view account balance; view bill and payment history; pay a bill; manage account details; view the payment plan of individual schedules and view historic usage patterns and download relevant data.
- proposed introduction of email / text 'payment received' notifications.

Notably, less customer contacts were received in 18/19 regarding disputed liability and bill calculation queries.

Reporting Method

The source data for DG6 Table 4 (Lines 1 to 5) is reported using the submitted methodology stated for DG6.

Monthly reports for DG6 (received and closed) are run by Echo and independently validated by the CSD Services MI & Data Team. On the first working day of each month, the DG6 reports are run for both the current and previous months to accurately update received and closed figures on a retrospective basis to support the annual reconciliation. Variances are queried with NI Water Billing & Revenue, Contacts Team and Echo and resolved as they arise.

Responses

For DG6 reporting purposes, the date of resolution of the item or date of the substantive response/holding response is used as the closure date. If a customer has a billing-related query, which leads to a recalculated bill, the date of the response (verbal or written) explaining the reason for the bill is used as date and timestamp of the response. The recalculated bill is generated overnight and issued under separate cover.

A change to the holding response period was made during AIR 19. Effective 2 July 2018, the follow up dates provided to customers for DG6 contacts reduced from 40 working days to 20 working days (equating to one calendar month) from the date of the first holding response being issued.

This period should allow time for a site visit to be completed by a Meter Query Technician (MQT), the resolution confirmed and the final response issued to the customer.

Some meter surveys may take longer, so this category of holding response has been extended out to 30 days.

NB The majority of DG6 contacts which cannot be resolved within 5 days require a site visit by a MQT. It is not unusual that the requirement for remedial meter maintenance work is identified during these site visits. The 20 day period should allow time for an initial site visit to be performed by a MQT, any routine meter maintenance work requested and completed, the resolution confirmed and the final response drafted and issued to the customer.

However, in certain circumstances, especially where a site visit is not required, a 20-day hold may not be required and a shorter period is given in the holding response.

Re-categorisation between Regulatory Categories

NIW has procedures in place for instances where written contacts are changed from one DG category to another e.g. DG6 to DG7. The process document, **"Re-categorisation of written contacts"**, is embedded as Document 1 for reference purposes.

NIW_Re-categorisation of written conta

Document 1 - Re-categorisation of written contacts

Open contacts can be re-categorised using Rapid screen wccm11 (Contact Amendments), and closed contacts can be re-categorised using Rapid screen wccm91 (Close Date Maintenance).

There are a number of stages at which the categorisation of a billing contact can be reviewed after it has been scanned, logged and indexed.
Whilst not exhaustive, the main activities during which the categorisation of contacts is regularly checked are:

- Agent Review - it is the responsibility of the Agent to ensure that each contact they are handling is closed in line with reporting guidelines. On initial review, they should ensure that the contact has been correctly categorised in line with the DG/Contact definitions. If incorrect, it is their responsibility to ensure that the contact is updated on Rapid accordingly. If unsure, they should seek guidance from their line manager.
- The CSD Services MI & Data Team perform monthly sampling on 50 randomly selected closed DG6 Telephone and Written contacts. Any discrepancies found when carrying out the Telephone sampling are reported and escalated to Echo as part of NI Water's response to the Monthly Business Review Pack.
- Written sampling results are sent to the Contacts & Complaints & Executive Mail (C & C&EM) Team Managers (TMs) for review. It is the responsibility of the C & C&EM TMs to ensure that any agreed exceptions which require re-categorisation are retrospectively updated on Rapid.
- C & C&EM Coaching – TMs perform coaching using sampling of closed contacts. It is the responsibility of the TMs to ensure that any contacts identified through this process which require re-categorisation are updated on Rapid.

Email and Faxes

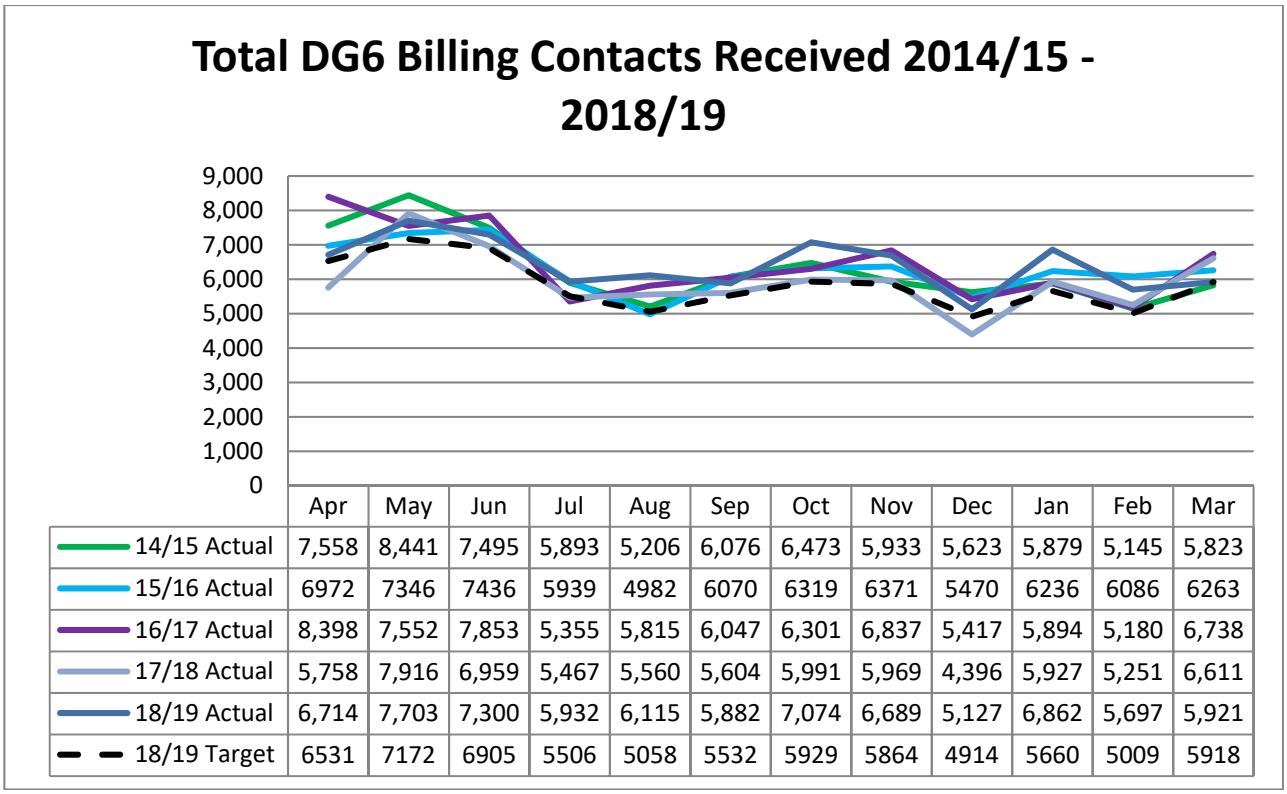
Systems remained in place to ensure that the receipt date of email/fax contacts is recorded as the date it is delivered to the company with the following working day being recorded as Day 1.

Payment Cards

NI Water does not issue payment cards to non-domestic customers.

DG6 Volumes Year-on-year

DG6 received volumes from 2014/15 to 2018/19 is displayed in Chart 2.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
14/15 Actual	7,558	8,441	7,495	5,893	5,206	6,076	6,473	5,933	5,623	5,879	5,145	5,823
15/16 Actual	6972	7346	7436	5939	4982	6070	6319	6371	5470	6236	6086	6263
16/17 Actual	8,398	7,552	7,853	5,355	5,815	6,047	6,301	6,837	5,417	5,894	5,180	6,738
17/18 Actual	5,758	7,916	6,959	5,467	5,560	5,604	5,991	5,969	4,396	5,927	5,251	6,611
18/19 Actual	6,714	7,703	7,300	5,932	6,115	5,882	7,074	6,689	5,127	6,862	5,697	5,921
18/19 Target	6531	7172	6905	5506	5058	5532	5929	5864	4914	5660	5009	5918

Chart 2 - DG6 received 2014/15 to 2018/19

The total received volume for 2018/19 is 77016. This is an increase of 5967 on 2017/18 total.

End of Year (Contacts not dealt with at end of year)

Based on data extracted on 16.04.19

- 161 DG6 contacts received during 18/19 were open;
- The oldest open DG6 contact received during 18/19 was 48 working days
- 161 DG6 contacts received during 18/19 were open for more than 5 working days, each pending completion of agreed actions as outlined in substantive holding responses;
- The average age of an open DG6 contact received during 18/19 was 23 working days.

Self Service Platform

NI Water provide additional web-based services for customers. The services are aimed predominantly at non-domestic customers who have an account with NIW and make it easier for them to pay bills online and check their accounts. The service also allows domestic customers with septic tanks to order their tank to be 'de-sludged'.
Once registered, non-domestic customers are able to:

- view their account balance;
- view the payment plan of individual schedules;
- view bill and payment history;
- view desludging request history;
- process a new desludging request;
- pay a bill; and
- manage their account details.

Line 6 – Number of Properties Connected for Water Supply Only

AIR18 figure – 164695
AIR19 figure – 165152

There has been a net increase of circa 457 properties during the 18/19 year, which were connected for water only.

Line 7 – Number of Properties Connected for Water and Sewerage Services

AIR18 figure – 698293
AIR19 figure – 709155

There has been a net increase of circa 10862 properties connected for water and sewerage services during the 18/19 year – commentary detailed below.

Line 8 - Number of Properties Connected for Sewerage Services Only

AIR18 figure – 25
AIR19 figure – 25

The number of properties connected for sewerage only has remained the same during the 18/19 reporting year.

As with Table 2, Table 3, Table 7 & Table 13 we have identified that properties can be added to/removed from the billing system via the methods below:-

1. New Connections during the 2018/19 reporting year. The figures are based on a report received from the Customer Connections Team. The figures are based on data supplied by our Customer Connections Team and represent completed connections during the reporting year. The projections for New Connections remain in line with the agreed PC15 forecasts, however we have noted a downturn and will review mid-year (during the draft Principle Statement) to ascertain if projections should be changed.
2. As a result of a customer contact. i.e. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    (a) The adding of properties NI Water allegedly did not know about
    (b) The adding of duplicates as the customer's address could not be found on Rapid. Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time of New Connection to that of customer contact (street names can change in the early stages of site development).
3. Removal/reclassification of properties as a result of data quality initiatives/projects
    a. Duplicate properties
    b. Reclassification of properties that were recorded in error
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.

For NI Water, accurate property data is fundamental for many systems and processes, including customer service, metering, billing, consumption, leakage and Major Incident Planning & Response. The Rapid Customer Contact System contains the master property data for NI Water.

As Data Owner for Property Standing Data, The Head of CSD Services is responsible for the property standing data held by NI Water; this is monitored and managed through the Property Information Group (PIG). The CSD Services MI & Data Team chairs this group.

The role of PIG is to ensure that there is appropriate governance, controls and reporting for changes made to core data on the system. As Property Data Owners, we need to ensure the processes around creation, maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. Control is key for us; as such we have identified the systems, processes and people using property information across the business, alongside confirming data accuracy and endeavouring to reduce the opportunities for erroneous data entry and creation (such as the inability to recreate demolished properties or duplicate properties).

The issues under consideration were identified as of corporate relevance, therefore to ensure appropriate direction and governance the PIG was formalised. Key objectives include:

1. To agree a single consistent source of property data.
2. To ensure the source property data represents accurate, up-to-date information appropriate for use by the business.
    a. To understand and agree data primacy in respect of data updates from NI Water and external (Land & Property Services - LPS) sources
    b. To ensure the processes around creation (i.e. New Connections), maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. i.e. through CBC Data Validation (Phase 1, Phase 2, Phase 3, 105 Days DV)
    c. To co-ordinate property reconciliations between NI Water & external sources i.e. Data Sharing Agreements between NI Water & LPS, NI Water & Belfast City Council (BCC) etc. and understand the reasons and validity of any differences
    d. To understand and ensure the adequacy of long term procedures for database maintenance, including the updating of data standards and associated CDE M&M Plans
3. To ensure the reporting requirements for the business are met relating to data held on Rapid, particularly, but not exclusively, in respect of tariffs, leakage, Annual Information Returns (AIR) & Principle Statement (PS) returns.
4. Challenge the data in the areas of
    a. Data categorisation & structure
    b. Data robustness – i.e. where is our data good and where is there opportunity for improvement? Identify projects that could aid improvement
    c. Data alignment – both internally and externally. Internally between systems such as Rapid, Ellipse, GIS, Diamond, Netbase, IMS etc. Externally through data reconciliations, such as LPS above.
5. To agree measures to improve the quality and integrity of the data, particularly the key CDEs as monitored by IMU
6. To agree the content and frequency of reports required by NI Water.
7. To agree the quality checking criteria for the above data and reporting and develop a Quality Plan including the determination of responsibilities and audit trails.
8. To produce & circulate an ‘operate and maintain’ programme for property data to the business.

During 2018/19, the focus for PIG included analysis and action on:

- Volume of properties coming onto the Rapid billing system on a monthly basis
    - new connections
    - customer contact
    - project work
- Volume of properties coming off the Rapid billing system (demolished)
    - sample check to ensure reason for demolition has been noted and on system audit trail recorded
- Volume of properties amended on the Rapid billing system
    - In particular, address fields -> building number, street name, town and postcode
    - sampling to identify if the data changes are data improvement or data regression
    - if data regression, further analysis into the process is undertaken
- Review of access privileges
    - Rapid audit
    - Through monthly audit samples
    - Internal CRs require sign off from PIG as BAU
    - Working with Echo to review access privileges on an ongoing basis
- Interruptions to supply notices – returned mail
    - This returned mail was brought to the attention of LPS and include properties that LPS have classified as live properties despite being returned as 'no such address' etc.
    - The 2 way communication with LPS will help underpin our governance work and provide direction to the business on practices
- Car Parking Spaces
    - The group identified that 'car parking' spaces were being added to Rapid as properties. One of the project teams added them because they were live on LPS, however they are not physically a property, nor do they require a water supply, therefore this practice has now ceased.

The PIG Strategy for 2019/20 will include the following:

- New Connections - A move to on-system reporting following the Business Improvement New Connections Review
- Rapid-POINTER Reconciliation - follow on actions to be worked through and benefits realised. i.e. Uploading of UPRNs from POINTER where a property can move from an A match to an A* match
- Running of a mini data cleanse project within the CSD Services MI & Data Team to prepare the Rapid property data for the switch on of system validations. There were 4 phases of system validation functionality introduced to Rapid as part of the CBC Implementation Project. Off system data cleanse is required before some of the system validation rules can be applied. The data will need prepared offline to ensure accuracy and that it conforms to the system validation rules. It will then need tested before being uploaded to Rapid through the bulk upload tool. There will be some further testing to ensure all has uploaded correctly before the functionality is switched on.
- Data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – NDA has been signed off, data sharing project to commence during June 19 for a 12 month period.
- Continuation of the 2 way communication with LPS - This will help underpin our governance work and provide direction to the business on practices that will work alongside LPS

- Student Accommodation – further case studies on student accommodation re-development sites. How does Rapid hold these properties? Liaise with Belfast City Council to understand at what stage they can inform NI Water of properties that are to be re-developed as student accommodation.
- Test Meters – follow up on ‘retain for review meters’
- Properties with ‘no water supply’ (no water/well water) – review and validate on a monthly basis

Annex A details the Line Methodology for the figures calculated in Table 4 Lines 6-8.

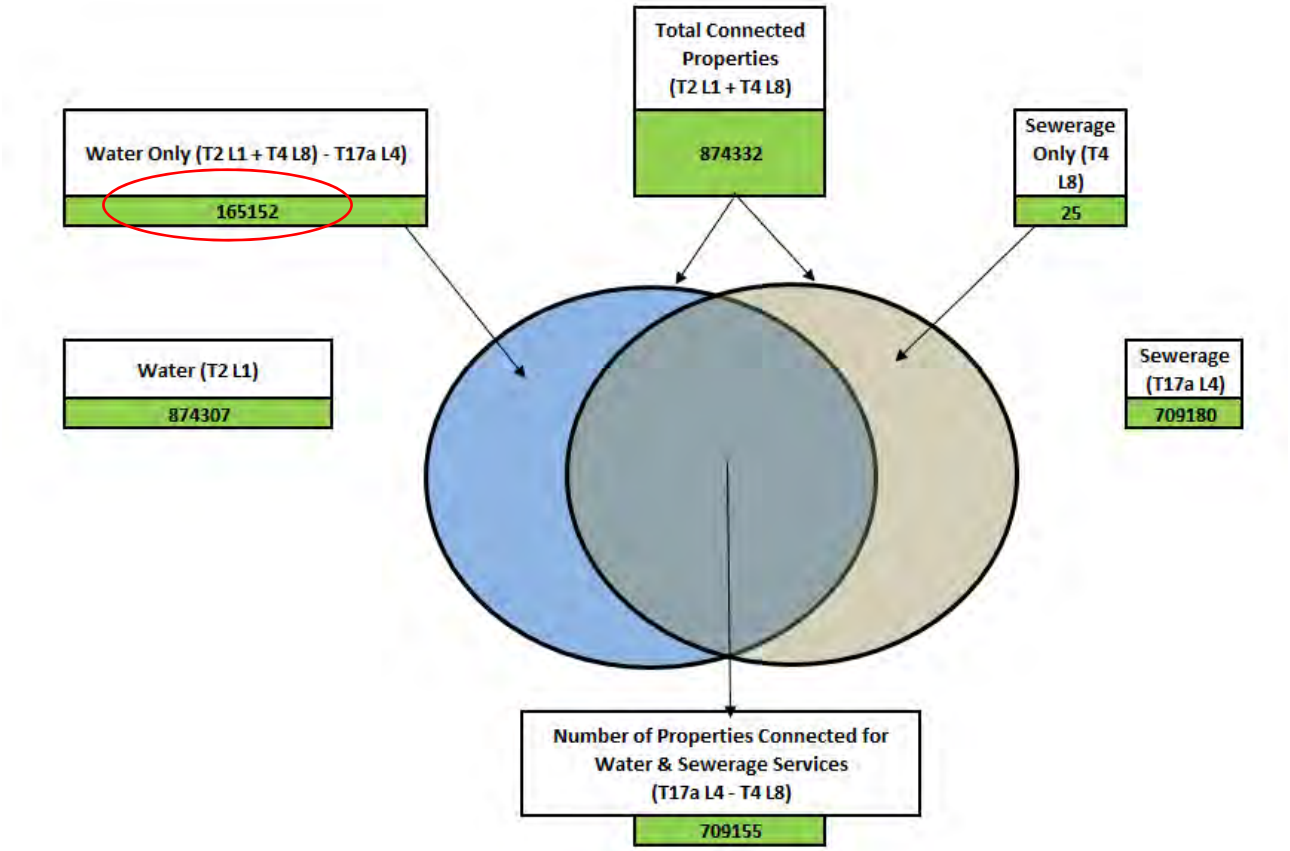
Annex A – Line Methodology for Table 4 Lines 6-8

B Connected Properties

Line 6 - Number of Properties Connected for Water Supply Only

The total number of household and non-household properties connected to the water distribution system for water supply only, at the end of the AIR19 reporting year. This includes properties which are connected but not billed (e.g. temporarily unoccupied), but excludes properties which have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR19 and is displayed in the diagram below:



Therefore:-

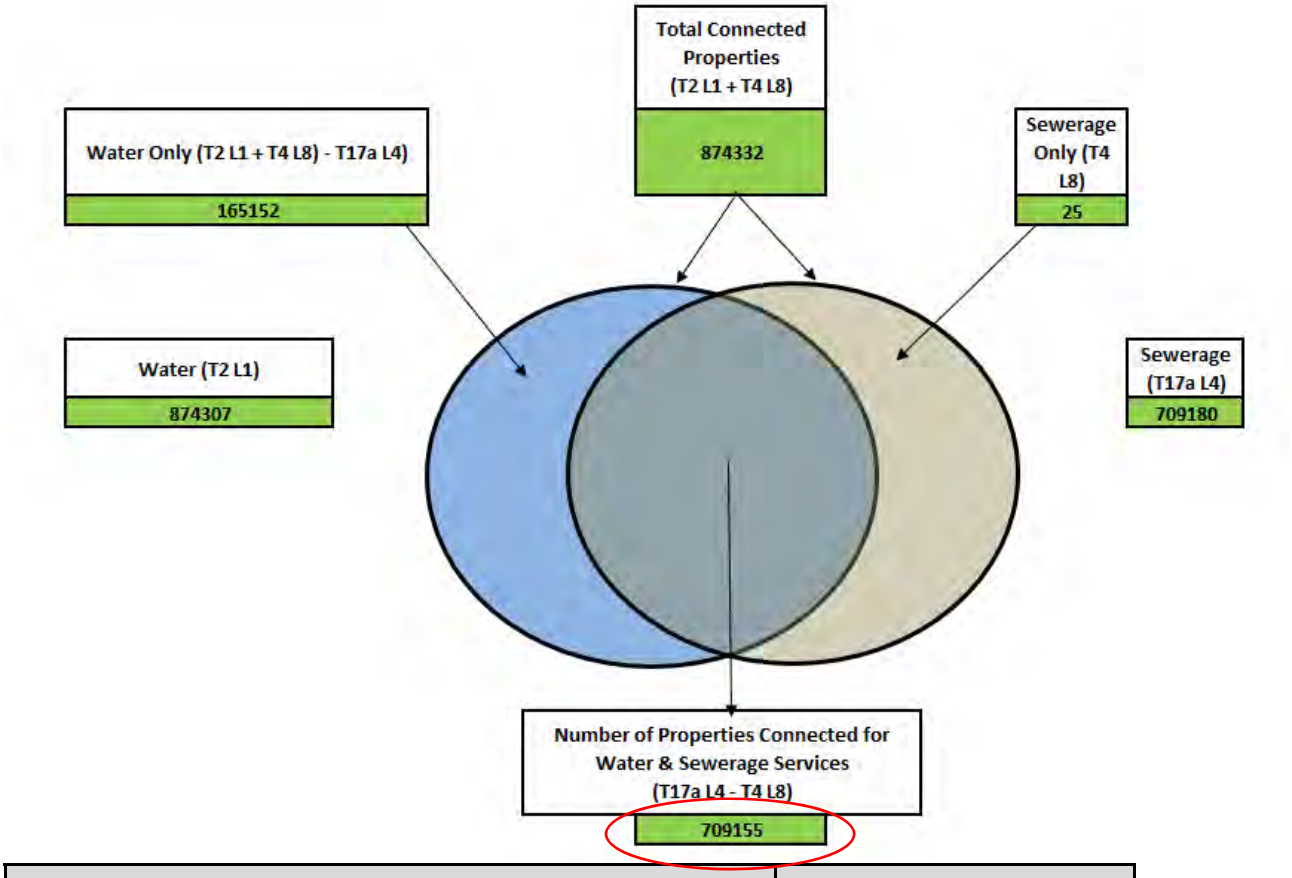
	End March 2019
Total Connected Properties (T2 L1 + T4 L8)	874332
less	
Total Connected Properties for Sewerage (T17a L4)	709,180
Total Connected for Water Only	**165,152**

Line 7 - Number of Properties Connected for Water and Sewerage Services

The total number of household and non-household properties connected for both water and sewerage services at the end of the reporting year. This includes properties which are

connected but not billed (e.g. temporarily unoccupied), but excludes properties which have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR19 and is displayed in the diagram below:



	End March 2019
Number of Properties Connected for Water & Sewerage Services (T17a L4 - T4 L8)	**709155**

Line 8 - Number of Properties Connected for Sewerage Services Only

The total number of household and non-household properties connected for sewerage services only, at the end of the reporting year. This includes properties which are connected but not billed (e.g. temporarily unoccupied), but excludes properties which have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR19.

	End March 2019
Domestic sewerage only	7
plus	
Non-domestic sewerage only	18
Total Properties Connected for Sewerage Only	**25**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5 KEY OUTPUTS
CUSTOMER SERVICE - 2 (TOTAL)

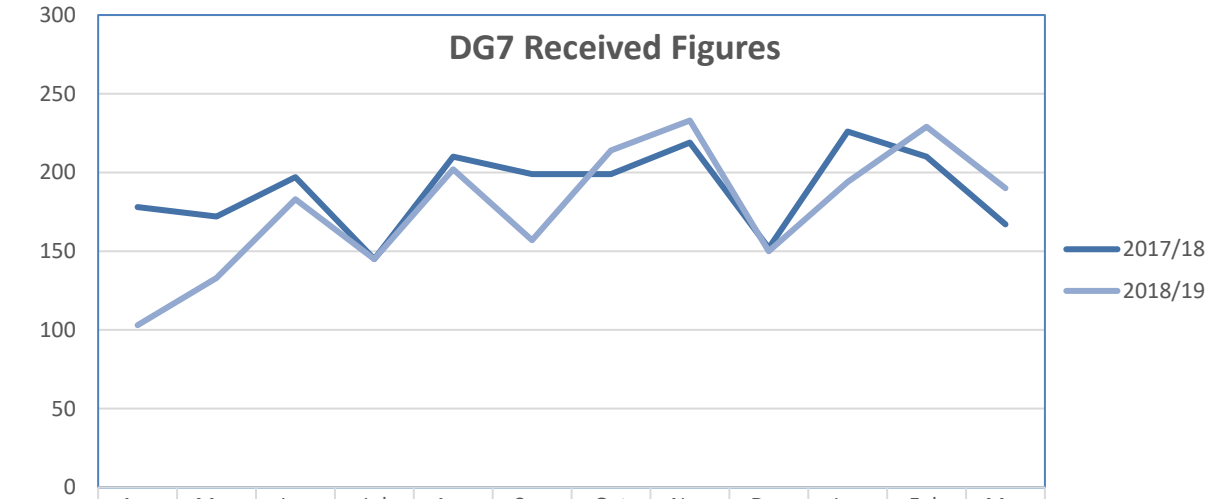
	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**DG7 RESPONSE TO WRITTEN COMPLAINTS**																				
1	Total written complaints	nr	0	3,173	B2	2,505	B2	2,364	B2	2,269	B2	2,375	B2	2,274	B2	2,133	B2				
2	Number dealt with within 10 working days	nr	0	3,166	B2	2,498	B2	2,363	B2	2,266	B2	2,375	B2	2,271	B2	2,133	B2				
3	Percentage dealt with within 10 working days	%	2	99.78	A1	99.72	A1	99.96	A1	99.87	A1	100.00	A1	99.87	B2	100.00	B2				
4	Number dealt with in more than 20 working days	nr	0	1	B2	2	B2	0	B2	2	B2	0	B2	3	B2	0	B2				
5	Percentage dealt with in more than 20 working days	%	2	0.03	A1	0.08	A1	0.00	A1	0.09	A1	0.00	A1	0.13	B2	0.00	B2				
B	**DG8 BILLS FOR METERED CUSTOMERS**																				
6	Total metered accounts	nr	0	110,164	A1	115,227	A1	118,732	A1	123,763	A1	127,807	A1	128,705	A1	129,387	A1				
7	Metered accounts excluded from indicator	nr	0	42,688	A1	47,784	A1	51,214	A1	55,875	A1	59,428	A1	60,060	A1	60,542	A1				
	(I) NO. OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING AT LEAST ONE BILL DURING YEAR BASED ON METER READING:																				
8	Company readings	nr	0	66,557	A1	66,775	A1	66,855	A1	67,319	A1	68,025	A1	68,400	A1	68,603	A1				
9	Company or customer readings (or both)	nr	0	66,622	A1	66,840	A1	66,916	A1	67,366	A1	68,051	A1	68,420	A1	68,621	A1				
	(ii) NUMBER OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING:																				
10	Estimated bills only	nr	0	550	A1	433	A1	548	A1	426	A1	270	A1	184	A1	203	A1				
11	No bills received during the report year	nr	0	304	A1	170	A1	54	A1	96	A1	58	A1	41	A1	72	A1				
12	Unread by company for 2 years	nr	0	310	A1	186	A1	164	A1	207	A1	173	A1	90	A1	21	A1				
C	**DG9 TELEPHONE CONTACT**																				
13	Total calls received on customer contact lines	nr	0	219,399	A2	226,881	A2	230,847	A2	210,487	A2	217,023	A2	212,095	A2	215,011	A2				
14	All lines busy	nr	0	0	A2	0	A2	32	A2	159	A2	63	A2	18	A2	29	A2				
15	Total of calls not abandoned	nr	0	216,006	A2	223,256	A2	226,204	A2	209,284	A2	216,015	A2	211,061	A2	213,835	A2				
16	Call Handling Satisfaction	nr	2	4.54	A1	4.63	A1	4.65	A1	4.59	A1										
17	Total telephone complaints	nr	0	73,158	A2	74,316	A2	76,536	A2	61,316	A2	62,866	A2	57,940	A2	59,686	A2				
D	**SPECIAL ASSISTANCE REGISTER**																				
18	Customers on the special assistance register	nr	0	2,675	A2	2,903	A2	3,084	A2	3,163	A2	2,017	A1	2,096	A1	2,201	A2				
E	**CUSTOMER SATISFACTION MEASURES**																				
19	Total contacts	nr	0									257,866	A2	250,753	A2	252,844	A2				
20	Unwanted contacts	nr	0									110,197	A2	105,964	A2	75,569	A2				
22	First Point of Contact Resolved (FPOCR)	%	1									66.5	A2	65.8	A2	90.0	A2				
23	Customer advocacy measure	nr	0									27	A1	31	A1	32	A1				
24	Omnibus survey question 1	nr	1									80.3	A1	92.4	A1	81.6	A1				
25	Omnibus survey question 2	nr	1									11.2	A1	8.2	A1	8.3	A1				

Table 5 – Customer Service 2

Lines 1-5 - DG7 Response to written complaints

DG7 Received Volumes

The chart below shows the DG7 received volumes during 17/18 and 18/19.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2017/18	178	172	197	145	210	199	199	219	152	226	210	167
2018/19	103	133	183	145	202	157	214	233	150	194	229	190

The chart shows a decrease in the overall volume of written complaints received in 18/19 compared to the previous year; 2,133 in total received in 18/19 compared with a total of 2,274 received in the previous reporting period.

When comparing with average monthly received figures based on the data for the past 3 years, received volumes in 18/19 were above average monthly received figures in 4 of the 12 months.

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
16/17	192	175	248	150	162	211	219	256	183	201	188	190
17/18	178	172	197	145	210	199	199	219	152	226	210	167
18/19	103	133	183	145	202	157	214	233	150	194	229	190
Average	***158***	***160***	***209***	***147***	***191***	***189***	***211***	***236***	***162***	***207***	***209***	***182***

The most notable of the above-average monthly volumes was received in February 2019. Analysis of written complaints received in February 2019 found no obvious drivers for this above average figure.

In 2018/19 83 complaints were received in relation to malodour issues being experienced of residents of Belfast Road, Comber.

As in previous years, the number of written complaints in the Charges & Billing category was highest, representing 38% of the total received across the reporting period. This represents a 7% increase on 2017/18.

For 2018/19 113 written complaints were linked to accounts which had been reviewed by the Metering & Billing project. This is an increase on 2017/18 when 88 written complaints were linked to accounts reviewed by the project.

As is typical, the complaints in the Charges & Billing category this reporting period stem from a variety of reasons, some of which are summarised below:

- Over 250 complaints were recorded as being from customers disputing liability for charges.
- Over 100 complaints were recorded as being about leakage allowances or high consumption.

End of Year (Contacts not dealt with at end of year)

Based on data extracted on 26 April 2019, no DG7 contacts received during 18/19 complaints remained open.

Petitions

No DG7 contacts were received which could be described as petitions.

CCNI Written Complaints Assessment

There was no formal CCNI Written Complaints Assessment held during the reporting period.

E-mail and Faxes

Systems remained in place to ensure that the receipt date of email/fax contacts is recorded as the date it is delivered to the company with the following working day being recorded as Day 1.

1,736, or 81.39%, of the total DG7 received volume were recorded with a document type of “email”.

No DG7 contact was recorded as having a document type of “fax”.

Self-Service Portal

The “Contact Us” section of the online self-service portal allows customers to submit complaints on completion of an online form. The resulting complaints are received as emails and reported as such.

The link as is below:
https://selfservice.Nothern Ireland Waterater.com/ContactForm#Complaint

Complaints about Contractors

The process which supports the recording of written complaints received directly by PPP concessionaires (or other contractors working on NI Water’s behalf) remained in place throughout 18/19. No complaints of this nature were recorded via this process during the reporting period.

Complaints about HVCA

There were no written complaints recorded as being related to the High Volume Call Answering system.

NI Direct

There were no complaints received through NI Direct in respect to the company’s call centre or field staff responses to flooding incidents.

Telephone Complaints

Complaints received via telephone are reported as DG9 telephone complaints, not DG7. Billing telephone complaints are reported as DG6.

Date of Receipt

Written complaints are date-stamped per the date of receipt.

Date of Dispatch

The date of dispatch refers to the date on which a response is sent to the customer. The date of dispatch is recorded as the date closed.

Response Time

This is the number of working days between receipt of a contact by Northern Ireland Water up to and including the day of dispatch of a response. For the purpose of this calculation, the day of receipt (provided it is a working day) is counted as day zero and the next working day as day one.

When an email or fax is received after 16:00 it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

The reported date of receipt for emails/faxes received outside of normal operating hours is the actual date on which the complaint was delivered to the company. For example, if an email is received on a Saturday, this is recorded as day zero. The next working day (normally the Monday) would be counted as day one. If an email is received on a Sunday then this is recorded as date of receipt (day zero) and (normally) Monday as day one.

Substantive Holding Reply

This is defined as a response to a written complaint which advises the customer that Northern Ireland Water needs to undertake additional investigations or other actions before being able to provide a full response. A holding response is considered substantive if it advises the customer what further action needs to be taken in order to fully respond, when this will be done and when they will receive a further communication from Northern Ireland Water.

Items remain open until all actions have been completed but will be closed back to the date of the holding response for reporting purposes when said actions have been completed.

When a date by which investigations or further actions will be complete cannot be given, we will give the date by which we will contact the customer again.

Holding responses can be issued in writing or provided verbally by telephone.

Repeat Contact

Where a complaint has been responded to and results in a period of correspondence each written contact is treated as, and reported as, a separate complaint.

No complaints have been excluded from DG7 where Northern Ireland Water consider the complaint has been dealt with as far as we are able.

Consumer Council for Northern Ireland (CCNI)

Complaints received in writing via CCNI will be logged as complaints and recorded in DG7 figures. All complaints from CCNI are received in writing by email.

CCNI enquiries and follow-up questions are not recorded as complaints.

Changes to original categorisation

Open contacts can be re-categorised using Rapid screen wccm11 (Contact Amendments), and closed contacts can be re-categorised using Rapid screen wccm91 (Contact Date Maintenance).

There are a number of stages at which the categorisation of a written contact can be reviewed after it has been scanned, logged & indexed.

Whilst not exhaustive, the main activities during which the categorisation of contacts is regularly checked are:

- Agent Review - it is the responsibility of the Complaints & Executive Mail Team Agent to ensure that each written contact they are handling is closed in line with reporting guidelines. On initial review, they should ensure that the contact has been correctly categorised in line with the DG/Contact definitions. If incorrect, it is their responsibility to ensure that the contact is updated on Rapid accordingly. If unsure, they should seek guidance from their line manager.
- MI & Data Team Sampling – the MI & Data Team within CSD Services performs monthly sampling on closed DG6, DG7 and non-reportable contacts. The sampling results are sent to the Customer Service Delivery Manager, Complaints & Executive Mail Team Manager & Supervisor for review. It is the responsibility of the Complaints & Executive Mail Team Manager & Supervisor to ensure that any agreed exceptions which require re-categorisation are retrospectively updated on Rapid.
- Line Management checks – Complaints & Executive Mail Team Manager & Supervisor perform coaching using sampling of closed contacts. It is the responsibility of the Complaints & Executive Mail Team Manager & Supervisor to ensure that any contacts identified through this process which require re-categorisation are updated on Rapid.

Exclusions

A total of 22 written customer complaints have been excluded from DG7 reporting during 18/19 for a variety of exclusion reasons as per the Level of Service Methodology.

Confidence Grades

The confidence grades assigned to lines 1-5 as shown below, remain the same as those assigned to the 2017/18 performance figures.

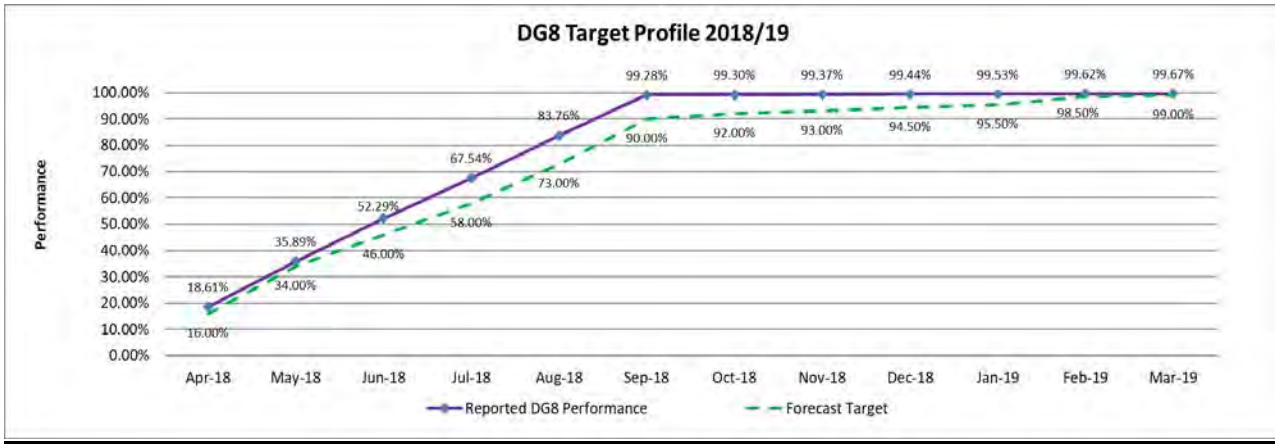
1	Total written complaints	B2
2	Number dealt with within 10 working days	B2
3	Percentage dealt with within 10 working days	B2
4	Number dealt with in more than 20 working days	B2
5	Percentage dealt with in more than 20 working days	B2

Lines 6-12 DG8 – Bills for metered customers

99.67% of meters were read and billed based on an 'actual' meter read during 18/19, exceeding the target of 99.00%. For the second year in a row the company achieved the target of 99.00% within the first 6 read cycles.

The target for 19/20 remains at 99%.

DG8 Meters Read and Billed Performance (%)



The graph detailed above provides a monthly profile of the cumulative increase in DG8 reads throughout the course of 18/19. The monthly performance is based on actual meter reads out of the total meter stock base.

As at Sep18, per graph detailed above, following completion of the first set of 6 monthly read cycles (Apr18-Sep18), 99.28% of the meters contributing to the DG8 target were read, against an internal company target of 90.00%.

Within the second half of the year the targeted monthly skip management approach resulted in a reduction in the number of skips from 114 for 17/18 to 84 18/19, this has been due to a number of factors including;

- Proactive management of meter maintenance programme to ensure meters are replaced as quickly as possible and at a time convenient to the customer.
- Proactive engagement with customers to obtain access to properties to enable the meter to be read.
- Proactive identification of in month new meter uploads which are required to be read and billed.

NIW will continue to assess the benefits of the various technologies trialed within the on-going pilot study of SMART Metering over the course of the year. We will continue to investigate what SMART meter and network technologies are merging and available to NIW, and their appropriateness for both NIW's business and our Customer's business. We will continue engagement with suppliers and the industry to further understand what future technology trends are emerging and how NIW can avail of them within the budgetary constraints.

Billing Policy

Frequency of Bill Issue:

- Household properties – the Company do not bill household meters at present.
- Non-household – the Company aim to read twice a year and bill twice yearly.
- Large non-household users – the Company aim to read and bill monthly.

Customer Reads

The Company encourages our customers to take readings themselves so that they are aware of their usage. The company continues to insert a message on bills and recovery envelopes to remind customers of the importance checking consumption by regular meter reading where possible. Customer reads can be submitted for billing purposes by using the Self-serve on-line facility available on our website, email or by calling our billing line.

Exclusions

Based on data extracted on 1st April 2019 from RapidXtra:

- 60,542 Meters were excluded in 18/19.

The 'exclusions' base report which is run directly from RapidXtra over reports the excluded meters total by 1. The figure shown on the base report is 60,543, but the actual Exclusion total is 60,542.

The variance of 1 record relates an erroneous meter reference contained in the report which does not actually exist (Meter Reference 1150975) - when searched on the RapidXtra system it returns 0 results.
This is a known anomaly with the exclusions base report, which was identified prior to the 16/17 audit, and was reported directly to Rapid on 28/06/17.

Rapid have been requested to build a data fix for the DG8 Exclusion report. The fix is currently in the system testing phase, and once complete, is scheduled to be implemented in patch 'hotfix 11', which will result in the invalid meter reference removed from the report during 19/20.

The company can exclude any unusual accounts or unusual circumstances that complicate the measure. The following are excluded from the indicators:

- Charged on another basis (not metered consumption)
- Test meters
- Trade-effluent meters
- DRD or NIW meters
- Fire supplies
- Properties occupied continuously for less than six months
- Complex accounts – Including combination meters i.e. the 'low-flow' element is excluded.
- Void properties

The table below illustrates the numerical breakdown and reason for Meters Excluded in 18/19:

Reason for Exclusion	Count of Exclusions	% of total Exclusions
Charged on another basis	57,607	95.15%
New Property	319	0.53%
Occupied <181 consecutive days	117	0.19%
Void Property/ No Occupier	2,499	4.13%
Grand Total	**60,542**	**100%**

For 18/19 the total meters excluded has risen by 482 compared to the total exclusion reported in 17/18.

Confidence Grades

The confidence grade is assigned based on methodology used to extract and report the DG8 performance. The information is extracted and summarised from RapidXtra via automated system reports. The 'DG8 Summary Report' does not require any manual manipulation. RapidXtra automatically categories each account based on its status using the most current and up to date data.

The confidence grades assigned to lines 6-12, as shown below, remain the same as those assigned to the 2017/18 performance figures:

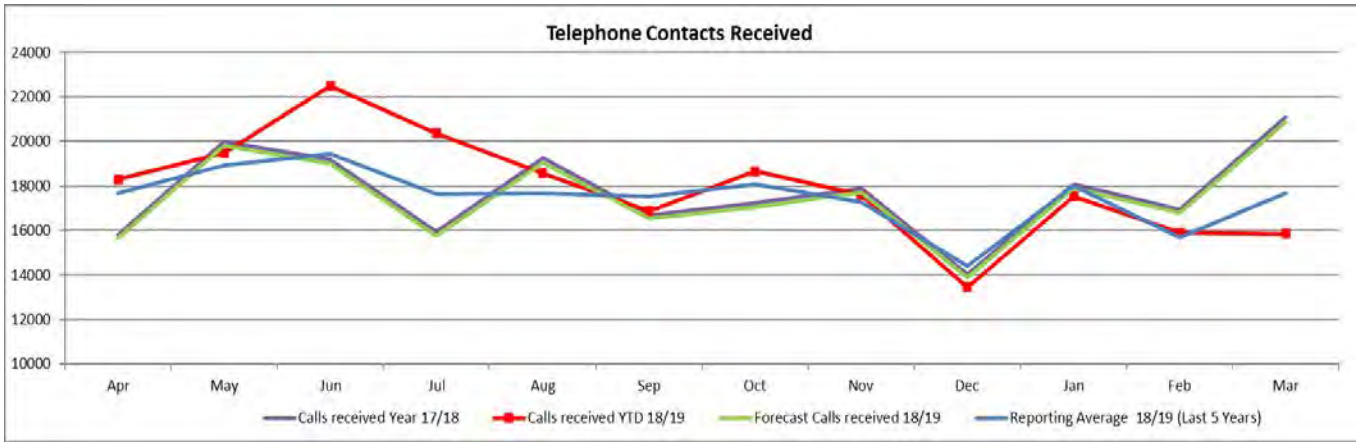
6	Total Meter Accounts	A1
7	Metered accounts excluded from indicator	A1
8	Company readings	A1
9	Company or customer readings (or both)	A1
10	Estimated bills only	A1
11	No bills received during the report year	A1
12	Unread by company for 2 years	A1

Lines 13 – 17- DG9 Telephone Contact

DG9 Introduction

During the reporting year a total of 215,011 calls were made to the Public Advertised Company telephone numbers.

Graph 1 shows a comparison against the previous reporting year (2017/18) and against our target level of calls for the year and the 5 year average.



Graph 1: Telephone Contacts Received

Call volumes for 18/19 where 2,916 higher against the previous reporting year (2017/18), with June (22,486) and July (20,360) receiving the highest call volumes YTD.

The increase in call volumes for June can be attributed to a Taste & Odour incident, as well as a High Demand incident as a result of exceptionally hot weather conditions; this continued into July. A hosepipe ban was introduced from the 29th June to 19th July. There was a slight decrease in calls during July (compared to June), but they still remained high in comparison to the same time the previous reporting year (2017/18). Another contributing factor to the increased call volumes for July was the adverse weather conditions, which caused severe flooding province wide.

The deployment of a High Volume Call Answering (HVCA) solution in NI Water is unique in the water industry, providing an enhanced customer experience and improved incident

management when compared to other water companies in UK and on a par with other utilities in Northern Ireland i.e. Power NI. HVCA was available to handle overflow calls for customers reporting faults on the Waterline.

The High Volume Call Answering (HVCA) system was driven from the events in winter 2010-11, where prolonged sub-zero temperatures during December 2010, followed by a sudden thaw on 26th December 2010, caused extensive disruption of supplies (due mainly to bursts on customer supply pipes) and huge increase in customer contacts to the NI Water Customer Relations Centre.

Since the 5th March 2013 the HVCA system has been deployed in Agent First Mode, which means all calls to the Waterline are still diverted to the Cable and Wireless Network IVR system. The caller is presented with the menu selection and depending on the option selected and if a CRC agent available, passed to a CRC call Agent. If no Agents are available then the caller will enter into the HVCA call routing plan to have their issue logged.

HVCA received 3,141 calls, 47% of HVCA calls where received in June and July. The increase in volumes can be attributed to the Taste and Odour, High Demand and Flooding incidents.

HVCA Calls	YTD	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
Total HVCA Calls (All Classed as Answered)	**3141**	220	299	979	493	244	189	103	158	105	89	150	112
Total HVCA Calls Answered	**1993**	147	174	644	286	179	117	61	96	71	57	88	73
Total HVCA Calls Abandoned	**1148**	73	125	335	207	65	72	42	62	34	32	62	39

New – IVR Platform

A new IVR platform has been introduced to provide customers with another channel of choice, the IVR platform is available 24/7 and this will support the reduction of calls into the Customer Relation Centre.

IVR is a technology that automates and simplifies interactions with incoming customer calls. In doing this, IVR provides a conversation, which can be either pre-recorded or generated audio that assists, directs, and/or guides customers automatically without the need to talk to an agent. Within these interactions customers are able to communicate by using either the dial pad or speech recognition.

The areas that the IVR will service are:

- Switchboard
- Billing and debt line
- Septic tank desludge request

The new IVR platform is not set to Agent first which means all calls will hit the BT switch first and then be directed to the IVR platform. If completed successfully on the IVR, the call will never hit the Avaya switch and will not be reported in Call Media. However, the Billing & Debt line and Septic Tank IVR are linked to the Billing Enquiry and Waterline PACC lines and will be reported using the CIRRUS Voice platform.
The switchboard IVR went live on the 20th November 2018, this has not impacted call volumes as switchboard contacts can be excluded if proven to be genuine – If the call went directly to the person required these do not need to be counted in line with current guidance. If the call goes to CRC then they will be counted via the Avaya switch (Call Media Console) and any genuine contacts will be excluded as per the agreed process via the switchboard customer references.

The Billing IVR was switched on 'as a test' from 12th February 2019 to 27th February 2019 and then switched on permanently from 7th March 19.
The Septic Tank IVR went live 27th March 2019.

Line 14 - All Lines Busy

There were 29 instances of 'All lines busy' during the reporting year 18/19. An increase of 11 instances compared with the number received during 17/18.

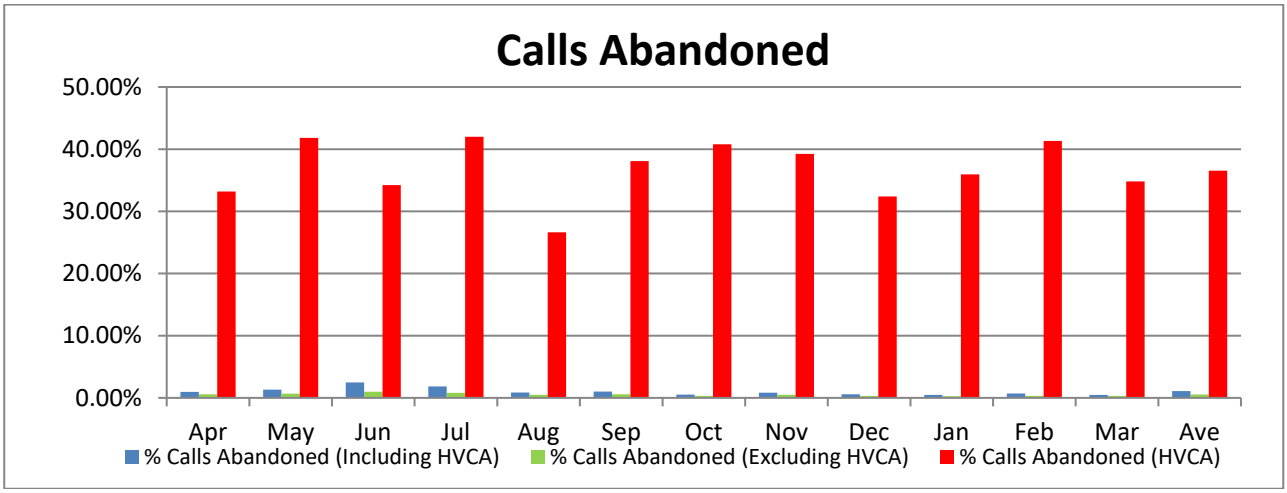
Lines 15 - Calls Abandoned

There were 1,176 calls abandoned on the Call Media system during the year leading to a reportable Company performance of 99.45% of 'calls not abandoned', which exceeded the 99% target set for the year.

All calls abandoned on HVCA are now classified as answered due to agreement with the Regulator and CCNI. However, for monthly Business and annual Regulatory reporting purposes all calls handled by HVCA continue to be analysed and reported as answered or abandoned using the agreed hang up location methodology.

NI Water is able to classify each hang up location as either 'answered' if the caller has reached a point in the call flow at which they can hear a salient message or 'abandoned' as HVCA has 226 distinct hang up locations allowing for detailed analysis of where the customer call ended and what messages the customer was presented with. There were an additional 1148 abandoned on the HVCA system and the details on calls abandoned, including and excluding the HVCA system, are set out in Table 1 in Annex A.

As reported previously to the Regulator, 36.55% of all calls transferred to the HVCA system are being abandoned due primarily to customers hanging up on hearing the automated system and redialling in the likelihood that they will be answered by an agent.



Graph 1.1 Call Abandoned 2018 – 2019

Line 17 - Telephone Complaints

Telephone complaints cover any telephone call from a customer or a customer's representative (e.g. Citizens Advice Bureau, solicitor) alleging that an action or inaction of the Company, or a service or lack of service provided by NI Water or agent/contractor has fallen below his/her expectation.
General statements of complaint are also counted. Customers may complain unfairly or unjustifiably; nevertheless, such calls are classed as complaints. Some complaints may be frivolous or vexatious, nevertheless these are reported.

As a general policy, the Company records telephone calls about the following water service issues as complaints: no water, lack of pressure, leaks, taste and odour, discoloration and hard water (except for simple enquires e.g. dishwater settings). Telephone calls about the following wastewater services are also recorded as complaints: sewer flooding other than those received through NI Direct/blockages, collapsed sewers/manholes, smells from sewage treatment works/pumping stations and flies from sewage treatment works.

Telephone complaint volumes increased to 59,686, compared to 57,940 received during 2017/18 reporting period. This increase can mainly be attributed to the High Demand incident in June 18 which received the highest reported complaints for 18/19.

YTD	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18	Jan 19	Feb 19	Mar 19
59686	4558	4700	7121	5681	5272	4352	4564	4867	4432	5062	4707	4370

34% of telephone complaints received in 2018/19 were for ‘no water complaints’ with 15% of those being received in June.

Line 18 – Customers on the Customer Care Register

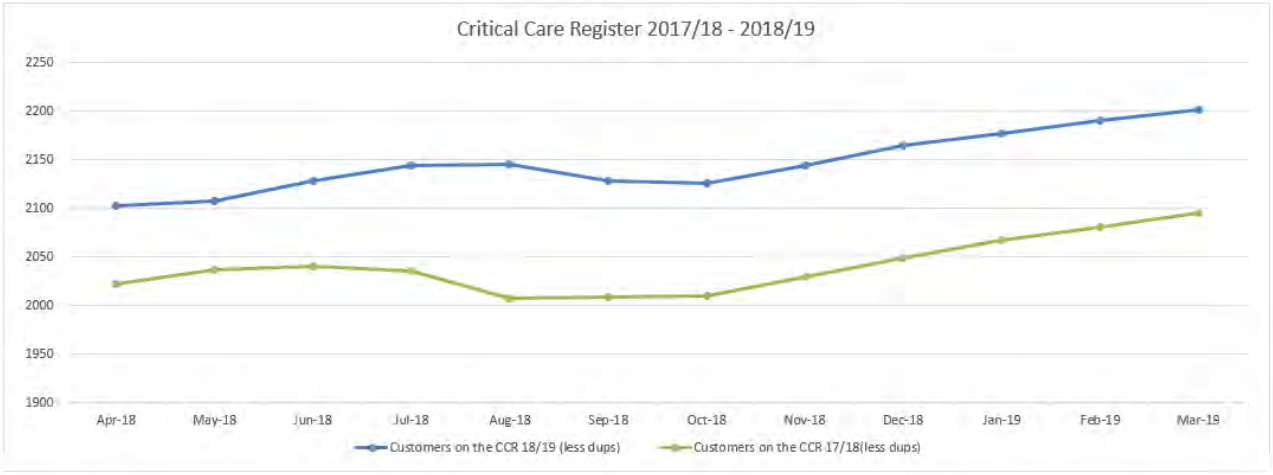
The Customer Care Register offers a range of free additional services to customers who are older, have a disability, a serious medical condition or require extra help when experiencing an interruption to their water supply.

A bespoke CorVu report has been created in conjunction with NI Water code of Practice - “Priority Services for Domestic Services” to report on CCR Customers. The report has been created with predefined filters to only return customers registered against the special needs listed below:

Special Needs Code	Need Description
01	Require Braille - Blind/partially sighted
02	Require Audio - Blind/partially sighted
03	Deaf
04	Vocally Impaired
06	Large Print Bill - Learning/Reading difficulties
07	Dialysis patient
08	Vulnerable
11	Nursing Home

Customers who are registered for multiple medical conditions will only be reported on once, except for when the customer is a Nursing Home or Hospice.

At the end of 18/19 reporting year 2,201 customers were registered on the Customer Care Register, this has increased slightly compared to the reported 2,096 for 17/18.



Graph 4 – Customer Care Register

Echo currently carry out a twice yearly review and contact with CCR customers. The first contact is by telephone which commences over the summer months. This call is a courtesy call and allows Echo to reconfirm contact details.

The second contact is the annual Newsletter (embedded below) which is sent out to all CCR Customers in November. The annual Newsletter reminds customers of the service available and other useful telephone numbers such as NIE Networks, Quick Check 101 etc. It also advises of the expectation of the delivery of bottled water on preparation for Winter. It is worth noting that requests to be added or removed from the register can be received following the distribution of this newsletter.

CCR letter Nov 2018v1.0FINALFACTSH

Customers will only be removed from the CCR register on the request of the customer or family member.

Representatives from NI Water attended a number of community events including the Disability Exhibition in the Eikon Centre, the Balmoral Show, the Over 50s Exhibition in Belfast's Waterfront Hall and the Consumer Council for Northern Ireland's Consumer Parliament in the Spires Conference Centre in Belfast to promote the CCR.

Customer Satisfaction Measures

Lines 19 to 21 – Total Contacts and Unwanted Contacts

Line 19 – Total Contacts

Total contacts refers to the number of Telephone (Billing) and Operational telephone contacts the company has received from customers during the reporting year 18/19. During the reporting year 252,844 telephone contacts where received. The figure is obtained from the All Received CorVu report and is calculated using the Original CMS contacts logged within Rapid.

The table below illustrates the monthly breakdown of the Total Telephone contacts received for 2018/19:

Month Received	Grand Total
April	20952
May	22475
June	25447
July	23470
August	22120
September	19923
October	21907
November	21159
December	15910
January	20957
February	19403
March	19121
Grand Total	**252844**

Line 20 – Unwanted Contacts

During the reporting year 18/19 a total of 75,569 unwanted contacts were received.

An unwanted contact is a contact received from a customer that is 'unwanted' from the customer's point of view. This includes a contact about an event or action that has caused the customer unnecessary aggravation (however mild). It also includes repeat or chase calls by the customer to the company. This is determined by the subject matter of the contact. The table below illustrates the breakdown of unwanted contacts:

Month	Unwanted Contacts
Apr	5,940
May	6,190
Jun	8,725
Jul	7,105
Aug	6,534
Sep	5,494
Oct	5,888
Nov	6,183
Dec	5,467
Jan	6,369
Feb	5,945
Mar	5,729
Grand Total	**75,569**

Based on the total unwanted telephone contacts received by the company, 26,888 are relating to Sewerage Services and 39,222 are relating to Water Services.

The top Sewerage Service unwanted contact for 18/19 is *'Blocked Sewer Inc Cleanup & Disinfect',* with a total of 13,780 (18%) of unwanted customer contacts.

The top Water Service unwanted contact for 18/19 is '*No Water Complaint',* with a total of 20,151 (27%) of unwanted customer contacts.

Unwanted + FPOCR algorithms.d

Following AIR17 there was a recommendation for a sample to be taken of Wanted & Unwanted Contacts to confirm that these were being logged correctly. A sample of 50 Wanted & 50 Unwanted closed contacts continues to be taken at month end, with any anomalies in the categorisation being fed back to the relevant team for training purposes. As per table below, only 1 anomaly was found during Q1 and Q2:

	Month Received	Unwanted Exceptions	Wanted Exceptions
	Apr-19	0	1
	May-19	0	0
Q1	Jun-19	0	0
	Jul-19	0	0
	Aug-19	0	0
Q2	Sep-19	0	0

Line 22 – First Point of Contact

During the reporting year the First Point of Contact resolution (FPOCR) was 90%

Month	First Point of Contact Resolution (FPOCR)
Apr	91%
May	90%
Jun	88%
Jul	90%
Aug	89%
Sep	91%
Oct	91%
Nov	90%
Dec	89%
Jan	88%
Feb	89%
Mar	90%
Average	**90%**

When a contact requires an action and this action is completed and there has been no prior contact from the same property on the same issue within a 90 day period then it shall be counted as 'First Point of Contact Resolution'.

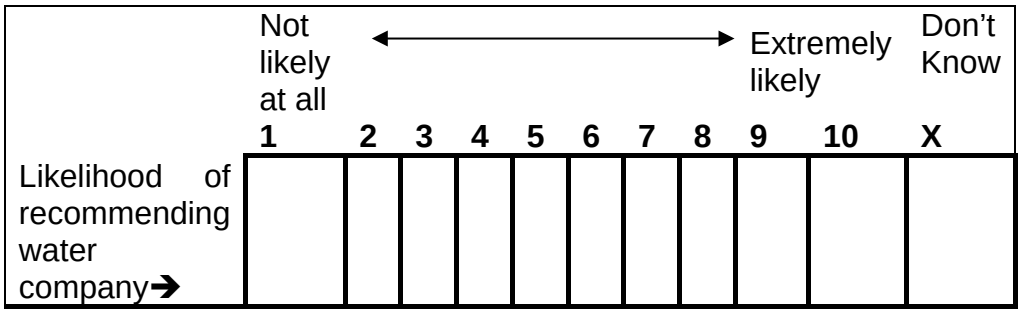
First point of contact resolution is reported as a percentage of contacts resolved at FPOC against the number of issues.

Unwanted + FPOCR algorithms.d

Line 23 – Customer Advocacy measure

Customer advocacy is an annual satisfaction score assessed by Allto, an independent market research company. Allto carry out quarterly surveys (waves) of customers who have contacted the company for any reason. The objective of the research is to capture the views of those customers who have had dealings with the company, not only through the main contact centre but to any part of the business.

Customers are asked "*Likelihood of recommending Northern Ireland Water 1-10?"*
The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is 'not at all likely to recommend' and 10 is 'extremely likely to recommend'



Customer Advocacy is calculated: Promoter % - Detractor %

NPS Calculation document embedded below:

NPS Q71 Calculation - AIR 19.xlsx

The survey is based on a sample of resolved contacts only (from telephone and written channels) in relation to both billing and operational areas. Allto will issue an email in advance to notify which week's data will be required. The sample data set is obtained from a bespoke CorVu report entitled 'SIM Resolved Contacts Query LIVE with date prompt' which was created by NI Water.

Due to field configuration and system limitations within Rapid, there is no current field that will report the 'Resolution Date'. The closed date field is often populated with the date a holding letter is issued, which is typically within 5/10 working days and aligns with DG6/7 SLAs, however the contact may have been open for longer. The actual closed date field can include the last date a contact was amended, therefore not necessarily the actual date of resolution. The closed date and actual closed date are aligned to give the resolution date.

Line 24 Omnibus survey question 1

Kantar Millward Brown (Cognisense) is an independent market research company, who carry out customer surveys on behalf of many other clients, including Regulators, Councils and Utilities.

The objective of the research are to survey a sample of domestic and non-domestic customers who have contacted NI Water and therefore to confirm their level of customer satisfaction and if there is any correlation in the level of satisfaction between customers who contact NI Water and those who don't.

The survey has to be sufficiently robust and statistically significant to enable benchmarking within multiple markets. The score is calculated from an average of overall satisfaction with the following statement: *'I am satisfied with the services provided by NI Water'*. (1- very dissatisfied, 5 - very satisfied).

The Omnibus survey is based on a sample of 1000+ domestic consumers and 200 non-domestic consumers that have had no direct contact with NI Water to request a service or make a complaint. The survey is carried out once a year every September.

Each domestic survey consists of a freshly drawn sample of 1000+ adults aged 16+ (with each interview representing one household). The sample is quota controlled to represent the Northern Ireland population in terms of gender, age and social class. 60 sampling points (spread over 110 electoral wards) are drawn using a stratified random sampling method to ensure that the sample is representative in terms of region. The survey is conducted face to face and data collected by means of a CAPI Methodology using Hand Held devices (HAPI).

Each non-domestic survey is conducted via telephone. The survey is derived from a random sample of businesses in Northern Ireland, with quotas applied to ensure that the survey mirrors the profile of the Northern Ireland business community insofar as this is possible, building quota requirements by region with a view to ensuring maximum geographical representativeness. Given that the data may be subject to media and public scrutiny the sample is controlled by industry sector and number of employees to ensure broad representativeness, although it is possible to add further area quota controls to the overall sample stratification. Throughout the course of the fieldwork, geographic analysis would be monitored, to ensure representation is being achieved.

Consumers are asked to what extent do you agree or disagree with the following statement? 'I am satisfied with the services provided by NI Water'.

Strongly agree	1
Tend to agree	2
Neither agree nor disagree	3
Tend to disagree	4
Strongly disagree	5
Don't know	6

The survey data suggests strong levels of endorsement of water services in Northern Ireland with four fifths (81%) of domestic customers agreeing that they were satisfied. There has been no change in the level of satisfaction since 2015 when the same proportion agreed with the statement 'I am satisfied with the services provided by NI Water'.

As per table below, the overall score achieved was 81.62.

	Nr	Score	Total/Ave
Domestic	1035	80	82800
Non-domestic	200	90	18000
Total/Average	1235		**81.62**

Line 25 Omnibus survey question 2

Kantar Millward Brown (Cognisense) is an independent market research company, who carry out customer surveys on behalf of many other clients, including Regulators, Councils and Utilities.

The objective of the research are to survey a sample of domestic and non-domestic customers who have not contacted NI Water and therefore to confirm their level of customer

satisfaction and if there is any correlation in the level of satisfaction between customers who contact NI Water and those who don't.

The survey has to be sufficiently robust and statistically significant to enable benchmarking within multiple markets.

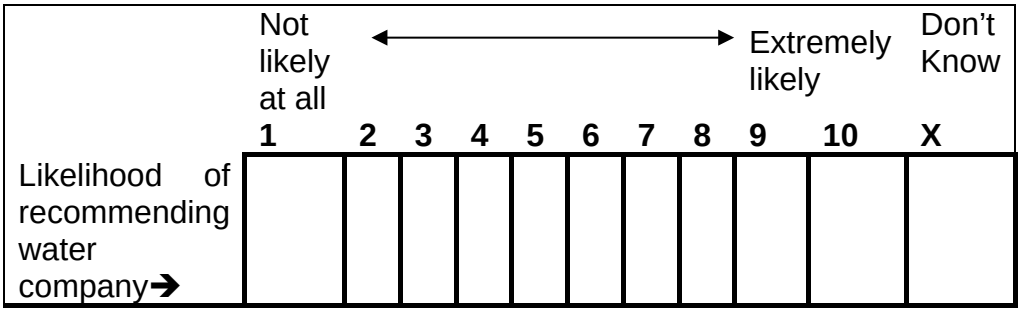
The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is 'not at all likely to recommend' and 10 is 'extremely likely to recommend'

The Omnibus survey is based on a sample of 1000+ domestic consumers and 200 non-domestic consumers that have had no direct contact with NI Water to request a service or make a complaint. The survey is carried out once a year every September.

Each domestic survey consists of a freshly drawn sample of 1000+ adults aged 16+ (with each interview representing one household). The sample is quota controlled to represent the Northern Ireland population in terms of gender, age and social class. 60 sampling points (spread over 110 electoral wards) are drawn using a stratified random sampling method to ensure that the sample is representative in terms of region. The survey is conducted face to face and data collected by means of a CAPI Methodology using Hand Held devices (HAPI).

Each non-domestic survey is conducted via telephone. The survey is derived from a random sample of businesses in Northern Ireland, with quotas applied to ensure that the survey mirrors the profile of the Northern Ireland business community insofar as this is possible, building quota requirements by region with a view to ensuring maximum geographical representativeness. Given that the data may be subject to media and public scrutiny the sample is controlled by industry sector and number of employees to ensure broad representativeness, although it is possible to add further area quota controls to the overall sample stratification. Throughout the course of the fieldwork, geographic analysis would be monitored, to ensure representation is being achieved.

The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is 'not at all likely to recommend' and 10 is 'extremely likely to recommend'



Non-domestic customers were more likely to recommend NI Water (NPS score: +35%) compared with domestic consumers (NPS score: -8%), making the latter cohort the greater challenge in terms of creating greater positive advocacy. That said, the mean scores for likelihood to recommend are broadly similar for both (8.54 out of 10 amongst non-domestic consumers / 8.23 out of 10 amongst domestic consumers), suggesting a strong sense of positivity relating to the NIW brand across both markets.

As per table below, the overall score achieved was 8.28.

	Nr	Score	Total/Ave
Domestic	1035	8.23	8518.05
Non-domestic	200	8.54	1708
Total/Average	1235		**8.28**

NI Direct Flood Line

NI Direct Floodline (FIL) was launched on 30 January 2009, as a single contact telephone number for customers in the event of a flooding incident. This telephone number is not one of NIW's advertised PACC numbers and is provided through a separate Call Centre managed by NI Direct.

NI Direct operate as a 'triage' service, taking the details of the incident from the customer and directing their issue to the relevant agency for appropriate action. Following a change in supplier within NI Direct during 2012/13, the integrated interface between FIL and NI Water systems was severed creating a gap in the process which NI Water were forced to bridge. This resulted in FIL contacts being received by e-mail and manually logged onto the NI Water CRC system by agents.

The new FIL contract went live on 1st December 2012, and following some initial manual logging the automated connection went live on 9th July 2013 between the FIL CRM and Rapid, in order to ensure that customer contacts relevant to NIW are logged on Rapid and work orders processed via Ellipse where necessary.

During the reporting period circa 691 work orders were received by the Company from FIL.

Confidence Grades

Call volume data is derived using a combination of telephony systems, the HVCA system for automated calls and Call Media that draws information from the Avaya system for agent handled calls.
In March 2014, the Telephony supplier changed from Cable & Wireless to BT. This switch was relatively seamless, with only a minor impact on lines busy due to the technical handover and these calls were excluded for reporting purposes.

As per methodology, the process of reconciliation between the telephony systems is largely manual, as calls transferring from CallMedia are deemed to be received in HVCA; however the confidence grade assigned to the data remains at 'A2', as per the AIR guidance.

Call Handling Satisfaction retains the confidence grade of 'A2' as it is conducted independently and the results are provided to NI Water by Allto.

Table 1: HVCA (2018/19) **Annex A**

Calls received/answered to HVCA

Details	YTD	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
Total calls received (HVCA)	**3141**	220	299	979	493	244	189	103	158	105	89	150	112
Total calls answered (HVCA)	**1993**	147	174	644	286	179	117	61	96	71	57	88	73
% Calls transferring to HVCA based on total calls received	**1.40%**	0.66%	1.62%	4.50%	2.46%	1.36%	1.16%	0.57%	0.91%	0.81%	0.51%	0.94%	0.70%

Abandoned on HVCA

Total of Abandoned Calls (Call Media)	**1176**	105	132	223	166	94	97	58	86	43	49	50	73
Total of Abandoned Calls (HVCA)	**1148**	73	125	335	207	65	72	42	62	34	32	62	39
Total of Abandoned Calls	**2324**	178	257	558	373	159	169	100	148	77	81	112	112
% Calls Abandoned (Including HVCA)	**1.08%**	0.97%	1.32%	2.48%	1.83%	0.86%	1.00%	0.54%	0.84%	0.57%	0.46%	0.70%	0.46%
% Calls Abandoned (Excluding HVCA)	**0.56%**	0.57%	0.68%	0.99%	0.82%	0.51%	0.58%	0.31%	0.49%	0.32%	0.28%	0.31%	0.31%
% Calls Abandoned (HVCA)	**36.55%**	33.18%	41.81%	34.22%	41.99%	26.64%	38.10%	40.78%	39.24%	32.38%	35.96%	41.33%	34.82%

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS

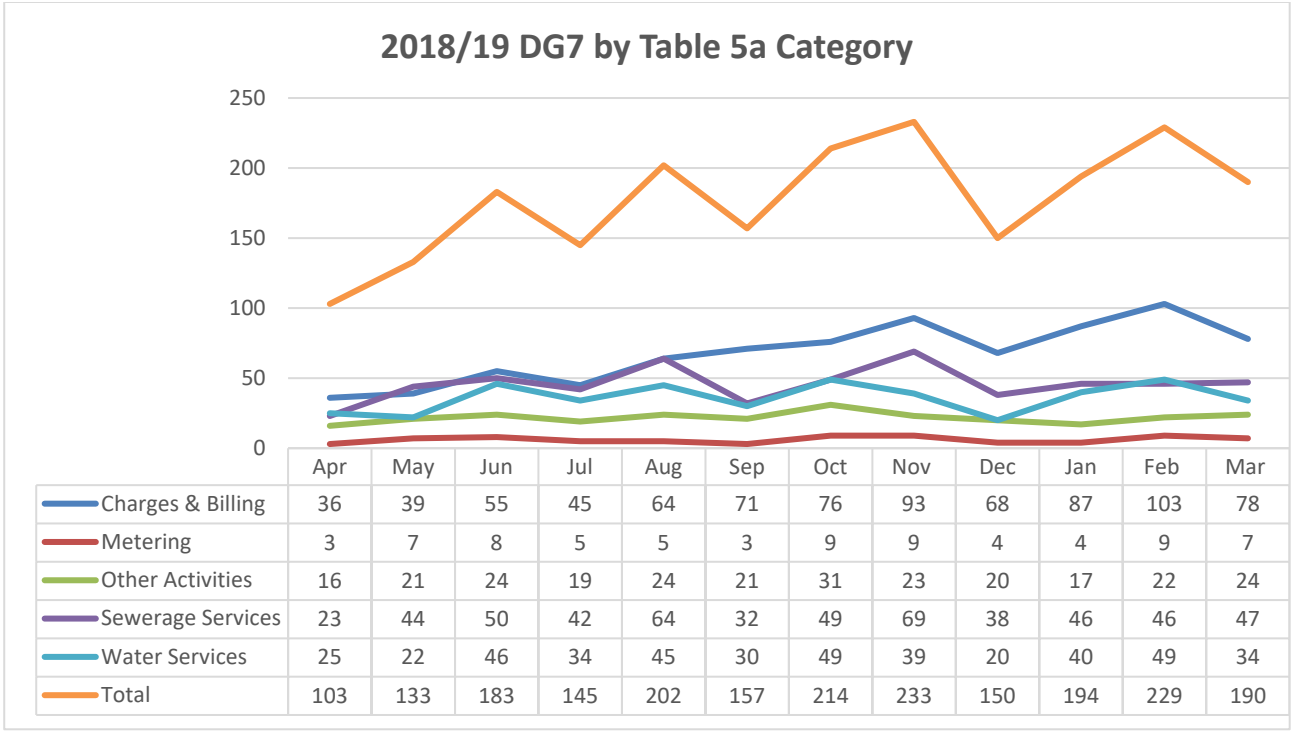
CUSTOMER COMPLAINTS DATA FOR CONSUMER COUNCIL FOR NORTHERN IRELAND (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**TOTAL WRITTEN COMPLAINTS**																				
1	Total written complaints	nr	0	3,173	B2	2,505	B2	2,364	B2	2,269	B2	2,375	B2	2,274	B2	2,133	B2				
2	Number dealt with within 10 working days	nr	0	3,166	B2	2,498	B2	2,363	B2	2,266	B2	2,375	B2	2,271	B2	2,133	B2				
3	Number dealt with in more than 20 working days	nr	0	1	B2	2	B2	0	A1	2	B2	0	B2	3	B2	0	B2				
B	**CATEGORY OF WRITTEN COMPLAINTS**																				
	(i) Charges and Bills																				
4	Total written complaints about charging and billing issues	nr	0	1,567	B2	839	B2	906	B2	890	B2	935	B2	699	B2	815	B2				
5	Total written complaints about charging and billing issues escalated to second stage review	nr	0	381	B2	149	B2	124	B2	92	B2	87	B2	72	B2	38	B2				
	(ii) Water Service																				
6	Total written complaints about water service issues	nr	0	448	B2	552	B2	555	B2	505	B2	600	B2	616	B2	433	B2				
7	Total written complaints about water service issues escalated to second stage review	nr	0	71	B2	52	B2	52	B2	33	B2	29	B2	51	B2	36	B2				
	(iii) Sewerage Service																				
8	Total written complaints about sewerage service issues	nr	0	689	B2	493	B2	434	B2	487	B2	533	B2	579	B2	550	B2				
9	Total written complaints about sewerage service issues escalated to second stage review	nr	0	82	B2	42	B2	31	B2	29	B2	43	B2	73	B2	128	B2				
	(iv) Metering																				
10	Total written complaints about metering issues	nr	0	123	B2	133	B2	107	B2	104	B2	75	B2	91	B2	73	B2				
11	Total written complaints about metering issues escalated to second stage review	nr	0	25	B2	28	B2	11	B2	4	B2	5	B2	9	B2	4	B2				
	(v) Other activities																				
12	Total written complaints about other service issues or activities	nr	0	346	B2	488	B2	362	B2	283	B2	232	B2	289	B2	262	B2				
13	Total written complaints about other service issues or activities escalated to second stage review	nr	0	82	B2	124	B2	51	B2	18	B2	14	B2	22	B2	19	B2				
C	**OTHER CUSTOMER RESPONSE MEASURES**																				
14	Number of holding responses issued	nr	0	695	B4	351	B4	294	B4	413	B2	326	B4	286	B4	290	B4				
15	Consumer Council investigations	nr	0	27	B2	40	B2	28	B2	34	B2	30	B2	23	B2	5	B2				

Table 5a – DG7 Response to Written Complaints

DG7 Received Annual Profile & Explanation

The volume of DG7 complaints received each month during 18/19 by type is shown in the chart below.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Charges & Billing	36	39	55	45	64	71	76	93	68	87	103	78
Metering	3	7	8	5	5	3	9	9	4	4	9	7
Other Activities	16	21	24	19	24	21	31	23	20	17	22	24
Sewerage Services	23	44	50	42	64	32	49	69	38	46	46	47
Water Services	25	22	46	34	45	30	49	39	20	40	49	34
Total	103	133	183	145	202	157	214	233	150	194	229	190

In line with previous years, those falling into the Charges & Billing category remain the principal written complaint type. In 18/19, 38% of the total received fell within the Charges & Billing category. This represents a 7% increase in comparison to the previous reporting period.

The increase in complaints within this category cannot be categorically attributed to any single factor.

83 complaints received during the reporting period are linked to malodour complaints from residents of Belfast Road, Comber; these fall within the Sewerage Services category. In an effort to resolve this issue NI Water staff met with local residents and businesses and in early 2019 commenced a programme of tankering waste directly from one business to our wastewater treatment works. No further complaints have been received since this tankering programme began.

Second Stage Complaints

Systems remained in place to enable the reporting of complaints escalated to second stage review throughout 18/19.

It should be noted that the associated data does not highlight instances of the same customers sending further complaints on the same issue following a second stage complaint. Second stage complaints have not been analysed to determine whether they would be deemed upheld or unjustified by the Company.

Sampling audits were performed throughout the year to ensure accuracy of categorisation.

Other Customer Measures

Within the PC10 Final Determination, stakeholders agreed to introduce monitoring systems to allow reporting of:

- the number and frequency of repeat complaints; and
- the number and frequency of holding responses.

Whilst there is no data line to report on repeat complaints, those complaints reported as having been escalated to second stage review could be interpreted as representing the number of repeat written complaints.

Monitoring systems have been in place throughout the reporting period to support reporting on the number holding responses issued throughout 18/19.

System-based report data was used to derive the number of holding responses issued between 01/04/18 and 31/03/19.

The figure reported in Line 14 is the total recorded number of holding responses issued to customers during 18/19 owing to pending investigations linked to open DG7 contacts which were received in 18/19. It does not include holding responses issued within 18/19 in relation to DG7 contacts received in the previous reporting year.

The reported figure does not represent the number of singular DG7 contacts for which one or more holding response was issued.

In cases where the investigations were ongoing by the expiry date of the initial holding response, a further holding response will have been issued.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 6A BAD DEBT

OUTSTANDING REVENUE AND BREAKDOWN OF CUSTOMER SERVICES OPERATING EXPENDITURE (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	REVENUE OUTSTANDING - MEASURED HOUSEHOLDS																				
	Lines 1 to 14 not used																				
B	REVENUE OUTSTANDING - UNMEASURED HOUSEHOLDS																				
	Lines 15 to 28 not used																				
C	REVENUE OUTSTANDING - MEASURED NON HOUSEHOLDS																				
29	Total revenue outstanding < 48 months (measured non households)	£m	3	7.972	A2	8.260	A2	8.739	A2	7.220	A2	7.305	A2	7.009	A2	6.112	A2				
30	Number of measured non households with outstanding revenue < 48 months	nr	0	15,348	A2	14,570	A2	14,645	A2	17,091	A2	11,715	A2	11,517	A2	9,781	A2				
31	Revenue outstanding < 3 months (measured non households)	£m	3	6.891	A2	7.189	A2	7.525	A2	5.530	A2	5.376	A2	5.611	A2	5.136	A2				
32	Number of measured non households with outstanding revenue < 3 months	nr	0	10,588	A2	10,053	A2	10,415	A2	10,405	A2	7,992	A2	8,576	A2	7,310	A2				
33	Revenue outstanding 3 - 12 months (measured non households)	£m	3	0.952	A2	0.928	A2	0.960	A2	0.758	A2	1.100	A2	0.629	A2	0.454	A2				
34	Number of measured non households with outstanding revenue 3 - 12 months	nr	0	2,925	A2	3,108	A2	2,815	A2	4,889	A2	2,368	A2	1,906	A2	1,607	A2				
35	Revenue outstanding 12 - 24 months (measured non households)	£m	3	0.012	A2	0.039	A2	0.088	A2	0.435	A2	0.446	A2	0.362	A2	0.163	A2				
36	Number of measured non households with outstanding revenue 12 - 24 months	nr	0	1,049	A2	911	A2	992	A2	1,142	A2	922	A2	737	A2	573	A2				
37	Revenue outstanding 24 - 36 months (measured non households)	£m	3	0.117	A2	0.104	A2	0.166	A2	0.497	A2	0.383	A2	0.407	A2	0.359	A2				
38	Number of measured non households with outstanding revenue 24 - 36 months	nr	0	786	A2	498	A2	423	A2	656	A2	433	A2	298	A2	291	A2				
39	Revenue outstanding 36 - 48 months (measured non households)	£m	3			0.000		0.000		0.000		0.000		0.000		0.000					
40	Number of measured non households with outstanding revenue 36 - 48 months	nr	0			0		0		0		0		0		0					
41	Revenue outstanding > 48 months (measured non households)	£m	3			0.000		0.000		0.000		0.000		0.000		0.000					
42	Number of measured non households with outstanding revenue > 48 months	nr	0			0		0		0		0		0		0					
D	REVENUE OUTSTANDING - UNMEASURED NON HOUSEHOLDS																				
43	Total revenue outstanding < 48 months (unmeasured non households)	£m	3	0.402	A2	2.627	A2	2.566	A2	2.604	A2	2.647	A2	2.600	A2	2.650	A2				
44	Number of unmeasured non households with outstanding revenue < 48 months	nr	0	1,542	A2	10,114	A2	9,302	A2	9,664	A2	8,881	A2	8,679	A2	8,262	A2				
45	Revenue outstanding <3 months (unmeasured non households)	£m	3	0.111	A2	2.349	A2	2.350	A2	2.282	A2	2.351	A2	2.211	A2	2.237	A2				
46	Number of unmeasured non households with outstanding revenue < 3 months	nr	0	155	A2	8,826	A2	8,591	A2	8,224	A2	8,102	A2	8,056	A2	7,650	A2				
47	Revenue outstanding 3 -12 months (unmeasured non households)	£m	3	0.025	A2	0.165	A2	0.070	A2	0.154	A2	0.132	A2	0.203	A2	0.142	A2				
48	Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0	256	A2	697	A2	195	A2	190	A2	256	A2	160	A2	177	A2				
49	Revenue outstanding 12-24 months (unmeasured non households)	£m	3	0.241	A2	0.005	A2	0.116	A2	0.113	A2	0.116	A2	0.126	A2	0.165	A2				
50	Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0	894	A2	184	A2	448	A2	662	A2	366	A2	326	A2	316	A2				
51	Revenue outstanding 24-36 months (unmeasured non households)	£m	3	0.025	A2	0.108	A2	0.030	A2	0.055	A2	0.048	A2	0.060	A2	0.106	A2				
52	Number of unmeasured non households with outstanding revenue 24 - 36 months	nr	0	237	A2	407	A2	68	A2	588	A2	157	A2	137	A2	119	A2				
53	Revenue outstanding 36 -48 months (unmeasured non households)	£m	3			0.000		0.000		0.000		0.000		0.000		0.000					
54	Number of unmeasured non households with outstanding revenue 36 - 48 months	nr	0			0		0		0		0		0		0					
55	Revenue outstanding >48 months (unmeasured non households)	£m	3			0.000		0.000		0.000		0.000		0.000		0.000					
56	Number of unmeasured non households with outstanding revenue > 48 months	nr	0			0		0		0		0		0		0					
E	REVENUE WRITTEN OFF																				
57	Amount of revenue written off from measured households	£m	3																		
57a	Amount of revenue written off from measured non-households	£m	3	1.094	A2	0.844	A2	0.666	A2	1.237	A2	0.341	A2	0.474	A2	0.442	A2				
58	Amount of revenue written off from unmeasured households	£m	3																		
58a	Amount of revenue written off from unmeasured non-households	£m	3	0.173	A2	0.094	A2	0.110	A2	0.083	A2	0.045	A2	0.056	A2	0.051	A2				
F	CUSTOMER SERVICES OPERATING EXPENDITURE																				
59	General customer services operating expenditure Total	£m	3	6.418	A2	6.767	A2	6.284	A2	6.337	A2	6.898	A2	6.453	A2	6.806	A2				
i	Employment costs	£m	3	3.673	A2	3.408	A2	3.188	A2	3.501	A2	3.972	A2	3.933	A2	4.196	A2				
ii	Hired and contracted costs	£m	3	3.139	A2	3.392	A2	3.188	A2	3.018	A2	2.876	A2	2.593	A2	2.770	A2				
iii	Other	£m	3	0.611	A2	0.739	A2	0.819	A2	0.738	A2	0.985	A2	0.951	A2	0.906	A2				
iv	Adjustments	£m	3	-1.005	B3	-0.772	B3	-0.911	B3	-0.920	B3	-0.935	A2	-1.024	A2	-1.066	A2				
60	Outstanding revenue collection operating expenditure (households)	£m	3																		
60a	Outstanding revenue collection operating expenditure (non households)	£m	3	2.118	DX	2.269	DX	2.242	DX	1.934	DX	1.950	A2	2.098	A2	2.215	A2				
61	Donations to charitable trusts assisting customers in debt (households)	£m	3																		
62	Operating expenditure due to vulnerable household customers	£m	3																		
63	Total customer services operating expenditure	£m	3	8.536	A2	9.036	A2	8.526	A2	8.271	A2	8.848	A2	8.551	A2	9.021	A2				

Table 6a – Bad Debt

Overview

The company operates a partnership with an external service provider (Echo) for customer contact and billing. Customer Services Delivery Directorate works closely with the supplier on all billing matters including debt recovery, designations of customers for write off of debt and estimation of the level of bad debt provisioning to be put in place for potential future write-offs.

The service provider furnishes monthly information for non-domestic measured water and trade effluent income, cash, write-offs, VAT and closing debtor balances to the company from the billing system (RapidXtra). This information is used to produce the monthly management accounts. The figures in Table 6a are derived from this information.

The figures contained within the table are clarified below:

Box A – Revenue Outstanding – Measured Households

For the year ended 31 March 2019 NI Water had no actual revenue from households as this is received by way of a subsidy from Department for Infrastructure ("DfI"). There was £1.43m due to NIW from DfI for subsidy at 31 March 2019. This figure varies to the Statutory Accounts as Septic Tank subsidy is not reported in AIR as it is classified as non-appointed income in the Regulatory accounts.

Box B – Revenue Outstanding – Unmeasured Households

As above, income is received by way of a subsidy from DfI.

Box C – Revenue Outstanding – Measured Non-Households

Revenue outstanding from non-households is the amount of revenue relating to measured water, measured sewerage and trade effluent charges that had been billed in the year but not collected at 31 March 2019.

At 31 March 2019 the closing trade debtor balance was £6.112m. Trade Debtors decreased this year largely due to the settlement of outstanding billing queries.

The debtor balance reported figure is made up of various GL codes and is calculated as measured water and sewerage debtors (including Trade Effluent debtors) less unreconciled receipts, bad debt provision and provision for discount. The bad debt provision is £1.497m and is made up of the following:

- £0.124m for debt over 4 years
- £0.079m for debt 3 - 4 years
- £0.260m for debt 2 – 3 years
- £0.475m for debt 1 – 2 years
- £0.441m for debt 90 – 365 days
- £0.118m for debt less than 90 days

There is one GL code for measured water and sewerage debtors. At year end the GL debtor balance (gross of credit balances) was approx. £2.0m less than the detailed debtors listing provided by Echo. This was due to the following:

- Future system adjustments (£1.8m)
- Other adjustments (£0.2m)

Summary of all relevant rows for Section C

Row 29 – Total Revenue Outstanding < 48 months - Measured Non Households

The total amount of revenue at the end of 2018/19 outstanding from measured non households for less than 48 months. Balance as at 31 March 2019 was £6.112m.

Row 30 – Number of Measured Non-Households with Outstanding Revenue < 48 months

The number of measured non households with revenue outstanding for less than 48 months at 31 March 2019 was 9,781. The number of households has been adjusted in line with the decrease in debtors taking account of anticipated future system adjustments and other adjustments of £2.0m. The £2.0m is approximately 16% of total outstanding debtors at 31 March 2019 of £12.3m. An assumption was made to apply a 15% reduction across all measured revenue age groups up to 36 months.

Row 31 – Revenue Outstanding < 3 months (Measured Non Households)

The total amount of revenue at the end of 2018/19 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2019 was £5.136m.

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months

The number of measured non households at end of 2018/19, with revenue outstanding for less than 3 months. As at 31 March 2019 this totalled 7,310.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households)

The total amount of revenue at the end of 2018/19 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2019 was £0.454m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months

The number of measured non households at end of 2018/19 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2019 this totalled 1,607.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households)

The total amount of revenue at the end of 2018/19 outstanding from measured non households for at least 12 months but less than 24 months. At 31 March 2019 this totalled £0.163m.

Row 36 – Number of Measured Non-Households with Outstanding Revenue 12-24 months

The number of measured non households at end of 2018/19 with revenue that has been outstanding for at least 12 months but less than 24 months. At 31 March 2019 this totalled 573.

Row 37 – Total Revenue Outstanding 24-36 months (Measured Non Households)

The total amount of revenue at the end of 2018/19 outstanding from measured non households for at least 24 months but less than 36 months. At 31 March 2019 this totalled £0.359m.

Row 38 – Number of Measured Non-Households with Outstanding Revenue 24-36 months

The number of measured non households at end of 2018/19 with revenue that has been outstanding for at least 24 months but less than 36 months. At 31 March 2019 this totalled 291.

Row 39 – Number of Measured Non-Households with Outstanding Revenue 36-48 months

The number of measured non households at end of 2018/19 with revenue that has been outstanding for at least 36 months but less than 48 months.

Once the bad debt provision is applied there are no debtors greater than 36 months. Therefore at 31 March 2019 this row and all remaining rows in box C are zero.

Box D – Revenue Outstanding – Unmeasured Non-Households

Revenue outstanding from non-households is the amount of revenue relating to unmeasured water and sewerage charges that had been billed in the year but not collected at 31 March 2019.

- At 31 March 2019 the closing trade debtor balance was £2.650m (31 March 2018, £2.600m).

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.048m and is made up of the following:

- £0.004m for debt over 4 years
- £0.003m for debt 3 - 4 years
- £0.008m for debt 2 – 3 years
- £0.015m for debt 1 – 2 years
- £0.014m for debt 90 – 365 days
- £0.004m for debt less than 90 days

Row 43 – Total Revenue Outstanding < 48 months - Unmeasured Non Households

The total amount of revenue at the end of 2018/19 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2019 was £2.650m.

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months

The number of unmeasured non households at the end of 2018/19 with revenue that has been outstanding for less than 48 months. Total at 31 March 2019 was 8,262.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households

The total amount of revenue at the end of 2018/19 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2019 was £2.237m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months

The number of unmeasured non households at the end of 2018/19 with revenue outstanding for less than 3 months. Total at 31 March 2019 was 7,650.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households

The total amount of revenue at the end of 2018/19 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2019 was £0.142m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months

The number of unmeasured non households at end of 2018/19 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2019 was 177.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households

The total amount of revenue at the end of 2018/19 outstanding from unmeasured non households for at least 12 months but less than 24 months. Balance at 31 March 2019 was £0.165m.

Row 50 – Numbers of Unmeasured Non-Households with Outstanding Revenue 12-24 months

The number of unmeasured non households at end of 2018/19 with revenue outstanding for at least 12 months but less than 24 months. Total at 31 March 2019 was 316.

Row 51 – Revenue Outstanding 24-36 months - Unmeasured Non Households

The total amount of revenue at the end of 2018/19 outstanding from unmeasured non households for at least 24 months but less than 36 months. Balance at 31 March 2019 was £0.106m.

Row 52 – Numbers of Unmeasured Non-Households with Outstanding Revenue 24-36 months

The number of unmeasured non households at end of 2018/19 with revenue outstanding for at least 24 months but less than 36 months. Total at 31 March 2019 was 119.

Row 53 – Revenue Outstanding 36-48 months - Unmeasured Non Households

The total amount of revenue at the end of 2018/19 outstanding from unmeasured non households for at least 36 months but less than 48 months.

Once the bad debt provision is applied there are no debtors greater than 36 months. Therefore at 31 March 2019 this row and all remaining rows in box D are zero.

Box E – Revenue Written Off

Bad debt write-offs

The bad debt write off policy is detailed below. As with all other customer data the company receives monthly figures for bad debt write-offs. The figure for the year is £0.493m (2017/18, £0.5306m).

Authorisation of bad debt write-off

With regard to writing off bad debts the service provider has authorisation to write off in accordance with the financial delegations.

Authorisation approval levels are as follows:

Delegation Limits	Recommendation from	Approval required	DoF/DfI *

[By Item]	(External service provider)	Grade (Internal)	(External)
Value			N/A
Up to £100	Agent	Billing, Revenue & Collection Manager L4.	
>£100 to £1,000	Team Manager		
>£1,000 to £5,000	Service Delivery Manager		
>£5,000 to £10,000	Head of Service Delivery	Billing, Revenue & Collections Senior Manager L3	
>£10,000 to £50,000		Director of Customer Service Delivery L2	
>£50,000		Chief Executive	
> £250,000	N/A	Board	>£500k

* All submissions for external approval must be submitted through F&R to the DfI SU.

Revenue written off is revenue relating to non-household water and sewerage charges along with any trade effluent charges that have been written off in the year.

Revenue written off only includes water, sewerage and trade effluent charges and does not include court costs or other items included.

NI Water uses a third party contractor to manage their debtors and a Debt Management Strategy was drawn up for Echo use to guide their actions and decisions.

Row 57 – Measured Households

As NI Water receives no revenue from households, there was no revenue written off from measured households.

Row 57a – Measured Non-Households

Bad debts written off are calculated on a monthly basis and include trade effluent. The total for 2018/19 was £0.442m (2017/18, £0.474).

Row 58 – Unmeasured Households

As NI Water receives no revenue from households, there was no revenue written off from unmeasured households.

Row 58a – Unmeasured Non-Households

Bad debts written off are calculated on a monthly basis. The total for 2018/19 was £0.051m (2017/18, £0.056m).

Bad Debt provisioning

The methodology for calculating the bad debt provision is based on an analysis of industry specific bad debt which banded specific industry types as high, medium or low risk in terms of collectability of debt. Percentages were then applied in terms of bad debt provision. Percentages for ‘high risk’ were set at an increased level and percentages for ‘low risk’ at a reduced level. The company view this methodology as providing an appropriate estimate of the provisioning required and reflects the current economic climate. NI Water’s bad debt provision is calculated as follows:

Provision	0-30 days	31-60 days	61-90 days	91-120 days	121-150 days	151-180 days	180-365 days	1 - 2 years	2 - 3 years	3 - 4 years	4+ years
High	5%	5%	10%	10%	35%	65%	80%	100%	100%	100%	100%
Medium	2%	2%	2%	2%	20%	35%	65%	100%	100%	100%	100%
Low	1%	1%	1%	1%	10%	20%	30%	50%	75%	100%	100%

Allocation of High, Medium and Low

A review of the total debtors (debit balances) was carried out in March 2018 (no change March 19). Account balance and aged debt taken into consideration when applying risk of default. Data was filtered by VAT SIC code and the following steps were taken:

- Top customers were reviewed by name.
- All public sector accounts reviewed e.g. Health Trusts, Education Boards, Schools - <30 days Low; if >30days, Med.
- Agricultural customers grouped and reviewed - >£5K reviewed individually and set to HIGH. £1k to £5k reviewed individually and set to HIGH if debt > 180 days, or MED if <180 days. DD customers low.
- Retail customers grouped and reviewed.
- Hotels, bars and restaurants reviewed - Final account no forwarding address – high risk.
- Charities, voluntary groups, housing associations, churches grouped and reviewed.
- Construction companies, quarries grouped and reviewed.
- Accounts with STD VAT code reviewed individually, direct debit payers on MED (these accounts are mainly new customers who have not yet completed VAT questionnaire, so we can't be sure of activity).
- Manufacturers grouped and reviewed by name (high value) and activity (lower value).
- Food processors grouped and reviewed.
- Unmeasured customers in sic code 6 classified as HIGH.
- Unmeasured customers in sic code 8 (Banks and professional services) classified as LOW or MED.
- Banks all at MED risk.
- All final accounts classified as HIGH risk.
- VAT code:
  - 1 Energy as low unless debt greater than £180 days then med.
  - 2 Minerals - <30 days med. > 30 days high.
  - 3 Metal Goods and Engineering - DD - Low. >180 days High
  - 4 Other manufacturing - >180 days high if not Key account or DD.
  - 5 Construction < 30 days med. > 30 days high
  - 6 Distribution/Catering <30 days Med. > 30 days High
  - 7 Transport > 60 days High. <60 days med
  - 8 Banking & Finance - DD Low
  - 9 Other services:-
    - DD Low, >£1k, Med
    - Std Vat Rate unknown > 180 days high.
    - DD Med unless final a/c <180 days, if >£1k high.
    - Domestic Property - > 180 days high, <180days and <£100 low.
    - Redundant zero Vat - Med.
- Mitigation accounts set as HIGH
- RPA accounts set as HIGH.

Reduction in Provision

NIW provides against aged debt through the bad debt provision, applying a methodology based on age profile and industry. It is recognised that a proportion of the old debt will not in fact be written off as bad debt but will be eliminated via negative system adjustments and thus be a reduction in income rather than a bad debt expense.

Using the monthly analysis of system adjustments carried out, an estimate of the future system adjustments was made for measured water and measured sewerage only. This was done on the basis of the adjustments in previous months, resulting in an estimate of £1.8m of future system adjustments.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2019 and 31 March 2018:

	2019	**2018**
	£m	**£m**
Measured water & sewerage	1.215	1.821
Unmeasured water & sewerage	0.048	0.086
Trade effluent	0.282	0.335
Total	**1.545**	**2.242**

Subsidy

NI Water received £278.2m subsidy in relation to household customers in 2018/19 with nothing outstanding from DfI at 31 March 2019.

NI Water received £17.28m subsidy in relation to non-household customers and at 31 March 2019 an amount of £1.43m was outstanding from DfI. The total subsidy for non-households for the year ended 31 March 2019 was £18.71m. This figure varies to the Statutory Accounts as Septic Tank subsidy is not reported in AIR as it is classified as non-appointed income under in the Regulatory accounts.

Box F – Customer Service Operating Expenditure

Line 59 – General customer services operating expenditure

The line 59 total of £6.806m in AIR19 is a £0.35m increase (5.49%) against the costs of £6.453m in AIR18. This arises for the following reasons:

- Employment costs (increase of £0.26m (7%)).
- Hired and contracted costs (increase of £0.18m (7%)).
- Other costs (decrease of £0.04m (5%)).

Line 60 – Outstanding revenue collection operating expenditure (households)

As NI Water has no actual revenue from households, there is no revenue outstanding from households and therefore no operating expenditure for outstanding revenue collection.

Line 60a – Outstanding revenue collection operating expenditure (non-households)

The calculation of this figure was based on the split of the Gross Service Charge from Echo (Northern Ireland) Ltd. In addition, an estimate of some internal NIW collection costs was included.

Line 61 – Donations to charitable trusts assisting customers in debt (households):

There were no donations to charitable trusts assisting customers in debt in the year.

Line 62 – Operating expenditure due to vulnerable household customers

Household customers in Northern Ireland currently do not pay for water and sewerage services; therefore, NI Water issues no bills to ‘vulnerable household customers’.

Line 63 – Total customer services operating expenditure

This agrees to the total of table 21, line 13 and table 22, line 12.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 7 NON FINANCIAL MEASURES
WATER PROPERTIES & POPULATION (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	PROPERTIES																				
1	Household properties connected during the year	000	3	4.154	B2	3.611	B2	4.224	B2	5.461	B2	6.327	B2	7.267	B2	6.859	B2				
2	Non-household properties connected during the year	000	3	0.195	B2	0.204	B2	0.26	B2	0.366	B2	0.319	B2	0.349	B2	0.397	B2				
B	BILLING																				
3	Households billed unmeasured water	000	3	681.095	A2	688.832	B2	694.934	A2	703.772	A2	717.015	A2	729.388	A2	740.316	A2				
4	Households billed measured water (external meter)	000	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1				
5	Households billed measured water (not external meter)	000	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1				
6	Households billed water	000	3	681.095	A2	688.832	B2	694.934	A2	703.772	A2	717.015	A2	729.388	A2	740.316	A2				
7	Household properties (water supply area)	000	3	721.698	A2	729.182	B2	734.976	A2	743.090	A2	755.769	A2	767.888	A2	778.923	A2				
8	Non-households billed unmeasured water	000	3	10.896	A2	10.271	A2	9.589	A2	8.861	A2	8.602	A2	8.623	A2	8.613	A2				
9	Non-households billed measured water	000	3	69.158	A2	69.567	A2	69.645	A2	69.813	A2	70.150	A2	70.417	A2	70.771	A2				
10	Non-households billed water	000	3	80.054	A2	79.838	A2	79.234	A2	78.674	A2	78.751	A2	79.040	A2	79.384	A2				
11	Non-household properties (water supply area)	000	3	92.466	A2	92.286	A2	91.541	A2	90.796	A2	90.286	A2	89.806	A2	89.725	A2				
12	Void properties	000	3	53.015	A2	52.798	B2	52.350	A2	51.439	A2	50.288	A2	49.266	A2	48.949	A2				
C	POPULATION																				
13	Population - households billed unmeasured water	000	2	1,709.66	B2	1,718.73	B2	1,731.65	B2	1,747.72	B2	1,759.07	B2	1,766.56	B2	1,771.85	B2				
14	Population - households billed measured water	000	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
15	Population - non-households billed unmeasured water	000	2	7.11	B3	6.78	B3	6.49	B3	4.47	B3	4.40	B3	4.44	B3	4.19	B3				
16	Population - non-households billed measured water	000	2	102.7	B3	102.28	B3	102.4	B3	98.08	B3	98.11	B3	98.17	B3	97.10	B3				
17	Population - total	000	2	1,819.47	B2	1,827.79	B2	1,840.54	B2	1,850.27	B2	1,861.58	B2	1,869.17	B2	1,873.14	B2				

Table 7 – Water Properties and Population

Introduction

Table 7 focuses on the number of properties and population connected to the public water supply system. It extends to 17 lines, set out in three blocks:

- Block A Properties (Lines 1 & 2). Reports properties connected during the year.
- Block B Billing (Lines 3-12). Includes a breakdown of all measured and unmeasured household and non-household properties billed by the company. The property numbers should be the average for the reporting year.
- Block C Population (Lines 13-17). This records the population within each of the measured and unmeasured household and non-household categories. The population numbers should be the average for the reporting year.

In keeping with the Utility Regulator guidance, lines 6, 10 and 17 are calculated lines, being the sum of their equivalent lines within the table. The CSD Services - MI & Data Team complete Blocks A & B, whilst Leakage DMU complete Block C.

The information in this table is used in a number of core corporate calculations such as the water balance calculation and in tariff, charging analysis and determination (water delivered unit cost).

Data Sources, Data Validation and Data Quality

NI Water's data on property counts and classifications is reported monthly from RapidXtra within the Rapid Property Summary (RPS). The data is extracted from the Diamond Warehouse via Microsoft SQL Server to produce the RPS report.

Our AIR19 methodology has remained consistent with previous years – using the automated Property Model tool to populate Table 7 figures (this was first introduced in AIR12 – the RPS as the input).

The RPS provides us with a snapshot at the end of each month in terms of net movement; however it currently does not support us in the explanation of gross movements within the data. The CSD Services MI & Data Team are currently exploring the use of Power BI to determine the gross movement.

Customer/Property information is updated through:

- BAU ('business as usual') customer contacts, such as new connection requests, customer move in/move outs, or
- through Data Quality initiatives/Projects, and/or
- Metering work streams e.g. UNHH (Selectives), Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water were required to install meters on all new household connections from April 2007. This practice has stopped as directed by a change in legislation, which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NI Water of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

As per Utility Regulator guidelines, farms were reclassified as billed non-households for AIR09. This classification remains for AIR19 and farms are included in the billed non-households. In AIR08, farms were classified and reported as 'billed' households; on the principle of their status and allocation of 'domestic allowance'.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the winter months based on information published by the Department for Economy (DFE) and the Central Statistics Office (CSO), Ireland.

The difference between the AIR18 and the AIR19 properties can be explained as follows:

1. New Connections during the 2018/19 reporting year. The figures are based on data supplied by our Customer Connections Team and represent completed connections during the reporting year. The projections for New Connections remain in line with the agreed PC15 forecasts, however we have noted a downturn and will review mid-year (during the draft Principle Statement) to ascertain if projections should be changed.
2. Added as a result of a customer contact. i.e. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    (a) The adding of properties NI Water allegedly did not know about
    (b) The adding of duplicates as the customer's address could not be found on Rapid. Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time of New Connection to that of customer contact (street names can change in the early stages of site development).
3. Removal/reclassification of properties as a result of data quality initiatives/projects
    a. Duplicate properties
    b. Reclassification of properties that were recorded in error
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.

For NI Water, accurate property data is fundamental for many systems and processes, including customer service, metering, billing, consumption, leakage and Major Incident Planning & Response. The Rapid Customer Contact System contains the master property data for NI Water.

As Data Owner for Property Standing Data, The Head of CSD Services is responsible for the property standing data held by NI Water; this is monitored and managed through the Property Information Group (PIG). This group is chaired by the CSD Services MI & Data Team.

The role of PIG is to ensure that there is appropriate governance, controls and reporting for changes made to core data on the system. As Property Data Owners, we need to ensure the processes around creation, maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. Control is key for us; as such we have identified the systems, processes and people using property information across the business, alongside confirming data accuracy and endeavouring to reduce the opportunities for erroneous data entry and creation (such as the inability to recreate demolished properties or duplicate properties).

The issues under consideration were identified as of corporate relevance, therefore to ensure appropriate direction and governance the PIG was formalised. Key objectives include:

1. To agree a single consistent source of property data.
2. To ensure the source property data represents accurate, up-to-date information appropriate for use by the business.
    a. To understand and agree data primacy in respect of data updates from NI Water and external (Land & Property Services - LPS) sources
    b. To ensure the processes around creation (i.e. New Connections), maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. i.e. through CBC Data Validation (Phase 1, Phase 2, Phase 3, 105 Days DV)
    c. To co-ordinate property reconciliations between NI Water & external sources i.e. Data Sharing Agreements between NI Water & LPS, NI Water & Belfast City Council (BCC) etc. and understand the reasons and validity of any differences
    d. To understand and ensure the adequacy of long term procedures for database maintenance, including the updating of data standards and associated CDE M&M Plans
3. To ensure the reporting requirements for the business are met relating to data held on Rapid, particularly, but not exclusively, in respect of tariffs, leakage, Annual Information Returns (AIR) & Principle Statement (PS) returns.
4. Challenge the data in the areas of
    a. Data categorisation & structure
    b. Data robustness – i.e. where is our data good and where is there opportunity for improvement? Identify projects that could aid improvement
    c. Data alignment – both internally and externally. Internally between systems such as Rapid, Ellipse, GIS, Diamond, Netbase, IMS etc. Externally through data reconciliations, such as LPS above.
5. To agree measures to improve the quality and integrity of the data, particularly the key CDEs as monitored by IMU
6. To agree the content and frequency of reports required by NI Water.
7. To agree the quality checking criteria for the above data and reporting and develop a Quality Plan including the determination of responsibilities and audit trails.
8. To produce & circulate an ‘operate and maintain’ programme for property data to the business.

During 18/19, the focus for PIG included analysis and action on:

- Volume of properties coming onto the Rapid billing system on a monthly basis
    - new connections
    - customer contact
    - project work
- Volume of properties coming off the Rapid billing system (demolished)
    - sample check to ensure reason for demolition has been noted and on system audit trail recorded
- Volume of properties amended on the Rapid billing system
    - In particular, address fields -> building number, street name, town and postcode
    - sampling to identify if the data changes are data improvement or data regression
    - if data regression, further analysis into the process is undertaken

- Review of access privileges
    - Rapid audit
    - Through monthly audit samples
    - Internal CRs require sign off from PIG as BAU
    - Working with Echo to review access privileges on an ongoing basis
- Interruptions to supply notices – returned mail
    - This returned mail was brought to the attention of LPS and include properties that LPS have classified as live properties despite being returned as 'no such address' etc.
    - The 2 way communication with LPS will help underpin our governance work and provide direction to the business on practices
- Car Parking Spaces
    - The group identified that 'car parking' spaces were being added to Rapid as properties. One of the project teams added them because they were live on LPS, however they are not physically a property, nor do they require a water supply, therefore this practice has now ceased.

PIG Strategy 19/20:

- New Connections - A move to on-system reporting following the Business Improvement New Connections Review
- Rapid-POINTER Reconciliation - follow on actions to be worked through and benefits realised. i.e. Uploading of UPRNs from POINTER where a property can move from an A match to an A* match
- Running of a mini data cleanse project within the CSD Services MI & Data Team to prepare the Rapid property data for the switch on of system validations. There were 4 phases of system validation functionality introduced to Rapid as part of the CBC Implementation Project. Off system data cleanse is required before some of the system validation rules can be applied. The data will need prepared offline to ensure accuracy and that it conforms to the system validation rules. It will then need tested before being uploaded to Rapid through the bulk upload tool. There will be some further testing to ensure all has uploaded correctly before the functionality is switched on.
- Data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – NDA has been signed off, data sharing project to commence during June 19 for a 12 month period.
- Continuation of the 2 way communication with LPS - This will help underpin our governance work and provide direction to the business on practices that will work alongside LPS
- Student Accommodation – further case studies on student accommodation re-development sites. How does Rapid hold these properties? Liaise with Belfast City Council to understand at what stage they can inform NI Water of properties that are to be re-developed into student accommodation.
- Test Meters – follow up on 'retain for review meters'
- Properties with 'no water supply' (no water/well water) – review and validate on a monthly basis

Summary

As Table 7 is based on averages, please find summary table below for 'End March 2018' and 'End March 19'. The '1st Dec 2018' are actuals used in the Principal Statement and Tariff Setting process.

Property Numbers	March 2018	1st Dec 2018	March 2019	Expected Movement
Unmeasured Water Household	734866	742818	745765	Increase
Unmeasured Water Non-Household	8604	8559	8622	Decrease (but project work has led to an increase)
Measured Water Non-Household	70547	70871	70994	Increase
Voids	48971	49027	48926	Currently no trend
Total	**862,988**	**871,275**	**874,307**	**Increase**

No Water/Well Water

No Water/Well Water and demolished properties are not included in the Table 7 property count; however their exclusion does not impact on the number of reported 'supplied' properties.

Not all properties are connected to the public water supply system, but some will have a septic tank and will look to NI Water to avail of the free annual septic tank desludging service.

During 18/19 the household no water/well water category decreased by 48 and the non-household have increased by 527. Throughout 19/20, the CSD Services MI & Data Team will continue to sample check the No Water/Well Water category to ensure these properties are truly not connected for water.

The Metering & Billing Project are on some occasions adding properties that are not connected for water - this project is due to run until 2020. We are currently reviewing this category to ascertain if it would be worthwhile separating the 'No Water' properties from the 'Well Water' properties.

Site Metered Properties

As part of ongoing data checks, NI Water has been confirming the number of site-metered properties, which are multiple properties being charged through a single meter, such as business parks and industrial estates.

To ensure that these properties are not double counted, they are not included in Table 7 non-domestic property counts (although NI Water retain this information for customer record and charging purposes).

There are 2291 domestic properties (an increase of 547 during 18/19) classified as site meters and there will be further investigation and analysis to be completed during 2019/2020 to ensure these are classified correctly. As above, the output of the Metering & Billing project can result in additional site metered properties being added to Rapid.

Overall, the number of non-domestic site meters has decreased by circa 372 during 2018/19. This is as a result of categorisation movements in year such as measured water

to site meter and unmeasured water to site meter and also the resulting work of Metering & Billing project as detailed above.

Unmeasured Not Charged Properties

From the RPS, there are deemed to be 643 (gross) non-domestic 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water properties. The CSD Services MI & Data Team are currently investigating any 'unmeasured – not charged' properties outside of NI Water ownership to ensure they are classified correctly.

Unmeasured Household Property Movement

The table below provides a reconciliation of the reporting year property movements and resulting property numbers. It sets out how the properties have changed over the reporting year, due mainly to new connections, alongside some movement in the occupancy status. Note: these reported figures include domestic properties that are metered but as NI Water does not bill households for water, they are reported as unmeasured.

Property Numbers	March 2018	1st Dec 2018	March 2019
Unmeasured Water Gross Household (L7 year-end sub calc)	773387	781564	784459
Unmeasured Water Occupied Household (L3 year-end sub calc)	734866	742818	745765
Unmeasured Water Voids Household	38521	38746	38694

Household Voids	Voids	Difference (in-year)
March 2019	38694	(+) 173
March 2018	38521	(+) 42
March 2017	38479	

Measured Household Property Movement

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured or measured water, therefore we don't report figures for measured household property movements (they are included in the unmeasured line as they are not billed)

Unmeasured Non-Household Property Movement

Property Numbers	March 2018	1st Dec 2018	March 2019
Unmeasured Water Gross Non-Household	14313	14038	13976
Unmeasured Water Occupied Non-Household (L8 year-end sub calc)	8604	8559	8622
Unmeasured Water Voids Non-Household	5709	5479	5354

Measured Non-Household Property Movement

Property Numbers	March 2018	1st Dec 2018	March 2019
Measured Water Gross Non-Household	75288	75673	75872
Measured Water Occupied Non-Household (L9 year-end sub calc)	70547	70871	70994
Measured Water Voids Non-Household	4741	4802	4878

Non-Household Voids

Non-Household Voids	Voids	Difference (in-year)
March 2019	10232	(-) 218
March 2018	10450	(-) 632
March 2017	11082	

Confidence Grades

We have kept the confidence grades consistent with those of AIR18. During the reviews mentioned in the company commentary above, we will retain evidence to support any change in confidence grades.
Whilst the quality of data will improve, the method of extraction and reporting will remain consistent. The automated tool (developed during AIR12) to populate the base property tables has remained in place for AIR19.

Lines 13 – 17 Population

The population data used by NI Water has been derived from 2016 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/NPP16-coc.xls

NISRA Population Projections figures are based on births, deaths and migration information gathered by NISRA between 1st July and 30th June for each year. Net migration is the overall difference between the in-migration and out-migration for Northern Ireland and is calculated using health card registration and deregistration data for Northern Ireland. NISRA update their population projections every two years.

The population for unconnected properties has been calculated from two sources:

1. The gross number of unconnected household properties is provided by Customer Services.
2. The unconnected occupancy is sourced from the NIHE Housing Condition Survey 2016 (statistical annex – Table 5.6).
   https://www.nihe.gov.uk/Documents/Research/HCS-Main-Reports-2016/HCS-Main-Report-2016.aspx

The number of unconnected properties is 9,910 and an occupancy rate is calculated at 0.865 (rounded) to determine a total population for unconnected properties of 8,572. The total supplied population for all connected properties is calculated as 1873.14 (x1000). (Line 17)

Non-household population has been calculated by adding the population in communal residence (Table 1 - https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/HP16-bulletin.pdf) to the population of farms. The number of farms has been determined from the company's Rapid system and the occupancy rate is obtained from NISRA (Tables 2 & 3 https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/HP16-bulletin.pdf)

The communal population for AIR19 is 23,628.

The farm population is 30,791 x 2.522 = 77,661. Therefore with the addition of the communal population, the non-household population is 101.29 (x1000).

The connected household population is the difference between the non-household population and the overall connected population. This gives the household population a figure of 1771.85 (x1000) (Line 13). The confidence grade for this line is a B2. This line remains the dominant figure within Section C of Table 7.

The population for non-household measured/unmeasured was derived from the percentage split between measured (not including farms) and unmeasured non-household properties and applied against the NHH communal population. The total farm population (77,661) has been classed as measured. The communal population (23,628) is split based on 8,613 unmeasured customers (17.75%) and 39,918 measured customers which excludes farms (82.25%). This therefore provides a population for measured NHH of 97.10 (x1000) (Line 16) and an unmeasured NHH population of 4.19 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure of 1873.14 (x1000) which is the total connected population.

It is recognised that the primary means of determining population numbers is from data published by NISRA. Bearing this in mind NI Water, as in previous years, has endeavoured to populate a confidence grade against the various lines. The Reporter has previously stated that in doing so the company has made a reasonable effort to assign appropriate confidence grades and accepts that NI Water has no influence over the methodology adopted by NISRA.

Annex A details the Line Methodology followed for the figures within Table 7 Lines 1-12.

Annex A – Line Methodology for Table 7

A) Properties

Line 1: Household Properties Connected during the Year

This line represents the number of new household (domestic) properties added within the area of supply during the reporting year (previously not connected for water supply).

The figures are based on the New Connections reported by the Customer Connection Team (CCT), as per embedded document. It is NIW policy to install meters on all Non-Domestic New Connections.

AIR 19 NC_7256 Water.xlsx

Therefore, the number of new household connections for the year is 6859.

Household properties connected during the year	6859

Line 2: Non-Household Properties Connected during the Year

This line represents the number of new non-household (non-domestic) properties added within the area of supply during the reporting year (previously not connected for water supply).

The figures are based on the New Connections reported by the Customer Connection Team (CCT), as per embedded document. It is NIW policy to install meters on all Non-Domestic New Connections.

Therefore, the number of new non-household connections for the year is 397.

Non-Household properties connected during the year	397

B) Billing

Line 3: Households Billed Unmeasured water

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured or measured water.

Void properties have been excluded, so occupied numbers only used.

This is calculated from the monthly Rapid Property Summary for AIR19 (dated 31st March 2019) as attached below.

RPS March YE 2019.xlsx

Households Billed Unmeasured Water	End March 2018	End March 2019
Household – Unmeasured	690441	700574
Household - Measured – Not Charged (test meters)	176	144
Household - Measured	43150	43596
Household - Site Meters	1082	1437
Unmeasured - Not Charged	17	14
Total	734866	745765
Average (Apr18/Apr19)	**740316**	

The figure represents the number of unmeasured domestic properties that would have been billed had charging been introduced.

Line 4: Households Billed Measured Water (external meter)

Due to the deferral of domestic charging, NI Water does not bill households for measured water. Therefore, any domestic properties that would have been included in line 4 are now included in line 3, as per AIR10 erratum, Reporters Recommendations and Undertaking A Agreement.

Households Billed Measured Water (external meter)	End March 2018	End March 2019
	0	0
Average Apr 18/Apr19	**0**	

Line 5: Households Billed Measured Water (not external meter)

Due to the deferral of domestic charging, NI Water does not bill households for measured water.
Average number of billed metered households (not externally metered).
An internal meter is one located inside the customer's property or attached to the property at above ground level in a box or cabinet. All other meters should be classed as external with void properties excluded.

Households Billed Measured Water (internal meter)	End March 2018	End March 2019
	0	0
Average (Apr18/Apr19)	**0**	

Line 6: Households Billed Water

Average number of households billed for water within the water supply area.

Calculated by adding AIR19 Table 7 lines 3, 4 and 5

Households Billed Water	Average 18/19
Households billed unmeasured water (Line 3)	740316
Households billed measured water (external meter) (Line 4)	0
Households billed measured water (not external meter) (Line 5)	0
Total	**740316**

The figure represents the number of domestic properties that would have been billed had charging been introduced.

Line 7: Household Properties (water supply area)

This is the number of connected household properties within the water supply area, including void properties.

This is calculated from the monthly Rapid Property Summary for AIR19 (dated 31st March 2019).

Household Properties (Water Supply Area)	End March 2018	End March 2019
Unmeasured	723615	733723
Measured – Not Charged (Test)	182	150
Measured	47827	48279
Site Meters	1744	2291
Unmeasured - Not Charged	19	16
Total	773387	784459
Average (Apr18/Apr19)	**778923**	

Line 8: Non-Household Billed Unmeasured Water

This is the average number of non-households billed for unmeasured water within the supply area, calculated from the Rapid Property Summary.

Figures are based on the average of End March 2018 and End March 2019 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Water	End March 2018	End March 2019
	8604	8622
Average (Apr18/Apr19)	**8613**	

Line 9: Non-Household Billed Measured Water

This figure represents the average number of non-households billed for measured water within the supply area, calculated from the Rapid Property Summary.

Figures are based on the average of End March 2018 and End March 2019 non-domestic measured properties.

Non-Households Billed Measured Water	End March 2018	End March 2019
	70547	70994
Average (Apr18/Apr19)	**70771**	

Site metered properties are a subset of the overall non-domestic billed measured water customer base, therefore not included in the figure above to avoid duplication. E.g. where multiple businesses/properties are served through one site meter, only the landlord or business park management is considered as the customer.

Line 10: Non-Household Billed Water

This figure represents the average number of non-households billed for water within the supply area.
This is calculated from the Rapid Property Summary for AIR19, excluding voids.
The sum of AIR19 Table 7 lines 8 & 9

Non-Households Billed Water	Average 18/19
Non-Households Billed Unmeasured Water (Line 8)	8613
Non-Households Billed Measured Water (Line 9)	70771
Total	**79384**

Line 11: Non-Household Properties (water supply area)

This is the average number of connected non-household properties within the water supply area, including void properties, calculated from the Rapid Property Summary.

Non-Household Properties (Water Supply Area)	End March 2018	End March 2019
Unmeasured	14313	13976
Measured	75288	75872
Total	89601	89848
Average (Apr18/Apr19)	**89725**	

Line 12: Void Properties

This is the average number of properties, within the supply area, which are connected to the distribution system but do not receive a charge, as there are no occupants – (voids). This is calculated from the Rapid Property Summary.

Void Properties (Water Supply Area)	End March 2018	End March 2019
Non-Household – Unmeasured	5709	5354
Non-Household – Measured	4741	4878
Household – Unmeasured	33174	33149
Household - Measured	4677	4683
Household – Measured - Not Charged (Test)	6	6
Household – Site Meters	662	854
Household - Not Charged	2	2
Total	48971	48926
Average	**48949**	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 8 NON FINANCIAL MEASURES
WATER METERING (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**HOUSEHOLD METER INSTALLATION**																				
1	Selective meters - installed	nr	0	3,078	B3	3,030	B3	3,787	B3	5,218	B3	1,395	B3	0	B3	0	A1				
2	Meter optants installed	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1				
3	Meters installed - external meter with existing or new boundary box	nr	0	3,078	B3	3,031	B3	3,787	B3	5,218	B3	1,395	B3	0	B3	0	A1				
4	Meters installed - external meter without boundary box	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1				
5	Meters installed - internal meter	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1				
6	No. of meter installation requests outstanding for greater than three months	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1				
B	**NON HOUSEHOLD METER INSTALLATION**																				
7	Selective meters - installed	nr	0	692	B2	458	B2	509	B2	473	B2	449	B2	601	B2	699	B2				
7a	Number of non household meters renewed	nr	0	4,653	B2	6,772	B2	6,044	B2	9,830	B2	9,671	B2	3,156	B2	3,150	B2				
8	Meter optants installed	nr	0	45	B2	23	B2	18	B2	20	B2	57	B2	61	B2	52	B2				
9	Meters installed - external meter with existing or new boundary box	nr	0	638	B2	396	B2	472	B2	469	B2	452	B2	614	B2	709	B2				
10	Meters installed - external meter without boundary box	nr	0	17	B2	22	B2	37	B2	22	B3	38	B3	37	B3	35	B3				
11	Meters installed - internal meter	nr	0	82	B2	62	B2	18	B2	2	B2	16	B2	11	B2	7	B2				
12	No. of meter installation requests outstanding for greater than three months	nr	0	10	B2	8	B2	1	B2	2	B2	6	B2	4	B2	0	B2				
C	**WATER DEMAND AT RECENTLY METERED NON-HOUSEDHOLD PROPERTIES**																				
13	Average water billed - selective metered properties	l/prop/d	2	363.53	B3	520.74	B3	449.68	B3	384.09	B3	532.55	B3	580.74	B3	628.33	B3				

Table 8 – Non Financial Measures – Water Metering

Regulations made in 2016 removed the Art 81 obligation on NI Water to meter newly connected domestic premises.

Line - 1 Selective meter's installed

NI Water no longer installs meters at newly connected domestic premises for reasons stated above, no domestic premises had meters fitted in the reporting year.

Line 3 - Meters Installed – external meter with existing boundary box

All newly connected domestic properties are provided with a boundary box at or as close to the boundary as possible when connected to the water main. As such all new domestic properties have the capability to have a water meter fitted.

NI Water no longer installs meters at newly connected domestic premises for reasons stated above, no domestic premises had meters fitted in the reporting year.

Lines 7-12 - Non household meter installation

NIW installs water meters at newly connected non-domestic premises as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006.

The company in an attempt to increase its meter penetration where permissible is continuing to install meters across its non-domestic revenue generating customer base, providing it is technically possible to do so.

Line 7 - Selective meters installed

Meters installed at the behest of NI Water include those properties selected because they are new non-domestic connections or fall into the selective category. The total selective meter installs for the year was 699. New connections accounted for 35 large and 321 small diameter installations, the other 343 installations are classed as selectives performed by the metering contractor and NIW staff.

Line 7a - Number of non-household meters renewed

NIW has a reactive meter maintenance section within the MCT and reactively replaces meters and street furniture associated with meters. The maintenance activities are driven by reports generated by the meter readers, meter query technicians and project teams. All Meter Maintenance Requests (MMR's) are logged on a local database and channelled through a maintenance process. The MMR's are forwarded to the maintenance contractor who has a maximum of 28 days to complete the replacement or remedial work and return the associated data. The returned data is processed by the MCT and meter exchanges are notified to the individual who requested the job, the CSC (for billing purposes) and the Corporate Asset Register (for asset management reasons). The meter maintenance process is an end to end process managed by the metering section using a corporate process flow system known as Savvion linked to the corporate billing system. During the reporting year NIW meter maintenance section replaced 3150 meters through the MMR process.

NIW also had a Proactive Meter Exchange (PME) programme which was designed to target a number of small diameter meters exchanges each year. The meters selected for exchange are those deemed to be 17 years of age or more and where possible those meters with a whole life consumption reading >8000m3. During the reporting year, NIW exchanged 575 meters under the PME programme.

An additional 379 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation.

Other teams within NI Water replaced a total of 2196 meters during the course of their activities and investigations.

The total number of meters replaced by NIW in the reporting year combining all of the above work streams was 3150 meters.

Line 8 - Meter optants installed

NIW will install meters at existing non-domestic premises when a customer requests a meter and providing it is technically possible to do so. An optants process is in operation and has been communicated across the company to include the Customer Services Centre (CSC). If an unmeasured customer contacts the company and requests the option to have their premises billed as a measured (metered) property and it is determined following a survey to be possible, a meter will be installed. It is the company preference to install meters externally in boundary boxes or in chambers however if this is not technically possible an internal meter will be considered. The total number of non-domestic meter optants for the reporting year was 35.

Line 9 - Meters installed – external meter with existing boundary box

NI Water continues to actively install external meters across a number of metering work streams which includes optants and other selective non-domestic customer properties. While the majority of these are fitted in existing boundary boxes which essentially entails screwing in a meter, other installations can only be completed with the replacement of the boundary box. This involves replacing legacy stop tap boxes often referred to as ‘Toby’ boxes and replacing them with modern proprietary boundary box units. The total number of non-domestic meters installed within this category was 709.

Line 10 - Meters installed – external meter without boundary box

NI Water Developer Services Team (DS) is responsible for coordinating new non-domestic water connections and meter installations >32mm diameter. These large connections by the nature of their size require a chamber constructed to facilitate the meter and valves installations, these totalled 35 in the reporting year.

Line 11- Meters installed – internal meters

NI Water’s preference is to install meters externally when possible. Internal installations are only considered and undertaken when the possibility of an external installation has been discounted because of engineering difficulties, shared supplies or an inability to capture the total volume of water entering a property. Internal meters have been installed across the selective and optant metering programmes. The total number of internal non-domestic meter installations completed this reporting year was 7.

Line 12 - No. of meter installation requests outstanding for greater than three months

The number of non-household optant meter installation requests that took longer than 3 months to complete was 0. There are no significant deviations in trends of any of the reporting lines from previous years, with the exception of line 12 where for the first time NIW have achieved 0 Optant meter installations taking greater than 3 months from the date that the customer requested them. This represents a significant improvement in the customer experience achieved by more cohesive working between various NIW departments and a focus in general on decreasing the time taken to answer customer contacts/complaints.

Line 13 – Average Water Billed - Selective Metered Properties

The meters uploaded to Rapid during the previous reporting year (2017/18) are the focus for this line, along with the consumption usage throughout the 2018/19 reporting year.

The TRIMMEAN function was applied to the consumption to ensure the result was a true average. There were some very high and very low consumption, which would have skewed the results.

The figure reported for Line 13 is 628.33 l/prop/day, an increase of 47.59 l/prop/day from AIR18. To demonstrate the range of consumption for AIR18 and AIR19, please see table below:

Consumption Band (m^3)	AIR18	AIR19
1-1000	564	572
> 1000	70	77
Total (excl. zeros)	634	649

The embedded document below details the meter industry codes of the meters included in this calculation. The categories where there have been an increase in the number of meters have been highlighted - this will help to explain/justify the increase in the l/prop/day volume.

AIR18_19
Comparison per MIC

NORTHERN IRELAND WATER LIMITED COMPANY - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 9 NON FINANCIAL MEASURES
WATER QUALITY (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	WATER TREATMENT AND DISTRIBUTION																				
	Lines 1 to 5 not used																				
B	DISTRIBUTION INPUT COVERED BY WORK PROGRAMMES AGREED WITH DWI																				
6	Raw water deterioration	Ml/d	3	23.100	A2	3.654	A2	3.559	A2	15.364	A2	15.322	A2	44.561	A2	49.970	A2				
7	Conditioning water supplies to reduce plumbosolvency	Ml/d	3	563.648	A2	562.851	A2	560.429	A2	562.876	A2	571.703	A2	570.584	A2	594.486	A2				
8	Reducing the risk from Cryptosporidium	Ml/d	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1				
9	Other	Ml/d	3	22.952	A2	0.000	A1	106.441	A2	0.000	A1	0.000	A1	0.000	A1	202.164	A2				

Table 9 – Water Quality

Background – Year on Year

The perceived quality of water supplied by NI Water to customers has risen slightly over the last number of years:

- NI Water now assesses compliance using % Overall Compliance across customer tap, WTWs, SRs and Authorised Supply Points rather than Mean Zonal Compliance. Under this means of assessment, NI Water's compliance has risen slightly from 99.88% in 2017 to 99.90% in 2018 (figure assessed by NI Water - waiting for confirmation from DWI).
- The Drinking Water OPA (based on turbidity, iron, manganese, faecal coliforms, Total Trihalomethanes (THM) and aluminium at customer tap) has risen from 99.49% in 2017 to 99.69% in 2018. This is in part due to reporting THMs to 2 significant figures to match the rest of the water industry as well as ongoing programmes of work.
- The percentage compliance measured at Water Treatment Works (WTWs) increased slightly from 99.93% in 2017 to 99.97% in 2018.
- The percentage compliance measured at Service Reservoir (SR) has increased slightly from 99.95% in 2017 to 99.96% for 2018.

Please note a total re-zoning exercise was carried out for 2009 based on more accurate DMA data. The new 2009 and 2010 Water Supply Zones were not contiguous with the previous zones, and as such were given new codes and names, with the codes reflecting the leakage supply areas, and the names reflecting the supplying WTW / SR and the major conurbation in the zonal area. Following some small WTWs being taken out of service in 2010, some further zones were created for 2011 with new codes and names as before. For 2014 onwards some zonal boundaries were moved to more closely match leakage operational boundaries.

The previous method of compliance assessment (Mean Zonal Compliance) gave undue emphasis on individual exceedances in small zones. The % Overall Compliance methodology treats all exceedances with the same emphasis.

Line 6 – Raw water deterioration

The data used for the estimation of average flow at WTWs in Table 9 lines 6-9 was supplied from operations leakage metering. For this return the Distribution Input was calculated as the average daily flow from the various individual sites or amalgamation of associated readings obtained from leakage metering. In accordance with the guidance, sites that were out of service at the end of the reporting period (the calendar year) will have been excluded and would be listed here.

Over the past number of years, NI Water's WTWs have had a number of exceedances of the pesticide MCPA. A programme of enhanced monitoring for MCPA has been setup for these sites. DWI is content with the above enhanced programme and the sites have not been included in the calculations.

Authorised Departures are no longer likely to be used as regulatory instruments against NIW by DWI. Notice under Regulation 31(4)(b) and Enforcement Orders (including "Consideration of Provisional Enforcement Orders", "Provisional Enforcement Orders") are now the methodology by which NIW is regulated by DWI.

A PEO for Derg WTW was opened in 2016 due to contravention of the Regulatory Standard for the pesticide MCPA.

A CPEO for Ballinrees WTW was opened in 2017 for the pesticide MCPA.

A further CPEO for Glenhordial WTW was opened in 2018 for the pesticide MCPA.

Including these 3 sites, the volume for Raw Water deterioration is therefore 49.970 Ml/d.

Line 7 – Conditioning water supplies to reduce Plumbosolvency

NI Water, as required by the Drinking Water Regulations (Regulation 32), has put in place orthophosphoric acid dosing to control plumbosolvency in the distribution system. This control measure is agreed with the DWI and the Health Authorities. The average initial dose rate was approximately 1 mg/l following propensity testing. The level of dosing is reviewed annually against compliance with existing lead standards, with DWI being informed as to the proposed dosing rates. DWI has the opportunity to query the proposed dose rates. Following the annual review, the dose rates were adjusted as agreed.

Site Name	Average Dosed Water (ML/d)
Altnahinch	8.77
Ballinrees	29.69
Belleek	1.55
Carmoney	21.29
Carran Hill	5.91
Castor Bay	107.10
Caugh Hill	16.01
Clay Lake	3.47
Derg	15.97
Dorisland	22.53
Drumaroad	94.98
Dungonnell	8.66
Dunore Point	114.63
Fofanny	34.83
Forked Bridge	14.14
Glenhordial	4.31
Killyhevlin	26.32
Killylane	11.16
Lough Bradan	6.29
Lough Fea	11.13
Lough Macrory	10.58
Moyola	15.48
Seagahan	9.68
Total:	594.486

Line 8 – Reducing the risk from *Cryptosporidium*

DWI approved *Cryptosporidium* risk assessments were previously carried out on all sources annually and showed effective barriers existed at all NI Water's treatment works. The risk assessment for *Cryptosporidium* is now incorporated into annual revisions of the treatment works and supply systems Drinking Water Safety Plans (DWSP) which are submitted to DWI under regulation 30.

Under the current guidance, which requires that this should be assessed against sites with “legally binding instruments”, NI Water has no sites which fall into this category.

Whilst a warning letter for a *Cryptosporidium* exceedance at Drumaroad WTW was issued during 2018, DWI note that the ongoing programme of work for an aluminium exceedance CPEO also issued in 2018, will mitigate the *Cryptosporidium* risk.

The return for this line is therefore 0 Ml/d.

Line 9 – Other

There were 3 other legal instruments put in place during 2018 (see appendix).
The return for this line is 202.164 Ml/d.

Confidence Grades

Confidence grades used in returns are based on OFWAT guidance documentation.

Appendix – Lines 6, 8 & 9

Regulatory enforcement	Issue Date	Location	Parameter	Date Closed
PEO/16/01	Issued 30/06/2016	Derg WTW	Contravention of the Regulatory Standard for the pesticide MCPA	
PEO/18/01	Issued 25/06/2018	Castor Bay WTW	Contravention of the Regulatory Standard for Odour	

Regulatory enforcement	Issue Date	Location	Parameter	Date Closed
CPEO/17/01	Issued 24/05/2017	Ballinrees WTW	Contravention of the Regulatory Standard for the pesticide MCPA	
CPEO/18/01	Issued 31/01/2018	Glenhordial WTW	Contravention of the Regulatory Standard for the pesticide MCPA	05/02/2019
CPEO/18/02	Issued 02/03/2018	Rathlin WTW	Contravention of the Regulatory Standard for Total Trihalomethanes	
CPEO/18/03	Issued 30/11/2018	Drumaroad WTW	Contravention of the Regulatory Standard for Aluminium	

Regulatory enforcement	Issue Date	Location	Parameter	Date Closed
WL/18/02	Issued 30/11/2018	Drumaroad WTW	Contravention of the Regulatory Standard for Cryptosporidium	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10 NON FINANCIAL MEASURES
WATER DELIVERED (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**WATER DELIVERED - VOLUMES**																				
1	Billed measured household	Ml/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
2	Billed measured non-household	Ml/d	2	121.44		125.79		120.17		118.03		120.58		122.02		128.40					
3	Billed measured	Ml/d	2	121.44		125.79		120.17		118.03		120.58		122.02		128.40					
4	Billed unmeasured household	Ml/d	2	297.41		285.52		292.36		294.86		302.76		304.82		315.93					
5	Billed unmeasured non-household	Ml/d	2	6.87		6.07		5.82		5.28		5.17		5.14		5.49					
6	Billed unmeasured	Ml/d	2	304.28		291.59		298.18		300.14		307.93		309.96		321.42					
B	**WATER DELIVERED - COMPONENTS**																				
7	Estimated water delivered per unmeasured non-household	l/prop/d	2	630.51	C4	591.01	B4	606.98	B4	595.87	B4	601.02	B4	596.08	B4	637.41	B4				
7a	Estimated water delivered per unmeasured household	l/prop/d	2	436.66	B3	414.50	B3	420.70	B3	418.97	B3	422.25	B3	417.91	B3	426.75	B4				
8	Per capita consumption (unmeas'd h'hold - excl s/pipe leakage)	l/h/d	2	149.98	B3	145.53	B3	148.42	B3	148.42	B3	151.89	B3	152.35	B3	158.13	B4				
9	Per capita consumption (meas'd h'hold - excl s/pipe leakage)	l/h/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
10	Underground supply pipe leakage (unmeas'd households)	l/prop/d	2	60.20		51.22		50.87		50.38		49.62		48.92		48.29					
11	Underground supply pipe leakage (ext. metered households)	l/prop/d	2	30.10		25.61		25.44		25.19		24.81		24.46		24.15					
12	Underground supply pipe leakage (other metered h'holds)	l/prop/d	2	60.20		51.22		50.87		50.38		49.62		48.92		48.29					
13	Underground supply pipe leakage (void properties)	l/prop/d	2	60.20		51.22		50.87		50.38		49.62		48.92		48.29					
14	Meter under-registration (measured households)	Ml/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
15	Meter under-registration (measured non-households)	Ml/d	2	9.29		9.70		9.21		8.52		8.22		7.81		7.63					
16	Distribution system operational use	Ml/d	2	2.36		2.39		2.51		3.05		2.93		3.51		3.20					
17	Water taken legally unbilled	Ml/d	2	14.79		15.16		17.10		16.80		16.40		17.57		16.76					
18	Water taken illegally unbilled	Ml/d	2	0.51		0.48		0.43		0.38		0.68		0.66		0.69					
19	Water taken unbilled	Ml/d	2	15.30		15.64		17.53		17.18		17.08		18.23		17.45					
20	Water delivered (potable)	Ml/d	2	441.02		433.02		435.88		435.35		445.59		450.21		467.27					
21	Water delivered (non-potable)	Ml/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
22	Water delivered (non-standard rates: potable)	Ml/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
23	Water delivered (non-standard rates: non-potable)	Ml/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
24	Distribution losses	Ml/d	2	115.44		127.31		126.08		122.08		123.52		122.52		120.23					
25	Total leakage	Ml/d	2	161.75	B4	167.21	B3	165.99	B3	161.99	B3	163.43	B3	162.43	B3	160.14	B3				
26	Distribution input	Ml/d	2	558.82	B2	562.72	B2	564.47	B2	560.48	B2	572.04	B2	576.24	B2	590.70	B2				
27	Bulk supply imports	Ml/d	2	0.00		0.00		0.00		0.00		0.00		0.00		0.00					
28	Bulk supply exports	Ml/d	2	0.85		1.09		0.80		0.73		0.34		0.44		0.39					
29	Water treated at own works to own customers	Ml/d	2	557.97		561.63		563.67		559.75		571.70		575.80		590.31					
30	Overall water balance	CG			B2		A1		A1		A2		B2		B2		B2				
C	**SECURITY OF SUPPLY**																				
31	Security of supply index - company's planned levels of service	nr	0	100		100		100		100		100		100		100					
32	Not used																				

Table 10 – Non Financial Measures - Water Delivered

Introduction

NI Water continues to follow the methodology as described in Chapter 10 of the Northern Ireland Utility Regulator (UR) AIR19 Reporting Requirements and Definitions manual March 2019. In doing so it has adhered to the methodologies for estimating the water balance set out in the Demand Forecasting Methodology report produced by NERA on behalf of UKWIR.

As a result of the Sustainable Economic Level of Leakage (SELL) study in PC13 as the method of deriving company leakage targets, NI Water has challenged themselves with the setting of a 12 Ml/d target reduction over the six year period of PC15, namely, 165 Ml/d to 153 Ml/d.

For AIR15, the final reporting year of the PC13 period, NI Water reported a reconciled leakage figure of 165.99 Ml/d which was approximately 1 Ml/d above target and subsequently established a 15/16 target of 3 Ml/d reduction in reconciled leakage to bring the PC15 programme back to profile. In AIR18, NI Water reported a reconciled leakage figure of 162.43 Ml/d.

For AIR19, the pre-MLE bottom up leakage figure of 156.53 Ml/d equated to a decrease of 3.56 Ml/d from AIR18. In AIR18, NI Water implemented a household night use update with the agreement of the Utility Regulator as it is considered that the update of this parameter on an annual basis reflects a more accurate reported leakage calculation. For AIR19, this reviewed parameter was applied retrospectively within the bottom up calculated leakage.

In summary, the outputs of this water balance are that the Integrated Flow Method of leakage assessment has given a figure of 183.84 Ml/d for total leakage and the Minimum Night Flow Method has provided a figure of 156.53 Ml/d. When the resulting imbalance between the two methods of 27.31 Ml/d is compared to the Distribution Input figure of 593.05 Ml/d (pre-MLE), it provides a percentage discrepancy of 4.60%. This remains within the 5% tolerance set to enable a Maximum Likelihood Estimation method to be applied, using the squares method, and produces a reconciled leakage figure of 160.14 Ml/d. This figure is approximately 3.14 Ml/d behind the PC15 profiled leakage target of 157.00 Ml/d.

Demand Analysis

During the 2018/19 reporting year there has been an increase in the distribution input of 2.7% from a pre-MLE value of 577.62 Ml/d in AIR18 to 593.05 Ml/d in AIR19.

The graph in Fig 1 below illustrates the monthly distribution input in AIR16, AIR17, AIR18 & AIR19 and highlights a marked month on month increase in demand profile compared to the AIR18 DI.

This was primarily as a result of two specific weather events namely the “Beast from the East” which occurred in March of the AIR18 reporting period however this event impacted into April of AIR19 from both a demand and leakage point of view. The second weather event, the Summer Demand, started in May with an extended period of hot dry weather which continued into June and July and recorded a DI of a significant magnitude and duration that resulted in the implementation of a companywide hose pipe ban.

The year-to-date DI average for AIR19 was approximately 15 Ml/d higher than AIR18.

Fig. 2 shows AIR19 having a similar sunshine observation profile to AIR18 until mid-June when a clear increase in sunshine hours was observed in the subsequent four week period.

This coincided with a three week period were zero rainfall was recorded and the 759 Ml/d peak distribution input was reported. Ground temperatures are also shown deviating from the previous year's temperature profile in mid-May and maximum daily temperatures exceeded 30 degrees in June.

From August to November 2018, rainfall and sunshine levels were similar to that of AIR18 however ground temperatures remained cooler. The winter season was markedly drier and warmer than observed in AIR18 with no prolonged periods of frost and snow experienced. In summary, the weather in the 2018/19 reporting period was 6% sunnier, had 12% less rainfall and experienced a 63% increase in cumulative average ground temperatures.

Although greater detection resources were maintained in order to recover from the previous year's reconciled leakage increase, NRR analysis for 2018/19 indicates that the total NRR increased to 137.89 Ml/d or 0.8% above that calculated for 2017/18 and is therefore the highest annual NRR experienced since 2010/11, the year of the winter freeze/thaw event. This has challenged the leakage resource and management and has affected NI Water's ability to reduce leakage to pre-AIR17 levels.

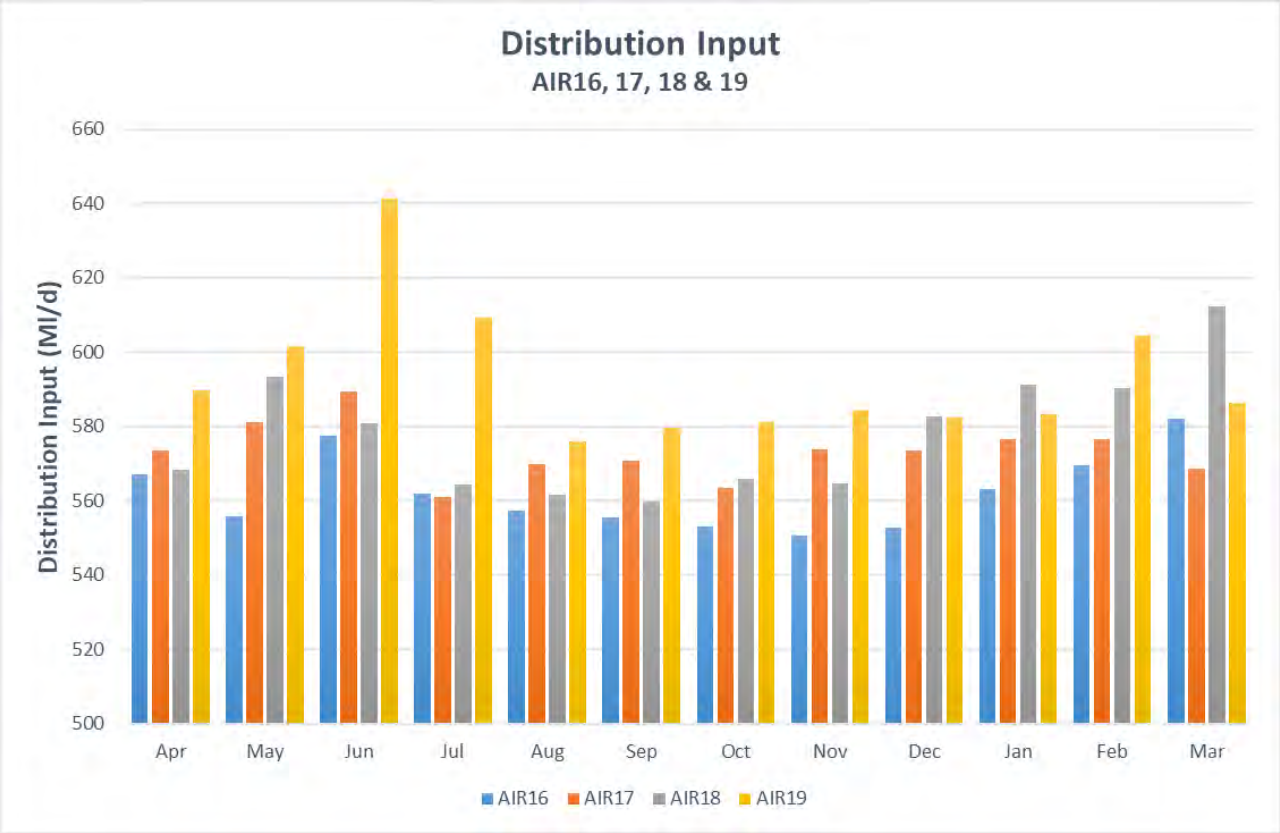


Fig 1

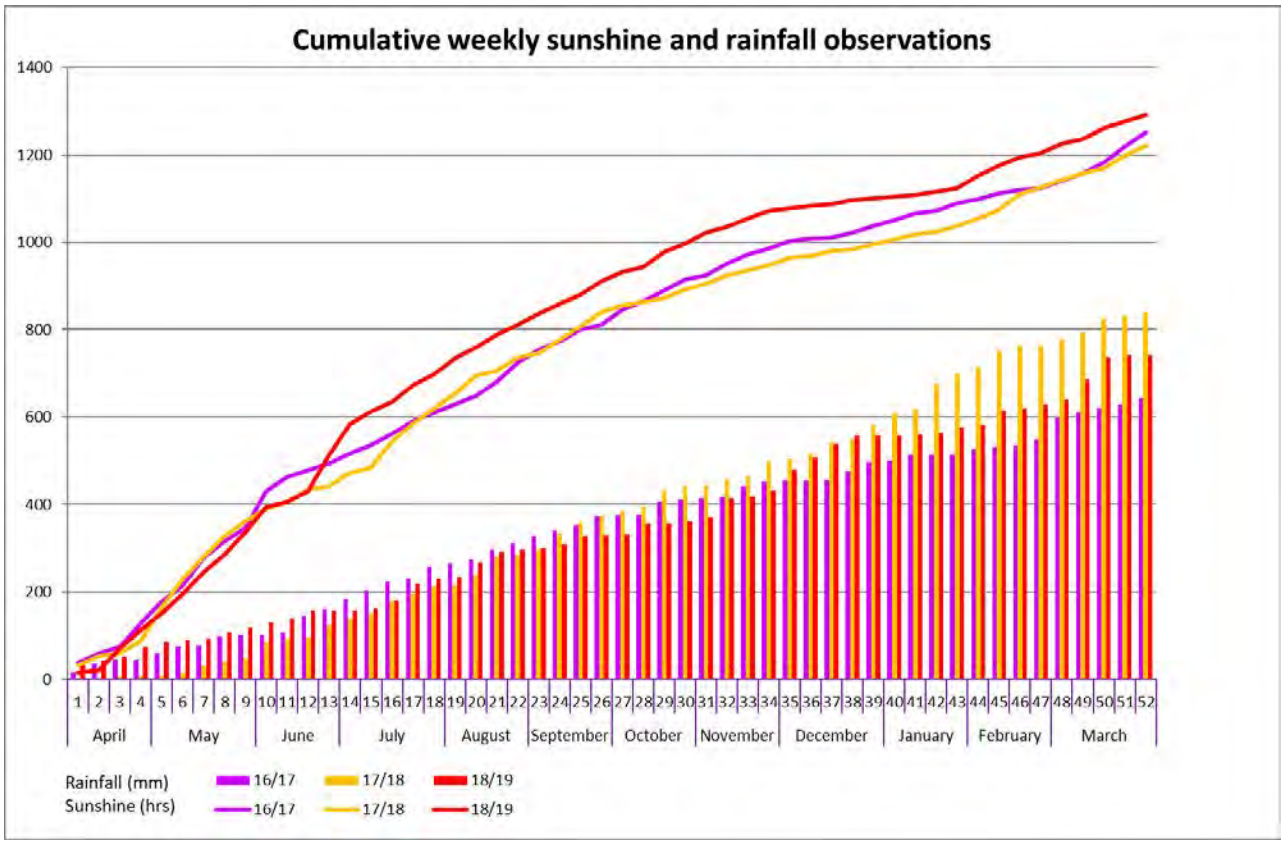

Cumulative weekly sunshine and rainfall observations
1400
1200
1000
800
600
400
200
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
April
May
June
July
August
September
October
November
December
January
February
March
Rainfall (mm)
16/17
17/18
18/19
Sunshine (hrs)
16/17
17/18
18/19

Fig 2

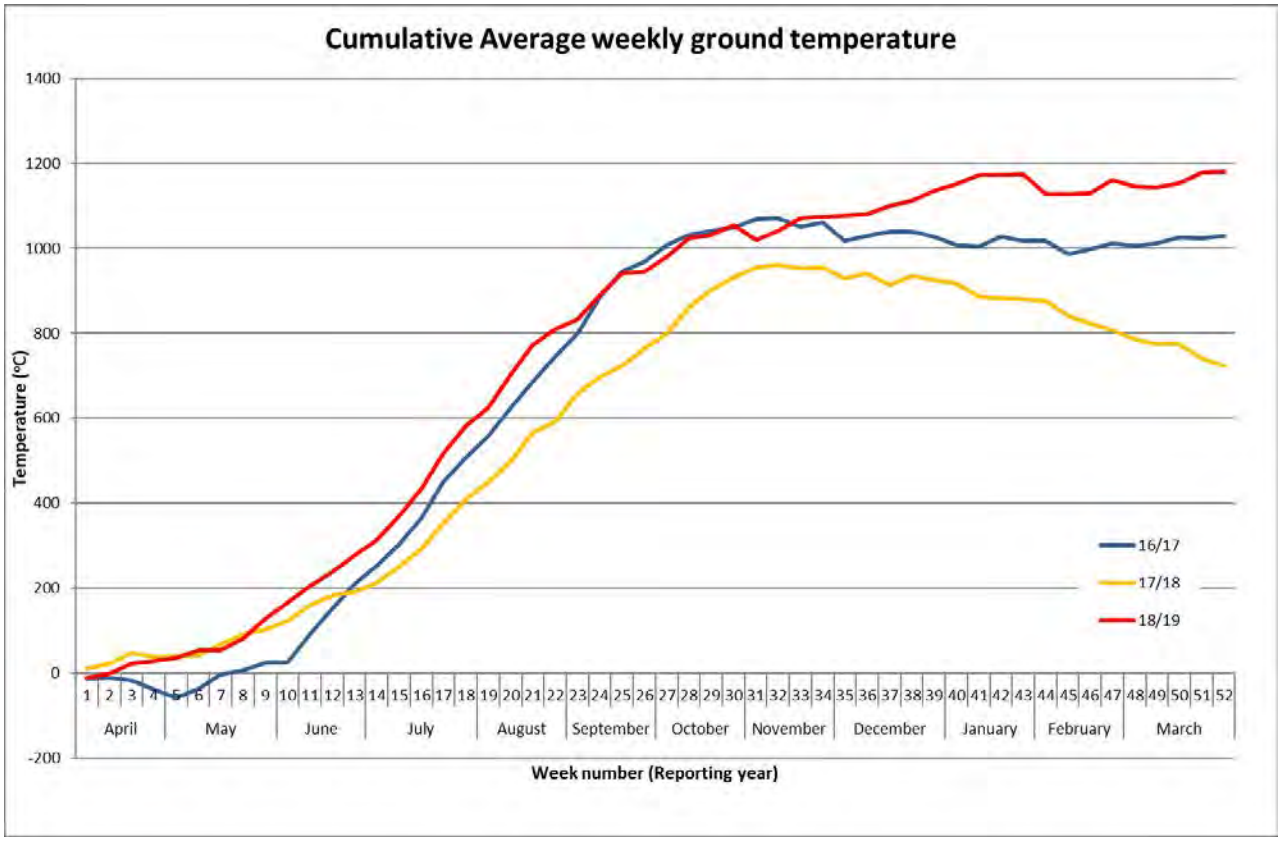

Cumulative Average weekly ground temperature
1400
1200
1000
800
600
400
200
0
-200
Temperature (°C)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
April
May
June
July
August
September
October
November
December
January
February
March
16/17
17/18
18/19
Week number (Reporting year)

Fig 3

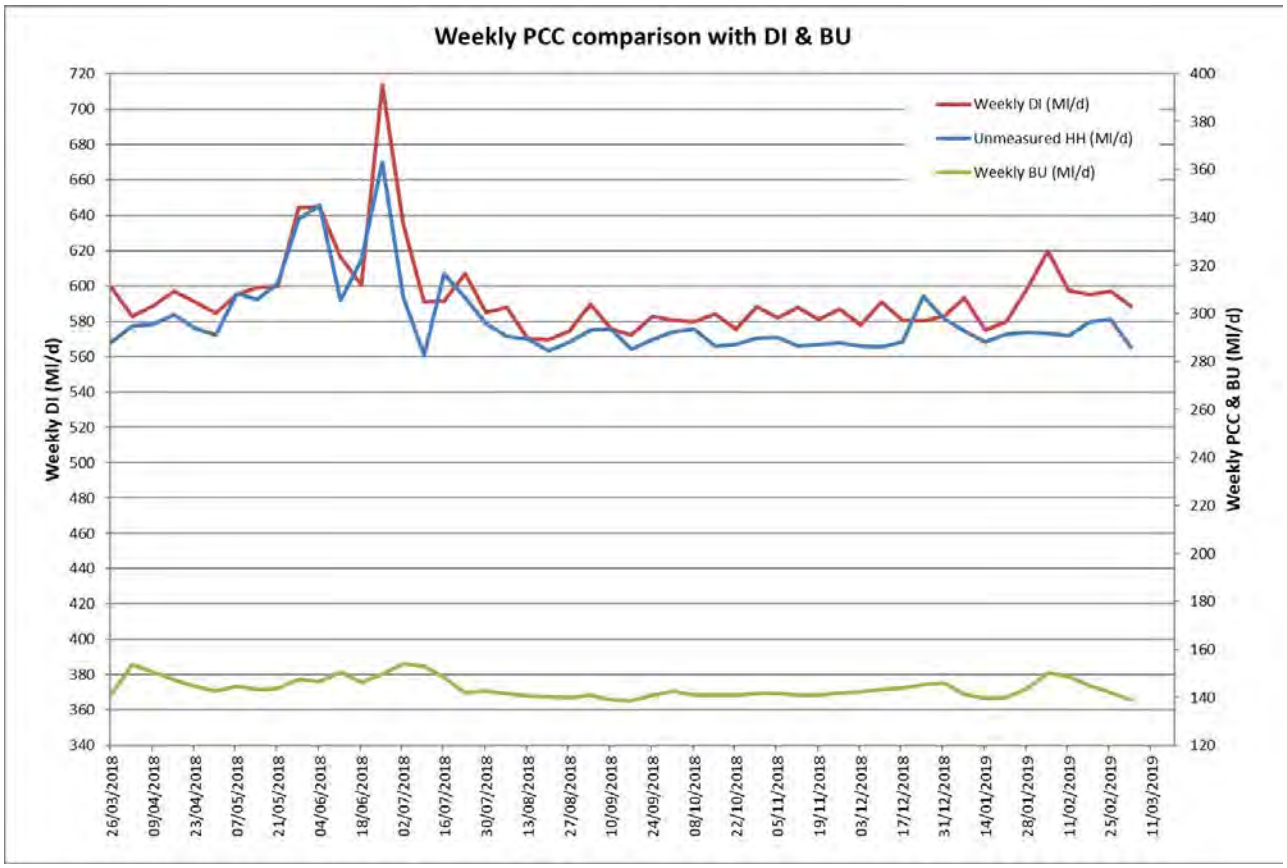


Fig 4

Data Quality

NI Water has remained committed to improve data quality throughout the PC10 and PC13 periods and will continue this commitment throughout PC15.

With Netbase embedded as NI Water's leakage reporting tool, the UKWIR 20th Percentile calculation of Bottom Up leakage remains as reported in AIR18 commentary and in keeping with the Reporter's recommendations the Bottom Up error estimation is 10%.

As reported in AIR17, DMA operability decreased from 78% in AIR15 to 73% in AIR16 which was impacted by a continuing telemetry outstation upgrade project and the Netbase update regarding continuously logged users.

NI Water was focussed on recovering operability to prior year levels and reports a DMA operability value of 79% for March 2019. NI Water is focussed on the continued improvement of operability however understand that this can be impacted by infrastructure upgrades, improvements and weather/major events.

In AIR18, an addendum was submitted with the table 10 commentary on request of the Reporter to outline the company actions to achieve the PC15 leakage target of 153 Ml/d. The progress of these actions include:

- The continued holding of quarterly leakage review meetings to provide strategic direction and focus to reduce leakage. These meetings have been attended by Area Managers, Data Management, Heads of Functions and the Director of Operations.
- The review of the HHNU assessment and retrospective back-calculation has been carried out for AIR19.

- Targeted DMA leak detection reporting has been fully embedded within the suite of weekly reports highlighting DMAs with the greatest gains along with historic minimum achieved levels.
- NRR continues to be reviewed every 6 months.
- An intensive review strategy of the top 100 DMAs is embedded within the DMA Studies and Optimisation project workstreams to reduce the NRR in DMAs susceptible to multiple resource interventions. This strategy has been developed on the positive results of pilot studies.
- Pressure management continues as an ongoing programme of works to identify and install new pressure management schemes as well as optimising existing PRV and pumping regimes.
- In AIR19, NI Water have engaged with Fujitsu and Catepillar in regards to utilising satellite technologies and artificial intelligence in regards to leak detection. This innovation is in the early project stages. Other innovations include the deployment of noise logging as a pilot to understand the capabilities of this technology and a pressure transient study has involved the deployment of over 50 loggers on the network to understand the implications of transients in a calm network.
- A Customer Supply Pipe Leakage policy paper was completed in AIR19 and is under review.
- A pressure logging programme continues within the network to enable a dynamic HDF calculation. The project will continue through PC15 and will be enhanced further during PC21.
- NI Water continues to explore the benefits of SMART metering in understanding seasonal demand trends for non-domestic customers and refined leakage calculations.
- Recommends on ‘hotspot’ rehabilitation schemes, identified through the intensive DMA Studies workstream are being reviewed in regards to influencing Rehab Work Packages.
- Leakage Detection resources have been increased during AIR19.
- A programme to install fast-logging points on 40 PCC sites, a number of DMAs and on sections of rural DMAs is ongoing. It is envisaged that this project will allow NI Water to dynamically review household night use as well as understand demand trends throughout the network.

Trunk Mains & Service Reservoirs

With an aspiration towards the use of company specific calculations for all key aspects of the water balance, NI Water continue to build on their trunk main and service reservoir leakage calculation through the primary use of flow balance assessments.

In AIR15, NI Water completed the assessment of trunk main and service reservoir leakage based on flow meter balances, finding that 50% of the trunk main flow balance calculated leakage occurred within 10% of the trunk main flow balance audits. Although NI Water accepts that there may be leakage within these audits, the company is undertaking a number of proactive steps to identify and resolve issues.

NI Water considers it prudent to fully investigate the audits with perceived leakage to understand the resource economics and uncertainty associated with flow balances for trunk mains and service reservoirs.

NI Water, in partnership with other E&W water companies, continued a project facilitated by WRc for determining uncertainties on large diameter upstream meters, the outputs of which will be incorporated within NI Water’s understanding, monitoring and reporting of trunk mains and service reservoirs.

Gross Measured Consumption

As part of the annual tariff submission to the Utility Regulator, NI Water is required to submit the Principle Statement Information Capture System. One of the consistency checks in this submission is to compare the billed measured non-household volume (Table 10 Line 2) with the Principle Statement and for these volumes to reconcile to within 1%.

Reconciliation of both the Gross Measured Consumption Report and Principle Statement has closed to 0% since the 2014/15 reporting year.

HDF

In preparation for the PC15 submission, NI Water commissioned an SELL assessment to determine company leakage targets for submission years AIR16 to AIR21. As part of this review, HDF was assessed based on 2012/13 data and, as a result, it was deemed appropriate to update the HDF for AIR14 to 23.2.

As part of continuing data enhancements, NI Water have commenced work on the development of a pressure model utilising Netbase, the comprehensive pressure managed area study (2500+ PMAs) and permanent pressure monitoring points (1500+ pressure points). This model will allow NI Water to calculate HDF on a more regular basis and it is envisaged that the reported HDF will be introduced during the PC15 period and enhanced further in the PC21 period.

Meter Under Registration

It should be noted that the Utility Regulator determined that, during the PC15 period, the non-household meter under registration (NHH MUR) figure shall reduce from 8.33%, which was derived for AIR10 by WRc utilising the NI Water meter age profile and meter sample tests, to 5.5% which is understood to be the current NHH MUR average for E&W companies.

This reduction in NHH MUR is planned to be implemented linearly over the six years of the PC15 period, however it is proposed that a company specific MUR study will be commissioned during PC15.

NI Water has acknowledged a risk to the water balance calculation in applying an unsubstantiated MUR figure which is moving the company away from the excellent work undertaken over recent years in terms of developing company specific data.
For AIR19, NHH MUR has been updated to 6.44%.

NI Water initiated both a non-household consumption MUR study and PCC monitor MUR study during AIR17.

Leakage Capital Investment

The PC15 leakage business plan clearly identified a number of key areas of capital investment to replace and improve our network/assets as well as the ongoing improvement in data availability and quality.

The upgrade of DMA meters from GSM logger technology to telemetry status remains a priority project thus providing access to continuous data to assist leakage management, NI Water and the customer. At present 93% of all DMA sites are now monitored directly through telemetry with the remaining returning data via GPRS loggers. This work is proposed to continue in the PC15 period. This has increased data availability and quality to enhance

leakage monitoring, targeting and reporting as well as being available during major incidents.

During 2018/19 projects were carried out to replace existing PRV stock that are operational across the network and to design, install and commission new PRV sites to optimise leakage reduction. This has resulted in 16 PRV replacements and 57 new PRV installations during the year.

DMA optimisation continues to play an important role within the success of the function. In 2017/18 the resolution of High Volume DMAs has played a key part in this. The underlying objective has been initially to investigate the unique factors that cause these DMAs to behave in such a manner and subsequently to provide an engineering solution where possible to reduce leakage.

As work has continued in regards to High Volume DMA studies, DMA optimisation and data quality improvements has resulted in 238 infrastructure improvement schemes being identified as part of the overall capital improvement programme.

For reference, the table below states the variables/parameters which may impact upon the variance in individual water balance component calculations.

	AIR19	**AIR18**
HDF (hrs)	23.2	23.2
UNHH consumption (m3/yr)	207.70	191.54
PCC MUR (%)	7.39	7.39
HH occupancy (nr)	2.52	2.53
NHH MUR (%)	6.44	6.92
SPL (Ml/d)	39.91	39.91
HH night use allowance (l/p/hr)	2.83	2.64
NHH night use allowance (l/p/hr)	Dynamic (21.96)	Dynamic (20.22)
Per Capita Consumption (l/hd/d)	136.43	136.62

Projects regarding the review and analysis of the parameters listed in the table above continues with consideration and strategic planning required regarding the application and impact of updates in light of new and evolving water industry leakage reporting guidance.

Line 1 – Billed Measured Household

There are no billed measured households and the value is therefore zero.

Line 2 – Billed Measured Non-Household

The reported value for water delivered to non-households has increased from 122.02 Ml/d in AIR18 to 128.40 Ml/d in AIR19.

In AIR15, after a full review, the Gross Measured Consumption Report (GMCR) was revised, amended and recoded to reflect the changes in data handling and the evolution of the metering and property company datasets which resulted in the variance between the GMCR and the Principle Statement calculations closing within the recommended 1%.

The variance between GMCR and the Principle Statement has closes to 0% since the 2014/15 reporting year. The GMCR is used to derive the billed measured non-household consumption as stated in Table 10 Line 2.

Similar to AIR18, the GMCR utilises metering data from the RAPID billing system. This volume does not include test meters that are not billed, trade effluent volumes, free supplies or NI Water supplies which are included under water taken unbilled.

There was a noted increase in measured consumption in AIR19 of 5.76 Ml/d, approximately 80% of which was due to an increased agricultural consumption. It was also observed that the consumption increase occurred from August 2018 onwards and is likely attributed to the summer demand event.

A non-household meter under-registration (MUR) value of 6.44% has been added to billed measured non-household use. It should be noted that the Utility Regulator determined that, during the PC15 period, the non-household meter under registration (NHH MUR) figure shall reduce from 8.33%, which was derived for AIR10 by WRc utilising the NI Water meter age profile and meter sample tests, to 5.5% which is understood to be the current NHH MUR average for E&W companies.

This reduction in NHH MUR is planned to be implemented linearly over the six years of the PC15 period, however it is proposed that a company specific MUR study will be commissioned during PC15. NI Water initiated non-household consumption MUR study during AIR17 and will apply a bespoke NHH MUR value during PC15.

No allowance for underground supply pipe leakage has been added to this value as the measured non-households are all externally metered and therefore the billed consumption already includes underground supply pipe leakage (however, the figure for underground supply pipe leakage for measured non-households has been estimated and is part of total leakage in other lines of the table).

The confidence limit of 10% on this component has not been changed and is still considered to be appropriate.

Line 3 – Billed Measured

This is the summation of lines 1 and 2.

Line 4 – Billed Unmeasured Household

The reported value for Billed Unmeasured Household volume for AIR19 is 315.93 Ml/d. This figure represents an increase from the AIR18 value of 304.02 Ml/d.

The net effect of an increased population combined with a slight decrease in calculated PCC has resulted in a similar reported figure to AIR17.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. The method and sources of information are consistent with previous AIR returns. Similarly the source of the PCC figure is generated from the NI Water domestic consumption monitor. The household population figure is sourced from the Northern Ireland Statistics and Research Agency (NISRA) 2016. Adjustments are made to this household population figure to account for:

- Non-Household Population – Sourced from the most recent NISRA 2016 based population projections in alignment with Table 7.
- Unconnected Properties Population – The number of unconnected properties has been provided within NI Water by Rapid. The population of unconnected properties

is determined by multiplying the assessed average occupancy from the NIHE Housing Condition Survey report by the number of unconnected properties.
- Farm Population – The population of farms is included as non-household use. The population is calculated as the number of farms multiplied by the average occupancy rate from NISRA. The number of farms is sourced from RAPID (NI Water's Billing System). The assessment takes into consideration farm properties that became void during 2018/19 but will have billed consumption associated with them.
- PCC Night Use Allowance Assessment

Underground Supply Pipe leakage has been applied to the billed unmeasured household volume component of this calculation.

A meter under registration factor of 7.39% has been applied to this total volume. This percentage was assessed by WRc for AIR10 and is specific to NI Water's domestic consumption monitor meters and has remained constant. NI Water initiated PCC monitor MUR study during AIR17, the output of which will be applied during PC15.

During the reporting year work has continued to maintain the reliability of this value:
- A comprehensive door to door survey of approximately 25% of properties within the Domestic Consumption Monitor Areas. The data from the 2018/19 surveys has been input into the AIR19 consumption monitor assessment. The overall occupancy rate is 2.38 for AIR19 and is a slight reduction from the AIR18 occupancy rate of 2.39. The NISRA occupancy rate for Northern Ireland is 2.52 for 2018/19.
- A figure of 1.5% continues to be applied to allow for the 'Hawthorne Effect' and is consistent with previous AIR submissions.
- Use of company specific MUR value as determined by WRc.

NI Water undertook analysis in relation to the summer 2018 weather event to understand the customer demand stresses made on the water network. In doing so, it was apparent that the household demand, calculated through the PCC monitors of approx. 4,900 properties, was not fully representative of the household demand in the mainly rural areas that experienced the greatest demand stresses, for example within the Foffanny Supply Zone.
NI Water's PCC monitors are contained within 100 sites which by their nature categorises these areas as Urban due to the length of mains per property calculation.

In the last quarter of the reporting period, we requested a meeting with the incoming Reporter to understand how NI Water could best account for the discrepancy in demand within the reconciled leakage calculations.
On consideration, the Reporter advised that the methodologies used to calculate the water balance components should remain consistent however due to the uncertainty raised regarding the Billed Unmeasured Household component it was advised that the error estimate could be reviewed.

RPS was engaged to undertake this review and make the following recommendation within their document "Water Balance – Review of Household Demand":

> *"With consideration to the poor representation of rural areas within the NIW PCC SAM sites, combined with the findings from the recent NRR and climate relationships for 2018-19, it is considered prudent to increase the uncertainty of the HH demand estimate for 2018-19 within the water balance. This is also consistent with RPS's recent experience of working with other UK water companies which have identified a spike in PCC over the first two quarters of 2018-19, supporting the view that the NIW PCC calculation is currently under-estimating the impact of last years' atypical hot and dry weather.*

We consider that the error estimate for HH consumption can be justifiably increased from the 10% used previously to 12% for 2018-19. This is likely to be a conservative increase when considering the impact of weather on NRR over the same period."

NI Water consider the recommendations from the RPS report appropriate for AIR19 only and have applied a confidence limit of 12% to this component which is at the upper range of the 'Per Capita Consumption' reporting guidance of 8% to 12%.
NI Water will revert this confidence limit back to 10% for AIR20 reporting. The application of the revised error estimate to 12% has reduced the reconciled leakage value from 161.05 Ml/d to 160.14 Ml/d.

In order to better understand the seasonal consumption patterns within the company's rural household stock, NI Water will install a number of PHC monitors in rural locations with the expectation of accounting for atypical household demand in rural areas.

Line 5 – Billed Unmeasured Non-Household

The reported value for Billed Unmeasured Non-Household for AIR19 is 5.49 Ml/d. The value reported in AIR18 was 5.14 Ml/d. NI Water has continued with a programme of meter installation of unmeasured non-household properties.

The assessed unmeasured non-household figure for AIR19 is 207.70 m^3/prop/yr, which is an increase compared to a figure of 191.54 m^3/prop/yr for AIR18. The increased AIR19 figure correlates with the increase experienced in line 2 – Billed Measured Non-household.

As these unmeasured non-households have an allowance that has been estimated from metered non-households then underground supply pipe leakage has not been included in this figure. A non-household company specific MUR value of 6.44% was applied for AIR19.

The confidence limit of 15% on this component has not been changed and is considered to be appropriate.

Line 6 – Billed Unmeasured

This is the summation of lines 4 and 5.

Lines 7 to 30 – Water Delivered Components

Line 7 – Estimated Water Delivered Per Unmeasured Non–Household

The post MLE figure for estimated water delivered per unmeasured non-household for AIR19 is 637.41 l/prop/d. The figure reported for AIR18 was 596.08 l/prop/d.

The allowance for unmeasured non-household properties for AIR19 is 207.70 m^3/prop/yr. The calculated figure for AIR18 was 191.54 m^3/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household

The post MLE figure for estimated water delivered per unmeasured household for AIR19 is 426.75 l/prop/d. The figure reported for AIR18 was 417.91 l/prop/d.

The confidence grade applied to this line has increased from a B3 in AIR18 to a B4 in AIR19 because of the billed unmeasured household error estimate increasing from 10% to 12%.

Line 8 – Per Capita Consumption (Unmeasured Household – Excluding Supply Pipe Leakage)

The post MLE PCC figure for AIR19 is 158.13 l/hd/d. The figure reported for AIR18 was 152.35 l/hd/d.

NI Water continues to employ domestic consumption monitors set up specifically to monitor unmeasured household consumption. These sites are small (average size of 48 properties), permanently bounded, monitored for leakage, and flows into them are recorded by meters.

The average PCC figure (pre MUR) has been calculated as 136.43 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2018 to 31 March 2019. This compares to a figure of 136.62 l/hd/d for AIR18.

Although the pre-MLE figures are approximately equal, the difference observed in the post-MLE PCC figures of 5.78 l/hd/d can be attributed to the adjustment of the component error estimate.

A company specific MUR value of 7.39% has been used for unmeasured PCC. This figure has been provided by WRc as a result of a project commissioned by NI Water and is specific to NI Water's domestic consumption monitor meters.

A company specific domestic consumption monitor MUR study has been initiated and it is expected that the results of will be implemented during PC15.

The confidence grade applied to this line has increased from a B3 in AIR18 to a B4 in AIR19 as a result of the billed unmeasured household error estimate increasing from 10% to 12%.

Line 9 – Per Capita Consumption (Measured Household - Excluding Supply Pipe Leakage)

There are no measured household supplies in NI Water; therefore no value has been input against this line.

Lines 10 to 13 – Underground Supply Pipe Leakage

For PC13, NI Water engaged their Leakage Management Services consultant, RPS, to review the underground supply pipe assessment which has resulted in the reduction of total supply pipe leakage to 39.91 Ml/d from 46.31 Ml/d during PC10. This accounts for approximately 24% of total leakage.

The total volume of Underground Supply Pipe Leakage was assessed using the recommended methodology contained in the UKWIR report 'Towards Best Practice for the Assessment of Supply Pipe Leakage' and based on 2012/13 company data.

As SPL has remained constant at 39.91 Ml/d throughout the PC15 period, it is required to adjust the 'per property' assessed underground supply pipe unit values on an annual basis due to increasing property numbers.

Therefore, the assessed SPL unit values of 52.49 & 26.25 l/prop/d, for unmeasured and measured properties respectively, require adjustment as they have been calculated using 2012/13 base year data resulting in a total SPL of 39.91 Ml/d.

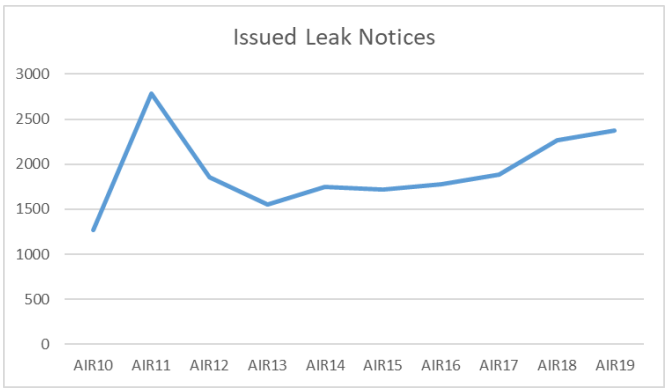
The SPL assessment will remain unchanged for the duration of the PC15 period as agreed with the Utility Regulator, therefore the adjusted AIR19 unit values are 48.29 l/prop/d for unmeasured, other households and void properties, with a value of 24.15 l/prop/d being calculated for externally measured non-households.

Work previously undertaken, utilising Ofwat published data, indicated that the majority of the water companies in England and Wales estimate the underground supply pipe leakage on

externally measured properties to be approximately half that of internally measured and other properties. NI Water has continued to adopt this assumption. In NI Water, the unmeasured non-household use is based on the measured non-household use. Therefore this assumption will also be applied to the unmeasured non-household.

The SPL calculation for NI Water is detailed in the NI Water Assessment of Leakage from Customer Supply Pipes (carried out by RPS) and has be reassessed in parallel with the AIR17 commissioned SELL study. The reviewed SPL figure is reported as 43.64 Ml/d with assessed SPL unit values of 52.80 l/prop/d and 26.40 l/prop/d respectively.

It should be noted that the trend over recent reporting years has shown that the number of unreported customer side leakage defects, resulting in the issue of a Leak Notice, has continued to increase since the last SPL review utilising 2012/13 base data. In AIR19 leak notices increased by 5% from the previous year.



Lines 14 to 15 – Meter Under-Registration

It should be noted that the Utility Regulator has determined that, during the PC15 period, the non-household meter under registration (NHH MUR) figure shall reduce from 8.33%, which was derived for AIR10 by WRc utilising the NI Water meter age profile and meter sample tests, to 5.5% which is understood to be the current NHH MUR average for E&W companies.

This reduction in NHH MUR is proposed to be implemented linearly over the six years of the PC15 period. NI Water initiated non-household consumption MUR study during AIR17 and will apply a bespoke NHH MUR value during PC15.

NI Water has acknowledged a risk to the water balance calculation in applying an unsubstantiated MUR figure which is moving the company away from the excellent work undertaken over recent years in terms of developing company specific data.

For AIR19, NHH MUR has reduced to 6.44%. Furthermore the MUR value applied to the unmeasured household consumption remains at 7.39%.

Line 16 – Distribution System Operational Use

The reported value of Distribution System Operational Use (DSOU) for AIR18 was 3.51 Ml/d. The value reported for AIR19 is 3.20 Ml/d. This calculation is consistent with the AIR18 methodology.

The confidence limit of 25% on this component has not been changed and is considered appropriate.

Lines 17 to 19 – Water Taken Unbilled

The reported Water Taken Unbilled figure of 16.76 Ml/d in AIR19 is a decrease from the value of 18.23 Ml/d in AIR18.

As a result of the findings and subsequent amendments to the gross measured consumption report, as discussed within the Data Quality section of this commentary, an element of billed measured NHH consumption reported in AIR18 has been transferred into the water taken unbilled component of the water balance.

The methodology used to estimate each category within Water Taken Unbilled remains consistent with AIR18 and includes the addition, in AIR17, of the 'NHH property review project' category which estimates the consumption currently not captured as billed measured non-household but the likely consumption billed after surveying is completed.

Line 20 – Water Delivered (Potable)

All potable water supplied by NI Water is calculated as the sum of lines 3, 6 and 19.

Line 21 – Water Delivered (Non-Potable)

There are no non-potable supplies to NI Water customers.

Line 22 – Water Delivered (Non-Standard Rates: Potable)

There are no non-standard rates for potable supplies to NI Water customers.

Line 23 – Water Delivered (Non-Standard Rates: Non-Potable)

There are no non-standard rates for non-potable supplies to NI Water customers.

Line 24 – Distribution Losses

Distribution Losses for NI Water are calculated by subtracting Lines 16 (DSOU) and 20 (Water Delivered) from Line 26 (Distribution Input). Distribution Losses for AIR19 are estimated to be 120.23 Ml/d. This is a decrease on the AIR18 figure of 122.52 Ml/d.

Line 25 – Total Leakage

Total leakage is the sum of distribution losses and underground supply pipe leakage. The reported figure for total leakage for AIR18 was 162.43 Ml/d. The reported figure for AIR19 is 160.14 Ml/d.

Total leakage is also calculated using an MNF methodology. For AIR18 the reported pre MLE MNF method leakage was 160.49 Ml/d. The figure reported for AIR19 is 156.53 Ml/d and equates to a decrease in BU leakage of 3.96 Ml/d.

NI Water has an extensive DMA network (approx. 1090 DMAs) covering 98% of all properties in Northern Ireland. All DMAs are monitored and exporting 15 minute trend data into corporate software systems and for leakage analysis. Approximately 93% of these DMAs are now monitored with electromagnetic meters with a direct link to the company telemetry system. The remaining DMAs are monitored by utilising data loggers attached to mechanical meters, and over the last few years logger data has migrated from GSM to GPRS communication technology. Whilst GPRS loggers have an automatic link to the company's telemetry system they currently do not provide real-time data but provide a 24

hour daily download. NI Water are exploring the functionality within the GPRS loggers to provide the expanded real-time monitoring of the network.

DMA minimum night flow (MNF) continues to be determined using a 20th percentile method. Minimum night flows are recorded on a daily basis. The company specific night use allowance for households has been updated from 2.64 l/prop/hr in AIR18 to 2.83 l/prop/hr in AIR19. The household night use figure is reviewed on an annual basis and applied retrospectively to the reported leakage calculation. The methodology to derive the household night use figure has not changed.

NI Water are exploring the use of fast-logging within their network to derive a more dynamic household night use. Currently household night use is derived from our PCC monitor calculation and it is proposed to refine this calculation further through the installation of fast-logging points on 40nr PCC sites, on a small number of DMAs with no non-household properties as well as on sections of rural DMAs to understand household demand patterns.

The measured non-household night use allowance figure for AIR13 was 8 l/prop/hr as documented in 'Managing Leakage', however as stated in the AIR14 commentary, Netbase has become the leakage reporting tool for AIR14 onwards which utilises an integrated night use model embedded within Netbase which was developed based on the best practice as outlined in the UKWIR Report 'Estimating Legitimate Non-Household Night Use Allowances' for AIR10. This model was calibrated using approximately 1000 customer datasets and dynamically assesses night use based on consumption and consumer industry type. The equivalent industry weighted measured non-household night use figure for AIR19 is approximately 22 l/prop/hr.

It is proposed to review the non-household night use assessment through the initiation of a representative consumption logging programme during PC15. This will be consistent with current industry best practice.

According to the guidance provided the reporting requirements for this line calculates total leakage by adding Distribution Losses (line 24) to the various calculated SPL components for MHH, UHH, MNHH, UNHH & voids. The SPL figure was reassessed for the PC13 period as 39.91 Ml/d. It was proposed that SPL would be reassessed during the PC15 period and as part of an SELL study. The reported SPL using 2015/16 base data is 43.64 Ml/d.

As agreed with the Utility Regulator for the inclusion of stable data during a PC reporting period, total customer SPL remains at 39.91 Ml/d, however it should be noted that the trend over recent reporting years shows that the number of unreported customer side leakage defects, resulting in the issue of a Leak Notice, has increased by 52% since the SPL review utilising 2012/13 base data.

Similarly, NI Water's service reservoir leakage and trunk main leakage remains constant at 4.53 Ml/d and 13.66 Ml/d respectively.

NI Water has continued to develop a company specific assessment for both trunk main and service reservoir leakage based on a flow balance methodology. This is consistent with the recommendations of the Reporter and Utility Regulator.
NI Water continues to investigate potential leakage within these audits and is undertaking a number of proactive steps to identify and resolve leakage issues.

However, NI Water consider it prudent to fully investigate the audits with perceived leakage to understand the resource economics and uncertainty associated with flow balances for trunk mains and service reservoirs.

Further work is required to refine NI Water's estimate and methodology particularly in relation to meter uncertainty. NI Water have engaged with other England & Wales water companies along with Scottish Water with a view of undertaking a joint research project into large diameter meter uncertainties in conjunction with WRc.

In addition, NI Water will review the recently published UKWIR report "Leakage Upstream of District Meters", and will assess trunk main and service reservoir leakage with a view to meet best practice.

A 10% error estimate has been applied to BU Leakage in the MLE calculation following the implementation of Netbase for PC13. This reflects the continued improvement in data quality resulting in the reduction of the error estimate from 15% reported in AIR13.

Line 26 – Distribution Input

The distribution input figure for AIR18 was calculated as a post MLE figure of 576.24 Ml/d. The distribution figure for AIR19 is 590.70 Ml/d.

The company specific confidence interval for distribution input for AIR19 remains at 2.1% and is unchanged from AIR18.

The method of reporting and calculating the company distribution input figure remains consistent in that it is based on a definitive number of input meters. As in previous years, NI Water has continued with an annual programme of calibration of DI meters.

In line with the guidance provided, details of the distribution input for each of the PPP Water Treatment Works site is as follows

	pre-MLE (Ml/d)	post-MLE (Ml/d)
Ballinrees	29.35	29.23
Castor Bay	120.79	120.31
Dunore Point	113.37	112.92
Moyola	15.52	15.46
Total	**279.03**	**277.92**

Line 27 to 28 – Bulk Supply Imports / Exports

There are no bulk imports of water to NI Water. There is one small import from the Republic of Ireland which supplies 3 properties.

There are 74 small exports to the Republic of Ireland. These exports are predominately individually metered customers and these meters are read and billed through RAPID in a category known as cross border supplies. This figure is included in the metered non-household consumption category.

The post MLE volume amounts to 0.39 Ml/d and includes an MUR adjustment of 6.44%.

Line 29 – Water Treated At Own Works to Own Customers

With the exception of the 74 small exports above, all water treated at its own works is used by NI Water's own customers. The post MLE distribution input volume amounts to 590.72 Ml/d and deducting the cross border exports the volume of water treated at NI Water's own works to its own customers is 590.31 Ml/d.

Overall Water Balance

AIR19 - Water Balance						
NIW	**Pre MLE** (mld)	**Error estimate** (%)	**Confidence Range** (mld)	**% of total**	**MLE Adjustment** (mld)	**Post MLE** (mld)
Billed Measured HH	0.00	10%	0.00	0.0%	0.00	0.00
Billed Measured NHH	126.07	10%	158.92	8.6%	2.34	128.40
Billed Unmeasured HH	297.20	12%	1271.96	68.6%	18.72	315.93
Billed Unmeasured NHH	5.48	15%	0.68	0.0%	0.01	5.49
SPL	39.91					39.91
DSOU	3.19	25%	0.63	0.0%	0.01	3.20
Water Taken Unbilled	17.18	25%	18.44	1.0%	0.27	17.45
Sum of components	565.74					590.70
Distribution Input	593.05	2%	159.57	8.6%	2.35	590.70
Top Down Leakage	**183.84**					
BU Leakage	**156.53**	10%	245.03	13.2%	3.61	**160.14**
Imbalance (mld)	**27.31**			100.0%		
% Imbalance	**4.60%**					**470.47**

Table 1: Water Balance

The Water Balance produces an overall imbalance of 27.31 Ml/d, (4.60%). The imbalance reported for AIR18 was 13.28 Ml/d, (2.30%).

It is considered that in applying the confidence grade in accordance with the guidance notes contained in Table 10 of the NIAUR Annual Information Return Reporting Requirements and Definitions Manual 2018, the confidence grade applied to the NI Water's water balance for AIR19 is B2. The confidence level for the overall water balance for AIR18 was B2.

Confidence Grades

All components in the water balance are subject to errors to a greater or lesser extent, and as a method of comparing the accuracy and robustness of water balance components, the Utility Regulator uses an Alpha-numeric confidence grading system consisting of reliability bands (A to D) and Accuracy Bands (1 to 6).

NI Water adopted this approach a number of years ago and the current confidence grading for the water balance are shown in Table 2 below.

Line 7 – The Unmeasured Non-household Water Delivered confidence grade remains a B4 for AIR19. An error estimate of 15% has been applied to this component in the MLE calculations.

Line 7a – Unmeasured Household Water delivered has been assigned a confidence grade of B4. This is a reduction in the confidence grade reported in AIR18 of B3 and as a result of uncertainties regarding household demand during the summer weather event.

Line 8 - Unmeasured Household Per Capita Consumption has a confidence grade of B4. This is a reduction in the confidence grade reported in AIR18 of B3. This component has been calculated using the company's own consumption monitor data however as stated within the commentary, an error estimate of 12% has been applied to this component due to the increased uncertainty in regards to household demand during the summer weather event.

Line 25 - Total Leakage has a confidence grade of B3 for AIR19 and is consistent with AIR18. A 10% error estimate has been applied to BU Leakage in the MLE calculation following the implementation of Netbase for PC13. This reflects the continued improvement in data quality resulting in the reduction in error estimate from 15% reported in AIR13.

Line 26 - Distribution Input has a confidence grade of B2. The sum of components and the distribution input balance to less than 5%. A 2.1% error estimate has been applied to DI in the MLE calculation.

Line 30 - In accordance with the definition provided by the Utility Regulator the overall Water Balance has a confidence grade of B2 in AIR19.

It is considered appropriate that the confidence grade for AIR19 is B2, as the water balance components reconcile with measured distribution input to greater than 2% and less than 5%. Similar to AIR18, Bottom Up leakage is estimated with over 80% of properties continually monitored through night line analysis (recorded more than 20 times per year) and sample flow balance audits have been undertaken on service reservoirs and trunk mains. This is a similar confidence grade to AIR18 with the imbalance marginally above the 2% threshold, at 2.30%, which required this confidence grade to be reported as a B2.

Table 2 Water Delivered Components Confidence Grades

Component	Reliability Bands				Accuracy Bands						
	A	B	C	D	1 <1%	2 1-5%	3 5-10%	4 10-25%	5 25-50%	6 50-100%	X
Unmeasured Non-Household Water Delivered (l/prop/d)		■						■			
Unmeasured Household Water Delivered (l/prop/d)		■						■			
Unmeasured Household Per Capita Consumption (l/head/d)		■						■			
Total Leakage (Ml/d)		■					■				
Distribution Input (Ml/d)		■				■					
Overall Water Balance		■				■					

Lines 31 - Security of Supply

Security of Supply is discussed in Table 10a.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10A NON FINANCIAL MEASURES

SECURITY OF SUPPLY INDEX - PLANNED LEVEL OF SERVICE (TOTAL)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Water resource zone	**WAFU (EA definition) (Ml/d)**	**Bulk imports (Ml/d)**	**Bulk exports (Ml/d)**	**Dry year distribution input (Ml/d)**	**Reporting year distribution input (Ml/d)**	**Dry year available headroom (Ml/d)**	**Target headroom (Ml/d)**	**Surplus/ deficit (Ml/d)**	**Percentage surplus/ deficit (Ml/d)**	**Zonal population**	**Percentage of total population with headroom deficit**	**Zonal index (%age deficit^2 x % population affected x 100)**	**Security of supply index**
North	55.08	50.00	0.00	74.31	75.51	30.77	4.73	26.04	32.95	257.669	0.00	0.000	
West	86.44	0.00	0.00	63.82	64.86	22.61	4.89	17.72	25.79	167.308	0.00	0.000	
Central	11.86	19.00	0.00	26.38	26.81	4.48	1.98	2.50	8.81	73.416	0.00	0.000	
East	146.51	207.00	0.00	261.07	265.32	92.44	19.47	72.97	26.01	945.831	0.00	0.000	
South	70.17	127.00	0.00	157.98	160.55	39.19	13.00	26.19	15.32	428.916	0.00	0.000	
Total	**370.05**	**403.00**	**0.00**	**583.56**	**593.05**					**1873.140**		**0.000**	**100.000**

Table 10a (i) – Non Financial Measures - Security of Supply Index – Planned level of service

NI Water published its Water Resource Management Plan (WRMP) in 2012 which covers the period 2010-2035. The Security of Supply Index (SoSI) calculated for AIR19 is based on Ofwat's letter RD 03/02, and is formulated from the information presented in the WRMP.

The WRMP has adopted the latest methodology for producing water resource management plans. There has been no change in the reported SOSI from AIR18. For 2018/19 the SoSI remains 100. This is mainly due to the following reasons:

The Water Available for Use has risen slightly due the additional capacity from the River Strule Abstraction (11.6Ml/d) in the West WRZ. The Distribution Input (DI) has increased slightly from last year. In 2017/18 the total average DI was 577.62 Ml/day, this has risen by 2.67% to 593.05 in 2018/19, and this is based on the Post Maximum Likelihood Estimation (MLE) figure.

There are also a number of other factors that influence the AIR19 SoSI calculation. These include:

- There is a significant interaction between South and East water resource zones (WRZs). The WRMP indicates it is likely that circa 20Ml/d from Castor Bay is actually used within the East WRZ. This reallocation of Water Available for Use (WAFU) between East and South is believed to be a more accurate reflection of the actual situation on the ground.
- The Water Available for Use (WAFU) across Northern Ireland has remained the same as 2017/18 at 370.05Ml/d.
- Outage allowance for NI Water WTWs remains at 2% as indicated in the WRMP for the period 2010-2035.
- For this calculation, it has been assumed that the bulk imports from the PPP WTWs are available at the contracted volumes as set out in the WRMP.

The total population figure used within the SoSI calculation has been confirmed to correspond with the population figure used in AIR 19 Table 7.

As part of the Reporters Recommendations for AIR19 he stated that *'We recommend that the company continues to investigate a more robust approach for use in years with more extreme weather, potentially applying the factors from the modelling approach to derive a more robust estimate of the dry-year uplift consistent with the WR&SR Plan.'*

NI Water has completed the Draft Water Resource and Supply Resilience Plan (WR&SRP), which is currently awaiting ministerial sign-off. Some of the WR&SRP outputs have been used in the calculation of the 'dry year uplift factor.' The 'dry year uplift factor' refers to the % uplift that should be applied to average demand (Ml/d) in a normal weather year to estimate the average demand (Ml/d) in a dry weather year. Three approaches were assessed:

- Increased Summer Demand
- Increased Summer PCC
- Monthly weather-demand modelling

The Monthly Weather-demand model was the preferred model. This statistical regression model was developed to produce a relationship between monthly distribution input and weather parameters for the period April 2008 to March 2015 for which monthly regional demand data was available. A statistically very significant relationship was found between

monthly demand and monthly average temperature and monthly total rainfall. However, the R-squared value, which measures the quantity of variance explained by the model, was 40%, and so the accuracy of the predictions may be poor.

The model was used to predict the monthly demands that could have been expected now in the event of 1995/96 weather (the most dry and hot year on record). This suggested that summer demand would be 3.39% higher than the base demand, leading to an estimate of dry year uplift factor of 1.7% (i.e. half of 3.39%). In essence, Summer Demand would be 3.39% higher for DYAA than NYAA.

Based on analysis carried out on historical rainfall and temperature data from 1988 to 2019, 2018/19 is deemed as a “Warm & Dry” year as can be seen in Figure 1 below. The monthly demand weather model was populated with the outputs for 2018/19 and this estimates the average DI would be 1.6% lower in a dry year (like 1995/96) than in 2018/19. This was calculated as the DI was 3.3% higher in 2018/19 than would be expected in NYAA. Therefore the Dry Year Uplift Factor then would be 1.7% (Difference in DYAA TO NYAA) – 3.3% (Difference in 2018/19 to NYAA) which equates to -1.6% (1.7-3.3=-1.6). Thus, an uplift factor of 0.984 has been used in the SoSI 19 calculation.

As highlighted above the monthly demands witnessed in Summer 2018 were higher than those within the modelled ‘Dry Year’ of 1995. This may be a reflection of changes in customer behaviour as overall the year not as extreme as 1995. However there was a significant peak in temperatures in late June 2018 which resulted in extreme peak demands. As part of a sensitivity check and to confirm the robustness of approach, as per the Reporter’s recommendation of the uplift factor it should be noted that if an uplift factor of 1 was used the SOSI calculation this still equates to 100.

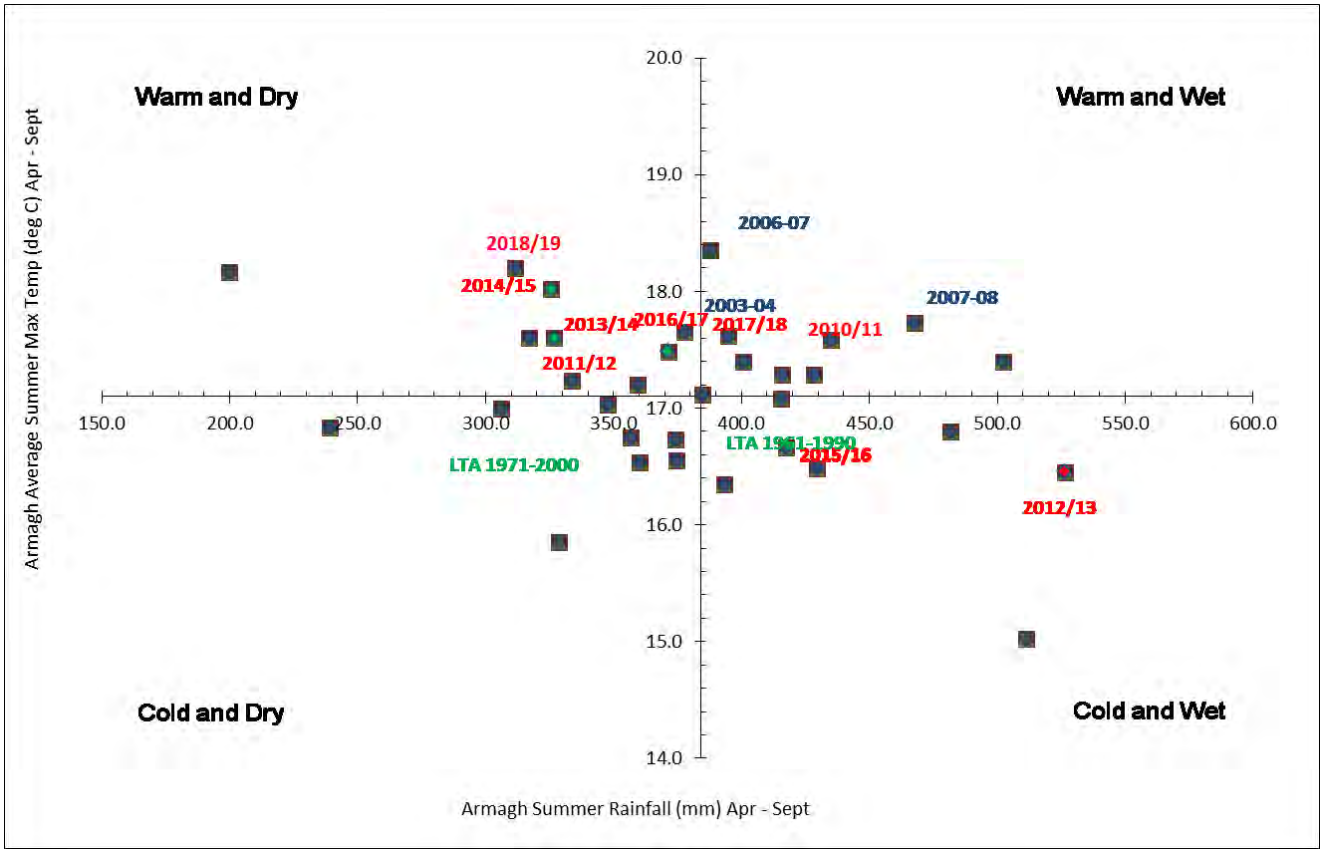


Figure 1 – Historical rainfall & Temperature Data Summer (April-September)

The calculation for AIR19 is believed to be an accurate reflection of the current NI Water SoSI based on the 2012 WRMP.

As previously described, NI Water has completed the Water Resource and Supply Resilience Plan (WR&SRP), which is currently awaiting ministerial sign-off. A SoSI figure based on the draft outputs on this latest plan has been calculated and the estimated figure is 100. There have been changes to a number of the inputs in the calculation, based on the Draft WR&SR Plan, these are detailed below:

1. The Draft WR&SR Plan has seen the creation of two additional WRZs, increasing from 5 WRZs to 7 WRZs:
    a. The 2012 West WRZ has been split into two zones, the West WRZ and the South West WRZ. The reason for this split is the lack of connectivity across the new WRZ boundary resulting in differing levels of risk between the zones.
    b. The 2012 South and East WRZs have been split into 3 zones (South, East and North East) which better reflect the operation of the supply system.
    c. Supply to Belfast has been combined into the new East WRZ as there is extensive interconnectivity in this area.
    d. The selection of the North East/East resource zone boundary is based on the limited connectivity between the Water Supply Zones (WSZs) along this boundary. The exception is the bulk transfer from Dunore Point WTW, in the North East Zone, to Hydepark Service Reservoir (SR), in the Eastern Zone. However, as this provides a distinct and measured boundary point this was considered an appropriate border.
    e. The selection of the South/East boundary is based on the lack of interconnectivity between the WSZs along this line. While both zones have supplies from Castor Bay WTW, they both have their own dedicated trunk mains direct from the WTW.
    f. Rathlin Island has been included in the North WRZ as in the event of a water shortage on Rathlin, water from the North WRZ is tankered in to meet the shortfall.
2. The latest Water Available for Use (WAFU) figure has increased from the 2012 plan by 12.08Ml/d to 773.77Ml/d and changes detailed below.
    a. Table 1 below, shows the comparison of the Draft WR&SR Plan Baseline DO estimates with the results from the WRMP 2012. Overall, the total DO for Northern Ireland appears to have had little change from the previous assessment. The WR&SR Plan Baseline DO estimate (using DYAA LoS) for Northern Ireland has been calculated as 805.5 Ml/d, which is around a 16 Ml/d increase from the 789.2 Ml/d overall DO from the previous plan assessment. In order to facilitate the comparison between the two assessments, the WRZs have been based on the WRMP 2012 WRZ boundaries. Therefore, the South, East and North East WRZs DO estimates have been combined to compare to the WRMP 2012 East and South WRZ DO estimates. The DO results from West WRZ and South West WRZ have also been combined in order to compare to the West WRZ estimates of the WRMP 2012.

Table 1: Comparison of Draft WR&SR Plan and 2012 WRMP Baseline DO Estimates

WRZ (based on WRMP 2012 WRZs)	WRMP 2012 DO (Ml/d)	WR&SR Plan DO (DYAA) (Ml/d)	Comments
North	115.6	113	
South and East	553.4	581	Camlough WTW has been decommissioned. Differences in constraints including Drumaroad WTW capacity. Lough Island Reavy modelled as a permanent source for Fofanny WTW. Hydrological differences due to length of record and revised inflow sequences.
Central	31.1	32.5	Slight increase in Lough Fea output.
West	89.1	79	The differences are likely mostly due to different assumptions made on the license restrictions at the Derg/Strule.
NI Total	**789.2**	**805.5**	

   b. The outage allowance for NI Waters WTWs has increased from 2%, used in the previous plan, to 5%. This was based on the available data for analysis, expert opinion as part of the Draft WR&SR Plan, and benchmarked against a review of UK water companies' data that showed that outage ranges from 2% to 8%.

3. The dry year uplift factor has decreased in the latest plan from 7% in 2012 to 1.7%. As described previously the Draft WR&SR Plan figure was obtained from applying the monthly demand-weather model, developed as part of the Draft WR&SR Plan process, to the dry weather year 1995/96.

Table 10a (iii) – Non Financial Measures - Security of Supply Index – Critical Period (TOTAL)

The security of supply index has been calculated based on the outputs from the Water Resource Management Plan (WRMP) 2012.

In previous years, the assumption by NI Water was that a SOSI – Critical Period has not been required. The previous justification has been that:-

The supplies available to NI Water are dominated by abstractions from Lough Neagh, which can be considered an infinite hydrological storage resource. In addition, recent demand data does not suggest that there is a strong peak demand driver in Northern Ireland. For these reasons, it is not appropriate or necessary to consider the critical period scenario for Northern Ireland, because this is not the primary driver for investment to maintain the supply demand balance. On this basis, there has been no need for NI Water to develop a SOSI calculation for a critical period.

As part of the Reporters Recommendations for AIR15, he stated- *Recommend the Company reassess the need for a Critical Period SOSI during its preparation of WRMP17.*

As highlighted previously as part of the current Water Resource and Supply Resilience Plan, critical periods were included within the analysis and it was felt a critical period SOSI should be available for AIR19. However there has been further slippage in the delivery of the plan and as consequence it will be AIR20 before the outputs could be used for the development of a critical period SOSI.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 11 NON FINANCIAL MEASURE
WATER SERVICE ACTIVITIES (NI Water Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**ASSET BALANCE AT APRIL 1**																				
1	Total length of mains	km	2	26,499.03	B3	26,700.79	B3	26,710.55	B3	26,712.44	B3	26,728.83	B3	26,778.15	B3	26,837.45	B3				
B	**CHANGES DURING REPORT YEAR**																				
2	Mains renewed	km	2	285.42	A2	202.31	A2	164.91	A2	105.24	A2	161.29	A2	120.55	A2	154.66	A2				
3	Mains relined	km	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
4	Mains cleaned (total)	km	2	683.75	B3	1,096.52	B2	1,189.50	B2	1,191.68	B3	1,665.69	B3	2,008.61	B3	2,257.19	B3				
6	New mains	km	2	89.05	B2	50.40	B2	118.24	B2	76.51	B2	75.22	B2	92.43	B2	83.91	B2				
6a	Total length of new, renewed or relined mains	km	2	374.47		252.72	A2	283.15	A2	181.75	B2	236.51	A2	212.98	A2	238.57	A2				
6b	Length of new, renewed or relined mains delivered under the watermain rehabilitation programme	km	2	326.41		226.13	A2	222.66	A2	116.92	A2	172.27	A2	126.00	A2	166.52	A2				
7	Mains abandoned and other changes	km	2	357.29	A2	214.62	A2	208.09	A2	105.51	A2	167.55	A2	124.24	A2	158.49	A2				
8a	Lead communication pipes replaced as a consequence of water quality sample failures	nr	0			20	B2	15	B2	37	B2	44	B2	43	B2	35	B2				
8b	Lead communication pipes replaced as a consequence of customers notifying NI Water that they are replacing their lead supply pipe	nr	0			617	B2	566	B2	703	B2	599	B2	574	B2	562	B2				
8c	Opportunistic lead communication pipes replacement undertaken under the watermain rehabilitation programme or during burst service pipe repairs	nr	0			1239	A2	2747	A2	660	B2	1801	A2	76	B3	75	B3				
8d	Lead communication pipes replaced under the proactive lead replacement programme	nr	0			0	A1	401	B2	1,922	B2	1,867	A2	1,767	A2	2,070	A2				
9	Total lead communication pipes replaced	nr	0	1,271	B3	1,876	B3	3,729	B2	3,322	B2	4,311	A2	2,460	A2	2,742	A2				
10	Communication pipes replaced - other	nr	0	8,566	B3	8,790	B3	7,469	B3	3,915	B3	5,608	B2	3,769	B2	4,232	B2				
11	Mains bursts per 1000km	nr	0	93	B3	86	B3	85	B3	74	B3	80	B3	91	B3	92	B3				
C	**ASSET BALANCE AT MARCH 31**																				
12	Total length of mains	km	2	26,700.79	B3	26,710.55	B3	26,712.44	B3	26,728.83	B3	26,778.15	B3	26,837.45	B3	26,958.40	B3				
D	**DISTRIBUTION STUDIES**																				
13	Cumulative number of distribution zone studies completed	nr	0	71	A1	71	A1	71	A1	71	A1	71	A1	71	A1	71	A1				
14	Distribution zone studies ongoing	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1				
15	Total distribution zones identified for study	nr	0	71	A1	71	A1	71	A1	71	A1	71	A1	71	A1	71	A1				
16	Cumulative % distribution zone studies completed	%	1	100	A1	100	A1	100	A1	100.0	A1	100.0	A1	100.0	A1	100.0	A1				
17	Percentage population/properties - completed studies	%	1	100.0	A1	100.0	A1	100.0	A1	100.0	A1	100.0	A1	100.0	A1	100.0	A1				
E	**WATER QUALITY COMPLIANCE MEASURES**																				
18	% overall compliance with drinking water regulations	%	2	99.77		99.81		99.86		99.83	A2	99.86	A2	99.88	A2	99.90	A2				
19	% compliance at consumers tap	%	2	99.63		99.74		99.78		99.74	A2	99.77	A2	99.81	A2	99.83	A2				
20	% iron compliance at consumers tap	%	2	97.25		98.08		98.95		98.40	A2	98.66	A2	98.85	A2	98.94	A2				
21	% Service Reservoirs with coliforms in >5% samples	%	2	0.00		0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A2	0.00	A1				
F	**NOMINATED WATER SERVICE OUTPUTS**																				
22	Completion of nominated trunk main schemes	nr	0	2	A1	0	A1	1	A1	2	A1	1	A1	0	A1	0	A1				
23	Completion of nominated water treatment works schemes	nr	0	0	A1	0	A1	3	A1	1	A1	0	A1	0	A1	0	A1				
24	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0	1	A1	0	A1	1	A1	0	A1	0	A1	1	A1	0	A1				
G	**ADDITIONAL WATER SERVICE OUTPUT MEASURES**																				
25	Number of Catchment Management Plans	nr	0			3	A1	5	A1	3	A1	7	A1	3	A1	0	A1				
26	Number of school visits	nr	0	138		150		209		277	A1	257	A1	219	A1	246	A1				
27	Number of other education events	nr	0	35		38		59		65	A1	64	A1	62	A1	66	A1				
28	% Service Reservoirs where sample taps have been assessed and are to required standard	%	1							0.0	A1	0.0	A1	72.9	A2	98.3	A1				

Table 11– Water Service Activities

Line 1 – Total length of mains at 1st April 2018

This value has been extracted from AIR18 return.

Lines 2 to 10 - Changes during the reporting year

This document provides the commentary on the following tables and lines for NI Water and records the amount of capital and maintenance activity carried out in the report year 18/19 on water mains and communication pipes.

The figures for these lines were supplied respectively by:
Consultants: Faithful and Gould, on behalf of the Asset Delivery Team, by extracting and summarising the source output data of Projects Progress, (which are submitted monthly by Asset Delivery).

The Networks Water Business Unit, on behalf of The Customer Services Directorate, by extracting and summarising the source output data from their monthly reporting records.

Total Mains Activity Progress

Northern Ireland Water has delivered 238.57km of total mains activity in this period, no relining has been carried out in this period.

Watermains Rehabilitation Progress against PC15 Target

The cumulative length of Watermains Rehabilitation pipelines completed to the end of year 4 from the Line 6b output in AIR16, 17, 18 and 19 is:
116.92km + 172.27km + 126.00km + 166.52km = **581.71km.**

This is against a **cumulative** FD target for by the end of year 4 of PC15 of:
130km + 144km + 129km + 167km = **570km.**

The cumulative length of Watermains Rehabilitation pipelines completed to the end of year 4 has exceeded the PC15 target for this stage by 11.7km.

Proactive Lead Replacements Total against PC15 Target

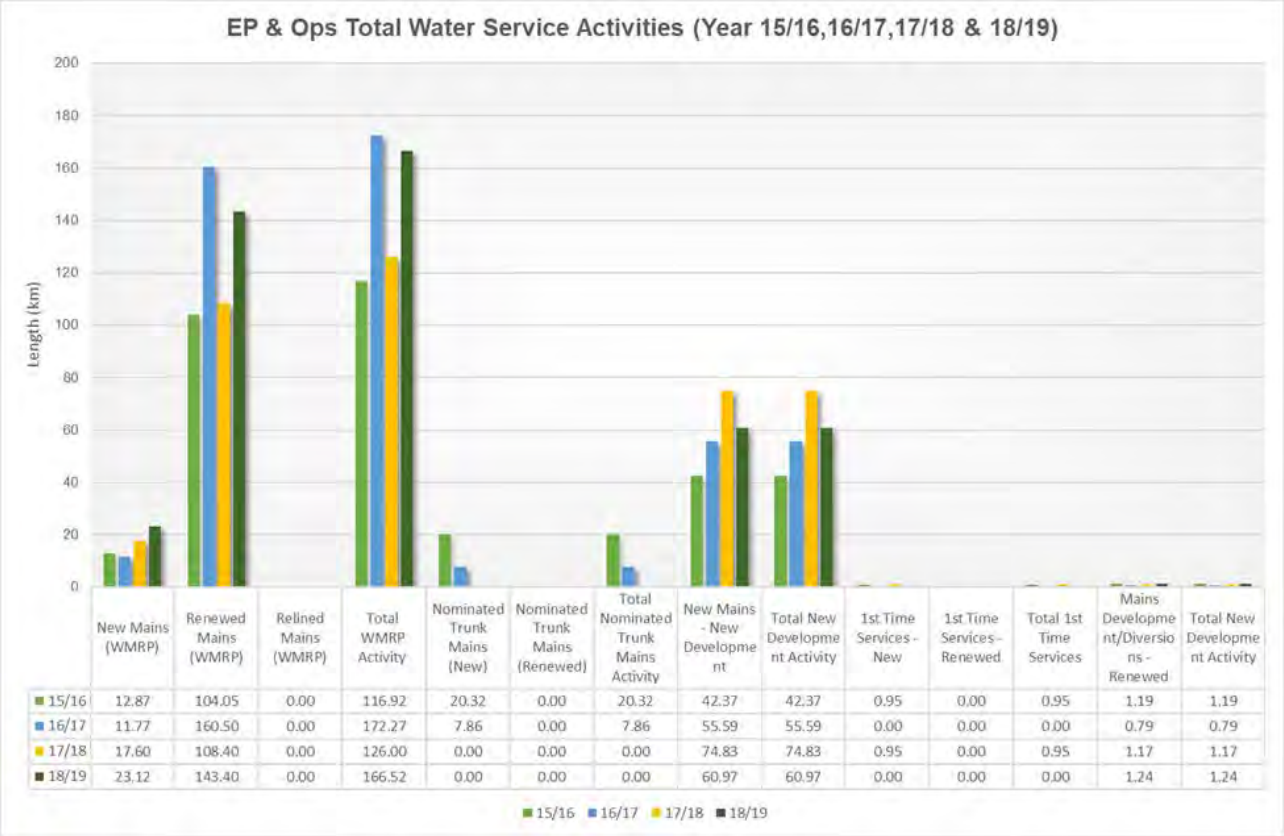
The Lead Communications pipe replacement target for PC15 is on target.

The PC15 year 4 sub programme 23 results showed 2,070nr lead pipes replaced as a result of the implementation of the proactive lead replacement programme. Overall NIW has exceeded the FD cumulative target of 7,376nr (i.e. 1,844 annual target x 4).

The 4 year target of 7,376 Nr is therefore exceeded as the number of lead communications pipe replacements respectively from AIR16, 17, 18 and 19 is: 1,922 + 1,867 + 1,767 + 2,070
The AIR19 running total is 7,626nr.

Summary of Mains Activity Figures for PC15

Activity Description	Total Return AIR16 (km)	Total Return AIR17 (km)	Total Return AIR18 (km)	Total Return AIR19 (km)	PC15 TOTAL (km)
New Mains (WMRP)	12.87	11.77	17.60	23.12	65.36
Renewed Mains (WMRP)	104.05	160.50	108.40	143.40	516.35
Relined Mains (WMRP)	0.00	0.00	0.00	0.00	0.00
Total WMRP Activity	116.92	172.27	126.00	**166.52**	**581.71**
Nominated Trunk Mains (New)	20.32	7.86	0.00	0.00	28.18
Nominated Trunk Mains (Renewed)	0.00	0.00	0.00	0.00	0.00
Total Nominated Trunk Mains Activity	20.32	7.86	0.00	0.00	28.18
Sub Programme 23c and 23e	0.00	0.00	10.98	10.02	21.00
Total Sub Programme 23c and 23e	0.00	0.00	10.98	10.02	21.00
New Mains – within new Developments	42.37	55.59	74.83	60.79	233.58
Total mains within new Developments	**42.37**	**55.59**	**74.83**	60.79	233.58
1st Time Services – Serving New Developments	0.95	0.00	0.00	0.00	0.95
1st Time Services - Renewed	0.00	0.00	0.00	0.00	0.00
Total 1st Time Services	0.95	0.00	0.00	0.00	0.95
Mains Development/Diversions -Renewed	1.19	0.79	1.17	1.24	4.39
Total New Development Activity	1.19	0.79	1.17	1.24	4.39
Total Mains Activity in the Period	181.75	236.51	212.98	238.57	869.81



	New Mains (WMRP)	Renewed Mains (WMRP)	Relined Mains (WMRP)	Total WMRP Activity	Nominated Trunk Mains (New)	Nominated Trunk Mains (Renewed)	Total Nominated Trunk Mains Activity	New Mains - New Development	Total New Development Activity	1st Time Services - New	1st Time Services - Renewed	Total 1st Time Services	Mains Development/Diversions - Renewed	Total New Development Activity
15/16	12.87	104.05	0.00	116.92	20.32	0.00	20.32	42.37	42.37	0.95	0.00	0.95	1.19	1.19
16/17	11.77	160.50	0.00	172.27	7.86	0.00	7.86	55.59	55.59	0.00	0.00	0.00	0.79	0.79
17/18	17.60	108.40	0.00	126.00	0.00	0.00	0.00	74.83	74.83	0.95	0.00	0.95	1.17	1.17
18/19	23.12	143.40	0.00	166.52	0.00	0.00	0.00	60.97	60.97	0.00	0.00	0.00	1.24	1.24

Strategic Trunk Mains Progress for PC15 - Year 4

Nominated Trunk Mains

JB693 Carland – Cookstown Strategic TM

No pipe laying work took place in this reporting period on this scheme this pipeline is now complete.

JR342 Strategic Link Castor Bay – Belfast

No pipe laying work took place in this reporting period on this scheme this pipeline is now complete.

Sub Programme 23c: Trunk Mains Rehabilitation during AIR19 Period

The following Non-Nominated Trunk Mains were addressed in 18/19 as risk based prioritised rehabilitation schemes.

AIR19 Reporting Period

JN550 Lough Fea to Kingmills TM

The work completed in this reporting period comprises a renewed section of 1.4km of 315mm O.D. HPPE pipes.
TOTAL AIR19 = 1.4km

JN544 Doochrock to Drumkeeran TM

To install approx. 4.6 km of new 225mm OD HPPE SDR 17.6 (200mm Nominal bore)Trunk Watermain as a dedicated trunk main to supply Drumkeeran SR .The replaced main had hydraulic constraints resulting in very long refill times at this site if there was a WTW outage. These improvements will leave Ally Hill system more resilient and robust.
TOTAL AIR19 = 4.6km

JN545 112 Alleyhill to Doochrock

Supply and installation of approx. 3.5km of 2225mm OD HPPE Pipe to replace existing 150mm PVC. The replaced main had hydraulic constraints resulting in very long refill times at this site if there was a WTW outage This work is ongoing.
TOTAL AIR19 = 3.5km

(This Project is not entirely complete on site –change request issues and connections are currently ongoing).

Sub Programme 23e: Appraisal of NI Water Infrastructure at Railways, DRD Road and Pipe Bridges (Water)

JI 048 Resilience of Pipelines Crossing Northern Ireland Railways Track

This Project involves the slip lining, (insertion of a smaller pipe inside the existing pipe), to rehabilitate the pipeline. This work is not funded out of Watermains Rehabilitation. In this period 518m (0.518km) of Watermains pipeline under railway tracks were slip lined.
TOTAL AIR19 = 0.518km

The total reported in the summary table above for non-nominated trunk mains above , (which are not funded under the Watermains Rehabilitation Budget but funded from Sub Programmes 23c and 23e), is **10.02km**.(The figure includes 0.518km of structural lining of watermains under Railways)

Line 2 - Mains renewed (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
2	Mains renewed	km	2	153.42	A2	1.24	**B3**	154.66	**A2**

Asset Delivery

- The Asset Delivery team has continued its method of reporting on renewed mains in line 2 to comply with the Regulator's Annual Information Return reporting requirements and definitions manual.
- The Asset Delivery Figure is made up of 143.40km of Watermains Rehabilitation and 10.02km of Trunk Main Rehabilitation= 153.42km
- This figure does not include first time services
- Asset Delivery is the primary contributor to this information
- The confidence grade is therefore A2

CSD Networks Water

- CSD Networks Water has continued to manage some smaller schemes, for example, social housing redevelopments and minor mains diversions or realignments.
- The confidence grade is B3

Future Reporting for Networks Water will continue to develop the established process for monthly reporting using MWM as a source for base information. The CSD mains renewal work is usually very low volume as is the case here.

Overall Line Confidence Grade is A2 - The overall confidence grade is A2 due to the fact that the Asset Delivery return is 99 % of the total with minimal CSD input.

The Asset Delivery Team (AD) total contributes to the total WM Rehab progress, see summary comment at the beginning of this commentary.

Line 3 - Mains relined (km)

At present this activity is not carried out either by Networks Water or by Asset Delivery and the Confidence Grade is A1 as the total is zero.

To ensure VFM and continuity is achieved, NIW have withheld the review of spray lining techniques until the award of the new framework. It is anticipated that a WP of spray lining will be considered in 18/19 as the new Framework is now awarded, to test the viability and value of this technique.

Overall Line Confidence Grade is A1 as the return is zero for Asset Delivery and CSD Networks Water.

There has been no change in the current mains relined figures in PC15 as this methodology is not currently used within NIW. The Asset Delivery Team are continuing to review the value for money from the delivery of mains relining.

Line 4 - Mains cleaned (km)

Line	Description	Units	CSD	CSD CG	Total	Overall CG
4	Mains cleaned (total)	km	2,257.19	**B3**	2,257.19	**B3**

This work is carried out by CSD Networks Water, the Asset Delivery team has no involvement in this activity.

Detailed data for the reporting period was collated by the Water Business Unit using MWM system reports. As directed by the Regulator, repeat flushing of the same length of main has been discounted. Work Orders are automatically generated at various frequencies and sent to the Field Operators. This information is captured on the MWM system.

The recorded units are the total number of reactive fire hydrant flushing jobs plus the count of flushing MST's active on the Ellipse system, minus those flushing MST's which have not been performed a minimum of once in the report year. This has been converted from units to km using a revised factor of 0.316km per flushing. The revised factor of 0.316km per flush is based on an increasing sample batch being compiled throughout the year. Flushing details will continue to be added to the sample list and the applied factor revised as necessary throughout AIR 20.

Calculation - 2018 -2019 information return is made up as follows:
7143 no. flushings x 0.316 km per flush = 2 257.19 kms.

The figure of 0.316 km per flushing is calculated as an average of all flushings in this period, each one of the flushing events having been estimated and expressed in kms per flush. The spreadsheets on which these are based are available from the Networks Water Business Unit on request and are also kept in an audit file by the author of this line.

The 7,143 figure comprises a total count of 6693 no. flushing MST's in Ellipse, minus 53no. flushing MSTs identified as not having been carried out in the report year, plus 503 no. reactive flushing jobs completed.

For AIR19, Maintenance Scheduled tasks (MST's), as part of the planned flushing programme, have continued to be implemented. The programme has been amended from the previous year only in that some frequencies of flushing have been reduced but locations remain generally the same. Some MST's have been removed due to the on-going mains rehabilitation programme and others added as a consequence of repeat customer complaints or water quality sample failures.

Confidence Grade B3

Although the total no. of reactive flushing jobs (503no.) may contain some repeat flushings, at the same location these are considered to be minimal and the Company considers the data collated for this line to be continually improving.

There is a slight increase in the completed no. of reactive flushing's which may be linked to the slight increase in the number of burst main repairs carried out and increasing customer awareness of water quality standards.

The number of flushing MST's not carried out is 53No this figure has decreased noticeably from the AIR18 figure of 476. This may be down to an increased focus on water quality issues and lesser demands on other tasks.

The Total figure for mains cleaned has increased throughout PC15
AIR16 = 1191.68km, AIR17 = 1665.69km, AIR18 = 2008.61km, AIR19= 2257.19km

Line 6 - New mains (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
6	New mains	km	2	23.12	A2	60.79	B2	83.91	B2

New mains figure is calculated by adding Open Cut and Directional Drilling replacement to Open Cut, Directional Drilling and Pipe Bursting upsizing totals.
23.12 km is up by a third on 17.6km last year.

Asset Delivery

All Asset Delivery information is compiled from Asset Delivery contract management information monthly returns. This is an accurate measurement of the actual lengths of water mains laid, renovated or replaced, compiled from contractor's on-site records. The information is collated from each individual contract on a monthly basis and aggregated into an overall annual figure. The figure for 18/19 = 23.12km.

Asset Delivery Confidence Grade is A2. This figure is obtained from Monthly Reports in Captrax and aggregated into an annual return.

CSD Networks Water

Data for the period April 18 – March 19 was collated by Field Managers using system reports, which when checked and confirmed, were transferred onto a spreadsheet managed by the Water Business Unit. This figure primarily includes data for new mains laid in new housing developments throughout the year.

CSD Networks Water is the sole contributor for new mains laid in new housing developments. Asset Delivery is the primary contributor for new mains (replacement upsizing).

CSD Networks Confidence Grade is B2. **The total new mains figure of 83.91 km** is made up of 23.12 km of New Mains WMRP with 0 km of New Strategic Trunk Mains and 60.79 km of first time services.

Overall Line Confidence Grade is B2 -This figure is arrived at by considering that there is a 20:80 split in the total favouring CSD. It is reasonable therefore to state that the CG assessment is B2

The Asset Delivery (AD) total for this line contributes to the total WM Rehab progress as summarised above in the opening summary for this Table.

Line 6a: Total Length of new, renewed or relined Mains (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
6a	New renewed or relined mains	Km	2	176.54	A2	62.03	B2	238.57	A2

This is the calculated sum of Lines 2, 3 and 6 the Asset Delivery Total (143.40km of Watermains Rehab plus 23.12km new mains plus 10.02km of Trunk Main Rehab) =176.54km. The CSD Total (1.24km plus 60.79 km) = 62.03km.

Overall Line Confidence Grade is A2 as Asset Delivery contribution is 60% of the total therefore the A2 Confidence Grade predominates.

Line 6b - Length of new, renewed or relined mains delivered under the Water Main Rehabilitation Programme (km)

Line	Description	Units	DP	AD	AD CG	Total	Overall CG
6b	New renewed or relined mains under WMRP	Km	2	166.52	A2	166.52	**A2**

AD has continued its method of reporting on new mains in line 6 to comply with the Regulator's Annual Information Return reporting requirements and definitions manual.

The figure of 166.52km is derived from the Asset Delivery totals of 143.40km renewed and 23.12km of new mains. Relining was not utilised as a watermains rehabilitation technique during this period.

Overall Line Confidence Grade is A2 as reporting is from Asset Delivery Team from CPMR and Asset Delivery are the only contributors to this line.

The corresponding figures for the last 4 years was AIR16=116.92km, AIR17 = 172.27km AIR18 =126km with AIR19 = 166.52km

The PC15 Running Total is 581.71km**.**

This is against a **cumulative** FD target for by the end of year 4 of PC15 of:
130km + 144km + 129km + 167km = **570km.Therefore NIW are on schedule against this PC15 target.**

Line 7 - Mains abandoned and other changes (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
7	Mains abandoned and Other Changes	Km	2	157.25	A2	1.24	B3	158.49	**A2**

Asset Delivery

The PC15 year 4 results for sub-programme 8 indicates 94% of mains renewed are subsequently abandoned, which is slightly lower than year 3 which was 98%.

Total mains installed under the Rehab Programme = 143.4 + 23.12 = 166.52 km

Abandoned Mains = 157.25 km

Asset Delivery Confidence Grade is A2.

CSD Networks Water

Data for April 18 – March 19 was collated by Field Managers, confirmed and input onto a spread sheet managed by the Water Business Unit who collate the data for the annual reporting period. Asset Delivery is the primary contributor to this information but Networks Water has taken some ownership of smaller schemes, in particular social housing redevelopments and minor mains diversions.

CSD Networks Water Confidence Grade is B3.

Overall Line Confidence Grade is A2 as 98% of this return is from Asset Delivery**.**

	2015-2016			2016-2017			2017-2018			2018-2019		
	Actual Outturn			Actual Outturn			Actual Outturn			Actual Outturn		
	Urban	Rural	City	Urban	Rural	City	Urban	Rural	City	Urban	Rural	City
Total - km	29.941	81.759	0.276	50.123	122.40	0.00	21.634	106.766	0.00	40.089	126.43	0.00
Total - %age	26.74%	73.01%	0.25%	29.05%	70.95%	0.00%	16.85%	83.15%	0.00%	24.07%	75.93%	0.00

Line 8a: Lead Communication pipes replaced – as a consequence of water quality sample failures (no.)

Line	Description	Units	CSD	Total	Overall CG
8a	Lead Communications Pipes replaced as consequence of WQ Sample Failures	Nr	35	35	B2

The CSD Networks Water Business Unit collates information from Customer Field Managers using system reports, which, when checked and confirmed, was input onto a spreadsheet, collated data for the reporting period April 18 – March 19. This is managed by the Water Business Unit, which collates the data for the annual reporting period.

Overall Line Confidence Grade is B2.

Comment – The CSD total is similar to the **last 3 year's output.**
This figure continues to be minimal compared to the figures submitted for Line 8b.

Line 8b - Lead Communication pipes replaced – as a consequence of customers replacing their lead supply pipe (no.)

Line	Description	Units	CSD	Total	Overall CG
8b	Lead Communications Pipes replaced as consequence of Customers notifying of supply pipe change	Nr	562	562	B2

Data for the reporting period April 18 – March 19 was collated from Customer Field Managers using system reports which, when checked, confirmed, and input onto a spreadsheet.

The total submitted for AIR18 is comparable to that submitted for AIR17 and AIR18. There is no set target for this line.

Overall Confidence Grade is B2 as the return is exclusively from CSD.

Comment – The CSD total is similar to the last 2 year's output.

Line 8c - Lead Communication Pipes replaced – Opportunistic (no.)

Line	Description	Units	AD	AD CG	CSD	CSD CG	Total	Overall CG
8c	Opportunistic Lead Communications Pipes replaced	Nr	***0***	A2	75	**B3**	75	B3

Asset Delivery

The PC15 year 4 for sub programme 8 results showed zero lead communication pipes replaced as part of opportunistic lead replacement programme for asset delivery.

This may be due to the works taking place in more rural areas and also the increase in the number of packages dedicated to Lead Pipe Replacement as part of the PC15 Minor Works Programme.

CSD Networks Water

Data for the reporting period April 18 – March 19 was collated by the Water Business Unit using MWM system reports run on a monthly basis by Field Manager area for selected Standard Jobs. When checked and confirmed the data was input onto a spreadsheet managed by the Business Unit.

This figure reported for AIR19 for CSD shows a slight increase but is comparable to last year's figure of 63. It can be a complex issue to analyse on some Work Orders to ascertain if a full communication pipe replacement has taken place and if lead was a factor.
CSD Networks Water Confidence Grade is B3.

Overall Line Confidence Grade is B3 using the CSD figure of B3 due to the data dominance for this line BY CSD.

Comment – The CSD total is similar to the last 3 year's output.

Line 8d - Lead Communication pipes replaced – Proactive lead replacement programme (no.)

Line	Description	Units	AD	Total	Overall CG

8d	Lead Communications Pipes replaced under proactive programme	Nr	2070	2070	**A2**

Overall Confidence Grade is A2 due to the fact that all of this data was sourced from the Asset Delivery Team whose CG is A2 for this line.

The PC15 year 4 sub programme 23 results showed 2,070nr lead pipes replaced as a result of the implementation of the proactive lead replacement programme. Overall NIW has exceeded the FD cumulative target of 7,376nr (i.e. 1,844 annual target x 4).

The 4 year target of 7,376 Nr is therefore exceeded as the number of lead communications pipe replacements respectively from AIR16, 17, 18 and 19 is: 1,922 + 1,867 + 1,767 + 2,070

The AIR19 running total is 7,626nr.

Line 9 - Total Lead Communication Pipes Replaced – Sum of 8a, 8b, 8c and 8d (no.)

Line	Description	Units	AD	AD CG	CSD	CSD CG	Total	Overall CG
9	TOTAL Lead Communications Pipes replaced	Nr	2,070	A2	672	B2	2742	**A2**

Asset Delivery

This is the calculated sum of Lines 8a, 8b, 8c and 8d
Calculation - The Asset Delivery Total is 1,844 + 0 (No opportunistic Lead Replacements) = 1,844
Asset Delivery Water Confidence Grade is A2.

CSD Networks Water

This is the calculated sum of Lines 8a, 8b, 8c and 8d
Calculation - The CSD Total is 35+562+75 = 672 this is comparable to last year's figure.
CSD Networks Water Confidence Grade is B2.

Overall Line Confidence Grade is A2 as approx. 75% of this return is from the Asset Delivery Team.

Comment

This figure overall is similar to the return for AIR18 .NIW are ahead of the PC15 target for proactive Lead replacements (see summary at start of this Commentary)

Line 10 - Communication pipes replaced – other (no.)

Number of communication pipes (all types of materials but excluding lead) replaced for other reasons (e.g. at the customer's request or due to Rehab of the watermain)

Line	Description	Units	AD	AD CG	CSD	CSD CG	Total	Overall CG
10	Communications Pipes replaced (other)	Nr	2,714	A2	1,518	**B3**	4,232	B2

Asset Delivery

The AIR19 return for PC15 year 4 is 16% higher than comparable to that carried out in year 3.

Asset Delivery Water Confidence Grade is A2.

CSD Networks Water

Data for the reporting period April 18 – March 19 was collated by the Water Business Unit using MWM system reports run on a monthly basis by Field Manager area for selected Standard Jobs. When checked and confirmed, the data was input onto a spreadsheet managed by the Business Unit.

This figure is broadly in line with the figure submitted for AIR18.
It remains problematic when analysing some Work Orders whether or not a full communication pipe replacement has been carried out or only a localised burst service repair completed.

CSD Networks Water Confidence Grade is B3.

Overall Confidence Line Grade is B2 as it is between the B3 and A2 Confidence grades submitted.

The overall total for this line is comparable to last year .Any small increase is due to more mains activity in this period

Line 11 - Mains bursts per 1,000km

The specified unit for Line 11 is Mains Bursts per 1,000km. NIW do not currently record Mains Bursts per 1000km but record the actual number of Mains Bursts Repairs carried out. Detailed data for the reporting period April 18 – March 19 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spread sheet. A number of repairs attributable to third party damage have also been extracted from the final total. The total no. of mains bursts repairs for Networks Water was then converted to bursts per 1,000km.

Calculation of Mains Bursts per 1,000km

Total Burst Mains divided by Total length of mains multiplied by 1,000

2562 – 95 (rechargeables) / 26,958.4km = 0.0915 x 1,000 = 91.51

Total Bursts per 1,000km = 91.51

2015 information return was 2,348 (inc. 82no. rechargeables)
2016 information return was 2,051 (inc. 79no. rechargeables)
2017 information return was 2,196 (inc. 61no. rechargeables)
2018 information return was 2,510 (inc. 66no. rechargeables)

Proportion of bursts within line 11 detected by proactive methods

The total number of Mains Repairs carried out by NIW was 2562 (including 95no. due to third party damage).

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1451.

The number of mains repairs carried out due to proactive leakage detection methods was 1111.

Confidence Grade B3

The number of bursts for Networks Water has been captured for the complete year using base information on a monthly basis from MWM reporting systems. Individual Work Orders have been analysed and duplicates and non-mains repairs extracted. This year's figures show a very marginal overall increase from AIR 18 but the following comments continue to be a factor:

- Mains rehabilitation schemes continue to have a positive impact in reducing the no. of defects with older iron mains being replaced
- Pressure Management Schemes in targeted areas including new installations, replacements and relocations of pressure reducing / sustaining valves.
- Continuing detail has been paid to the classification of mains repairs as opposed to communication pipe repairs or replacements.

Although the number of mains repairs due to non-proactive leakage detective methods shows a slight increase, this is offset by an increase in the number of mains repairs down to third party damage (95no.). The number of mains repairs down to proactive leakage detection methods is almost identical to the numbers for AIR 18 (1111no. versus 1116no. for AIR 18). There has been a relatively mild winter period this year with only one noticeable 10 day freeze / thaw period towards the end of January / early February.

Between AIR17 and AIR18, the movement of burst rates relative to the movement in interruptions to supply was similar. The Table 11 Line 11 outturn increased by 14% whilst there was a 16% increase in the Table 2 Line 5 outturn when based on AIR18's performance, excluding the impact of severe flooding experienced in August 2017.

Between AIR18 and AIR19, the burst rate remained consistent with a variance of only 1% whilst there was a notable reduction in the Table 2 Line 5 outturn number of properties affected by an unplanned interruption of more than 3 hours. The relative movement indicates that fewer properties are experiencing an interruption of more than 3 hours as a result of burst main events as better working practices are resulting in an improvement in DG3 performance. NIW has an ongoing focus on Interruptions to Supply (ITS) with the development of an ITS Strategy. The Table 2 Line 5 outturn has also benefitted in 2018/19 from a review of unplanned interruption events involving more than 500 properties.

Future Reporting

For AIR 20 Networks Water will continue to use the established process for monthly reporting using MWM systems as a source for base information.

Line 12 - Total length of mains 31st March 2019

This figure has been extracted from the Corporate Asset Register. There has been no change to the structure of the data reported on this year from the previous years that would directly affect the total provided. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR18 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

No water main has been excluded based on its diameter size. The minimum diameter size of a water main within the Corporate Asset Register is 1 inch or 25mm. There are water mains with a diameter of 0 as this information is unknown.

This figure has not been calculated from Lines 1, 2, 6 and 7, it has been extracted using the process outlined in the methodology using data extracted from the Corporate Asset Register. This gives a figure of 26,958.40km, if the calculated figure had been used the value would have been 26,917.53km, a difference of 40.87km which equates to a difference of 0.15%.

As per the reporters recommendation during the AIR14 audit this figure includes trunk mains that are marked as “Out of Service” on the Corporate Asset Register. This recommendation was made as although these mains are currently out of service they are not abandoned and could potentially come back into service in the future.

Lines 13 to 17- Distribution studies

Lines 13 to 17 reflect the reporting requirements for the Zonal Study Methodology that has traditionally been employed by NIW to highlight and prioritise investment in the Water Network.

This methodology involved, identifying Zones which were then: intensively examined, hydraulically modelled, site checked and discussed in detail with NIW Managers.

The output of this exercise was a prioritised list of Network Rehabilitation and Rationalisation schemes.

All Zonal Studies have been addressed and completed over the 13 years or so prior to 2014, and therefore all of NIW Zones had been addressed by the Rehabilitation/Zonal Study Process (as shown in the table below).

The Confidence Grade therefore of this line is A1.

Line 13 – Cumulative number of distribution zone studies completed

The Zonal Studies table has been removed, as agreed with the Reporter, as this metric does not reflect the NIW PC15 Networks Water rehabilitation approach. The implications for Lines 13 to 17 are that, the specific question in relation to Zonal Study completion should probably be changed in the future to reflect progress in the new WIIM methodology. The total submitted however is 71 Zonal Studies completed (this has been the return for the past two years as it does not change).

Watermains Infrastructure Investment Model (WIIM) Workpackages Overview

The Zonal Study methodology has now been superseded by the WIIM Methodology. This methodology relies on current Corporate asset data to build up a picture of prioritised needs which is then checked hydraulically against a model and the output reviewed by NIW Managers and Field Staff.

The WIIM methodology involves taking all appropriate NIW asset datasets, which reflect the performance of the network (also including Customer data), and applying a scoring matrix to reflect these datasets for all distribution pipelines in NIW. These scores are then applied to each pipeline .The highest scoring model areas are then examined for prioritised and appropriate intervention depending on the drivers for each pipeline

The 71 Model areas have now been combined into 54 proposed model areas reflecting the current Water Resource areas.

During the 2016-2017 period two phases of prioritised interventions were commenced under the WIIM methodology, with the following WPs being issued in 2016 -2017, see table below.

Water Networks Rehab Workpackages passed to Delivery Team in 2016-2017 by the AP Networks Water Team (All Costs stated are Pre –Construction estimates)

WPs WIIM 1.2	Month completed	Year completed	Cost £
Althaninch Bushmills 1	April	2016	1.7M
Althaninch Bushmills 2	April	2016	2.0M
Ballinrees Limavady 1	April	2016	2.2M
Ballinrees Limavady 2	April	2016	1.2M
Carran Hill Crossmaglen	April	2016	2.5M
Clay Lake Keady	April	2016	2.5M
Dunore BGO North	April	2016	1.3M
Dunore East	April	2016	2.4M
Dunore Point	April	2016	2.2M
Lough Braden	April	2016	2.4M
Lough Fea	April	2016	2.3M
Loughmacrory	April	2016	2.0M
Moyola	April	2016	2.2M
TOTAL			**£27M**

WPs WIIM 1.2	Month completed	Year completed	Cost £
Antrim North	November	2016	2.2M
Antrim South	November	2016	1.3M
Banbridge South Armagh	November	2016	1.8M
Craigavon	November	2016	2.6M
Fermanagh North	November	2016	2.8M
Fermanagh South	November	2016	2.1M
Lurgan Moira	November	2016	2.6M
Tyrone North	November	2016	2.4M
Tyrone South	November	2016	2.4M
Tyrone West	November	2016	2.1M
Antrim Ballyclare	March	2017	2.3M
Lisburn	March	2017	2.4M
Newtownards	March	2017	2.2M
TOTAL			**29.2M**

WIIM 2.2 Work Package Overview (passed to the Asset Delivery Team in 2017-2018 on the 8/11/17)

WPs WIIM 2.2	Schemes Count	Sum of length (m)	Sum of scheme Cost £
Carrickfergus	71	22,363	£2,876,178
Castor Bay Dungannon	50	23,669	£2,332,064

Drumaroad Ards Peninsula	57	31,117	£2,950,220
Drumaroad Bangor	67	21,985	£2,660,555
Foffany South	50	31,216	£2,561,401
Seagahan Armagh	73	29,212	£2,534,986
Total	**368**	**159,562**	**£15,915,404**

Note: The WIIM 3 data analysis was completed in autumn 2018 to inform the next phases of WIIM 3 Schemes to be delivered over the next several years. All proposed are mapped and available for view on the NIW WIST Layer (An App on the Corporate Data System)

WIIM 3.1 Overview of Work Packages, passed to the Asset Delivery Team in 2018-2019 period (on the 4/10/18)

WP Name	Length (m)	Cost	Scheme Count
Ballywonard_Belfast	25,956	£2,486,569	65
Coleraine_Bushmills	27,876	£2,212,565	48
Derry_Carnmoney_Derg	24,483	£1,912,835	59
Derrylin_Ballygawley	33,244	£2,242,731	27
Drumaroad Ards_Carryduff_Bangor	18,113	£1,872,628	51
Enniskillen_Derrygonnelly_Ballinamallard	33,367	£2,648,941	49
Lurgan_Craigavon	23,032	£1,787,103	41
Portadown_Banbridge_Scarva	22,041	£1,764,091	38
High Priority Scoring WP	34,923	£2,626,864	27
Saintfield_Ballynahinch	21,812	£1,800,815	35
Strangford_Portavogie_Killinchy	20,170	£1,945,522	22
Toome_Randalstown	28,754	£1,962,176	16
Total	**313,771**	**£25,262,841**	**478**

Hydraulic Model Rebuilds

Hydraulic Model rebuilds are now identified by looking forward into the following years WIIM priority areas and making a judgement as to whether the model in this area is adequate to allow accurate Verification of the WIIM Desktop priority schemes. If the model quality is considered to be inadequate for purpose, due to the passage of time and the fact that the area has been extensively rehabilitated since the model was originally built, then the model area is prioritised for re-build so that the WIIM Work package can be carried out in the following year.

Hydraulic Model Rebuilds Completed in 2016-2017

Hydraulic Models Rebuilds Completed in 2016-2017	Month Completed	Year Completed	Numbers of Properties
Drumaroad Ards Carryduff	May	2016	10,100
Purdysburn	June	2016	41,500
Carran Hill Clay Lake	June	2016	10,000
Castor Bay Dungannon	March	2017	27,100
Carrickfergus	March	2017	36,000

Foffany South	May	2017	26,200
Drumaroad Ards	March	2017	23,800
Drumaroad Bangor	March	2017	34,200
Seagahan Armagh	May	2017	15,200

Hydraulic Model Rebuilds Completed in 2017-2018

Hydraulic Models Rebuilds Completed in 2017-2018	Month Completed	Year Completed	Numbers of Properties
Seagahan Armagh	August	2017	15,211
Fofanny South	May	2018	26,236
Drumaroad Ballynahinch	June	2018	17,183
Drumaroad Downpatrick	June	2018	17,342
Corrody Derry	June	2018	27,236
Carmoney Eglington	July	2018	18,909
Ballywonard	August	2018	13,681

Hydraulic Model Rebuilds Completed in 2018-2019

Hydraulic Models Rebuilds Completed in 2018-2019	Month Completed	Year Completed	Numbers of Properties
Trunk Main Model	January	2019	N/A

Hydraulic Model Rebuilds in Progress 2018-2019

Hydraulic Models Rebuilds in Progress 2019-2020	Status	Year To Be Completed	Numbers of Properties
Killylane CWB North	Ongoing	2019	2,735
Killylane CWB South	Ongoing	2019	17,435
Dunore East	Ongoing	2019	2,086
Camlough Newry West	Ongoing	2019	10,932
Lough Macrory Beragh	Ongoing	2019	4,652
Killyhevlin / Enniskillen	Ongoing	2019	34,448
Belleek Garrison	Ongoing	2019	2,122
Lough Macrory Killyclogher Omagh	Ongoing	2019	14,615
Derg Strabane	Ongoing	2019	16,508
Castor Bay Tandragee	Ongoing	2019	5,693

Summary of Current Model Status

Model Number	Model Code	Model Name	Number of Properties Supplied	Model Calibration Date
1	BTPK	Belfast Oldpark	151,046	2009
2	FBDY	Forked Bridge Dunmurry	24,150	2010
3	DBNS	Dunore Ballygomartin South	104,030	2009
4	DDAP	Drumaroad Ards Peninsula	11,382	2017
5	DDAC	Drumaroad Ards Carryduff	10,081	2016
6	DDBH	Drumaroad Ballynahinch	17,183	2018

Model Number	Model Code	Model Name	Number of Properties Supplied	Model Calibration Date
7	LSRL	Lisburn South Rural	6,053	2010
8	RNID	Rathlin Island	115	N/A
9	DPBE	Dunore Point Ballymena East	1,979	2005
10	BASH	Breda South	24,673	2014
11	AHBS	Altnahinch Bushmills	13,121	2015
12	DELL	Dungonnell	15,729	2013
13	KENH	Killylane CWB North	2,735	2005
14	KESH	Killylane CWB South	17,435	2010
15	DPAM	Dunore Point Antrim	25,803	2015
16	DEET	Dunore East	2,086	2010
17	CGUS	Carrickfergus	35,961	2017
18	BWON	Ballywonard	13,681	2018
19	FBSD	Forked Bridge Stoneyford	10,561	2005
20	CBLN	Castor Bay Lurgan	11,538	2014
21	DDAN	Drumaroad Ards Newtownards Town	13,475	2016
22	DDBR	Drumaroad Bangor	34,241	2017
23	DDLU	Drumaroad Lisburn - Urban	13,482	2015
24	PBUR	Purdysburn	41,541	2016
25	DDDK	Drumaroad Downpatrick	17,342	2018
26	FOSH	Foffany South	26,236	2018
27	CBNH	Castor Bay North	50,676	2013
28	FONH	Foffany North	15,003	2013
29	DBNN	Dunore Ballygomartin North	18,947	2009
30	DBNH	Dunore Belfast North	19,962	2017
31	CYEN	Carmoney Eglinton	18,909	2018
32	CHNW	Camlough Newry West	10,932	2004
33	CHCN	Carran Hill Crossmaglen	5,994	2016
34	CLKY	Clay Lake Keady	3,997	2016
35	LMBH	Lough Macrory Beragh	4,652	2010
36	MAUM	Moyola Unagh Mormeal	2,644	2015
37	CYDY	Corrody Derry	27,236	2018
38	BSLY	Ballinrees Limavady	8,654	2006
40	LFEA	Lough Fea	15,917	2015
41	SNAH	Seagahan Armagh	15,211	2017
42	CBDG	Castor Bay Dungannon	27,136	2017
43	KNEN	Killyhevlin / Enniskillen	34,448	2008
44	BKGN	Belleek Garrison	2,122	2008
45	LBDN	Lough Bradan Drumquin	9,976	2015
46	LMKC	Lough Macrory Killyclogher Omagh	14,615	2010
47	DGSE	Derg Strabane	16,508	2002
48	MAMT	Moyola Magherafelt	18,083	2015
49	CHDN	Caugh Hill Dungiven	6,467	2006
50	BSCE	Ballinrees Coleraine	39,568	2002

Model Number	Model Code	Model Name	Number of Properties Supplied	Model Calibration Date
51	CBTE	Castor Bay Tandragee	5,693	2004
52	DBSH	Dunore Breda North	18,163	2009
53	BMEN	Ballymena	13,939	2013
54	DDLC	Drumaroad Lisburn - Castlereagh	11,947	2004

Line 22 - Completion of nominated trunk main schemes

No trunk mains schemes identified in the PC15 Programme achieved Beneficial Use in Year 4 (2018/19) of the programme. NI Water has commenced a change control to substitute Northern Zone Resilience into PC15 in place of Caugh Hill, Carmoney to Strabane Strategic Link Watermain in order to meet operational needs relating a water quality risk associated with the illegal use of the Mobuoy Landfill site.

The confidence for this line was assessed as A1: this is based on review of CPMR approvals and financial details contained within CPMR.

Line 23 - Completion of nominated water treatment works schemes

No Water Treatment Works schemes identified in the PC15 Programme achieved Beneficial Use in Year 4 (2018/19).

The Caugh Hill WTW project is currently the subject of a Change Control being prepared for submission to the Utility Regulator. This Change Control is the result of discussions held with the UR and Drinking Water Inspectorate on the THM /DOC water quality driver and the fact that the works is passing the THM regulatory standard. The Caugh Hill WTW project will be substituted out of the PC15 delivery programme and several WTW sites with enforcement orders for pesticides and a bromide water quality related issue will be brought into PC15.

The confidence grade for this line was determined using the reporting guidance and was assessed as A1 following review of CPMR approvals and financial details contained within CPMR.

Line 24 - Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks

No projects of this type were profiled to achieve Beneficial Use in 2018/19.

The confidence was assessed as A1 following review of CPMR approvals and financial details contained within CPMR.

Line 25 – Number of Catchment Management Plans

There have therefore been 13 live catchment management plans fully completed so far in the PC15 period, with two left to complete under INTERREG in draft (see * below).

There have therefore been 0 Catchment Management Plans fully completed in 2018-19.

40 Catchment Management Plans were detailed for completion in the PC15 Final Determination PC15 period. To date there have been 21 live catchment management plans completed. 8 plans were completed ahead of schedule and within the PC13 period (3 in 2013-14; 5 in 2014-15).

The table below demonstrates the plans completed per year.

		PC15						
		2015-16	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**Total**
1	PC15 Final Determination	6	7	7	6	7	7	**40**
2	Actual Delivery	3	7	3	0	-	-	**13**

The PC15 Final Determination stated a total of 40 CMPs for completion in the period (row 1).

The actual delivery of the CMPs in laid out in row 2; 8 CMPs were completed in the PC13 period.

Water Treatment Work Name	**Catchment Management Study delivery year**	**Delivery Date**
Killylane	2013/14	31/03/2014
Dorisland	2013/14	31/03/2014
Clay Lake	2013/14	31/03/2014
Derg (Inc Strule)	2014/15	31/03/2015
Lough Braden	2014/15	31/03/2015
Caugh Hill	2014/15	31/03/2015
Carmoney	2014/15	31/03/2015
Seagahan	2014/15	31/03/2015
Altnahinch	2015/16	31/03/2016
Drumaroad (inc Silent Valley, Annalong & Lough Island Reavey)	2015/16	31/03/2016
Fofanny	2015/16	31/03/2016
Dunore Point	2016/17	31/03/2017
Castor Bay	2016/17	31/03/2017
Moyola	2016/17	31/03/2017
Ballinrees	2016/17	31/03/2017
Lough Macrory	2016/17	31/03/2017
Lough Fea	2016/17	31/03/2017
Glenhordial	2016/17	31/03/2017
Carron Hill	2017/18	31/03/2018
Rathlin	2017/18	31/03/2018
Dungonnell	2017/18	31/03/2018
Killyhevlin	2018/19	Q1 of 2019/20*
Belleek	2018/19	Q1 of 2019/20*

*The two remaining Catchment Management Plans have been completed to draft stage by The Agri Food and Bioscience Institute (AFBI), one of the research partners of the INTERREG VA-funded Source To Tap Project which has NI Water as a lead partner. Because this Partner is completing these Catchment Management Plans in their format under the Source To Tap Project rather than that of the already completed Catchment Management Plans, other competing priorities within the Project have meant there has been some delay in agreeing the format and content to ensure Catchment Management Plan consistency and suitable content.

Abandoned Water Treatment Works/Abstraction Points

1. Altmore (High)
2. Altmore (Low)
3. Ballydoolagh (IR)
4. Ballysallagh Lower
5. Ballysallagh Upper
6. Ballyversall
7. Boomers Reservoir
8. Church Road
9. Conlig Lower (IR)
10. Conlig Upper
11. Craigahulliar
12. Creightons Green (IR)
13. Dunalis
14. Killea (WTW)
15. Leathemstown
16. Lough Cowey
17. Lough Money
18. Portavoe IR
19. Quolie (North)
20. Quolie (South)
21. Stoneyford Reservoir

NIW will be submitting a formal change control which will amend the PC15 target (row 1), correcting the initial target of 40 to 36 and removing the out-of-service catchments above.

Line 26 - Number of school visits

There were 246 Schools visited during this reporting period.

Line 27 - Number of other education events

There were 66 other education events attended during this reporting period.

Line 28 - % Service Reservoirs where sample taps have been assessed and are to required standard

286 sample taps were installed during this reporting period. This is 98.3% of the total of 291 to be addressed. This figure was confirmed by the Project Manager for the “Sample Tap Installation “Project that it ties in with the monthly progress submissions completed by the Asset Delivery Team in their monthly summary output tables.

The sample tap contract was awarded in 16/17 with delays due to the development and award of New Frameworks, in addition delays were partly caused by the approval process required on the design before the manufacture of the sample tap points could commence. Three of these taps were also completed in April 2019, however these will be reported in the AIR 20 return.

There are 2 outstanding sample taps not completed due to operational issues on these sites to which all equipment has been procured by the contractor and ready to install. The full delivery of 100% taps (291No.) is expected by May/June 2019.

Confidence Grade A1

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (NIW Only)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
A	**SOURCE TYPES AND PUMPING**			nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
1	Impounding reservoirs			22	0.747	0.000		B2
2	River abstractions			9	0.253	0.000		B2
3	Boreholes			1	0.000	0.000		B2
4	Source types and pumping; total			32	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				91.6	B4

		TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
		UNITS / DP	UNITS / DP
B	**TREATMENT TYPE**	Prop'n (0-1) / 3	nr / 0
6	Proportion of distribution input - simple disinfection	0.000	1
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.000	0
9	Proportion of distribution input - W3	0.494	8
10	Proportion of distribution input - W4	0.506	10
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		19

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
C	**POTABLE MAINS**						
13	Potable mains (nominal bore)	km	2	21,119.61	4,170.53	1,385.57	282.69

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS (PPP Only)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
				nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
A	**SOURCE TYPES AND PUMPING**							
1	Impounding reservoirs			2	0.041	0.000		B2
2	River abstractions			4	0.959	0.000		B2
3	Boreholes			0	0.000	0.000		A1
4	Source types and pumping; total			6	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				157.8	B4

		TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
		UNITS / DP	UNITS / DP
		Prop'n (0-1) / 3	nr / 0
B	**TREATMENT TYPE**		
6	Proportion of distribution input - simple disinfection	0.000	0
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.000	0
9	Proportion of distribution input - W3	0.000	0
10	Proportion of distribution input - W4	1.000	4
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		4

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
C	**POTABLE MAINS**						
13	Potable mains (nominal bore)	km	2	0.00	0.00	16.42	0.00

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (Total)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES UNITS / DP	2 PROP'N DIST INPUT UNITS / DP	3 BULK PROP'N OF D.I. UNITS / DP	4 REPORT YEAR	CG
				nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
A	**SOURCE TYPES AND PUMPING**							
1	Impounding reservoirs			24	0.415	0.000		B2
2	River abstractions			13	0.585	0.000		B2
3	Boreholes			1	0.000	0.000		B2
4	Source types and pumping; total			38	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				122.7	B4

		TOTAL PROP'N OF D.I. UNITS / DP	TOTAL NR OF WORKS UNITS / DP
		Prop'n (0-1) / 3	nr / 0
B	**TREATMENT TYPE**		
6	Proportion of distribution input - simple disinfection	0.000	1
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.000	0
9	Proportion of distribution input - W3	0.262	8
10	Proportion of distribution input - W4	0.738	14
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		23

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
C	**POTABLE MAINS**						
13	Potable mains (nominal bore)	km	2	21,119.61	4,170.53	1,385.57	282.69

Table 12 – Water Explanatory Factors

Water sources & treatment types – NI Water only

Changes to Sources since AIR18

NI Water (Only) had the following 32 sources in service for part or all of AIR19, including in total: - boreholes (1nr), impounding reservoirs (22 nr), and rivers & loughs (9 nr). There is no net change in the total number of sources from AIR18 to AIR19.

Changes to treatment types since AIR18

The treatment type totals in service for part or all of AIR19, have not changed since AIR18, and include - simple disinfection (SD) (1nr); simple disinfection plus simple physical treatment (W1) (0 nr); single stage complex physical or chemical treatment (W2) (0 nr); more than one stage of complex treatment (W3) (8 nr); more than one stage of complex treatment, capturing processes with very high operating costs (W4) (10 nr).

Changes to proportional distribution input since AIR18

The Distribution Input (DI) has increased slightly from last year. In 2017/18 the total average DI was 577.62 Ml/day, this has risen by 2.67% to 593.05 in 2018/19, and this is based on the Post Maximum Likelihood Estimation (MLE) figure. This is due to the fact that Summer 2018 was one of the warmest and driest summers of the past number of years. This was particular evident in June 2018 when record temperatures were recorded within NI and demands on the network reached unprecedented levels, with the exception of extreme freeze thaw events. As a consequence a Hose Pipe was declared for the first time since 1995.

The following table shows changes which have occurred with reference to source types and treatment types since AIR18.

Location	AIR18 Source Type	Treatment Type	WTW In Service during AIR 19	Sources In Service at 31st Mar 2018	Sources In Service at 31st Mar 2019
Rathlin	Borehole	SD	Yes	Yes	Yes
Killylane	Imp. Reservoir	W3	Yes	Yes	Yes
Dungonnell	Imp. Reservoir	W3	Yes	Yes	Yes
Altnahinch	Imp. Reservoir	W3	Yes	Yes	Yes
Lough Fea	Imp. Reservoir (listed as a Lough for AIR15 – classified as IR in June 2015)	W3	Yes	Yes	Yes
Drumaroad	2No Imp. Reservoirs (Ben Crom IR & Silent Valley IR)	W3	Yes	Yes - 2No. sources	Yes - 2No. sources
Caugh Hill	Imp. Reservoir - Altnaheglish IR & River (Glenedra)	W3	Yes	Yes – 2No. sources	Yes – 2No. sources

Location	AIR18 Source Type	Treatment Type	WTW In Service during AIR 19	Sources In Service at 31st Mar 2018	Sources In Service at 31st Mar 2019
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes
Lough Bradan	2 No - Lough Bradan Imp. Reservoir, and Lough Lee	W4	Yes	Yes - 2No sources	Yes - 2No sources
Dorisland	7No Imp. Reservoirs – (Dorisland IR, Lough Mourne IR, Copeland IR, Lower South Woodburn IR, Upper South Woodburn IR, Middle South Woodburn IR and North Woodburn IR)	W4	Yes	Yes - 7No. sources	Yes - 7No. sources
Lough Macrory	1No Imp. Reservoir & 1No Lough (Lough Fingrean IR & Lough Macrory-Lough	W4	Yes	Yes - 2No. sources	Yes - 2No. sources
Clay Lake	Imp. Reservoir	W4	Yes	Yes	Yes
Fofanny	3No Imp. Reservoir (Lough Island Reavey, Fofanny, Spelga)	W4	Yes	Yes – 3No. sources	Yes – 3No. sources
Seagahan	Imp. Reservoir	W4	Yes	Yes	Yes
Camlough	Lough – No longer used since 30/3/16	N/A	No	No	No – Last day of production at Camlough WTW was 30/3/16
Killyhevlin	Lough	W4	Yes	Yes	Yes
Carran Hill	Lough	W4	Yes	Yes	Yes
Belleek	Lough	W3	Yes	Yes	Yes
Carmoney	River	W4	Yes	Yes	Yes

Location	AIR18 Source Type	Treatment Type	WTW In Service during AIR 19	Sources In Service at 31st Mar 2018	Sources In Service at 31st Mar 2019
Derg	River	W4	Yes	Yes– 2No sources (River Strule introduced April 2016, and River Derg)	Yes– 2No sources
		Total	**19**	**32**	**32**

1. Caugh Hill WTW

Caugh Hill WTWs is fed directly and independently by 2 sources Altnaheglish IR and Glenadra River. The works can also be fed by Kerlins Burn, but this has only been used in drought events and has not been used since 1995. Telemetry information for 18/19 indicates that 20.27% of the raw water into the WTWs came from Glenedra River during the AIR19 period. The Distribution Input for Caugh Hill has therefore been split in the ratio of 80:20 between the IR and the River, for the computation of the proportional distribution input for Lines 1 to 3. The AIR19 draw off from Glenedra River is higher than that for AIR18 as a breach on the feed pipe from Glenedra, following the storm in North West in August 2018, resulted in the intake being out of operation to allow repairs to take place. This was repaired prior to the AIR19 reporting period and therefore has been maximised in this period.

The draw off from Glenedra River is based on quantity & quality available. When the river is in normal condition the inlet valve is open fully to take as much water as possible from this source. However when there is a flood or a period of inclement weather & the water quality deteriorates the inlet valve is throttled back to reduce the inlet from this source. The normal percentage draw off is difficult to estimate as the raw water quality changes frequently and the NI Water throughput has been reduced significantly over the years with the introduction of the Balinrees source.

2. Fofanny WTW

Fofanny WTWs is fed directly and independently by 3 sources Lough Island Reavy IR, Spelga IR and Fofanny IR. NIW is listing these three sources for Fofanny WTWs, for AIR18.

3. Lough Bradan WTW

Lough Bradan WTWs is fed directly by Lough Lee (lough) and Lough Bradan Impounding Reservoir. Lough Lee is therefore being reported as a source. For AIR19, according to the Plant Manager, 60% of the total WTWs' raw water comes from Lough Lee (and 40% from Lough Bradan IR) and enters into the pipework between Lough Braden IR and the WTWs. Any extra coming from Lough Lee would backup into Lough Bradan IR and would vary depending on rain fall amounts.

Although telemetry information was available for AIR17 to determine the split of the raw water coming from Lough Lee and Lough Bradan IR, such information has not been available since as data points were not carried forward following the outstation upgrade.

4. Camlough WTW

Camlough WTWs was taken out of service on 31/3/16, with the last day of production on 30/3/16. The new Castor Bay to Newry Trunk Main was laid to enable the abandonment of Camlough WTW. Hence the Castor Bay supply area had been extended to cover the catchment previously supplied by Camlough WTW. Hence Camlough WTWs and Camlough Lake do not feature in the AIR19 figures respectively for treatment types and water sources.

5. Lough Fea WTW

Lough Fea WTWs is fed by Lough Fea, which is classified as an Impounding Reservoir.

6. Lough Macrory WTW

Lough Macrory WTW is fed directly by Lough Macrory (lough). Lough Fingrean IR overflows naturally into Lough Macrory, with the water being pumped on to the WTW. Approximately 90% of the water in Lough Macrory originates from Fingrean IR. As in AIR18, NIW is listing Lough Macrory and Fingrean IR as two sources for Lough Macrory WTW for AIR18.

7. Belleek & Killyhevlin WTWs

Although both Belleek WTW and Killyhevlin WTW are supplied by the same source i.e. Lough Erne, NI Water is counting Lough Erne as a source for each of the works, due to its size, in line with the approach to Lough Neagh as depicted in the NIAUR AIR13 Chapter 12 guidance.

8. Drumaroad WTW

Drumaroad WTW is fed directly by Silent Valley IR. It can receive occasional supply from Lough Island Reavy IR, to compensate Silent Valley water during operational maintenance or Drought Management. However this IR is not being reported against Drumaroad as it is reported against Fofanny WTW. Silent Valley is supplied by Ben Crom IR. Silent Valley IR and Ben Crom IR collect raw water from the Mourne Mountains' catchment area. NIW is listing Silent Valley IR and Ben Crom IR as two sources for Drumaroad WTW.

9. Dorisland WTW

Dorisland WTW is fed directly by Dorisland IR. However Dorisland IR is fed through a system of 6 IRs namely, Lough Mourne IR, Copeland IR, Lower South Woodburn IR, Upper South Woodburn IR, Middle South Woodburn IR and North Woodburn IR.

The above consists of six man made dams and one natural lake (Lough Mourne). Raw water from all dams can be mixed in many different combinations depending on storage and water quality. NI Water seeks to balance water level in each IR by controlling inlet and outlet valves. The Woodburn IRs can be used all year round. However Lough Mourne and Copeland IRs are used only in winter months due to challenges with algae. These IRs are important to NI Water from the point of view that they can be individually isolated and water diverted to waste, in the event of a pollution incident.

Following a number of years raw water deterioration due to the presence of MCPA, (a herbicide approved product used for rush control) NI Water installed GAC Filtration at this site to ensure the water quality parameters we achieve. This latest investment at this plant has been operational since April 2015.

10. Derg WTW

The main source for Derg WTW has been the River Derg. The River Strule has also been feeding the works from April 2016, contributing approximately 36% of the raw water which is pumped to the Derg WTW Inlet, during AIR19. NIW is listing River Strule and River Derg

as two sources for Derg WTW, for AIR18, as the works receives water directly from the two sources.

11. Dungonnell WTW

The OSEC plant has been taken out of service and temporary hypo dosing commenced on 27th March 2017 to complete water disinfection. A base maintenance project to remove the OSEC plant and install bulk hypo tanks has not yet started. There is no change to the treatment type.

12. Altnahinch WTW

The OSEC plant has been taken out of service and temporary hypo dosing commenced on 14th November 2016 to complete water disinfection. A base maintenance project to remove the OSEC plant and install bulk hypo tanks has been completed. There is no change to the treatment type.

Capacities of NIW's impounding reservoirs (22No)

The table below depicts the capacities of the 22 NIW Only Impounding Reservoirs which were in service during the AIR19 period. Ballinrees IR and Altikeeragh IR which are operated by PPP are not included in the table.

Raw Water Source – IRs	Total Capacity(ML)	Head WTWs
Altnahinch IR	1270	Altnahinch WTW
Altnaheglish IR	2273	Caugh hill WTW
Clay Lake IR	1895	Clay lake WTW
Lough Mourne IR	2621	Dorisland WTW
Copeland IR	607	Dorisland WTW
Lower South Woodburn IR	487	Dorisland WTW
Upper South Woodburn IR	1669	Dorisland WTW
Middle South Woodburn IR	2135	Dorisland WTW
North Woodburn IR	372	Dorisland WTW
Dorisland IR	302	Dorisland WTW
Ben Crom IR	7721	Drumaroad WTW
Silent Valley IR	13276	Drumaroad WTW
Dungonnel IR	1090	Dungonnel WTW
Lough Island Reavy IR	9091	Fofanny WTW
Spelga IR	3327	Fofanny WTW
Fofany IR	395	Fofanny WTW
Glenhordial IR	100	Glenhordial WTW
Killylane IR	1363	Killylane WTW
Lough Bradan IR	611	Lough Braden WTW
Lough Fingrean IR	746	Loughmacrory WTW

Raw Water Source – IRs	Total Capacity(ML)	Head WTWs
Lough Fea IR	539	Lough Fea
Seagahan IR	2220	Seagahan

The Water Supply Business Unit continues to keep the status of WTW and Boreholes up to date and liaises with NIW's Asset Information Centre to ensure that this information is aligned with GIS. Any anomalies with information held on GIS, compared to that held by the Water Supply Business Unit, are identified and steps are taken to realign the data.
With ref to the UR's Guidance, regarding the 'proportion of water taken from Lough Neagh that is included within Block A of each table and identify which source type'. – the PPP sources Castor Bay, Moyola and Dunore extract from Lough Neagh, with no extraction by NIW sources.

The following table identifies the proportion of water taken from Lough Neagh (which is classified as a 'River Abstraction' source) within Block A and B of Table 12:

Table 12 Block	Proportion of water extracted from Lough Neagh - NIW Only	Proportion of water extracted from Lough Neagh – PPP Only	Proportion of water extracted from Lough Neagh - Total
A	0%	0.895	0.421
B – with reference to Treatment Type W4	0%	0.933	0.720

Line 5 - Average pumping head – NIW only / PPP only / Total
The NIW 'Total' AIR19 Average Pumping Head is 122.74m.hd with a confidence grade of B4, an increase of 1.71m.hd from AIR18 (121.03m.hd).

Summary
In previous returns the Average Pumping Head (APH) calculation has centred on using completed Detailed Zonal Study (DZS) area data. With the completion of the DZS Project, this has now become redundant as an information source. Thus NIW have been investigating alternative data sources, principally Telemetry, for updating and improved confidence. Data sourced from NIW telemetry system, Telemweb, had been included in the APH calculation from AIR12. For AIR19 the use of data from telemetry has continued to be used with 76% of pump set returns based fully or in part on telemetry data.

For AIR19, NIW had 374 pump sets in service. Of these 259 are based on flow and/or lift data from telemetry. 57 of the 374 have no / incomplete data, no return has been made for these pump sets.

Reporter recommendations for previous returns stated pump sets with a significant contribution to the overall calculation be targeted (say flow x lift >50m.h). There are 100 pump sets with an individual contribution greater than or equal to 50m.h. Of these 98 are based on flow and / or lift data from telemetry. No telemetry points exist for the 2 remaining pump sets.

The daily flow total for individual pump sets is 1643.98Ml/d. Of this 1633.41Ml/d is based on telemetry data. Thus 99.4% of flow is based on data relative to the reporting year. Similarly

the total lift for individual pump sets is 17648.56m, of which 6335.91m is based on telemetry data, equating to 36% of lift based on data relative to the reporting year.
The Average Pumping Head figure has increased by 1.71m.hd from AIR18. Distribution pump sets have contributed an increase of 0.65m.hd to the overall figure Water Supply a decrease of -0.39m.hd and PPP an increase of 1.47m.hd. One pump set is no longer in service and with this removed from the calculation reduces the overall figure by 0.02m.hd. The increase can be attributed mainly to flow/drought management and high demand experienced during the hot/dry period of weather during AIR19. The table below lists pump sets whose contribution to the overall AIR19 APH figure has changed by +/-0.5m.hd or greater from its corresponding contribution in AIR18. These 5 pump sets represents 0.87m.hd increase. The changes are explained in more detail further in the commentary.

Pump sets whose contribution to the overall AIR19 APH figure has changed by +/-0.5m.hd or greater from AIR18

Name	AAIR18 Individual APH	Contribution to Overall AIR18 APH Figure	AAIR19 Individual APH	Contribution to Overall AIR19 APH Figure	Contributing difference from AIR18/AIR19
River Bann RWPS	2802.69	4.852	3258.63	5.495	0.64
Castor Bay 1 WPS	7274.08	12.593	8015.04	13.515	0.92
Castor Bay WPS	1951.25	3.378	1660.00	2.799	-0.58
Faughan River RWPS	1799.15	3.115	2161.71	3.645	0.53
Lough Island Reavy Fofanny RWPS	1801.42	3.119	1467.30	2.474	-0.64

Distribution pump data in master pump table

In keeping with the Reporters view that given the good progress made in recent returns with data from Telemetry being obtained for 76% of pump sets, the rollout programme should continue. The report created to provide data from Telemweb only produces information from the date pump sets are added. Some telemetry data for pump sets may not be data based on the full reporting year but will be based on a minimum of 3 months. For future returns, the report will provide data for the whole reporting period.

For pump sets with no telemetry data currently available, calibrated network models (Current Average Daily Demand Models) constructed by a framework of Consultants performing Detailed Zonal Studies (DZS) in various study areas across Northern Ireland continues to be the data source. Pump sets based solely on DZS data makes up 23% of the return.

1no distribution pump set was removed from service during the AIR19 reporting period.

- Mullaghans Bridge 1 WPS Fairhill Cres WPS

No data was available for previous returns for the following pump sets. Telemetry data is now available to allow a return to be made against them for AIR19.

- Brackagh Lane Beechfield Drive WPS
- Coreen WPS
- Garstings Hill WPS
- Carnhill Gardens

Where mean lift and average ADD flow cannot be obtained from a suitable calibrated network model / or telemetry, no estimation of these parameters has been included for distribution pumps in the Master Pump Table.

Supply pump data in master pump table

Abstraction pumps, treatment process pumps and WTW outlet pumps have not generally been included in the DZS network models. Therefore, local NI Water supply personnel have provided data from a variety of sources, listed below, for the determination of mean lift and average current flow for each pump supplying the distribution zones.

- Telemetry (Telemweb),
- Direct readings of dials from pump sites,
- Record Drawings for pump lift, and
- NIW Total Flow Calculations for WTW in NI.

As with distribution pump sets, the use of telemetry data has been sought for Supply pump sets, with all but 2 of the 44 Supply pump sets based on flow and / or lift data obtained from Telemweb.

Changes to Supply pump sets have contributed a decrease of 0.4m.hd to the overall change from AIR18.

The main contributors are listed in the table below:-

Name	AAIR18 Individual APH	Contribution to Overall AIR18 APH Figure	AAIR19 Individual APH	Contribution to Overall AIR19 APH Figure	Contributing difference from AIR18/AIR19
Faughan River RWPS	1799.15	3.115	2161.71	3.645	0.53
Lough Island Reavy Fofanny RWPS	1801.42	3.119	1467.30	2.474	-0.64

Faughan River RWPS supplies Carmoney WTW. During the period of dry weather during AIR19 Carmoney Supply Zone was extended to help conserve water stock at Altnaheglish Dam which serves Caugh Hill WTW.

Flow/drought management to preserve sources during the prolonged period of dry weather in the summer of 2018.

Distribution Input (DI)

The Company DI by Supply Source (593.05Ml/d) has been provided by the Company's Leakage Data Management Unit, as has the PPP Only DI (279.04Ml/d) and the NIW Only DI (314.01Ml/d), obtained by adding the relevant Water Supply sources.

PPP pump data in master pump table

Flow and lift information has been provided by the PPP Concessionaire through Contracts Management Section and have provided the following commentary:
The Average pumping head – total (Line 5) has been calculated in accordance with the calculation described in the Guidance.

Dalriada installed pressure gauges for manual readings at each of the Delivery Points (with the obvious exception of the 2 gravity feed points at Ballinrees) as listed below:

- Moyola HLP
- Ballinrees HLP (Moys)
- Magheraliskmisk HLP (CB1)
- Ballydougan HLP (CB2)

- Forked Bridge (FB)
- Crewe Hill HLP (FB2)
- Dunore Point HLP (DP1 & DP2)

In conjunction with the updated average flows has produced an updated average pumping head calculation when applied to the agreed formula for Average Pumping Head.

Lift (m) – Lift figures continue to be derived from the pressure gauges on High Lift and for Interstage or Low Lift taken from the quoted values that are physically stamped on each pump. This procedure has enabled these figures to be consistent with last year's approach.

Average to Supply (Ml/d)

Note that the average flows represent updated figures for the 2018/19 year. These have been derived from dispatch records over the past year which record - via a series of frequently calibrated flowmeters at each Delivery Point on site - the volumes dispatched to NIW in accordance with the dispatch requests received and also from on-site records and SCADA trends of interstage volumes. Also the Lift has been shown for each interstage process at each site. Therefore, in conjunction with the updated average flows this has produced an average pumping head calculation when applied to the agreed formula for Average Pumping Head.

This has demonstrated an increase in overall calculated Average Pumping Head [156.7m for AIR19 and 155.9m for AIR18]. This increase in Average Pumping Head has been caused primarily by the increased proportion of pumped abstraction (from the River Bann) compared to gravity abstraction from upland sources at the Ballinrees WTW, despite the overall decrease in throughput from this WTW. This reflects the need to preserve upland sources during periods of prolonged dry weather in the summer of 2018. Other factors in APH increase include the increased throughput for Dunore Point, Moyola and Castor Bay WTW's, which are all pumped into supply.

Changes to PPP pump sets have contributed 1.47m.hd increase to the overall figure from AIR18.

The main contributors to the change are:

Name	AIR17 Individual APH	Contribution to Overall AIR17 APH Figure	AIR18 Individual APH	Contribution to Overall AIR18 APH Figure	Contributing difference from AIR17/AIR18
River Bann RWPS	2802.69	4.852	3258.63	5.495	0.64
Castor Bay 1 WPS	7274.08	12.593	8015.04	13.515	0.92
Castor Bay WPS	1951.25	3.378	1660.00	2.799	-0.58

Dunore R Bann RWPS – For a period of time pumping stopped due to a pollution incident. When pumping restarted level was higher than normal to allow the impounding reservoir level to recover.
Castor Bay 1 (Ballydougan) – at time of writing unable to confirm reasoning for change due to relevant personnel being on leave. At this time it is assumed changes are result of flow/drought management during the prolonged period of dry weather in 2018.

Castor Bay (Forked Bridge) – at time of writing unable to confirm reasoning for change due to relevant personnel being on leave. At this time it is assumed changes are result of flow/drought management during the prolonged period of dry weather in 2018.

There is a slight discrepancy between the PPP APH figure (156.7m.hd) calculated by the PPP Concessionaire and the figure calculated by NIW (157.78m.hd). The discrepancy has occurred with the PPP DI figure used, 280.87Ml/D by PPP, 279.04Ml/D NIW. The NIW PPP DI figure is based on data provided by the Company's Leakage Data Management Unit as indicated above.

PPP only and NIW only 'Average Pumping Head' calculations

Average Pumping Head is by definition the amount of pumping required to transport an average ML of water from abstraction at source to supply the customer through the Distribution Network.

The UR AIR14 Guidance for Table 12 has requested an 'Average Pumping Head' to be calculated for NIW only and PPP only. It should be noted that it is NIW's interpretation that the true definition (as stated above) of Average Pumping Head is not being reflected through the splitting up of the overall NIW Average Pumping Head value.

The NIW only and PPP only 'Average Pumping Heads' are 91.59m.hd and 157.78m.hd respectively. The PPP only value is in relation to the Pumping Head within the works. PPP WTWs do not have specific Distribution Networks, and therefore the water is extracted, treated and then exits the works into the NIW Distribution Network. Within the Distribution Network, PPP water then mixes with NIW water, therefore making it impossible for NIW and PPP flows to be truly separated for use in PPP only and NIW only average pumping head calculations. Hence the value of 157.78m.hd calculated for PPP only is more in relation to the Pumping Head within the works.

However the UR AIR14 guidance document for Table 12 states 'Average Pumping Head should be calculated for 'NI Water only', 'PPP only' and the 'total company'. Different denominators should be used to calculate the average pumping head for each table (i.e. 'NI Water only', 'PPP' and 'Total') reflecting the amount of water entering supply from NI Water treatment works, PPP treatment works and in total, respectively. There is no requirement for the sum of the NI Water and PPP pumping head figures to equal the total company APH. The numerator for the 'NI Water only' calculation should reflect pumping from NI Water treatment works and all NI Water distribution system pumping. The numerator for the 'PPP' calculation should reflect only pumping associated with the PPP concession.'

NIW has complied with this request and has provided separate Average Pumping Head values for NIW only, PPP only and the Company 'total'. The respective distribution input values, associated with NIW only, PPP only and Company 'total' sources have been used as denominators to calculate the respective Average Pumping Head values.

The issue, outlined above, as posed by NIW in previous returns regarding the proportioning of the Average Pumping Head between NIW Only and PPP Only, is further exacerbated through the AIR14 approach, as requested by the UR. The use of the PPP source related DI, as a denominator to calculate the PPP Average Pumping Head, indicates the amount of pumping required to transport an average ML of water from abstraction at source to the 'exit' gate of the WTWs. However the use of the NIW Only source related DI, as a denominator for the NIW Only Average Pumping Head, indicates the amount of pumping required to transport an average ML of NIW Only water from abstraction at source to supply the customer through the Distribution Network, in addition to the pumping required to transport

an average ML of PPP Only water from the ‘exit’ gate of the PPP WTWs through the NIW Distribution Network.

A confidence grade of ‘B4’ has been allocated to these values of 91.59m.hd and 157.78m.hd for the ‘Average Pumping Head’ for NIW only and PPP only respectively.

With ref to the UR’s Guidance, regarding the ‘proportion of water taken from Lough Neagh that is included within Block A of each table and identify which source type’. – the PPP sources Castor Bay, Moyola and Dunore extract from Lough Neagh, with no extraction by NIW sources.

Data shortcomings

Calibrated hydraulic network models used in the data collection of pump lift and head have been built by a framework of DZSC’s over a period of more than five years. Thus, models used have various calibration days.

Leakage reduction and changes to the system subsequent to the field test and model construction have not been taken into account. New pumps or pumps not field tested / modelled will also have no data available from DZSC’s.

NI Water distribution input for WTW’s/sources in NI are current 2017/18 figures which may not absolutely match pump data available from the older network models but this represents the best combination available.

The report set up to provide telemetry data from Telemweb has been available since November 2012. The report created to provide data from Telemweb only produces information from the date telemetry points are added. Some telemetry data for pump sets may not be based on the full reporting year but will be based on a minimum of 3 months. For future returns, the report will provide data for the whole reporting period.

Data relating to lift from telemetry is limited. Where flow data only is available from telemetry, lift data from the DZS model has been used. These may not be an absolute match but represents the best combination available.

57 of the 374 as having an ‘in service’ operational status during AIR19 period have no or incomplete data, no return has been made for these pump sets. As the majority of these pump sets are distribution booster sets, it is anticipated, if full data were available, it would have minimal impact on the overall figure.

Confidence grade

The Confidence Grade is B4 as per the Reporter recommendations from AIR17 submission.

Improvements from AIR18

Shortcomings highlighted in previous returns included the age of data from network models and as such subsequent leakage reduction and network changes would not have been taken into account. This is being addressed with the increasing use of Telemetry data. Telemetry data is relevant to the current reporting year with flow data more in line with the DI figure. With over 99% of flow and 36% of lift now based on data relevant to the reporting period, data quality continues to increase.

Future improvements

Continue the interrogation of Telemweb for relevant data. Improved data capture from the upgrade of treated water pumping stations delivered through capital projects, base maintenance schemes and the iCAT project.

Average Pumping Head result comparison from 2008 to 2019

	DI Ml/d	Sum (flow x lift)	Average Pumping Head (m.hd)
2008 Assessment	284.459	31655.54	111.28
2009 Assessment	420.93	47845.27	113.67
2010 Assessment	609.62	84470.31	138.57
2011 Assessment	627.5	100446.95	161.82
2012 Assessment	585.09	91225.01	155.90
2013 Assessment	559.37	78170.54	139.7
2014 Assessment	562.4	75211.22	133.73
2015 Assessment	564.92	64740.9	114.6
2016 Assessment	561.62	62697.39	111.64
2017 assessment	573.23	68539.45	119.57
2018 Assessment	577.62	70,092.1	121.03
2019 Assessment	593.05	72,788.13	122.74

Lines 1- 4 Column 1 only – Number of sources (PPP)

The PPP Water sources have remained consistent over the reporting period for AIR19 as they were with AIR18. In accordance with AIR17, NI Water has included the River Bann intake as an additional source to Ballinrees WTW. The reasoning used is, that there exists the potential to source the WTW directly from the River Bann rather than purely directing this source from the Ballinrees Impounding Reservoir. NI Water has also included the Altikeeragh IR as a source for Ballinrees WTW as it supplied a proportion of the water for Ballinrees WTW during the period 2018-19 as it did in 2017-18.

Line 5 Column 4 only – Average pumping head (PPP)

The reported data is solely due to the average flows called by the Company from its PPP sites, it has varied from last year's average flows.

Lines 6-10 Column 1 & column 2 only – Types of Treatment by Proportion and Total number of Units referred to (PPP)

No changes to the PPP types of treatment over the reporting period.

Line 13 - Potable mains

This figure has been extracted from the Corporate Asset Register. There has been no change to the structure of the data reported on this year from the previous years that would directly affect the total provided. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR18 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

As per the reporters recommendation during the AIR14 audit this figure includes trunk mains that are marked as "Out of Service" on the Corporate Asset Register. This recommendation

was made as although these mains are currently out of service they are not abandoned and could potentially come back into service in the future.

There were no changes to the length of Potable Mains operated by the PPP Contractor over the reporting period.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 13 NON FINANCIAL MEASURES
SEWERAGE PROPERTIES & POPULATION (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**PROPERTIES**																				
1	Households properties connected during the year	000	3	3.455	B2	3.108	B2	2.627	B2	4.076	B2	5.442	B2	6.385	B2	6.240	B2				
2	Non-households properties connected during the year	000	3	0.123	B2	0.106	B2	0.13	B2	0.198	B2	0.112	B2	0.178	B2	0.347	B2				
B	**BILLING**																				
3	Households billed unmeasured sewage	000	3	586.127	A2	591.043	B2	594.525	A2	599.994	A2	609.753	A2	619.835	A2	629.513	A2				
4	Households billed measured sewage	000	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1				
5	Households billed sewage	000	3	586.127	A2	591.043	B2	594.525	A2	599.994	A2	609.753	A2	619.835	A2	629.513	A2				
6	Non-households billed unmeasured sewage	000	3	9.250	A2	8.706	A2	8.132	A2	7.513	A2	7.314	A2	7.354	A2	7.362	A2				
7	Non-households billed measured sewage	000	3	23.014	A2	23.347	A2	23.56	A2	23.809	A2	24.343	A2	24.820	A2	25.296	A2				
8	Non-households billed sewage	000	3	32.250	A2	32.053	A2	31.692	A2	31.322	A2	31.657	A2	32.174	A2	32.658	A2				
9	Void properties	000	3	44.637	A2	44.479	B2	44.164	A2	43.463	A2	42.551	A2	41.741	A2	41.579	A2				
C	**POPULATION**																				
10	Total connected population	000	3	1,512.024	B3	1,514.925	B3	1,521.776	B3	1,529.734	B3	1536.699	B3	1544.413	B3	1550.715	B3				

Table 13 – Sewerage Properties and Population (Non-financial measures)

Introduction

Table 13 focuses on the number of properties and population connected to the public sewerage supply system. It extends to 10 lines, set out in three blocks:

- Block A Properties (Lines 1 & 2). Reports properties connected during the year.
- Block B Billing (Lines 3-12). Includes a breakdown of all measured and unmeasured household and non-household properties billed by the company. The property numbers should be the average for the reporting year.
- Block C Population (Lines 13-17). This records the population within each of the measured and unmeasured household and non-household categories. The population numbers should be the average for the reporting year.

The information in this table is used in tariff and charging analysis and determination (sewerage unit cost).

Data Sources, Data Validation and Data Quality Projects

NI Water's data on property counts and classifications is reported monthly from RapidXtra within the Rapid Property Summary (RPS). The data is extracted from the Diamond Warehouse via Microsoft SQL Server to produce the RPS report.

Our AIR19 methodology has remained consistent with previous years – using the automated Property Model tool to populate Table 13 figures (this was first introduced in AIR12 – the RPS as the input).

The RPS provides us with a snapshot at the end of each month in terms of net movement; however it currently does not support us in the explanation of gross movements within the data. The CSD Services MI & Data Team are currently exploring the use of Power BI to determine the gross movement.

Customer/Property information is updated through:

- BAU ('business as usual') customer contacts, such as new connection requests, customer move in/move outs, or
- through Data Quality initiatives/Projects, and/or
- Metering work streams e.g. UNHH (Selectives), Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water were required to install meters on all new household connections from April 2007. This practice has stopped as directed by a change in legislation, which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NI Water of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

Based on standard industry figures, the volumes returned to sewer are assumed to be 95%, unless the customer challenges this assumption; whereupon they can apply for a non-return to sewer allowance which will be investigated and determined by NI Water.

For clarity, where reference is made in Table 13 to 'billed' household and 'billed' non-household, this is taken as the provision of water services to customers whether they are billed directly (non-domestic customers) or payment is made through subsidy by DFI (domestic customers).

As with Table 7 (Water) – as per Utility Regulator guidelines, farms were reclassified as billed non-households for AIR09 – this has remained for AIR19. Previously, in AIR08, farms had been classified and reported as 'billed' households; on the principle of their status and allocation of 'domestic allowance'.

The difference between the AIR18 and the AIR19 property figures can be explained as follows:

1. New Connections during the 2018/19 reporting year. The figures are based on data supplied by our Customer Connections Team and represent completed connections during the reporting year. The projections for New Connections remain in line with the agreed PC15 forecasts, however we have noted a downturn and will review mid-year (during the draft Principle Statement) to ascertain if projections should be changed.
2. Added as a result of a customer contact. i.e. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    (a) The adding of properties NI Water allegedly did not know about
    (b) The adding of duplicates as the customer's address could not be found on Rapid. Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time of New Connection to that of customer contact (street names can change in the early stages of site development).
3. Removal/reclassification of properties as a result of data quality initiatives/projects
    a. Duplicate properties
    b. Reclassification of properties that were recorded in error
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.
5.

For NI Water, accurate property data is fundamental for many systems and processes, including customer service, metering, billing, consumption, leakage and Major Incident Planning & Response. The Rapid Customer Contact System contains the master property data for NI Water.

As Data Owner for Property Standing Data, The Head of CSD Services is responsible for the property standing data held by NI Water; this is monitored and managed through the Property Information Group (PIG). This group is chaired by the CSD Services MI & Data Team.

The role of PIG is to ensure that there is appropriate governance, controls and reporting for changes made to core data on the system. As Property Data Owners, we need to ensure the processes around creation, maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. Control is key for us; as such we have identified the systems, processes and people using property information across the business, alongside confirming data accuracy and endeavouring to reduce the opportunities for erroneous data entry and creation (such as the inability to recreate demolished properties or duplicate properties).

The issues under consideration were identified as of corporate relevance, therefore to ensure appropriate direction and governance the PIG was formalised. Key objectives include:

1. To agree a single consistent source of property data.
2. To ensure the source property data represents accurate, up-to-date information appropriate for use by the business.
    a. To understand and agree data primacy in respect of data updates from NI Water and external (Land & Property Services - LPS) sources
    b. To ensure the processes around creation (i.e. New Connections), maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. i.e. through CBC Data Validation (Phase 1, Phase 2, Phase 3, 105 Days DV)
    c. To co-ordinate property reconciliations between NI Water & external sources i.e. Data Sharing Agreements between NI Water & LPS, NI Water & Belfast City Council (BCC) etc. and understand the reasons and validity of any differences
    d. To understand and ensure the adequacy of long term procedures for database maintenance, including the updating of data standards and associated CDE M&M Plans
3. To ensure the reporting requirements for the business are met relating to data held on Rapid, particularly, but not exclusively, in respect of tariffs, leakage, Annual Information Returns (AIR) & Principle Statement (PS) returns.
4. Challenge the data in the areas of
    a. Data categorisation & structure
    b. Data robustness – i.e. where is our data good and where is there opportunity for improvement? Identify projects that could aid improvement
    c. Data alignment – both internally and externally. Internally between systems such as Rapid, Ellipse, GIS, Diamond, Netbase, IMS etc. Externally through data reconciliations, such as LPS above.
5. To agree measures to improve the quality and integrity of the data, particularly the key CDEs as monitored by IMU
6. To agree the content and frequency of reports required by NI Water.
7. To agree the quality checking criteria for the above data and reporting and develop a Quality Plan including the determination of responsibilities and audit trails.
8. To produce & circulate an ‘operate and maintain’ programme for property data to the business.

During 18/19, the focus for PIG included analysis and action on:

- Volume of properties coming onto the Rapid billing system on a monthly basis
    - new connections
    - customer contact
    - project work
- Volume of properties coming off the Rapid billing system (demolished)
    - sample check to ensure reason for demolition has been noted and on system audit trail recorded
- Volume of properties amended on the Rapid billing system
    - In particular, address fields -> building number, street name, town and postcode
    - sampling to identify if the data changes are data improvement or data regression
    - if data regression, further analysis into the process is undertaken
- Review of access privileges

    - Rapid audit
    - Through monthly audit samples
    - Internal CRs require sign off from PIG as BAU
    - Working with Echo to review access privileges on an ongoing basis
- Interruptions to supply notices – returned mail
    - This returned mail was brought to the attention of LPS and include properties that LPS have classified as live properties despite being returned as 'no such address' etc.
    - The 2 way communication with LPS will help underpin our governance work and provide direction to the business on practices
- Car Parking Spaces
    - The group identified that 'car parking' spaces were being added to Rapid as properties. One of the project teams added them because they were live on LPS, however they are not physically a property, nor do they require a water supply, therefore this practice has now ceased.

PIG Strategy 19/20

- New Connections - A move to on-system reporting following the Business Improvement New Connections Review
- Rapid-POINTER Reconciliation - follow on actions to be worked through and benefits realised. i.e. Uploading of UPRNs from POINTER where a property can move from an A match to an A* match
- Running of a mini data cleanse project within the CSD Services MI & Data Team to prepare the Rapid property data for the switch on of system validations. There were 4 phases of system validation functionality introduced to Rapid as part of the CBC Implementation Project. Off system data cleanse is required before some of the system validation rules can be applied. The data will need prepared offline to ensure accuracy and that it conforms to the system validation rules. It will then need tested before being uploaded to Rapid through the bulk upload tool. There will be some further testing to ensure all has uploaded correctly before the functionality is switched on.
- Data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – NDA has been signed off, data sharing project to commence during June 19 for a 12 month period.
- Continuation of the 2 way communication with LPS - This will help underpin our governance work and provide direction to the business on practices that will work alongside LPS
- Student Accommodation – further case studies on student accommodation re-development sites. How does Rapid hold these properties? Liaise with Belfast City Council to understand at what stage they can inform NI Water of properties that are to be re-developed into student accommodation.
- Test Meters – follow up on 'retain for review meters'
- Properties with 'no water supply' (no water/well water) – review and validate on a monthly basis

Summary

As Table 13 is based on averages, please find summary table below for 'End March 2018' and 'End March 19'. The '1st Dec 2018' actuals are used in the Principal Statement and Tariff Setting process.

Property Numbers	March 2018	1st Dec 2018	March 2019	Expected Movement
Unmeasured Sewerage Household	624423	631702	634602	Increase
Unmeasured Sewerage Non-Household	7350	7313	7373	Decrease (but project work has led to an increase)
Measured Sewerage Non-Household	24994	25433	25598	Increase
Voids	41551	41682	41607	Currently no trend that aligns with water
Total	**698318**	**706130**	**709180**	**Increase**

Site Metered Properties

As part of the ongoing data checks, NI Water has been confirming the number of site metered properties (multiple properties being charged through a single meter, such as business parks and industrial estates).

To ensure that these meters are not double counted, as with Table 7, the non-domestic site meters are not included in Table 13 non-domestic property counts (although NI Water still retain this information for customer record and charging purposes).

There are 1882 domestic properties (an increase of 414 during 18/19) classified as site meters. There will be further investigation and analysis to be completed during 2019/2020 to ensure these are classified correctly. The output of the Metering & Billing project can result in additional site metered properties being added to Rapid.

Overall, the number of non-domestic site meters has decreased by 406 during 2018/19. (14747 – 14341). This is as a result of categorisation movements in year such as measured water to site meter and unmeasured water to site meter.

Unmeasured Not Charged Properties

From the RPS, there are deemed to be 630 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water properties. The CSDS Services MI & Data Team are currently investigating any 'unmeasured – not charged' properties outside of NI Water ownership to ensure they are classified correctly.

Unmeasured Household Property Movement

The table below provides a reconciliation of the reporting year property movements and resulting property numbers. It sets out how the properties have changed over the reporting year, due mainly to new connections, alongside some movement in the occupancy status. Note: these reported figures include domestic properties that are metered but as NI Water does not bill households for water, they are reported as unmeasured.

Property Numbers	March 2018	Dec 2018	March 2019
Unmeasured Sewerage Gross Household	657882	665401	668282
Unmeasured Sewerage Occupied Household (L3 year-end sub calc)	624423	631702	634602
Unmeasured Sewerage Voids Household	33459	33699	33680

Household Voids	Voids	Difference (in-year)
March 2019	33680	(+) 221
March 2018	33459	(+) 132
March 2017	33327	

Measured Household Property Movement

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured or measured water, therefore we don't report figures for measured household property movements (they are included in the unmeasured line as they are not billed).

Unmeasured Non-Household Property Movement

Property Numbers	March 2018	1st Dec 2018	March 2019
Unmeasured Sewerage Gross Non-Household	12557	12342	12284
Unmeasured Sewerage Occupied Non-Household (L6 year end sub calc)	7350	7313	7373
Unmeasured Sewerage Voids Non-Household	5207	5029	4911

Measured Non-Household Property Movement

Property Numbers	March 2018	1st Dec 2018	March 2019
Measured Sewerage Gross Non-Household	27879	28387	28614
Measured Sewerage Occupied Non-Household (L7 year end sub calc)	24994	25433	25598
Measured Sewerage Voids Non-Household	2885	2954	3016

Non-Household Voids

Non-Household Voids	Voids	Difference (in- year)
March 2019	7927	(-) 165
March 2018	8092	(-) 511
March 2017	8603	

Confidence Grades

We have kept the confidence grades consistent with those of AIR18. During the reviews mentioned in the company commentary above, we will retain evidence to support any change in confidence grades.

Whilst the quality of data will improve, the method of extraction and reporting remained consistent. The automated tool (developed during AIR12) to populate the base property tables has remained in place for AIR19.

Annex A details the Line Methodology followed to calculate the figures within Table 13 Lines 1-10

Annex A – Line Methodology for Table 13 Lines 1-10

A) Sewerage Properties and Population

Line 1: Household Properties Connected during the Year

This line represents the number of new household (domestic) properties added to the sewerage network during the reporting year (Previously not connected to the sewerage system).
The figures are based on the New Connections reported by the Customer Connection Team (CCT). A series of filters was then applied to identify New Connections connected for sewerage, as per embedded document. It is NIW policy to install meters on all Non-Domestic New Connections.

AIR 19 NC_6587 Sewerage.xlsx

Households properties connected during the year	**6240**

The number of new domestic connections for the year is 6240.

Line 2: Non-Household Properties Connected during the Year

This line represents the number of new non-household (non-domestic) properties added to the sewerage network during the reporting year (Previously not connected to the sewerage system).
The figures are based on the New Connections reported by the Customer Connection Team (CCT). A series of filters was then applied to identify New Connections connected for sewerage, as per embedded document. It is NIW policy to install meters on all Non-Domestic New Connections.

Non-Households properties connected during the year	**347**

The number of new non-domestic connections for the year is 347.

B) Billing

Line 3: Households Billed Unmeasured Sewerage

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured sewerage.
This figure refers to the average number of households billed for unmeasured sewerage within the supply area. Void properties have been excluded, so occupied numbers only used.
This is calculated from the monthly Rapid Property Summary for AIR19 (dated 31st March 2019) as embedded below.

RPS March YE 2019.xlsx

Households Billed Unmeasured Sewerage	End March 2018	End March 2019
Household - Unmeasured	592465	602398
Household - Sewerage Only	6	7
Household - Measured – Not Charged (test meters)	124	99
Household - Measured	30989	31023
Household – Site Meters	825	1064
Household - Unmeasured - Not Charged	14	11
Total	624423	634602
Average (Apr18/Apr19)	**629513**	

The figure represents the number of unmeasured domestic properties that would have been billed had charging been introduced.

Line 4: Households Billed Measured Sewerage

Due to the deferral of domestic charging, NI Water does not bill households for measured water. Therefore any household properties that would have been included in line 4 are included in line 3.

Households Billed Measured Sewerage	End March 2018	End March 2019
	0	0
Average (Apr18/Apr19)	**0**	

Line 5: Households Billed Sewerage

Due to the deferral of domestic charging, NI Water does not bill households for sewerage. This figure excludes void properties and is calculated as below:
(Table 13 line 2 plus line 4)

Households Billed Sewerage	Average 18/19
Households billed unmeasured sewerage	629513
Households billed measured sewerage	0
Total	**629513**

This figure represents the number of domestic properties that would have been billed had charging been introduced.

Line 6: Non-Households Billed Unmeasured Sewerage

This is the average number of non-households billed for unmeasured sewerage within the supply area, calculated from the Rapid Property Summary.
Figures are based on an average of Rapid End March 2018 and End March 2019 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Sewerage	End March 2018	End March 2019
Non-Household - Unmeasured	7336	7361
Non-Household - Sewerage Only	14	12
Total	7350	7373
Average (Apr18/Apr19)	**7362**	

Line 7: Non-Households Billed Measured Sewerage

This refers to the average number of non-households billed for measured sewerage within the supply area, calculated from the Rapid Property Summary.
Figures are based on an average of Rapid End March 2018 and End March 2019 non-domestic measured properties.

Non-Households Billed Measured Sewerage	End March 2018	End March 2019
	24994	25598
Average (Apr18/Apr19)	**25296**	

Site metered properties are a subset of the overall non-domestic billed measured sewerage customer base, therefore not included in the figure above to avoid duplication (as per AIR19 Table 7). E.g. where multiple businesses/properties are served through one site meter, only the landlord or business park management is considered as the customer.

Line 8: Non-Households Billed Sewerage

This is the total number of non-households billed for sewerage within NI Water's area, excluding void properties. It is a calculated figure of Table 13 Lines 6 and 7.

Non-Households Billed Sewerage	Average 18/19
Non-Households Billed Unmeasured Sewerage	7362
Non-Households Billed Measured Sewerage	25296
Total	**32658**

Line 9: Void Properties

This is the average number of properties, within the supply area, which are connected to the sewerage system but do not receive a charge, as there are no occupants – (void properties) This is calculated from the Rapid Property Summary for AIR19 by calculating the gross number of properties connected to the sewerage system minus the total number occupied as calculated in lines 5 and 8.

Gross Number of Properties Connected to the Sewerage System	End March 2018	End March 2019
Household - Unmeasured	620990	630987
Household - Sewerage Only	6	7
Household – Measured - Not Charged (test meters)	129	104
Household - Measured	35273	35289
Household – Site Meters	1468	1882
Household - Unmeasured - Not Charged	16	13
Non-Household – Unmeasured	12538	12266
Non-Household – Sewerage only	19	18
Non-Household - Measured	27879	28614
Total	698318	709180
Average (Apr18/Apr19)	**703749**	

Trade Effluent customers have been excluded from the above figure as they could already be included in measured sewerage. Trade effluent is considered within other tables of the AIR19 submission.

Voids	End March 2019
Total Gross Properties (as above)	703749
Less total occupied properties (line 5+line 8) =	662170
Total	**41579**

*rounding issues noted in table above - spreadsheet calculation results in a figure of 41579

C) Population

Line 10: Total Connected Population

This figure is a calculation of the total population multiplied by the properties connected to the sewerage system as a proportion of the properties connected for water (according to the Rapid Property Summary).

The average totals for gross occupied sewerage and water properties are obtained using the Rapid Property Summary for End March 2018 and End March 2019.

	End March 2018	End March 2019	Average 18/19		
Gross number of properties connected for sewerage	698318	709180	703749		
Gross number of properties connected for water (T7 L7 + T7 L11)	862988	874307	868648		
Calculation = Sewerage Properties / Water Properties	= (703749 / 868648) * 100		**81.02%**	**Therefore, Total Connected Population equals (Table 7 Line 17 [1,873,140] * 81.02%) + Table 17a Line 2 [33,097]**	**1,550,715**
				1,517,618+33,097	

As detailed above, the number of sewerage properties has been calculated as 81.02% of those with water; this percentage is then applied to the total water population from Table 7 Block C.
(Water population total (Source Peter Nicholl) X 81.02%) + Non-Resident Population (Source Lisa Woodman) = Table 13 line 10

(1,873,140 X 81.02%) = 1,517,618 + 33,097 = 1,550,715

T13 L10	**1550.715**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 14 NON FINANCIAL MEASURES
SEWAGE COLLECTED (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**SEWAGE - VOLUMES**																				
1	Volume unmeasured household sewage	Ml/d	2	243.14	B3	232.74	B3	237.61	A2	238.81	A2	244.60	B2	244.35	A2	255.21	A2				
2	Volume unmeasured non-household sewage	Ml/d	2	5.53	B3	4.89	B3	4.69	A2	4.25	A2	4.18	B2	4.16	A2	4.46	A2				
3	Volume unmeasured sewage	Ml/d	2	248.67	B3	237.63	B3	242.3	A2	243.06	A2	248.78	B2	248.51	A2	259.67	A2				
4	Volume measured household domestic sewage	Ml/d	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
5	Volume measured non - household domestic sewage	Ml/d	2	35.9	B3	36.65	B3	39.11	B3	38.72	B3	41.50	A2	39.21	A2	40.16	A2				
6	Volume trade effluent (excluding Roads Drainage)	Ml/d	2	34.12	B2	41.73	B2	48.49	B2	49.96	B2	49.00	B2	52.19	B2	48.28	B2				
7	Volume waste water returned	Ml/d	2	318.69	B3	316.01	B3	329.90	B3	331.74	B3	339.28	B3	339.91	B2	348.11	B2				
8	Volume of Roads Drainage returned	Ml/d	2	175.80	CX	175.80	CX	175.80	CX	175.80	CX	175.80	CX	175.80	CX	175.80	CX				

Table 14 – Non Financial Measures - Sewage Collected (Total)

Line 1 – Volume Unmeasured Household Sewage

This is calculated by assuming a 95% return to sewer of volume delivered to households factored by the percentage of the number of households billed for water against the number of households billed for sewerage services.

Sources

- AIR Table 10 Line 4 – Billed unmeasured household (Ml/d)
- AIR Table 13 Line 3 – Households billed unmeasured sewage
- AIR Table 7 Line 3 – Households billed unmeasured water

$$\text{Volume of unmeasured household sewage (Ml/d)} = \text{AIR Table 10 Line 4} \times 0.95 \times \frac{\text{AIR Table 13 Line 3}}{\text{AIR Table 7 Line 3}}$$

It is worth noting that water Billed unmeasured household volume includes the MLE adjustment, meter under registration and supply pipe leakage.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. The source of the PCC figure is the NI Water domestic consumption monitor. The household population figure is sourced from the Northern Ireland Statistics and Research Agency (NISRA).

Underground Supply Pipe leakage has been applied to the billed unmeasured household volume component of this calculation.

A meter under registration factor of 6.44% has been applied to this total volume. This percentage has been provided by WRc, as a result of a project initiated by NI Water, and is specific to NI Water's domestic consumption monitor meters.

The AIR19 volume reported for unmeasured household sewage is 255.21 Ml/d. The volume reported in AIR18 was 244.35 Ml/d.

Line 2 - Volume Unmeasured Non-Household Sewage

This is calculated by assuming a 95% return to sewer of volume delivered to non-households factored by the percentage of the number of non-households billed for water against the number of non-households billed for sewerage services.

Sources

- AIR Table 10 Line 5 – Billed unmeasured non-household (Ml/d)
- AIR Table 13 Line 6 – Non-households billed unmeasured sewage
- AIR Table 7 Line 8 – Non-households billed unmeasured water

$$\text{Volume of unmeasured Non-household sewage (Ml/d)} = \text{AIR Table 10 Line 5} \times 0.95 \times \frac{\text{AIR Table 13 Line 6}}{\text{AIR Table 7 Line 8}}$$

It is worth noting that water Billed unmeasured non-household volume includes the MLE adjustment, meter under registration and supply pipe leakage.

The reported value for Billed Unmeasured Non-Household for AIR19 is 5.49 Ml/d. The value reported in AIR18 was 5.14 Ml/d.

The AIR19 volume reported for unmeasured non-household sewage is 4.46 Ml/d. The volume reported in AIR18 was 4.16 Ml/d.

Line 5 - Volume Measured Non-Household Domestic Sewerage

The reported sewerage figure was based on actual billed sewerage discharge April 18 to March 19. The discharge volumetric information was derived directly from;

- The monthly 'Reconciling' Reports Apr18 - Mar19, detailing actual billed sewerage discharge m^3.
- The DfI Domestic Allowance Subsidy Assurance Report Apr18 – Mar19, detailing actual domestic sewerage allowance applied per bills.
- Monthly FN12 Transaction Reports Apr18 – Mar19, detailing Bad Debt Write-Off by Charge Type.

The calculated sewerage discharge volume was 14,658,568 m^3 converted to mega litres per day of 40.16 Ml/d.

Sewerage volume is 2% (345,495m^3 | 0.95Ml/d) greater than last year.

The increase in sewerage volume can be categorised as follows;

- 270,000m^3 – underlying increase in billed sewerage volume.
- 70,000m^3 – increase in retrospective billing linked to the ongoing 'Achieving Customer Excellence' (ACE) programme of work.

The ACE programme is a customer focused programme incorporating a number of projects to improve the integrity and completeness of customer account configuration and subsequent billing.

This line has been allocated a confidence grade of A2 as it has an element of manual manipulation of raw data from Rapid report to derive the full year discharge m^3.

Line 6 - Volume Trade Effluent

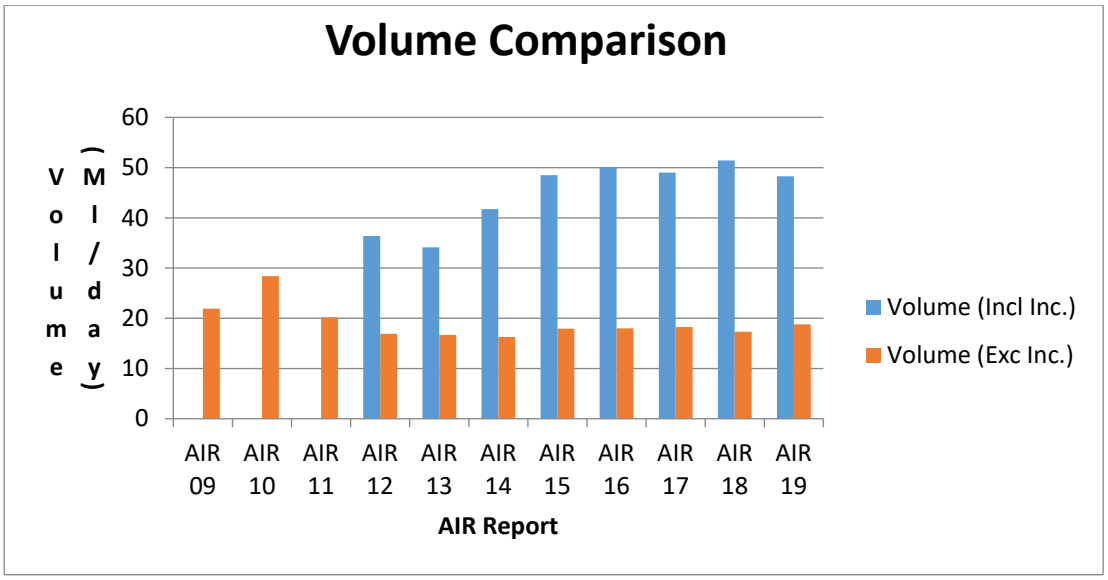
Sources

The names of individual traders were taken from Primary Source of Trade Effluent Customers (PSTEC). This database is updated by NIW on a regular basis. The chargeable volume of each trader was supplied by our Billing Section in Metered Accounts Management. Where no volumes were available, the consented volumes were used. This applied to 11 traders out of 594 assessed. The total number of traders has increased from 579 in AIR18 to 594 in AIR19.

The total volume for AIR 18 and 19 are detailed below:

AIR 18 Volume = 51.42 Ml/day
AIR 19 Volume = 48.28 Ml/day

In order to analyse these figures it has been decided to break them down into volumes including [redacted] and volumes without, to better identify the current trends in data.



There has been a 4.63Ml/day decrease of effluent discharged from Duncrue incinerator during this period (34.11 Ml/day to 29.48 Ml/day). Comparing the total AIR 19 volume to the AIR 18 volume there has been an overall decrease of 3.14 Ml/day. With the volumes for [redacted] excluded there has been an increase of 1.49 Ml/day.

Summary of Volumes changes between AIR18 and AIR19 excluding the incinerator are detailed below:

[redacted]

The increase in volume of 1.49Ml/Day can be attributed to a general increase in volume across all NIW and PPP categories, with exception to South PPP Standard Charge customers (volume remains unchanged between reporting periods at 0.24Ml/Day), and a decrease of 0.09Ml/Day for Southern Standard Charge customers.

As detailed in the commentary for Table14 Lines6 in AIR18, there was a minor volume discrepancy found in NE Standard Charge data, which lead to a total volume of 52.19Ml/Day being reported, this error has been rectified in the comparative data for AIR19 and the reference value of 51.42Ml/Day has been used for the 2018 data set.

Line 7 – Volume of Waste Water Returned

This line is a calculation of the figures from lines 3, 4, 5 and 6. The components of this calculation received confidence grades of A2, A1, A2 and B2 respectively. As B2 was the lowest confidence grade for a component, this line has been allocated a confidence grade of B2.

Line 8 – Volume of Road Drainage returned

In line with the proposed methodology, we carried out the following steps:

1. Based on information provided by Road Service, determined the surface area of all roads and footpaths in urban areas (i.e. within the 40mph speed limit) as follows:
    - Urban road surface area 39,264,486 m².
    - Urban footway surface area 17,022,987 m².
    - Total urban road & footway surface area 56,287,473 m².

2. Obtained Northern Ireland average annual rainfall data from the Met Office over the last 10 years – 1.14m.
3. Using the above, calculated the annual volume of rain falling on these surfaces and hence the run-off from roads & footpaths discharged to NIW sewers and storm drains.
    - 56,287,473 x 1.14 = 64,167,719m3 (175.80 MLD)
4. From data extracted from NIW's network information management system (NIMS) for the largest 105 urban areas in Northern Ireland (i.e. all areas with greater than 1,000 population) we determined the following:
    - Aggregate length of combined sewers = 4,378km
    - Aggregate length of stormwater sewers = 4,317 km

    Both of these figures were adjusted to allow for those stormwater sewers which –rather than discharging to a watercourse – are connected into the combined system.
    Applying the assumption that the sewer lengths represent a 'proxy' estimate of road lengths, this yields an approximate **50:50** split between areas draining to combined systems and those draining to separate systems.
5. Using points 3 and 4 the volumes of Road Drainage returned are calculated as follows:
    - Volume returned to combined sewer = 87.9 MLD
    - Volume returned to storm sewer = 87.9 MLD
    - Total Volume returned to sewer = 175.80 MLD

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (NIW Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**SEWAGE - LOADS**																				
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	3,778.6	B2	3,880.2	B2	5,322.6	B2	5,005.0	B2	4,378.9	B2	4,595.0	B2	5,036.5	B2				
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	39,183.9	C3	39,160.6	C3	38,946.1	C3	38,977.2	C3	38,552.9	C3	39,123.7	C3	42,246.8	C3				
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	286.6	C3	273.9	C3	210.8	C3	211.2	C3	211.0	C3	212.2	C3	212.2	C3				
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	691.5	C3	634.4	C3	634.4	C3	669.9	C3	670.0	C3	389.7	C3	389.7	C3				
5	Total load entering sewerage system (BOD/year)	tonnes	1	40,312.8	C5	40,213.4	C5	39,929.7	C5	39,991.8	C3	39,561.2	C3	39,850.2	C3	42,980.4	C3				
6	Equivalent population served (resident)	000	2	1,806.82	C5	1,802.63	C5	1,789.68	C5	1,792.79	C3	1,773.11	C3	1,785.8	C3	1,928.3	C3				
7	Equivalent population served (resident) (numerical consents)	000	2	1,742.90	C5	1,740.19	C5	1,727.76	C5	1,731.65	C3	1,712.28	C3	1,724.8	C3	1,867.0	C3				
B	**SEWERAGE - SERVICE FACILITIES**																				
8	Number of sewage treatment works	nr	0	1,018	A2	1,015	A2	1,016	A2	1,015	A2	1,015	A2	1,015.0	A2	1,015.0	A2				
9	Treatment capacity available (BOD5/day)	tonnes	1	132.4	D3	133.4	D3	134.2	D3	134.1	D3	134.2	D3	135.0	D3	135.6	D3				
C	**SEWAGE - SLUDGE DISPOSAL**																				
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
15	Total sewage sludge produced	ttds	1	32	B2	32.491	B2	33.5	B2	33.7	B2	37.2	B2	35.7	B2	35.4	B2				
16	Total sewage sludge transferred to PPP	ttds	1	31.3	A2	31.7	A2	32.6	A2	32.9	A2	36.4	A2	34.9	A2	0.0	A2				
17	Total sewage sludge disposal by NI Water	ttds	1	0.8	B2	0.8	B2	0.9	B2	0.8	B2	0.8	B2	0.8	B2	0.7	B2				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (PPP Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**SEWAGE - LOADS**																				
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	1,040.6	B2	1,082.3	B2	1,117.7	B2	1,094.1	B2	1,232.3	B2	1,418.4	B2	1,710.4	B2				
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	6,594.9	B3	7,209.1	B3	7,031.9	B3	7,153.2	B3	7,360.2	B3	6,909.8	B3	7,386.2	B3				
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1				
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1				
5	Total load entering sewerage system (BOD/year)	tonnes	1	6,594.9	C5	7,209.1	C5	7,031.9	B2	7,153.2	B2	7,133.2	B2	6,909.8	B2	7,386.2	C3				
6	Equivalent population served (resident)	000	2	301.14	B2	329.18	B3	321.09	B3	326.41	B3	325.72	B3	315.51	B3	337.27	B3				
7	Equivalent population served (resident) (numerical consents)	000	2	301.14	B2	329.18	B3	321.09	B3	326.41	B3	325.72	B3	315.51	B3	337.27	B3				
B	**SEWERAGE - SERVICE FACILITIES**																				
8	Number of sewage treatment works	nr	0	6	A1	6	A1	6	A1	6	A1	6	A1	6	A1	6	A1				
9	Treatment capacity available (BOD5/day)	tonnes	1	30.4	B3	30.4	A2	30.4	A2	30.4	A2	30.4	A2	30.4	A2	30.4	A2				
C	**SEWAGE - SLUDGE DISPOSAL**																				
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
15	Total sewage sludge produced	ttds	1	6.3	B2	6.4	A2	6.7	B3	5.7	B3	5.9	B3	6.0	B3	6.6	B3				
16	Total sewage sludge received from NI Water	ttds	1	31.3	A2	31.7	A2	32.6	A2	32.9	A2	36.4	A2	34.9	A2	35.5	A2				
17	Total sewage sludge disposal	ttds	1	37.6	B2	38.1	A2	39.3	B2	38.6	B2	42.3	B2	40.9	B2	41.3	B2				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (Total)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**SEWAGE - LOADS**																				
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	4,819.2	B2	4,962.6	B2	6,440.3	B2	6,099.1	B2	5,611.2	B2	6,746.9	B2	6,746.9	B2				
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	45,778.8	C3	46,369.7	C3	45,978.0	C3	46,130.4	C3	45,913.1	C3	49,633.0	C3	49,633.0	C3				
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	286.6	C3	273.9	C3	210.8	C3	211.2	C3	211.0	C3	212.2	C3	212.2	C3				
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	691.5	C3	634.4	C3	634.4	C3	669.9	C3	670.0	C3	389.7	C3	389.7	C3				
5	Total load entering sewerage system (BOD/year)	tonnes	1	46,907.7	C5	47,422.5	C5	46,961.6	C5	47,145.0	C3	46,694.4	C3	50,366.6	C3	50,366.6	C3				
6	Equivalent population served (resident)	000	2	2,107.96	C5	2,131.81	C5	2,110.77	C5	2,119.20	C3	2,098.83	C3	2,265.6	C3	2,265.6	C3				
7	Equivalent population served (resident) (numerical consents)	000	2	2,044.04	C5	2,069.37	C5	2,048.85	C5	2,058.06	C3	2,038.00	C3	2,204.2	C3	2,204.2	C3				
B	**SEWERAGE - SERVICE FACILITIES**																				
8	Number of sewage treatment works	nr	0	1,024	A2	1,021	A2	1,022	A2	1,021	A2	1,021	A2	1,021.0	A2	1,021.0	A2				
9	Treatment capacity available (BOD5/day)	tonnes	1	162.8	D3	163.8	D3	164.6	D3	164.5	D3	164.6	D3	166.0	D3	166.0	D3				
C	**SEWAGE - SLUDGE DISPOSAL**																				
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
15	Total sewage sludge produced	ttds	1	38.4	B2	38.9	A2	40.2	B2	39.4	B2	43.1	B2	6.60	B3	6.60	B3				
16	Not used	ttds	1																		
17	Total sewage sludge disposal	ttds	1	38.4	B3	38.9	A2	40.2	B2	39.4	B2	43.1	B2	41.30	B2	41.30	B2				

Table 15 - Sewage Treatment

Line 1 - Trade effluent load receiving secondary treatment (BOD/year)

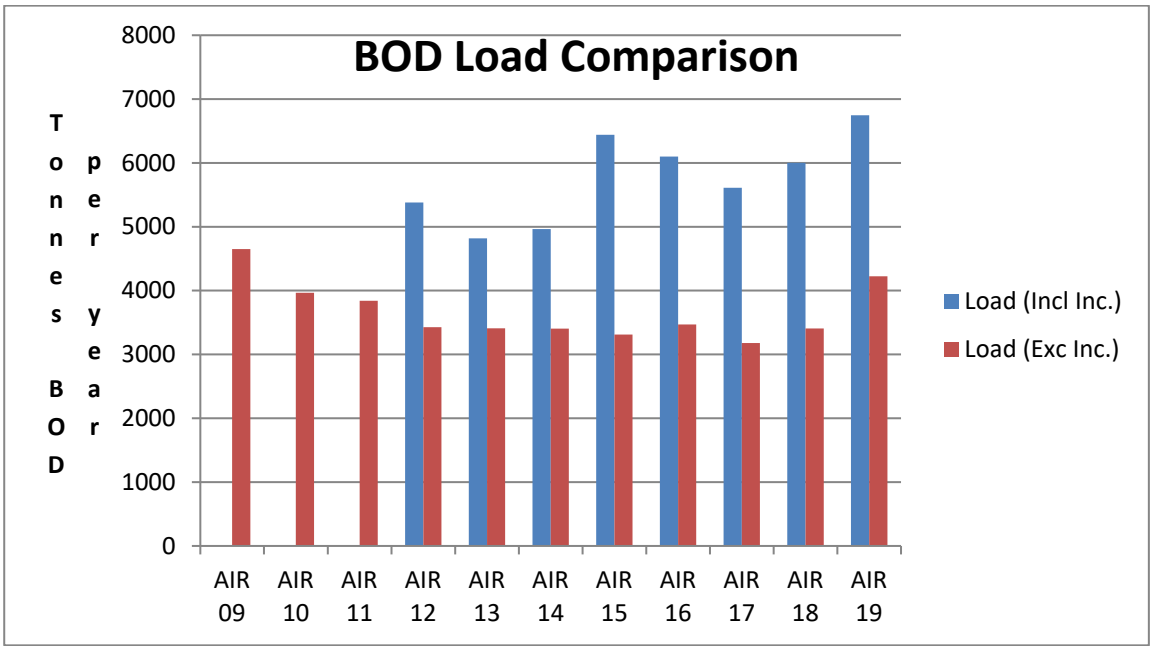
The names of individual traders were taken from the Primary Source of Trade Effluent Customers (PSTEC). This database is updated by NIW on a regular basis. The actual BOD strength of each sampled trader was used for the calculation of the load. Where an actual BOD strength was not available i.e. for sites that are not sampled, the discharge was assumed to be either standard strength, fixed industry strength or bespoke strength, a calculated BOD strength using the conversion factor detailed in the methodology document was used.

When determining the BOD conversion factor it was noted that due to a scheduling error on the Laboratory Information Management Systems (LIMS), 'Mogden' samples where not collected from 3 of the larger PPP WwTWs. Corrective action has been implemented and these samples will be included in future reports.

The loading for this year's and the previous year's reports were as follows:

AIR19 = 6746.9 tonnes BOD/year
AIR18 = 6001.3 tonnes BOD/year

In order to analyse these figures they have been separated to show loading including [redacted] and loading excluding [redacted].



The loading from [redacted] has decreased by 71.78 tonnes BOD/year from 2595.09 tonnes BOD/year (AIR18) to 2523.31 tonnes BOD/year (AIR19). Overall the loading for AIR19 increased by 745.55 tonnes BOD/year. With the decrease from the incinerator removed from this figure, the difference between the two reports is an increase of 817.33 tonnes BOD/year.

As detailed in the methodology, the Fixed Strength COD's were then converted to a BOD strength. The strengths in the report are detailed below:

Industry Type	Settled COD (mg/l)	BOD (mg/l)
Vehicle Wash (Jet)	517	386
Vehicle Wash (Roller)	108	81
Vehicle Wash (Combined)	313	234
Industrial Laundry	722	539
Swimming Pool Filter Backwash	36	27
Small Brewery	2648	1976
Cattlemarts	1404	1048
Wheelie Bin Cleaners	406	303
Launderettes	478	357
Standard Strength	260	194

Summary of BOD loading changes between AIR18 and AIR19 are detailed below:

Comparison of AIR18 and AIR19 BO

There were increases in loading reported in all regions for Sampled and Charged traders, as well as NW Standard Charge traders. These increases equated to 846.4 tonnes BOD/year, the most significant of these increases were for traders in the NE PPP Sampled and Charged (67.7 tonnes BOD/year), South PPP Sampled and Charged (218.6 BOD tonnes BOD/year), North West Sampled and Charged (102.1 tonnes BOD/year) and South Sampled and Charged (422.1 tonnes BOD/year).

There were decreases in loading reported South PPP Standard Charge, and also NE and South Standard charge traders. The total reduction was 29 tonnes BOD/year, the most significant of which were the South Standard Charge traders (reduction of 19.7 tonnes BOD/year).

The net of these changes equates to the 817.3 tonnes BOD/year increase in AIR loadings with the [redacted] figures excluded.

In summary there have been loading increases across all trader areas in AIR19, with exception to South PPP Standard Charge, NE Standard Charge and South Standard Charge traders.

As detailed in the commentary for Table15 Line1 in AIR18, there was a minor volume discrepancy found in the NE Standard charge volume data for [redacted] which resulted in an annual volume of 311256 m^3/year being reported in error. Substituting the correct volume reduces the total tonnes BOD/year from 6013.4 to 6001.3, this error has been rectified in the comparative data for AIR19.

NIW Only

Line 2 - 7 – Sewage loads

Future Improvements

As part of the PC21 submission an asset management plan (NIAMP5) is being undertaken. This includes a WwTW PE refresh/update. The update is a theoretical desk top exercise, primarily based on Land Property Services (LPS) Pointer data sets and the current Asset Standard - Wastewater Flow and Population Determination – v1.6 – January 2019. It is

hoped the update will be automated so as NI Water's GIS system is updated with pointer data, the WwTW PE system will be updated accordingly. Early indications are there will be substantial changes across the WwTW actual PEs.

It should be noted that the banding of the WWTWs for this table is on the same basis as that used for Table 17c. It is based on the latest set of Populations Equivalents minus the allowance for the tourist population. Since AIR18, PEs for 80 WWTWs have been updated.

The allowance for the tourist population, which has been deducted for the purposes of band size determination, has been the proportion of PE allocated to hotels, and caravan and tent pitches only. No deduction has been made for commuters as such information has not been captured.

The loads reported in this table are the sums of the loads received by each WWTWs or outfall in each particular category, and hence include the proportion of PE allocated to hotels, and caravan and tent pitches therefore loads reported in this table include the non-resident population. The method for computing loads from NIW only WWTWs is the same as was implemented for AIR18, there has been no inclusion of re-circulated sludge/sludge liquors in the loads reported.

Trade effluent information was obtained from NIW's Trade Effluent Section, for each individual consented trader, which enabled easy conversion to PEs. The COD: BOD conversion factor of 2:1 was not used as more accurate flow based information was available to the Trade Effluent Section.

The Water and Sewerage Services (NI) Order 2006 designated that the discharge from hospitals, nursing homes & clinics should no longer be considered as Trade Effluent, therefore for AIR19 these have been removed from the Trade Effluent Submission. For the majority of hospitals a certain percentage of hospital discharges has been included due to discharges from x-ray departments and bathing pools. The AIR11 Trade Information, for nursing homes and clinics, has been maintained for AIR19 in order to allow for this proportion of the influent entering the WWTWs. Similarly the PEs for the hospitals has been factored up to 100% of their total discharge to give a more accurate figure of load discharging to the sewerage network.

In AIR13 it was reported that flow & load information was validated for Belfast and a figure of 365,000 PE was agreed. Since then the only update to Belfast PE figure has been the latest trade information. As part of the Living with Water Programme, a population review for Belfast WwTW has been undertaken. The review is a theoretical approach based on the current Asset Standard – Wastewater Flow & Population Determination v1.6 and provides a PE of 485,234. Please note an element of this figure, 123,688, is made up of trade effluent information provided by NIW's Trade Effluent Section and is based on measured data. The trade figure includes returns from the sludge incinerator which is operated by a PPP concessionaire on behalf of NI Water. For previous returns the incinerator returns were excluded, the thinking being it did not form part of Belfast catchment. For this review this understanding has been challenged and, as the return from the incinerator is a significant loading and can have a major impact on the process, has been included. The PE figure of 485,234 has been adopted for AIR19.

NIW has information pertaining to septic tank imports to its WWTWs. In summary of the 17 WWTWs that are septic tank imports centres four receive the sludge at the head of the inlet works and the remaining 13 receive it via sludge reception centres

For AIR19 conversion factors, received from our scientific staff, were used to convert the septic tank imports to PEs for the 4 WWTWs where imports are discharged directly to the inlet works.

Allowance at the other 13 WWTWs is not being made as there is no way of computing the PE of the supernatant return as a result of the septic tank imports.

The WWTWs where this sludge was discharged at the head of the works were Belfast, Glenstall, Limavady and Lisburn (New Holland). A conversion was used to get an equivalent PE which was adopted for these sites for AIR13.

An assumption of 1% dry solids was made for Suspended Solid (SS) loading and an equivalent PE based on 60g of SS solids per PE was used

			PE Calculation			
NIW CAR Name	**Site Car Id**	**Total Volume m3/Yr**	**Total Volume m3/day**	**SS Loading (Assume 1% Dry Solids) m3/day**	**SS Loading kg/day**	**PE (SS/0.06)**
Belfast	345	749.751	2.05	0.02	20.54	342
Glenstall	1109	6204.033	17.0	0.17	169.97	2833
Limavady	3162	25.683	0.07	0.001	0.7	12
Lisburn (New Holland)	329	8485.18	23.25	.23	232.47	3875

NIW has also information pertaining to Sludge Imports to its WWTWs however due to the fact that the supernatant return is metered at only a small number of WWTWs, it would appear that these meters require verification and perhaps calibration. Therefore no allowance is being made for PE resulting from sludge imports at these works.

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total WWTW loads due to the inclusion of offices/commercial premises. The majority of the residential and non-residential element of PEs used to calculate tables 17c and 17d was based on Pointer information from MapInfo. However it should be noted that the non-residential element of Pointer is made up of both commercial and unknown properties. At this present time it is not known what proportion of the unknowns are actually residential and which are non-residential and therefore it has been decided to include both elements when calculating the PEs for the band sizes. It is difficult to estimate the proportion of load at a WWTW due to commuters, or the load which should be deducted from/added to a particular WWTW due to population commuting out of/into the catchments. Hence no allowance to WWTWs loads has been made either way for Table 17d.

The only allowance made for newly connected properties is where a population studies have been carried out for a drainage catchment during the reporting year and the recommendations have been considered and agreed upon. Where a population study has not been completed for a drainage catchment no allowance has been made for newly connected properties. It should be noted that some drainage catchments may not have had a population review undertaken for several years. Going forward the exercise explained under ‘Future Improvement’ above will address this shortfall.

The table below gives a breakdown of the total load received by the company in '000 tonnes of BOD per annum, by each component used to build up the reported data. Please note the total equates to Line 5 (minor discrepancy due to rounding up of fractions).

Components used in build-up of Total Load	Total PE	000 tonnes of BOD per annum
Residential	1,247,625	27,322.98
Non-Residential	223,246	4,889.08
Hotels	4,369	95.67
Nursery School	1,217	26.64
Playschool	1,069	23.41
Primary School	30,050	658.09
Secondary School	29,942	655.73
Trade PE	238,366	5,220.22
Large (>7500m3) Consumers	132,552	2,902.89
Caravan Parks	29,923	655.31
Sludge Import / Export / Supernatant (Sludge Import to Inlet of Works – to 4 WWTWs 9702 PE)	24,216	530.33
Total (Line 5)	**1,962,575**	**42,980.35**

Confidence Grades

The confidence grades of the data in lines 2 - 4 remain as C3.

The Reporter recommended in AIR14 and in AIR15 (Recommendation No 28/Reporter's Report Reference Table 15 Lines 2-9 S7) that NI Water consider increasing the confidence grades for lines 5 – 7 from C5 to C3. Following discussions with the Reporter, the confidence grades for these lines in AIR16 have been amended to reflect this recommendation and have been carried over to AIR19.

The confidence grades of the data in lines 8 and 9 remain as in AIR15, due to the confidence in the other information associated with the population of these lines.

The AIR 14 Reporter also recommended that NI Water should consider increasing the confidence grade for PPP Works (line 5) from C5 to B2. The latter was duly carried out for AIR15 and taken forward to subsequent AIRs.

Line 2 - Total load receiving secondary treatment

The table below shows the changes in WWTWs receiving secondary treatment since AIR18 for Line 2. NB. Change in PE (-Ve AIR19 PE Higher).

Name of Works	CAR Site ID	PE Change	Comments
Aghanloo (1)	S02989	-83	PE updated with AIR19 Trade Information
Annsborough	S02687	110	PE updated with AIR19 Trade Information
Antrim (WWTW)	S01422	-1073	PE updated with AIR19 Trade Information
Ardglass (WWTW)	S00268	-76	PE updated with AIR19 Trade Information
Ballyclare	S01467	-77	PE updated with AIR19 Trade Information
Ballykelly (L/Derry)	S03016	-33	PE updated with AIR19 Trade Information
Ballylintagh (New)	S01135	-38	PE updated with AIR19 Trade Information
Ballymena (WWTW)	S01456	-7289	PE updated with AIR19 Trade Information

Name of Works	CAR Site ID	PE Change	Comments
Ballyronan (WWTW)	S01558	106	Actual PE updated following APT PE assessment.
Banbridge (WWTW)	S02102	24	PE updated with AIR19 Trade Information
Beagh	S01605	1	Actual PE updated following RWwIP PE Review
Belfast (WWTW)	S00345	-120096	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Bovean	S02793	6	Actual PE updated following RWwIP PE review
Broagh	S01607	5	Actual PE updated following RWwIP PE Review
Buckna (WWTW)	S01432	7	Actual PE updated following RWwIP PE Review
Bushmills (WWTW)	S01178	-9	PE updated with AIR19 Trade Information
Carmean	S01608	8	Actual PE updated following RWwIP PE Review
Carrickfergus (WWTW)	S00261	-85	PE updated with AIR19 Trade Information
Coalisland	S02828	-61	PE updated with AIR19 Trade Information
Cookstown (WWTW)	S01582	1348	PE updated with AIR19 Trade Information
Craignasasonagh	S00308	2	Actual PE updated following RWwIP PE Review
Craigywarren	S01437	10	Actual PE updated following RWwIP PE Review
Culmore (WWTW)	S03071	1768	PE updated with AIR19 Trade Information
Derrycrin	S01567	59	Actual PE updated following APT PE assessment
Derryhale	S02570	182	PE updated with AIR19 Trade Information
Dervock (WWTW)	S01102	1	PE updated with AIR19 Trade Information
Donaghmore (WWTW)	S02840	-76	PE updated with AIR19 Trade Information
Donemana	S03103	149	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Donnybrewer	S03080	1	PE updated with AIR19 Trade Information
Downpatrick (WWTW)	S00771	1283	Sludge import PE removed as imports have reverted back to reception centre following screen being brought back into serve. PE updated with AIR19 Trade Information
Draperstown	S01615	1	PE updated with AIR19 Trade Information
Dromara (WWTW)	S00316	-2	PE updated with AIR19 Trade Information
Dromore (Down)	S02127	-24	PE updated with AIR19 Trade Information
Drumaness (WWTW)	S00293	-229	Actual PE updated following Consultant PE Review
Drumard Primate (WWTW)	S02404	4	Actual PE updated following RWwIP PE Review
Dungannon	S02850	-11277	PE updated with AIR19 Trade Information
Dungiven	S03101	1	PE updated with AIR19 Trade Information
Dunmurry	S00346	-346	PE updated with AIR19 Trade Information
Eglish (Tyrone)	S02843	-80	Actual PE updated following APT assessment
Enniskillen	S03218	649	PE updated with AIR19 Trade Information
Fivemiletown (WWTW)	S03113	-25	PE updated with AIR19 Trade Information
Glenstall	S01109	519	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Grange (Taylorstown)	S01442	3	PE updated with AIR19 Trade Information
Greenisland (WWTW)	S00263	-291	PE updated with AIR19 Trade Information
Greysteel (WWTW)	S03123	7	PE updated with AIR19 Trade Information
Hilltown (WWTW)	S02701	2	PE updated with AIR19 Trade Information

Name of Works	CAR Site ID	PE Change	Comments
Irvinestown	S03137	1	PE updated with AIR19 Trade Information
Keady (Armagh)	S02553	-1	PE updated with AIR19 Trade Information
Kilkeel (WWTW)	S00313	-72	PE updated with AIR19 Trade Information
Killinchy (WWTW)	S00252	311	PE updated with AIR19 Trade Information
Kilrea	S01156	-196	PE updated with AIR19 Trade Information
Larne (WWTW)	S02044	-3260	Catchment flow & load assessment carried out by WSP as part of Larne WwTW capacity assessment. PE updated with AIR19 Trade Information
Limavady (WWTW)	S03162	103	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisburn (New Holland)	S00329	1892	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisnamuck (Magherafelt)	S01626	4	Actual PE updated following RWwIP PE Review
Lisnaskea (WWTW)	S03171	368	PE updated with AIR19 Trade Information
Longfield (Eglinton)	S03173	38	Actual PE updated following APT PE Review PE updated with AIR19 Trade Information
Maghera (L/Derry)	S01629	-47	PE updated with AIR19 Trade Information
Magherafelt (WWTW)	S01621	-1594	Design PE updated. Correct design PE identified through NIAMP5 PE review. PE updated with AIR19 Trade Information
Moneymore (WWTW)	S01589	-2	PE updated with AIR19 Trade Information
Mountfield (WWTW)	S03192	-6	Actual PE updated following APT assessment
Mountnorris	S02248	-2	PE updated with AIR19 Trade Information
Moy (WWTW)	S02859	-369	PE updated with AIR19 Trade Information
Newmills (WWTW)	S02852	1	PE updated with AIR19 Trade Information
Newry (WWTW)	S02685	-2515	PE updated with AIR19 Trade Information
Newtownbreda (WWTW)	S00342	11	PE updated with AIR19 Trade Information
Newtownbutler (WWTW)	S03200	-10	PE updated with AIR19 Trade Information
North Coast (WWTWs)	S04150	93	PE updated with AIR19 Trade Information
Omagh (WWTW)	S03999	-3476	PE updated with AIR19 Trade Information
Portaferry (2)	S05200	-3	PE updated with AIR19 Trade Information
Rocktown	S01635	1	Actual PE updated following RWwIP PE Review
Roughfort (WWTW)	S01470	-8	PE updated with AIR19 Trade Information
Strabane	S03223	243	PE updated with AIR19 Trade Information
Tamnamore (WWTW)	S02862	-2	PE updated with AIR19 Trade Information
Tandragee	S02174	-618	PE updated with AIR19 Trade Information
Tartaraghan	S02421	8	Actual PE updated following RWwIP PE Review
Tirquin	S03230	-4	Actual PE updated following RWwIP PE Review
Tullyroan	S02600	5	PE updated with AIR19 Trade Information
Warrenpoint (WWTW)	S02720	1531	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Whitehouse	S00265	-17	PE updated with AIR19 Trade Information
	TOTAL	**-142606**	**Change in Line 2 since AIR18**

The change in PE equates to an increase in load of 3,123.07t BOD/yr (i.e. 142,606 x 60 for 60g/hd/day /1000/1000 x 365) from AIR18 to AIR19, allowing for rounding up and down and conversions.

Difference between AIR19 and AIR18 values (to 2 decimal places):

Line 2 for AIR19-	**42246.77**
Line 2 for AIR 18 -	**39123.74**
Total Difference -	**3,123.03**

Note – The difference in the above totals are due to rounding of values.

Line 3 - Total load receiving primary treatment only

There were no changes in WwTWs receiving primary treatment only since AIR18.

Difference between AIR19 and AIR18:

Line 3 for AIR19 -	**212.19**
Line 3 for AIR 18 -	**212.19**
Total Difference -	**0**

Line 4 - Total load receiving preliminary treatment only

There were no changes in WwTWs receiving preliminary treatment only since AIR18.

Difference between AIR19 and AIR19:

Line 4 for AIR19 -	**389.69**
Line 4 for AIR 18 -	**389.69**
Total Difference -	**0**

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR18 that affects load entering the system for Line 5. NB. Change in PE (-Ve AIR19 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Aghanloo (1)	S02989	-83	PE updated with AIR19 Trade Information
Annalong (WWTW)	S00300	-325	PE updated with AIR19 Trade Information
Annsborough	S02687	110	PE updated with AIR19 Trade Information
Antrim (WWTW)	S01422	-1073	PE updated with AIR19 Trade Information
Ardglass (WWTW)	S00268	-76	PE updated with AIR19 Trade Information
Ballyclare	S01467	-77	PE updated with AIR19 Trade Information
Ballyhornan Outfall	S04090	-1	PE updated with AIR19 Trade Information
Ballykelly (L/Derry)	S03016	-33	PE updated with AIR19 Trade Information
Ballylintagh (New)	S01135	-38	PE updated with AIR19 Trade Information
Ballymena (WWTW)	S01456	-7289	PE updated with AIR19 Trade Information
Ballyronan (WWTW)	S01558	106	Actual PE updated following APT PE assessment.
Banbridge (WWTW)	S02102	24	PE updated with AIR19 Trade Information
Beagh	S01605	1	Actual PE updated following RWwIP PE Review
Belfast (WWTW)	S00345	-120096	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Bovean	S02793	6	Actual PE updated following RWwIP PE review
Broagh	S01607	5	Actual PE updated following RWwIP PE Review
Buckna (WWTW)	S01432	7	Actual PE updated following RWwIP PE Review
Bushmills (WWTW)	S01178	-9	PE updated with AIR19 Trade Information
Carmean	S01608	8	Actual PE updated following RWwIP PE Review
Carrickfergus (WWTW)	S00261	-85	PE updated with AIR19 Trade Information
Coalisland	S02828	-61	PE updated with AIR19 Trade Information
Cookstown (WWTW)	S01582	1348	PE updated with AIR19 Trade Information
Craignasasonagh	S00308	2	Actual PE updated following RWwIP PE Review
Craigywarren	S01437	10	Actual PE updated following RWwIP PE Review
Culmore (WWTW)	S03071	1768	PE updated with AIR19 Trade Information

Name of Works	CAR ID	PE Change	Comments
Derrycrin	S01567	59	Actual PE updated following APT PE assessment
Derryhale	S02570	182	PE updated with AIR19 Trade Information
Dervock (WWTW)	S01102	1	PE updated with AIR19 Trade Information
Donaghmore (WWTW)	S02840	-76	PE updated with AIR19 Trade Information
Donemana	S03103	149	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Donnybrewer	S03080	1	PE updated with AIR19 Trade Information
Downpatrick (WWTW)	S00771	1283	Sludge import PE removed as imports have reverted back to reception centre following screen being brought back into serve. PE updated with AIR19 Trade Information
Draperstown	S01615	1	PE updated with AIR19 Trade Information
Dromara (WWTW)	S00316	-2	PE updated with AIR19 Trade Information
Dromore (Down)	S02127	-24	PE updated with AIR19 Trade Information
Drumaness (WWTW)	S00293	-229	Actual PE updated following Consultant PE Review
Drumard Primate (WWTW)	S02404	4	Actual PE updated following RWwIP PE Review
Dungannon	S02850	-11277	PE updated with AIR19 Trade Information
Dungiven	S03101	1	PE updated with AIR19 Trade Information
Dunmurry	S00346	-346	PE updated with AIR19 Trade Information
Eglish (Tyrone)	S02843	-80	Actual PE updated following APT assessment
Enniskillen	S03218	649	PE updated with AIR19 Trade Information
Fivemiletown (WWTW)	S03113	-25	PE updated with AIR19 Trade Information
Glenstall	S01109	519	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Grange (Taylorstown)	S01442	3	PE updated with AIR19 Trade Information
Greenisland (WWTW)	S00263	-291	PE updated with AIR19 Trade Information
Greysteel (WWTW)	S03123	7	PE updated with AIR19 Trade Information
Hilltown (WWTW)	S02701	2	PE updated with AIR19 Trade Information
Irvinestown	S03137	1	PE updated with AIR19 Trade Information
Keady (Armagh)	S02553	-1	PE updated with AIR19 Trade Information
Kilkeel (WWTW)	S00313	-72	PE updated with AIR19 Trade Information
Killinchy (WWTW)	S00252	311	PE updated with AIR19 Trade Information
Kilrea	S01156	-196	PE updated with AIR19 Trade Information
Larne (WWTW)	S02044	-3260	Catchment flow & load assessment carried out by WSP as part of Larne WwTW capacity assessment. PE updated with AIR19 Trade Information
Limavady (WWTW)	S03162	103	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisburn (New Holland)	S00329	1892	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisnamuck (Magherafelt)	S01626	4	Actual PE updated following RWwIP PE Review
Lisnaskea (WWTW)	S03171	368	PE updated with AIR19 Trade Information
Longfield (Eglinton)	S03173	38	Actual PE updated following APT PE Review PE updated with AIR19 Trade Information
Maghera (L/Derry)	S01629	-47	PE updated with AIR19 Trade Information
Magherafelt (WWTW)	S01621	-1594	Design PE updated. Correct design PE identified through NIAMP5 PE review. PE updated with AIR19 Trade Information
Moneymore (WWTW)	S01589	-2	PE updated with AIR19 Trade Information
Mountfield (WWTW)	S03192	-6	Actual PE updated following APT assessment
Mountnorris	S02248	-2	PE updated with AIR19 Trade Information
Moy (WWTW)	S02859	-369	PE updated with AIR19 Trade Information
Newmills (WWTW)	S02852	1	PE updated with AIR19 Trade Information
Newry (WWTW)	S02685	-2515	PE updated with AIR19 Trade Information
Newtownbreda (WWTW)	S00342	11	PE updated with AIR19 Trade Information
Newtownbutler (WWTW)	S03200	-10	PE updated with AIR19 Trade Information
North Coast (WWTWs)	S04150	93	PE updated with AIR19 Trade Information

Name of Works	CAR ID	PE Change	Comments
Omagh (WWTW)	S03999	-3476	PE updated with AIR19 Trade Information
Portaferry (2)	S05200	-3	PE updated with AIR19 Trade Information
Rocktown	S01635	1	Actual PE updated following RWwIP PE Review
Roughfort (WWTW)	S01470	-8	PE updated with AIR19 Trade Information
Strabane	S03223	243	PE updated with AIR19 Trade Information
Tamnamore (WWTW)	S02862	-2	PE updated with AIR19 Trade Information
Tandragee	S02174	-618	PE updated with AIR19 Trade Information
Tartaraghan	S02421	8	Actual PE updated following RWwIP PE Review
Tirquin	S03230	-4	Actual PE updated following RWwIP PE Review
Tullyroan	S02600	5	PE updated with AIR19 Trade Information
Warrenpoint (WWTW)	S02720	1531	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Whitehouse	S00265	-17	PE updated with AIR19 Trade Information
	Total	-142932	**Change in Line 5 PE since AIR18**

The change in PE equates to an increase in load of 3,130.21t BOD/yr (i.e. 142932 x 60 for 60g/hd/day /1000/1000 x 365) from AIR18 to AIR19, allowing for rounding up and down and conversions.

Difference between AIR19 and AIR18:

Line 5 for AIR19 -	**42980.36**
Line 5 for AIR 18 -	**39850.19**
Total Difference -	**3,130.17**

Note – The difference in the above totals are due to rounding of values.

Line 6 - Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR18 that affects equivalent population served (resident) for Line 6.

Name of Works	CAR ID	PE Change	Comments
Aghanloo (1)	S02989	-82.9	PE updated with AIR19 Trade Information
Annalong (WWTW)	S00300	-324.8	PE updated with AIR19 Trade Information
Annsborough	S02687	110.4	PE updated with AIR19 Trade Information
Antrim (WWTW)	S01422	-1072.7	PE updated with AIR19 Trade Information
Ardglass (WWTW)	S00268	-75.95	PE updated with AIR19 Trade Information
Ballyclare	S01467	-77.1	PE updated with AIR19 Trade Information
Ballyhornan Outfall	S04090	-0.6	PE updated with AIR19 Trade Information
Ballykelly (L/Derry)	S03016	-32.7	PE updated with AIR19 Trade Information
Ballylintagh (New)	S01135	-38.2	PE updated with AIR19 Trade Information
Ballymena (WWTW)	S01456	-7289.1	PE updated with AIR19 Trade Information
Ballyronan (WWTW)	S01558	85.2	Actual PE updated following APT PE assessment.
Banbridge (WWTW)	S02102	23.6	PE updated with AIR19 Trade Information
Beagh	S01605	1.0	Actual PE updated following RWwIP PE Review
Belfast (WWTW)	S00345	-120083.5	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Belleek (Fermanagh)	S03024	0.2	PE updated with AIR19 Trade Information
Bovean	S02793	6.0	Actual PE updated following RWwIP PE review
Broagh	S01607	5.0	Actual PE updated following RWwIP PE Review
Buckna (WWTW)	S01432	7.0	Actual PE updated following RWwIP PE Review
Bushmills (WWTW)	S01178	-8.5	PE updated with AIR19 Trade Information

Name of Works	CAR ID	PE Change	Comments
Carmean	S01608	8.0	Actual PE updated following RWwIP PE Review
Carrickfergus (WWTW)	S00261	-85.4	PE updated with AIR19 Trade Information
Castlederg (WWTW)	S03042	-0.1	PE updated with AIR19 Trade Information
Coalisland	S02828	-60.6	PE updated with AIR19 Trade Information
Cookstown (WWTW)	S01582	1348.2	PE updated with AIR19 Trade Information
Craignasasonagh	S00308	1.5	Actual PE updated following RWwIP PE Review
Craigywarren	S01437	9.7	Actual PE updated following RWwIP PE Review
Culmore (WWTW)	S03071	1768.0	PE updated with AIR19 Trade Information
Cushendall	S01183	0.0	PE updated with AIR19 Trade Information
Derrycrin	S01567	58.9	Actual PE updated following APT PE assessment
Derryhale	S02570	182.0	PE updated with AIR19 Trade Information
Dervock (WWTW)	S01102	0.8	PE updated with AIR19 Trade Information
Donaghmore (WWTW)	S02840	-75.9	PE updated with AIR19 Trade Information
Donemana	S03103	149.4	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Donnybrewer	S03080	0.8	PE updated with AIR19 Trade Information
Downpatrick (WWTW)	S00771	1283.4	Sludge import PE removed as imports have reverted back to reception centre following screen being brought back into serve. PE updated with AIR19 Trade Information
Draperstown	S01615	1.1	PE updated with AIR19 Trade Information
Dromara (WWTW)	S00316	-2.4	PE updated with AIR19 Trade Information
Dromore (Down)	S02127	-24.3	PE updated with AIR19 Trade Information
Dromore (Tyrone)	S03083	0.1	PE updated with AIR19 Trade Information
Drumaness (WWTW)	S00293	-229.0	Actual PE updated following Consultant PE Review
Drumard Primate (WWTW)	S02404	4.4	Actual PE updated following RWwIP PE Review
Dungannon	S02850	-11276.6	PE updated with AIR19 Trade Information
Dungiven	S03101	0.6	PE updated with AIR19 Trade Information
Dunmurry	S00346	-345.7	PE updated with AIR19 Trade Information
Eglish (Tyrone)	S02843	-79.7	Actual PE updated following APT assessment
Enniskillen	S03218	649.1	PE updated with AIR19 Trade Information
Fivemiletown (WWTW)	S03113	-25.2	PE updated with AIR19 Trade Information
Garvagh (WWTW)	S01154	0.0	PE updated with AIR19 Trade Information
Gilford (WWTW)	S02162	0.0	PE updated with AIR19 Trade Information
Glenstall	S01109	518.8	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Grange (Taylorstown)	S01442	2.9	PE updated with AIR19 Trade Information
Grangemore	S02580	0.4	Actual PE updated following RWwIP PE Review
Greenisland (WWTW)	S00263	-290.7	PE updated with AIR19 Trade Information
Greysteel (WWTW)	S03123	6.7	PE updated with AIR19 Trade Information
Hilltown (WWTW)	S02701	2.2	PE updated with AIR19 Trade Information
Irvinestown	S03137	0.5	PE updated with AIR19 Trade Information
Keady (Armagh)	S02553	-0.8	PE updated with AIR19 Trade Information
Kesh (WWTW)	S03140	-0.1	PE updated with AIR19 Trade Information
Kilkeel (WWTW)	S00313	-71.7	PE updated with AIR19 Trade Information
Killinchy (WWTW)	S00252	310.6	PE updated with AIR19 Trade Information
Killygonlan (WWTW)	S02043	0.2	PE updated with AIR19 Trade Information
Kilrea	S01156	-196.4	PE updated with AIR19 Trade Information
Larne (WWTW)	S02044	-2752.0	Catchment flow & load assessment carried out by WSP as part of Larne WwTW capacity assessment. PE updated with AIR19 Trade Information

Name of Works	CAR ID	PE Change	Comments
Limavady (WWTW)	S03162	102.6	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisburn (New Holland)	S00329	1891.7	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisnamuck (Magherafelt)	S01626	4.0	Actual PE updated following RWwIP PE Review
Lisnaskea (WWTW)	S03171	367.6	PE updated with AIR19 Trade Information
Longfield (Eglinton)	S03173	37.9	Actual PE updated following APT PE Review PE updated with AIR19 Trade Information
Maghera (L/Derry)	S01629	-47.3	PE updated with AIR19 Trade Information
Magherafelt (WWTW)	S01621	-1593.7	Design PE updated. Correct design PE identified through NIAMP5 PE review. PE updated with AIR19 Trade Information
Moneymore (WWTW)	S01589	-1.9	PE updated with AIR19 Trade Information
Moneyreagh (WWTW)	S00337	0.4	PE updated with AIR19 Trade Information
Mountfield (WWTW)	S03192	-5.6	Actual PE updated following APT assessment
Mountjoy (Dungannon)	S02849	0.1	PE updated with AIR19 Trade Information
Mountnorris	S02248	-2.0	PE updated with AIR19 Trade Information
Moy (WWTW)	S02859	-369.3	PE updated with AIR19 Trade Information
Newcastle (WWTW)	S00303	0.1	PE updated with AIR19 Trade Information
Newmills (WWTW)	S02852	0.7	PE updated with AIR19 Trade Information
Newry (WWTW)	S02685	-2514.6	PE updated with AIR19 Trade Information
Newtownbreda (WWTW)	S00342	11.2	PE updated with AIR19 Trade Information
Newtownbutler (WWTW)	S03200	-9.7	PE updated with AIR19 Trade Information
North Coast (WWTWs)	S04150	92.8	PE updated with AIR19 Trade Information
Omagh (WWTW)	S03999	-3476.5	PE updated with AIR19 Trade Information
Pomeroy (WWTW)	S01593	-0.3	PE updated with AIR19 Trade Information
Portaferry (2)	S05200	-2.8	PE updated with AIR19 Trade Information
Rocktown	S01635	1.0	Actual PE updated following RWwIP PE Review
Roughfort (WWTW)	S01470	-8.2	PE updated with AIR19 Trade Information
Seahill (WWTW)	S00774	0.0	PE updated with AIR19 Trade Information
Strabane	S03223	243.4	PE updated with AIR19 Trade Information
Swatragh (WWTW)	S01637	0.1	PE updated with AIR19 Trade Information
Tamnamore (WWTW)	S02862	-2.0	PE updated with AIR19 Trade Information
Tandragee	S02174	-617.8	PE updated with AIR19 Trade Information
Tartaraghan	S02421	8.4	Actual PE updated following RWwIP PE Review
Tirquin	S03230	-4.0	Actual PE updated following RWwIP PE Review
Tullyroan	S02600	5.2	PE updated with AIR19 Trade Information
Warrenpoint (WWTW)	S02720	1523.4	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Whitehouse	S00265	-17.4	PE updated with AIR19 Trade Information
	Total	-142438.45	**Change in Line 6 PE since AIR18**

NB. Change in PE (-Ve AIR19 PE Higher); Difference between totals is due to rounding.

Difference between AIR19 and AIR18:

Line 6 for AIR19 -	**1928282**
Line 6 for AIR 18 -	**1785843**
Total Difference -	**142439**

Note – The difference in the above totals are due to rounding of values.

Line 7 - Equivalent population served (resident) (Numerical consents)

The table below shows the changes in WWTWs PEs since AIR18 that affects equivalent population served (resident) with numerical consents for Line 7. NB. Change in PE (-Ve AIR19 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Aghanloo (1)	S02989	-82.9	PE updated with AIR19 Trade Information
Annsborough	S02687	110.4	PE updated with AIR19 Trade Information
Antrim (WWTW)	S01422	-1072.7	PE updated with AIR19 Trade Information
Ardglass (WWTW)	S00268	-75.95	PE updated with AIR19 Trade Information
Ballyclare	S01467	-77.1	PE updated with AIR19 Trade Information
Ballykelly (L/Derry)	S03016	-32.7	PE updated with AIR19 Trade Information
Ballymena (WWTW)	S01456	-7289.1	PE updated with AIR19 Trade Information
Ballyronan (WWTW)	S01558	85.2	Actual PE updated following APT PE assessment.
Banbridge (WWTW)	S02102	23.6	PE updated with AIR19 Trade Information
Belfast (WWTW)	S00345	-120083.5	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Belleek (Fermanagh)	S03024	0.2	PE updated with AIR19 Trade Information
Bushmills (WWTW)	S01178	-8.5	PE updated with AIR19 Trade Information
Carrickfergus (WWTW)	S00261	-85.4	PE updated with AIR19 Trade Information
Castlederg (WWTW)	S03042	-0.1	PE updated with AIR19 Trade Information
Coalisland	S02828	-60.6	PE updated with AIR19 Trade Information
Cookstown (WWTW)	S01582	1348.2	PE updated with AIR19 Trade Information
Culmore (WWTW)	S03071	1768.0	PE updated with AIR19 Trade Information
Derrycrin	S01567	58.9	Actual PE updated following APT PE assessment
Derryhale	S02570	182.0	PE updated with AIR19 Trade Information
Dervock (WWTW)	S01102	0.8	PE updated with AIR19 Trade Information
Donaghmore (WWTW)	S02840	-75.9	PE updated with AIR19 Trade Information
Donemana	S03103	149.4	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Donnybrewer	S03080	0.8	PE updated with AIR19 Trade Information
Downpatrick (WWTW)	S00771	1283.4	Sludge import PE removed as imports have reverted back to reception centre following screen being brought back into serve. PE updated with AIR19 Trade Information
Draperstown	S01615	1.1	PE updated with AIR19 Trade Information
Dromara (WWTW)	S00316	-2.4	PE updated with AIR19 Trade Information
Dromore (Down)	S02127	-24.3	PE updated with AIR19 Trade Information
Dromore (Tyrone)	S03083	0.1	PE updated with AIR19 Trade Information
Drumaness (WWTW)	S00293	-229.0	Actual PE updated following Consultant PE Review
Dungannon	S02850	-11276.6	PE updated with AIR19 Trade Information
Dungiven	S03101	0.6	PE updated with AIR19 Trade Information
Dunmurry	S00346	-345.7	PE updated with AIR19 Trade Information
Eglish (Tyrone)	S02843	-79.7	Actual PE updated following APT assessment
Enniskillen	S03218	649.1	PE updated with AIR19 Trade Information
Fivemiletown (WWTW)	S03113	-25.2	PE updated with AIR19 Trade Information
Glenstall	S01109	518.8	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Grange (Taylorstown)	S01442	2.9	PE updated with AIR19 Trade Information
Greenisland (WWTW)	S00263	-290.7	PE updated with AIR19 Trade Information
Hilltown (WWTW)	S02701	2.2	PE updated with AIR19 Trade Information
Irvinestown	S03137	0.5	PE updated with AIR19 Trade Information
Keady (Armagh)	S02553	-0.8	PE updated with AIR19 Trade Information
Kesh (WWTW)	S03140	-0.1	PE updated with AIR19 Trade Information
Kilkeel (WWTW)	S00313	-71.7	PE updated with AIR19 Trade Information
Killinchy (WWTW)	S00252	310.6	PE updated with AIR19 Trade Information
Killygonlan (WWTW)	S02043	0.2	PE updated with AIR19 Trade Information
Kilrea	S01156	-196.4	PE updated with AIR19 Trade Information

Name of Works	CAR ID	PE Change	Comments
Larne (WWTW)	S02044	-2752.0	Catchment flow & load assessment carried out by WSP as part of Larne WwTW capacity assessment. PE updated with AIR19 Trade Information
Limavady (WWTW)	S03162	102.6	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisburn (New Holland)	S00329	1891.7	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Lisnaskea (WWTW)	S03171	367.6	PE updated with AIR19 Trade Information
Maghera (L/Derry)	S01629	-47.3	PE updated with AIR19 Trade Information
Magherafelt (WWTW)	S01621	-1593.7	Design PE updated. Correct design PE identified through NIAMP5 PE review. PE updated with AIR19 Trade Information
Moneymore (WWTW)	S01589	-1.9	PE updated with AIR19 Trade Information
Moneyreagh (WWTW)	S00337	0.4	PE updated with AIR19 Trade Information
Mountfield (WWTW)	S03192	-5.6	Actual PE updated following APT assessment
Mountjoy (Dungannon)	S02849	0.1	PE updated with AIR19 Trade Information
Mountnorris	S02248	-2.0	PE updated with AIR19 Trade Information
Moy (WWTW)	S02859	-369.3	PE updated with AIR19 Trade Information
Newcastle (WWTW)	S00303	0.1	PE updated with AIR19 Trade Information
Newmills (WWTW)	S02852	0.7	PE updated with AIR19 Trade Information
Newry (WWTW)	S02685	-2514.6	PE updated with AIR19 Trade Information
Newtownbreda (WWTW)	S00342	11.2	PE updated with AIR19 Trade Information
Newtownbutler (WWTW)	S03200	-9.7	PE updated with AIR19 Trade Information
North Coast (WWTWs)	S04150	92.8	PE updated with AIR19 Trade Information
Omagh (WWTW)	S03999	-3476.5	PE updated with AIR19 Trade Information
Pomeroy (WWTW)	S01593	-0.3	PE updated with AIR19 Trade Information
Portaferry (2)	S05200	-2.8	PE updated with AIR19 Trade Information
Roughfort (WWTW)	S01470	-8.2	PE updated with AIR19 Trade Information
Strabane	S03223	243.4	PE updated with AIR19 Trade Information
Swatragh (WWTW)	S01637	0.1	PE updated with AIR19 Trade Information
Tamnamore (WWTW)	S02862	-2.0	PE updated with AIR19 Trade Information
Tandragee	S02174	-617.8	PE updated with AIR19 Trade Information
Warrenpoint (WWTW)	S02720	1523.4	Actual PE updated following SWELL PE Review PE updated with AIR19 Trade Information
Whitehouse	S00265	-17.4	PE updated with AIR19 Trade Information
	Total	-142177.05	**Change in Line 7 PE since AIR18**

Difference between AIR19 and AIR18:

Line 7 for AIR19 -	**1,866,946**
Line 7 for AIR 18 -	**1,724,769**
Total Difference -	**142,177**

Note – The difference in the above totals are due to rounding of values.

Line 8 - Number of sewage treatment works

The number of WWTWs of 1015, on this line differs from the total of 1023 as shown in Table 17c, as the former does not include the screened outfalls (2 No.) and the unscreened outfalls (6 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR18 for Line 8.

Name of Works	CAR ID	Change in Nr of STWs	Comments
		Net Reduction	**0**

Difference between AIR19 and AIR18:

Line 8 for AIR19 -	**1,015**
Line 8 for AIR 18 -	**1,015**
Total Difference -	**0**

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR18 for Line 9. NB. Change in PE (-Ve AIR19 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Cladymore	S02566	-73	Design PE updated following RWwIP upgrade.
Donaghey (2)	S01569	-27	Design PE updated following RWwIP upgrade.
Dougan place	S02164	-14	Design PE updated following RWwIP upgrade.
Drumenny	S03088	17	Design PE updated following RWwIP upgrade.
Edenderry (Tyrone)	S03104	-34	Design PE updated following RWwIP upgrade.
Killybaskey	S01581	-62	Design PE updated following RWwIP upgrade.
Maghaberry	S02412	-1040	Design PE updated following RWwIP upgrade.
Magherafelt (WWTW)	S01621	-7354	Design PE updated. Correct design PE identified through NIAMP5 PE review. PE updated with AIR19 Trade Information
Mayboy	S01163	-73	Design PE updated following RWwIP upgrade.
Newtown-Crommelin	S01447	-70	Design PE updated following RWwIP upgrade.
Waterfoot Road (WWTW)	S01643	-110	Design PE updated following RWwIP upgrade.
	Total	-8840	**Change in Line 9 PE since AIR18**

The change in PE equates to an increase in load of 0.53t BOD/day (i.e. 8840 x 60 for 60g/hd/day /1000/1000) from AIR18 to AIR19.

Difference between AIR19 and AIR18:

Line 9 for AIR19 -	**135.56**
Line 9 for AIR 18 -	**135.03**
Total Difference -	**0.53**

Note – The difference in the above totals are due to rounding of values

Confidence Grade

The confidence grade for line 8 remains as A2 (as for AIR15). There may still be a number of small WWTWs which are perhaps under the ownership of the NI Housing Executive or have become private due to customers perhaps installing their own private septic tanks or converting 2 houses into 1. Hence a small reduction in confidence grade i.e. A2 is viewed as necessary to reflect this uncertainty, especially as 698 WWTWs (excluding tourist PE) are listed as having a PE of less than 100.

PPP Only

Line 2 - Total load receiving secondary treatment

The total loads receiving secondary treatment have changed to reflect the load discharged from the NI Water sewer network to the PPP works.

Line 6 - Equivalent population served (resident)

The change in the Equivalent Population Served (resident) receiving treatment reflects the change in load received from the NIW Catchments.

Line 7 - Equivalent population served (resident) (Numerical consents)

As all the PPP WwTWs have numerical consents, the change reflects the same change in Line 6 above for the same reasons.

Lines 14- 17 Sewage – Sludge Disposal

NIW Only

Line 14 – Percentage unsatisfactory sludge disposal

Northern Ireland Water (NIW) continues to have zero unsatisfactory sludge disposals.
NIW has again assigned a confidence grade of A1 to percentage unsatisfactory sludge disposal as the total is zero.

Line 15 – Total sewage sludge produced

Sewage cake is produced from 8Nr. NIW sites and transported to PPP Contractor for incineration. Liquid sludge is also transported to the PPP Contractor (Ballynacor & Duncrue Street, Belfast) where the Contractor measures and processes same for disposal (including Belfast WwTW Indigenous).

For the purpose of AIR 19 submission Table 15 (NIW Only) relates to sewage sludge produced for 2018/19 (tds) as recorded by PPP and monthly by Ww Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report along with an estimated quantity of WwTW & WwPS grit & screenings which are routinely removed as part of the sewage treatment process and disposed of separately under Tender C821 (Collection, Transportation and Disposal of Waste by skip). The total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of under Tender C821 has been collated on Worksheet 4 for the period of 2018/19.

Line 16 - Total sewage sludge received from NI Water

Northern Ireland Water is contracted to transfer all sewage liquid and cake to PPP. Sewage cake is produced from 8Nr. NIW sites and transported to PPP Contractor for incineration. Liquid sludge is also transported to the PPP Contractor (Ballynacor & Duncrue Street, Belfast) where the Contractor measures and processes same for disposal (including Belfast WwTW Indigenous). That element of the sewage treatment production is reported and subsequently combined for the Total T15 submission. This data is also submitted through PPP reporting in T42.

Line 17 - Total sewage sludge disposal

Northern Ireland Water disposes the same amount of sludge as that produced (Line 15).

NIW remains committed to compliance with the requirements of the “Safe Sludge Matrix”. A total of 98.1% of sewage sludge to PPP during 2018/19, The total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of

separately under Tender C821 (Collection, Transportation and Disposal of Waste by skip) has been collated and disposed to landfill in 2018/19.

With reference to AIR17 Reporter Recommendations – Centrate returns from the incinerator have improved and no automated in-line measuring unit facility has been installed and is not now deemed necessary; will be kept under review based on quality of centrate returns.

PPP only

Line 14 – Percentage unsatisfactory sludge disposal

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

Line 15 - Total sewage sludge produced

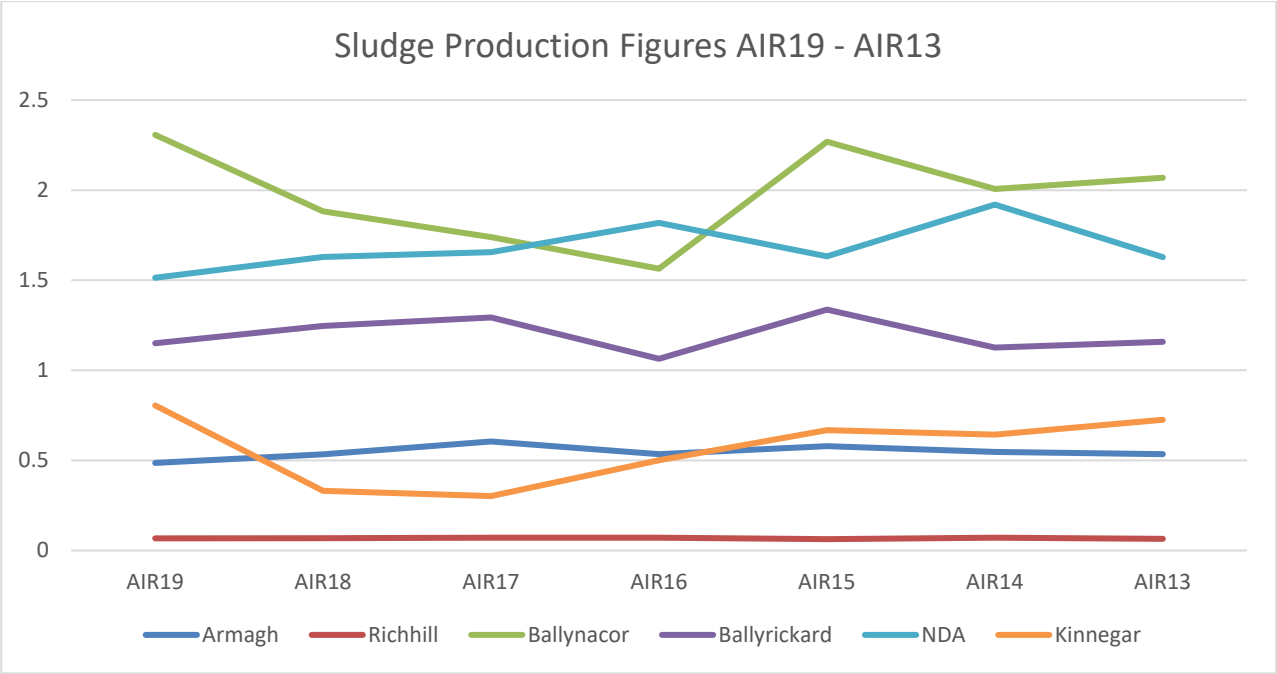
The changes in sludge produced data reflect the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control. There are minor additions for Screenings and Grit which were initially reported in AIR13 and subsequently in AIR submissions since by the Contractors.

The variations are tabulated below;

PPP Production	AIR19	AIR18	AIR17	AIR16	AIR15	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.486	0.534	0.605	0.535	0.579	0.547	0.535	0.570	0.759	0.840
Richhill WWTW	0.067	0.068	0.071	0.071	0.063	0.071	0.065	0.066	0.213	0.210
Ballynacor WWTW	2.307	1.882	1.739	1.564	2.269	2.007	2.069	3.330	2.468	2.290
Ballyrickard WWTW	1.150	1.246	1.293	1.064	1.337	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.514	1.629	1.656	1.818	1.633	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.805	0.331	0.302	0.501	0.668	0.643	0.726	0.823	0.792	0.700
Omega Screenings/Grit	0.220	0.233	0.206	0.083	0.083	0.088	0.106			
Kinnegar Screenings/Grit	0.033	0.035	0.058	0.049	0.057	0.047	0.022			
Totals	6.582	5.958	5.930	5.685	6.689	6.449	6.309	7.573	7.612	7.411

The changes in sludge production, shown below in graphical form, records data for Omega reflect a probable combination of:

- Cumulative tolerances in the representative nature of dry solids sampling and flowmeter accuracy (particularly on smaller sites)
- a mix of improved methodologies and record keeping systems for liquid and cake movements (as demanded by the Omega contract payment processes) implemented by end of AIR11, and
- the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control, and
- The timing of data capture, where prolonged dry periods can have a fluctuating effect from year to year on absolute values.



The Increased Kinnegar WwTW Sludge Production figures in the AIR19 period reflects the fact that Sludge is now being processed via a recently installed Centrifuge. Significant quantities of Sludge have been retained on site during the trial of various dewatering solutions in AIR17 and AIR18, which had led to an artificial suppression of the reported sludge production in these years. When the dewatering solution was determined, the commissioning of the new plant caused further back logs in Sludge Production to be caused. It is however obvious from recent data, and from Company knowledge of on-site operations, that the Sludge Production rates are now recovering, and retained Sludges are now also been processed for disposal. This is resulting in an artificial elevation in AIR19 to rebalance the sludge output from the Kinnegar site. Due to the Grit Trap requiring substantial maintenance, no grit is reported as removed from the Kinnegar Site during the AIR19 period.

Kinnegar aside, the Omega sites continue to present as a flat line / static trend over the last 5 year AIR periods. The notable exception to the trend is Ballynacor WwTW, which presents a clear downward trend from AIR15 to AIR16; some recent recovery in AIR17 and AIR18, and for AIR19, the site is now returned to previous levels. Given the treatment processes have not changed in the same period and effluent compliance has been maintained, it can be deduced the overall loading on the WwTW tends towards increased loading from within the catchment and/or from tankered imports, compared with the trend shown in AIR17/18. This is supported by the data behind Line 2 (Load Receiving Secondary Treatment).

Line 16 - Total sewage sludge received from NI Water

This reflects the change in sludge quantities received by the PPP Contractor from the Company and includes that received from Kinnegar concession, which is treated as Company sludge for the purposes of the Omega PPP Contractor's records.

Line 17 - Total sewage sludge disposal

In AIR18 the Omega Contractor reported a disposal of 40.9 ttds [40.856 ttds] sludge disposed of. This year (AIR19) the reported figure is 41.3 ttds [41.293 ttds]; these Omega based figures also exclude the Kinnegar site and NIW sites Screenings and Grit removal, where each of these parties disposes of these directly, rather than through the Omega contract.

In a previous year [AIR17] the Reporter made a recommendation that the Incinerator Returns (centrate liquors returned to Belfast WWTW) be deducted from the Total Sludge Disposal collation. For the period of AIR19 the Incinerator Returns have been calculated to be 3.822 ttds [Confidence Grade for this estimation would be approx. C4 at best, given the limited data set on which the calculations have been made], which could make this actual disposal figure 37.471 ttds, but this figure can't be used to compare or interrogate variances as the Incinerator Returns were not collated for the previous year's [from before AIR17].

The increase of +0.4 ttds total sludge disposal is considered to be a combination of:

(i) Timing of data capture (sludges being collected and receipted for disposal).
(ii) Accurate measurement and records demanded under the Omega contract.
(iii) Variations in quantities of sludge produced across PPP and NIW STWs.
(iv) Reporting of Screenings and Grit, and modification to accuracy where possible.
(v) Reporter requirement that the total Sludge Disposal calculation is adjusted to remove the Incinerator Return Loading which is essentially a double count, has not impacted on this as it has not been included.
(vi) The inaccurate methodology for estimation of the Centrate returns to Duncrue WwTW. As the Regulator has already agreed that the Glen Water operation at BWwTW is unique and that it should not be charged in relation to Trade Effluent, even though this operation is covered by Trade Effluent Agreements. It is worthy to note that the Omega Contract pays on Sludge Processed and not Net Volumes [which would disregard any re-circulation]. This would further suggest that the calculation is not relevant.

Total Table

Line 14 - Percentage unsatisfactory sludge disposal

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

Line 15 - Total sewage sludge produced

The changes to the sludges produced are reflected in the commentary to Line 17 below.

Line 17 - Total sewage sludge disposal

In AIR18 the PPP Contractors reported a disposal of 41.7 ttds sludge disposed of. This year (AIR19) the reported figure is 42.0 [41.975] ttds.

In AIR18 the Company disposed of 0.8 ttds relating to grit/screenings sludge. This year (AIR19) the reported figure is 0.7 ttds [0.681 ttds]. The AIR19 year was a drier year than on average [1,100mm of rainfall] with 1,039.2mm recorded on the Areal series. Rainfall for the AIR18 period was 1,241.5mm.
In total, AIR18 reported 41.7 ttds [41.658 ttds] of sludge disposed of by all parties. In this reporting year (AIR19) the figure is 42.0 ttds [41.975 ttds].
The variance of 0.3 ttds [1.415 ttds AIR18] is considered to be a combination of:

(i) A variation in total tonnage of sludge disposed of by the Omega contractor from NIW, Kinnegar and Omega WWTWs in combination.
(ii) Variation in sludges derived for PPP Contractor grit and screenings, providing a further potential for variance.
(iii) A reduction in Sludge and Screenings handled by NI Water.

Specific Commentary Requirements

- Assumptions Made:
  - 60g/h/d as per NIAUR requirements
  - Skips weights (Screenings and Grit) are recorded in wet tonnes. An assumption based on long term averages of (39%DS Screenings and 65%DS Grit) Dry Solids content has been used to convert wet tonnes into TDS. Apart from Kinnegar where the %DS is assessed for each skip weight.

- BOD loading is based on the measured influent sample result of loading applied to the WWTW processes; therefore there is no need to include a calculation for recirculated Sludge/Sludge liquors in Lines 1-7. It is not a calculated load from desktop analysis of Population, as required by the Regulator Guidance Notes. However, PPP Management team have been instructed to proceed on the basis of measured BOD and PE calculated from measured BOD (rather than desktop calculation) as it has been advised this is the Reporter and Regulators preferred method of establishing PE and BOD.

- Sludge production is based on the records of actual sludge imported to treatment or disposal centres. This is confirmed from the Contractors records of sludge from both weighbridge / Waste Management Notes records (for sludge cake) and sludge logger records (for liquid sludge).

- The PE figures have only been established on the basis of the BOD_5 loads recorded by the end of the year and represent the load received for the AIR19 Reporting Period. They have not therefore been notified to NIEA, as any such notifications relate to calendar years.

  As the PPP contractors do not control septage, trade effluent nor manage connections of domestic population, they are unable to build up the loads on this basis. The loads are therefore determined in accordance with the Table 15 Line 2 Methodology, based on 52 treated effluent BOD_5 sample results per year. This is contrary to the requirements of the Guidance Notes, and is not consistent with how NI Water only data is constructed; but PPP Management Team has been advised that this is the Reporter and the Regulator's preferred method of calculation. The PPP only data remains unchanged. The recirculated sludge/sludge liquors in Lines 1-7 are consistent with the methodology presented in AIR's 10-18.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16 NON FINANCIAL MEASURES
SEWERAGE SERVICE ACTIVITIES (NIW Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**ASSET BALANCE AT APRIL 1**																				
1	Total length of sewers	km	2	15,090.35	B3	15,254.37	B3	15,410.44	B3	15,581.51	B3	15,625.13	B3	15,777.29	B3	15,890.63	B3				
2	Total length of "critical" sewers	km	2	3,656.86	C3	3,716.68	C3	3,732.98	C3	3,760.85	C3	3,839.64	C3	3,860.69	C3	3,892.98	C3				
B	**CHANGES DURING REPORT YEAR**																				
3	New "critical" sewers	km	2	33.50	C3	24.68	C3	19.54	C3	36.44	C3	1.49	C3	2.75	C3	2.79	C3				
4	"Critical" sewers - inspection by CCTV/man entry	km	2	51.79	C4	48.98	C4	35.98	C4	71.62	C4	91.44	C4	151.69	C4	83.93	C4				
5	"Critical" sewers - renovated	km	2	1.41	B2	0.99	B2	1.87	B2	1.26	B2	4.65	B2	2.49	B2	1.52	B2				
6	"Critical" sewers - replaced	km	2	1.04	B2	3.32	B2	5.09	B2	5.32	B2	1.48	B2	2.76	B2	0.68	B2				
7	Abandoned "critical" sewers and other changes	km	2	0.00	B2	1.48	B2	0.50	B2	0.00	B2	0.16	B2	0.00	B2	0.00	B2				
8	New "non-critical" sewers	km	2	145.40	C3	172.22	C3	130.22	C3	110.60	C3	117.07	C3	117.78	C3	41.94	C3				
9	"Non-critical" sewers - renovated	km	2	2.31	B2	2.93	B2	1.95	B2	2.71	B2	2.53	B2	3.88	B2	3.96	B2				
10	"Non-critical" sewers - replaced	km	2	19.29	B2	18.08	B2	11.89	B2	7.80	B2	0.63	B2	5.98	B2	4.36	B2				
11	Abandoned "non-critical" sewers and other changes	km	2	0	B2	0.36	B2	0.60	B2	0.11	B2	0.29	B2	0.18	B2	0.39	B2				
11a	Total length of sewers replaced or renovated	km	2	24.05		25.32	B2	20.80	B2	17.09	B2	9.29	B2	15.11	B2	10.52	B2				
12	Sewer collapses per 1,000km	nr	1	73.6	B3	72.7	B3	85.7	B3	78.5	B6	79.1	B3	75.8	B3	77.5	B3				
13	Sewer blockages per 1,000km	nr	1	1,363.6	B3	1,172.1	B3	1,073.6	B3	1,023.4	B3	998.6	B3	905.8	B3	987.9	B3				
13a	Number of sewer blockage clearance which exceeds 6 hours	nr	0	1,250	B3	1,104	A2	2,640	B4	4,199	A2	4,285	A2	3,362	A1	4,155	A1				
13b	Number of sewer blockage clearance which exceeds 12 hours	nr	0	849	B3	645	A2	1,832	B4	3273	A2	3,625	A2	2,586	A1	3,137	A1				
13c	Number of sewer blockage clearance which exceeds 24 hours	nr	0	444	B3	203	A2	276	B4	555	A2	708	A2	390	A1	512	A1				
C	**ASSET BALANCE AT MARCH 31**																				
14	Total length of sewers	km	2	15,254.37	B3	15,410.44	B3	15,581.51	B3	15,625.13	B3	15,777.29	B3	15,890.63	B3	16,009.10	B3				
15	Total length of "critical" sewers	km	2	3,716.68	C3	3,732.98	C3	3,760.85	C3	3,839.64	C3	3,860.69	C3	3,892.98	C3	3,930.23	C3				
D	**INTERMITTENT DISCHARGES**																				
16a	Number of unsatisfactory intermittent discharges excluding CSOs (NIEA)	nr	0	197	C2	190	C2	159	C2	151	C2	147	C2	143	C2	253	C2				
16b	Number of unsatisfactory intermittent discharges CSOs (NIEA)	nr	0	318	C2	312	C2	288	C2	270	C2	263	C2	255	C2	137	C2				
17a	Number of intermittent discharges excluding CSOs	nr	0	1,675	B3	1,732	B3	1,751	B3	1,760	B3	1,762	C2	1,766	C2	1,771	C2				
17b	Number of CSOs	nr	0	779	B3	802	B3	802	B3	800	B3	796	C2	788	C2	784	C2				
E	**DRAINAGE AREA PLANS**																				
18	Cumulative number of drainage area plans completed	nr	0	71	A1	71	A1	58	A1	58	A1	58	A1	79	A1	82	B2				
19	Number of drainage area plan studies in progress at the report end of the report year	nr	0	1	A1	8	A1	8	A1	8	A1	14	A1	23	A1	35	B2				
20	Total sewerage drainage areas	nr	0	256	A2	254	A2	251	A2	250	A2	250	A2	250	A2	250	B2				
21	Cumulative % drainage area plan studies completed	%	1	27.7	A2	28.0	A2	23.1	A2	23.2	A2	23.2	A2	31.6	A2	32.8	B2				
22	% population/properties covered by completed studies	%	1	53.3	B3	53.2	B3	50.7	B3	50.4	B3	50.2	B3	87.2	B2	82.1	B2				
F	**SEWAGE TREATMENT COMPLIANCE MEASURES**																				
23	% WwTW discharges compliant with numeric consents	%	1	93.1		91.8	A1	92.17	A1	92.6	A1	93.4	A1	93.4	A1	94.7	A1				
24	% of total p.e. served by WwTWs compliant with numeric consents	%	1	97.9		94.5	C5	96.45	C5	97.5	A1	93.9	A1	98.1	A1	99.3	A1				
24a	% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	1	98.5		97.6	C5	98.15	C5	98.3	A1	98.7	A1	98.4	A1	99.3	A1				
25	Small WwTW compliance (works greater than or equal to 20 p.e. but less than 250 p.e.	%	2							80.72	A1	83.99	A1	87.21	A1	86.64	A1				
G	**NOMINATED SEWERAGE SERVICE OUTPUTS**																				
26	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	38	B3	11	A2	17	A2	26	A2	11	A1	11	A1	8	A1				
27	Delivery of improvements to nominated WWTWs part of a defined programme of work	nr	0	12	B3	17	A2	16	A2	3	A2	2	A1	1	A1	6	A1				
28	Small WwTWs delivered as part of the rural wastewater investment programme	nr	0	14		7	A2	18	A2	4	A2	8	A2	3	A2	10	A2				
H	**ADDITIONAL SEWERAGE SERVICE OUTPUTS**																				
29	CSO and EO discharges at which event and duration monitoring equipment has been installed	nr	0							0	B2	0	B2	0	B2	115	B2				
30	WwTWs upgraded to comply with PPC Regulations	nr	0							0	A1	0	A1	1	A1	5	A1				
31	Impermeable surface water collection area removed from the combined sewerage network	m2	0							28,560	B2	54,864	B2	119,200	B2	34,103	B2				
32	Number of sustainable WwTW solutions delivered (p.e. ≥ 250)	nr	0							1	A1	1	A2	1	A2	1	A2				
33	Number of sustainable WwTW solutions delivered (p.e. < 250)	nr	0							0	A1	1	A2	0	A2	0	A2				

Table 16 - Sewerage Service Activities (NI Water only WWTW)

Line 1 – Total length of sewers at 1 April

This value has been extracted from line 14 of the AIR18 Table 16.

Line 2 – Total length of 'critical' sewers at 1 April

This value has been extracted from line 15 of the AIR18 Table 16.

Lines 3 to 11a – Changes during report year

The tables below show the make-up of the figures submitted for these lines.

Line	Description	AD	DS	CSD	Total(km)
3	New "critical" sewers	2.56	0.23	0	2.79
5	"Critical" sewers - renovated	1.26	n/a	0.26	1.52
6	"Critical" sewers - replaced	0.68	n/a	0	0.68
7	Abandoned "critical" sewers and other changes	0	n/a	0	0
8	New "non-critical" sewers	2.80	39.14	0	41.94
9	"Non-critical" sewers - renovated	2.66	n/a	1.30	3.96
10	"Non-critical" sewers - replaced	4.36	n/a	0	4.36
11	Abandoned "non-critical" sewers and other changes	0.39	n/a	0	0.39
11a	Total length of sewers replaced or renovated				10.52

Lines 3 and 8 – New 'critical' sewers/ new 'non-critical' sewers

Lines 3 and 8 include lengths of sewers within 'new development' which have been adopted by the Developer Services section of NI Water. The total length has decreased from 120.530 km in AIR18 to 44.73km.


DS AIR19.docx


Copy of 18-19 Sewer Figures AIR.xlsx


CSDD AIR 19 Sewers.xls

The critical sewer lengths have been calculated using the same methodology as AIR18. The confidence grade is unchanged at C3.

Line 4 - 'Critical' sewers – inspection by CCTV/man entry

Line	Description	AD	In-house	AP	Total(km)
4	'Critical sewers'- inspection by CCTV/man entry	5.96	39.44	38.53	83.93

Asset Performance

Carried out 38.53 of CCTV work to address work for the Drainage Area Studies.

In-house crews

The length of CCTV executed by in-house CCTV crews is reported in AIR19 as 157.77km. In order to estimate the 'critical' sewer length this was multiplied by the overall percentage of critical sewer in the Corporate Asset Register – which is 25%.

A total of 39.44.


AP CCTV Figures for AIR19.docx


CCTV for CSDD.xlsm


Copy of 18-19 CCTV for AD.xlsx

The confidence grade for this line remains unchanged at C4.

Lines 5, 6, 9, 10 and 11a - sewers renovated and replaced

The total length renovated and replaced (10.52km) is less than the AIR 18 figure of 15.11 km.

NI Water is still on target to meet our targets for sewer rehab.

Confidence grades remain unchanged at B2.

Lines 7 and 11 - sewers abandoned

These lines had a return of 0.39 km which is an increase from the AIR18 figure of 0.18 km. These figures were due to the abandonment of sewers only.

Lines 12-13c – Sewer collapses and blockages

General

NIW collate the number of sewer blockages and sewer collapses from the draft invoices provided by the contractor and approved by the relevant Field Managers. As result of further refinement at NIW's request the contractor now, (end of March 2015), accurately records on their invoices what section within the sewer the blockage occurred (e.g. main, lateral or private). NIW are now in a good position for AIR19 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer. This reporting year the number of blockages has risen which may be linked to the end of current contract and will be monitored for ongoing trend. The number of sewer repairs has also risen as NIW are targeting hotspot areas where there have been numerous blockages. The data is collected for both main and lateral sewers but the return only requires the totals for collapses and blockages. NIW does not distinguish between collapses and essential repairs to sewers; they are all collated together for AIR figures. The total number of rising main failures added to the total number of gravity sewer collapses provides the number of sewer repairs for table 46 line 44. During the reporting year the figures are were as follows:

20 Rising Main Failures Repaired
1152 Gravity Main Sewers Repaired
69 Gravity Lateral Sewers Repaired
1241 Total number of sewer repairs

14952 Main Sewer Blockages
863 Lateral Sewer Blockages
15815 Total Number of sewer blockages

Of the 15815 sewer blockages, for 18/19 reporting year there were 23 incidents of actual internal flooding.

Note: There were no other sewer repairs other than those documented above.
All FOC's attributed to 17 Blockages 4 Collapses 2 Equipment Failure

NIW are now more proactive in their approach to repeat blockages, as part of their annual performance objectives all the Field Managers (FM) have been tasked to make a 1% reduction (initially 3%) in the number of blocked sewers. This reduction is being targeted by NIW Customer Field Managers (CFM) using the resource of designated field technicians to carry out CCTV investigations on sewers that have repeat blockage complaints, any faults found are remedied, thus reducing the number of repeat incidents. NIW have now generated a new standard job that enables the contractor, when he is attending a blocked sewer, to carry out a CCTV to locate and mark any suspected defects in the pipe, these can then be repaired and this prevents further repeat blockages and a reduction in the total number of blockages annually. Repeat blockages are recorded on the draft invoices, from the contractor, as they are not paid unless the original blockage was more than 14 days prior to the reoccurrence. These repeat blockages <14 days are discounted from the blockage numbers. The number of FOC Blockages appear to have had a disproportionate drop from last year but last year's figure had increased from 20 to 26 (as per the reporter's audit) to include all flats in two separate incidents.

NIW now run a monthly report in the Ellipse system that confirms the length of time a sewer blockage job took to be completed. WWBU now collate a list of all the work order numbers on the blockage drafts which are not "full rate" blockage clearance jobs and these jobs are excluded from the above-mentioned Ellipse data. All data completed on the contractor PDA's (contractor's hand held devices) is passed back through the contractor interface and is then time stamped into the Ellipse system. Due to the fact that the Ellipse system calculates the length of time a job takes from the time the work request is raised until the work request is closed all jobs exceeding 24 hours are investigated as all follow-on jobs are included in the time the work request is open. These jobs are then reported in the correct category according to the length of time the blockage job actually took to be completed.

- The number of rising main failures and the number of gravity sewer collapses are summated to give the total number of sewer collapses.
- The total number of sewer collapses is divided by the total length of sewers at 31 March 2019 to give the number of sewer collapses per kilometre.
- The number of sewer collapses per kilometre is multiplied by 1000 to give the number of sewer collapses per 1,000km.

Table 16 line 12 has been calculated using the figure reported for table 46 Lines 32 and 33 and the total length of sewers figure reported for Table 16 line 14.

Reported blockages which could not be identified or required no action when investigated on site are recorded on the blockage draft invoices as attendance only and are only paid an attendance rate therefore they are not counted in the blockage numbers for the AIR return.

Line 13 - Sewer Blockages per 1,000 Km

- The number of sewer blockages is divided by the total length of sewers at 31 March 2019 to give the number of sewer blockages per kilometre.
- The number of sewer blockages per kilometre is multiplied by 1000 to give the number of sewer blockages per 1,000km.

Table 16: line 13 has been calculated using the figure reported for table 46 Line 36 and the total length of sewers figure reported for Table 16 line 14.

Lines 13a, 13b and 13c - Number of blockage clearance which exceeds 6, 12 & 24 hours

NIW now run a monthly Ellipse report that confirms the length of time a sewer blockage job took to be completed. WWBU now collate a list of all the work order numbers on the blockage

drafts, which have not been paid the “full rate” for blockage clearance and these jobs are excluded from the above-mentioned Ellipse data. Due to the fact that the Ellipse system calculates the length of time a job takes from the time the work request is raised until the work request is closed all jobs exceeding 24 hours are investigated as all follow-on jobs are included in the time the work request is open. These jobs are then reported in the correct category according to the length of time the blockage job actually took.

Confidence Grading – Lines 12, 13, 13a, 13b & 13c

Because NIW are using data from checked and paid invoices (A1) and total length of sewers (B3), the confidence grade for the AIR19 L12 & L13 is B3. NIW expects this to consolidate as we move forward into AIR20 as report building continues with the single Sewer Maintenance Contractor.

Because NIW are using an Ellipse report (minus work orders that are not full rate blockage clearance jobs), to gather the information for Lines 13a, 13b & 13c and this is being manually confirmed, these lines have been given a confidence grade of A1 for AIR19.

Line 14 – Total length of sewers

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

This figure has not been calculated from Lines 1 to 11, it has been extracted using the process outlined in the methodology using data extracted from the Corporate Asset Register. This gives a figure of 16,009.10km, if the calculated figure had been used the value would have been 15,890.63km, a difference of 118.47km which equates to a difference of <1%.

Line 15 – Total length of ‘critical’ sewers

The same estimation techniques have been used as in previous years and are still dependent on 3rd party datasets. The analysis performed assesses the criticality of the sewers based on size, material and depth attributes of the sewer and its location in regards to structures, roads, railways and watercourses. This is a desktop exercise based on the location and attributes of each sewer as per the definition of critical sewers in the WRc Sewerage Rehabilitation Manual. Due to the reliance on 3rd party datasets for this analysis, sewer criticality grading for individual sewers may change from previous submissions and therefore the change in total length of critical sewers may not fully align with the new critical sewers figure in T16 L3. As the result of the analysis is an estimation the confidence grade of C3 will remain in place.

This figure has not been calculated from Lines 2 to 7, it has been extracted using the process outlined in the methodology using data extracted from the Corporate Asset Register. This gives a figure of 3930.23km, if the calculated figure had been used the value would have been 3895.77km, a difference of 34.46km which equates to a difference of <1%.

Lines 16a & 16b - Number of unsatisfactory intermittent discharges

This line refers to those intermittent discharges which have been defined as Unsatisfactory by NIEA within the terms of the Guidelines to the UWWT Directive.

The estimate of the number of Unsatisfactory Intermittent Discharges which was produced for AIR 18 was:

CSOs: 255
Other UIDs: 143

In order that lines 16a and 16b should provide a stable baseline by which progress in UID improvements may be assessed, the above estimates have been retained – and the entries made in 16a and 16b for AIR19 are equal to the above figures minus the numbers UID improvements which were executed in 18/19. i.e.

CSOs: 255 – 2= 253
Other UIDs: 143 – 6 = 137.

Notes:

1. The estimate of UIDs excludes those IDs within the boundary of WWTW sites. These are not subject to any systematic classification by NIEA.
2. The estimate of UIDs excludes those IDs which are overflows from 'Foul-only pumping stations'. These are not subject to any formal classification by NIEA.

20150518 v17 Master.xls

Lines 17a and 17b – Sewerage System Intermittent Discharges

General Commentary from the Asset Performance Team (APT) – Sewerage System Intermittent Discharges Lines [17a and 17b]

Table A - Depicting differences between the sewerage system overflows between AIR18 and AIR19

Intermittent Discharges	APT Preliminary AIR18 Number	Final AIR18 Number (after removal of Dual, Duplicates and Bifurcation Assets)	APT Preliminary AIR19 Number	Difference between AIR18 & AIR19 Preliminary Number	Total Number of Dual, Duplicates and Bifurcation assets to be removed	Final AIR19 Number (after removal of Dual, Duplicates and Bifurcation Assets)
Combined Storm Overflows (CSOs)	830	788	826	-4	-42	784
Waste Water Pumping Stations (WwPSs)	1107	1105	1107	0	-2	1105
Total Number of Intermittent Discharges	1937	1893	1933	-4	44	1889

Hence for AIR19 the total number of Sewerage System Overflows is 784 plus 1105 i.e. 1889.

From the APT data used there has been a decrease in CSOs since AIR18 (i.e. 830 to 826).

There has been 0 net change in WWPS overflows since AIR18 (i.e.1107)

Preliminary net decrease of 4 CSOs overflows since AIR18

Preliminary total decrease of 4 overflows since AIR18 (i.e. 1937 to 1933).

(For a further breakdown see Table B, C & D – Changes in Intermittent Discharges by Drainage Area below)

The total number of consented assets held by NI Water is 1933. However a number of these assets (n=44) are not included in the finalised number. This is because these are duplicates, dual manholes or bifurcation manholes which do not fall within the industry standard for reporting purposes.
The 44 sewerage system overflows have been categorised into the following:

- 29 Dual Manholes;
- 4 Bifurcation Manholes;
- 11Duplicate Assets

(For further details see Tables E, F & G below)

Overall this equates to a:

Net decrease of -4 Preliminary overflows since AIR18
Plus: 1937 Preliminary overflows identified in AIR18
Sub Total: 1933 sewerage system overflows
Minus: 44 Overflows not included in the finalised number for AIR19
Total: 1889 sewerage system overflows identified for AIR19

An exercise has been ongoing over the AIR reporting years to confirm the number of sewage system overflows within NI Water. An agreement is in place with Northern Ireland Environment Agency (NIEA) that updates will only be submitted on a catchment by catchment basis once all information is confirmed.

Before this information can be adopted by NI Water, it has to be signed off by NI Water Network Sewage Business Unit and any changes included on NI Water's Geographical Information Service (GIS). This process is ongoing.

Table B – APT Preliminary changes in intermittent discharges by drainage area for AIR19

Drainage Area	No of CSOs added since AIR18	No of CSOs removed since AIR18	No of WWPS added since AIR18	No of WWPS removed since AIR18	Comments
Belfast DA	1	5	0	0	CO000984471 Sandy Row CSO Closed NM001174110 Dublin Road CSO Closed CO002849758 Holiday Inn CSO Closed CO000984198 Dublin Road CSO Closed. CO000984197 Cromac Street CSO Closed CO004070123 Ormeau Road New CSO
Lisburn DA	1	1	0	0	CSO000984529 Antrim Street CSO Closed CSO004072052 Antrim Street New CSO
	0	0	0	0	
Total Number of intermittent discharges added or removed since AIR18	2	6	0	0	
Net decrease in CSOs since AIR18	-4				
Net Increase in WWPSs since AIR18		0			

Table C – AIC Preliminary changes in Intermittent discharges by drainage area for AIR19

Drainage Area	No of CSOs added since AIR18	No of CSOs removed since AIR18	No of WWPS added since AIR18	No of WWPS removed since AIR18	Comments
N/A	0	0	0	0	**No Updates from AIC for AIR19**
AIC Net Increase in CSOs since AIR18	**0**				
AIC Net Increase in WWPSs since AIR18			**0**		

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR19

	No of CSOs added since AIR18	No of CSOs removed since AIR18	No of WWPS added since AIR18	No of WWPS removed since AIR18
Preliminary APT number of intermittent discharges added or withdrawn since AIR18	2	-6	0	0
Preliminary AIC number of intermittent discharges added or withdrawn since AIR18	0	0	0	0
Subtotals	2	-6	0	0
Preliminary net increase or decrease in WWPS & CSOs since AIR18	-4		0	
Preliminary total decrease in sewage system overflows for AIR19	-4			

Table E - Dual Manholes not included in the finalised number for AIR19

Name of Sewer System	Car Id	Easy reference of asset from Consent of Discharge Map	Dual Manholes (To be Withdrawn)	Total No: of Dual Manholes per drainage area
Antrim	CO002586738		Y	1
Whitehouse	NM001345599		Y	16
Whitehouse	NM001348440		Y	
Whitehouse	NM001345603		Y	
Whitehouse	NM001349241		Y	
Whitehouse	NM001347238		Y	
Whitehouse	NM001346012		Y	
Whitehouse	NM001339619		Y	
Whitehouse	NM001340886		Y	
Whitehouse	NM001350136		Y	
Whitehouse	NM001340887		Y	
Whitehouse	NM001349313		Y	
Whitehouse	NM001339615		Y	
Whitehouse	NM001340884		Y	
Whitehouse	NM001349320		Y	
Whitehouse	NM001349319		Y	
Whitehouse	NM001349658		Y	
Ballynacor	NM001229100		Y	12
Ballynacor	NM001230688		Y	
Ballynacor	NM001231583		Y	
Ballynacor	NM001231355		Y	
Ballynacor	NM001229426		Y	
Ballynacor	NM001232930		Y	
Ballynacor	NM001278776		Y	
Ballynacor	NM001278775		Y	
Ballynacor	NM001234366		Y	
Ballynacor	NM001280565		Y	
Ballynacor	NM001282390		Y	
Ballynacor	NM001231354		Y	
Total Number of Dual Manholes not included in the finalised number for AIR19				**29**

Table F - Bifurcation Manholes not included in the finalised number for AIR19

Name of Sewer System	Car Id	Easy reference of asset from Consent of Discharge Map	Bifurcation Manhole (To be Withdrawn)	Total No: of Bifurcation Manholes per drainage area
Carrickfergus	NM001353097	Ellis Street A	Y	1
Rathfriland	NM001291669	John Street	Y	1
Waringstown	NM001238461	CS 06	Y	1
Enniskillen	CO003124504		Y	1
Total No: of Bifurcation Manholes not included in the finalised number for AIR19				**4**

Table G - Duplicate Assets not included in the finalised number for AIR19

Name of Sewer System	Car Id	Easy reference of asset from Consent of Discharge Map	Duplicate Assets (To be Withdrawn)	Total No: of Duplicate Assets per drainage area
Ballymena	SP002022687	Tullygarley Transfer WWPS FA Overflow	Y	1
Whitehouse	CO002966311	John Street	Y	6
Whitehouse	CO002987846		Y	
Whitehouse	CO002914133		Y	
Whitehouse	CO002988722		Y	
Whitehouse	CO002987839		Y	
Whitehouse	CO000984647		Y	
Omagh	SP002021852	Omagh Transfer WWPS	Y	2
Omagh	SP002021852	Omagh Transfer WWPS	Y	
Ballynacor	CO000984402	Thomas Street	Y	2
Ballynacor	SP002022218	Annsborough	Y	
Total Number of Duplicate not included in the finalised number for AIR19				**11**

Lines 17a and 17b – Above Ground Overflows from within WTWWs

Table H - Total number of Overflows within WWTW

	AIR18 Number	AIR19 Number
Total number of Overflows from within WWTW	659	666

Hence for AIR18 the total number of overflows within WWTW is 659.

The overall number of WWTW overflows from AIR18 to AIR19 has had a net increase of 7 overflows. With regards to the number of additional and withdrawn overflows and further changes to the designation of the type of overflow listed, see Tables H to P below.
The increase in WWTW overflows in AIR19 is mainly due to capital investment which has resulted in numerous small works now having an overflow facility.

The physical changes on the ground with respect to the number of overflows within WWTW since AIR18 are as follows:

- 4 Overflow within WWTW withdrawn since AIR18.
  (See Table I, J, K & L below)
  11 Additional overflows within WWTW since AIR18.
  (See Table M, N & O below)

Hence a net increase of 7 overflows since AIR18.

Table I - Overflows within WWTW withdrawn since AIR18 due to works becoming a pump away in AIR19

NAME of Works	Site ID	Status in AIR19	Withdrawn O/Fs Since AIR18
Not applicable for AIR19			0
Total Number of overflows withdrawn since AIR18 due to the WWTWs becoming a pump away			**0**

Table J - Overflows within WWTW withdrawn since AIR18 due to works being upgraded

NAME of Works	Site ID	Status in AIR18	Changes to Overflows for AIR19	Withdrawn O/Fs Since AIR18
Donaghey WWTW	S01569	Works Upgraded	Formula “A”	-1
Mayboy WWTW	S01163	Works Upgraded	FFT	-1
Maghaberry WWTW	S02412	Works Upgraded	FFT	-1
Killybaskey WWTW	S01581	Works Upgraded	Formula “A”	-1
Total Number of overflows withdrawn since AIR18 due to the works being upgraded				**-4**

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR18

NAME of Works	Site ID	Status in AIR19	Withdrawn O/Fs Since AIR18
Not Applicable for AIR19			0
Total of Withdrawn Overflows due to incorrect designation in AIR18			**0**

Table L– Summary of the total number of Overflows withdrawn since AIR18

Total of overflows withdrawn since AIR18 due to the works becoming a pump away	0
Total of overflows withdrawn since AIR18 due to the works being upgraded	-4
Total of Withdrawn Overflows due to incorrect designation in AIR18	0
Combined Total Number of overflows within WWTW withdrawn since AIR18	**-4**

Table M - Additional overflows within WWTW since AIR18 due to WWTW upgrades

NAME of Works	Site ID	Status in AIR19	Changes to Overflows for AIR19	Additional O/Fs Since AIR18
Bellany WWTW	S01137	Works upgraded	1 additional FFT overflow with storm retention	1
Donaghey (2) WWTW	S01569	Works upgraded	1 additional FFT overflow with storm retention	1

NAME of Works	Site ID	Status in AIR19	Changes to Overflows for AIR19	Additional O/Fs Since AIR18
Killybaskey WWTW	S01581	Works upgraded	1 additional FFT overflow with storm retention	1
Mayboy WWTW	S01163	Works upgraded	1 additional FFT overflow with storm retention	1
Newtown-Crommelin WWTW	S01447	Works upgraded	1 additional FFT overflow with storm retention	1
Cladymore WWTW	S02566	Works upgraded	1 additional FFT overflow with storm retention	1
Dougan Place WWTW	S02164	Works upgraded	1 additional FFT overflow with storm retention	1
Drumenny WWTW	S03088	Works upgraded	1 additional FFT overflow with storm retention	1
Edenderry (Tyrone) WWTW	S03104		1 additional FFT overflow with storm retention	1
Maghaberry WWTW	S02412	Works Upgraded	1additional FA overflow and 1 additional FFT overflow with storm retention	2
Total Number of additional overflows since AIR18 due to WWTW being upgraded				**11**

Table N - Additional overflows within WWTW due to incorrect designation in AIR18

NAME of Works	CAR ID	Status in AIR19	Changes in Overflows for AIR19 from Process Info	Additional O/Fs Since AIR18
Not Applicable for AIR19			0	0
Totals Number of additional overflows within WWTW due to incorrect designation in AIR18				**0**

Table O – Summary of additional overflows within WWTW since AIR18

Total Number of additional overflows since AIR18 due to works being upgraded	11
Totals Number of additional overflows within WWTWs due to incorrect designation in AIR18	0
Combined Total: of Additional overflows within WWTWs since AIR18	**11**

For AIR19, 4 overflows has been withdrawn (see Table J) and 11 additional overflows (see Table M) due to works being upgraded have now been included.
This equates to a net increase of 7 additional overflows since AIR18.

Table P – Summary of Overflow type within WWTW

Overflow Type	AIR18 Overflows from WWTW	AIR18 Overflows - Totals	AIR19 Overflows from WWTW	AIR19 Overflows - Totals	Difference between AIR18 & AIR19
Formula "A" O/Fs only	171	200	171	199	-1
Formula "A" O/Fs (which also act as PS E/O)	20		19		
Formula "A" O/Fs with Storm (which also act as PS E/O)	9		9		
FFT O/Fs only	105	334	103	334	8
FFT O/Fs (which also act as PS E/O)	16		16		
FFT O/Fs with Storm Retention	203		213		
FFT O/Fs with Storm Retention (which also act as PS E/O	10		10		
3 DWF	14	14	14	14	0
Additional Overflows-storm	6	111	6	111	0
Additional Overflows-other structures	6		6		
Additional Overflows-pumping station E/O	99		99		
Total No of WWTWs Overflows	**659**	**659**	**666**	**666**	**7**

Since AIR18 the Capital Maintenance Planning Team has continued to review their WWTW overflow summary information from Water Order Consent (WOC) applications.

This provides further refinement and greater confidence in the designation of overflow type. Therefore for the purpose of these lines Capital Maintenance Planning has not

endeavored to use A/C data due to the on-going A/C process of subscribing WOC information across onto GIS.

190511 - AIR19
WWTW Overflows.xls

Lines 18, 19, 20, 21 and 22 – Drainage Area Plans

1. Background

NI Water had a programme of Drainage Area Studies which commenced in 1995. The programme related to those drainage areas with residential population greater than one thousand. The status of the networks within the programme is summarised in the schedule below.

Each Drainage Area Study has used the full investigation procedure set out in the Sewerage Rehabilitation Manual, 4th Edition (WRc), including a CCTV survey targeted at surveying all critical sewers within the network.

More recently, networks with less than 5000 population have been subject to a scoping-study which seeks to identify the needs within the network, and allows a decision to be made as to whether a full DAS is justified.

It has been NI Water practice to review each Study on a 5-year cycle and, if necessary, to commission an update of the Study. A number of updates of older studies have been completed and others have commenced.

2. Current studies

Following studies are being carried out for Model Build and Verification:

- Antrim
- Ballymena
- Belfast
- Bushmills/Portballintrea
- Cookstown
- Culmore
- Downpatrick
- Dundrum
- Enniskillen
- Glenstall
- Greenisland
- Kilkeel
- Killinchy
- Killyleagh/Crossgar
- Kinnegar
- Moy
- Newry
- Portrush
- Portstewart
- Coleraine
- Bangor
- Millisle

- Omagh
- Saintfield
- Seahill
- Strabane
- Warrenpoint
- Portaferry

The studies below have achieved completion of the first stage - Model Build and Verification – of a study and second stage – Needs and Options are in process.

- Ballyrickard
- Carrickfergus
- Dungannon
- Greyabbey
- Larne
- Newtownbreda
- Whitehouse

3. Specification

NI Water's DAS specification is the "NI Water Risk Based Drainage Area Plan Document".

4. PC 15

To date, the principal driver for DAPs in Northern Ireland has been the need to develop UID solutions. The PC15 capital plan includes very limited funding for additional UID projects. There is therefore a risk that DAPs produced at present will not achieve funding for implementation and will therefore inform the PC21 business plan.

5. Outputs.

The main outputs from a DAP are:

- UIDs
- DG5s
- New Developments.
- SPG4s and SPG5s these are added to the Sewer Risk tool to enable these SPG4s and 5s to be assessed along with the other SPG4s and 5s within the overall sewerage network to enable a prioritised list to be produced.

Drainage Area Study Programme – Status at April 2019

The table below sets out the programme of DAPs since 2003.

DAPS.xlsx

The DAPs marked in yellow are new DAPs not completed after 2003. PE Total is 36,839.

Calculation is 1,925,958 – 36,839 = 1,889,119

The above domestic PEs have been updated where possible from the 'Master List of AIR17' spreadsheet. Giving TOTAL PE of 1,889,119

Line 18 – Cumulative number of drainage area plans completed

The number of drainage area plans that have been completed. The AIR 19 value of 82 completed DASs.

Line 20 – Total sewerage drainage areas

For the purposes of this AIR line, 'drainage area' is taken to mean a sewer-network served by a WwTW which serves a population equivalent of greater than 250.

For the 2018/19 AIR19 reporting year the number of drainage areas was calculated as 250.

Line 21 – Cumulative % drainage area plan studies completed

The cumulative percentage drainage area plan studies completed is equal to Line 18 divided by Line 20. The value has changed from AIR18 and is 32.8% (82 DASs/ 250 drainage areas).

Line 22 - % population/properties covered by completed studies

Line 22 is the percentage population/properties covered by completed studies.

- The PE relating to those networks defined by AIR19 Line 18 is 1,889,119 (From Table 1925958 – 36839 = 1,889,119) giving the total population completed DASs since 2003 (n=83)).
- The PE for the total sewerage network is 2,299,841

The percentage of PE covered by completed DAS studies is 82.14% (i.e. the division of 1,889,119 by 2,299,841 which is then converted to a percentage value).

Lines 23 – 25 Sewage treatment compliance measures

Introduction

The Northern Ireland Environment Agency (NIEA) issues Water Order Consents (WOC) which set out legally binding conditions under which discharges to the aquatic environment are permitted. NI Water has in the order of 1500 WOC's covering all Waste Water Treatment Works (WWTW), Water Treatment Works and sewerage systems.

NIEA assesses compliance on a calendar year basis, against WOC and UWWTR standards to give the "official" compliance figure. However, to inform Management of progress on achieving Key Performance Indicators (KPI's) and address any potential problems, monthly reports are produced. In 2018 the KPI's related to wastewater treatment performance were:

- The percentage of WWTW serving more than 250 Population Equivalent (PE) compliant with the WOC and Urban Wastewater Treatment Regulations (UWWTR).
- The percentage PE served by compliant WWTW

Changes carried forward for AIR 19

1. For AIR 19 data the base for the WWTW in service aligns with the compliance figures of the KPI outturn and NIEA compliance assessment, which reports on all works in service at the start of the calendar year.
2. The PE data used to populate this table are the PE's derived by the Asset Management Section (Performance Team – Above Ground) for the AIR 17 Return. These same PE's were also used to calculate the number of audit samples required per site for the 2018 reporting year and agreed with (NIEA).
3. Only WWTW serving greater than 250PE with numeric standards are included. No qualifying works were excluded from the assessment, with all regulatory samples having been sampled and analysed for the regulatory parameters.

4. The list of WWTW for AIR 19 contains a number of works which have crossed sampling thresholds. Table 1, which indicates the sampling frequencies associated with WWTW PE's, is provided below.

Table 1 – Sampling Frequency Table

PE	Sampling Frequency
<250 PE	0
250 – 4,999 PE	12
5,000 – 49,999 PE	24
>50,000 PE	48

If the PE of a WWTW causes a difference in sampling frequency, NIEA require evidence to justify the change. Evidence is required in the form of results of a flow and load survey or daily inlet sample results for a period of preferably one year but no less than six months. Table 2 indicates the WWTW affected by sampling frequency threshold changes and is provided overleaf.

Table 2 – Sampling Frequency Threshold Changes

Works Name	PE used in AIR15	PE Supplied by Asset Management	Threshold Being Crossed
Ballymena	113,825	69,915	100,000
Dunmurry	53,605	46,243	50,000
Dromore (Tyrone)	2032	1917	2,000
Dundrum	2243	1674	2,000

The 2012 sample scheduling PE data, which was agreed with NIEA in November 2011, has been applied to the works in Table 2, in the absence of flow and load data.

5. Only NI Water operated WWTW are included in assessment.

How the compliance is measured

Line 23 – Percentage of WWTW discharges compliant with numeric consents

The WOC specifies the number of samples to be taken per year and the parameters which have to be determined. A WWTW may fail if the required numbers of samples are not taken or the full range of parameter's are not determined.

Compliance for each WWTW was assessed on a parameter basis over a calendar year using the Look-Up Tables (LUT) of the Urban Waste Water Treatment Regulations (NI) 1995. This statistically derived methodology permits a certain number of exceedances, based on the number of samples taken, for each parameter included in the WOC e.g. where 24 samples are taken, three exceedances of each parameter are permitted. When this number of exceedances is surpassed a WWTW is deemed to fail. Table 3 in Appendix 1 details the relevant section of the Look-Up Table.

A number of WWTW have an additional clause in the consent known as an Upper Tier Limit (UTL) on the sanitary parameters of Biological Oxygen Demand (BOD, Suspended Solids (SS) and Ammonia (NH_4). One exceedance of this standard will lead to the WWTW failing for the year.

The WOC standards are contained in the Laboratory Information Management System (LIMS) and the audit sample results are automatically assessed against the standard. LIMS generates a standard report listing all WWTW with numeric standards and indicating the

number of exceedances and whether the works has passed or failed. The LIMS report is accessed through:

Sample Manager/ Reporting / Sewage Reports / NIEA Monthly Reports / All sites

A small number of WWTW have nutrient standards, nitrogen and/or phosphorus, although these are assessed on an annual average. While LIMS calculates a running average, which is displayed in the report referred to previously, it does not have the facility to compare this against a standard. This requires that the average is compared manually on an ongoing basis with the WOC standard. All standards can be viewed on SharePoint at:

Asset Management/Environmental Regulation/Wastewater and Waste/Tracking/Consent database over 250 consent

Exceedances can be discounted from compliance assessment should NI Water be able to demonstrate to NIEA that, at the time of the exceedance, a works was not under normal operating conditions. The definitions of abnormal operating conditions are given in Appendix 2 but NIEA may permit discounts under other conditions e.g. skewing of performance through too many samples being lifted in a short period caused by the rescheduling of samples. Should a sample be discounted it must be replaced by another sample taken on the same day of the week. A replacement sample when entered on LIMS will register automatically on the compliance report.

NIEA can also issue interim time banded standards during capital upgrades of a WWTW. This is a more relaxed standard applicable for a specified period over which construction work may disrupt the normal treatment processes. When this time banded standard is entered in LIMS it is taken account in the production of the compliance report.

At monthly intervals (for the KPI, Board and CSDD/MT) and at the end of the calendar year, the number of WWTW which have passed their numeric WOC was calculated as a percentage of the total number of works to determine the compliance with the target.

Line 23 Calculations – Taken from AIR 19 Calculation Spreadsheet
No. of NI Water Only WWTW's = 226
No. of failing NI Water Only works = 12
No. of passing NI Water Only works = 214

214/226 x 100 = 94.69%
Reported to one decimal place = **94.7%**

Line 24 – Percentage of Total PE Served by WWTW's Compliant with Numeric Consents
The PE served by compliant WWTW was calculated as a percentage of the PE served by the total number of WWTW. As referred to above it should be noted that Upper Tier Limits (UTL) were applied in determining this compliance. The figure reported is based on the total population.

Line 24 Calculations – Taken from AIR 19 Calculation Spreadsheet
PE of failing NI Water Only works = 12723
Total PE of NI Water Only works = 1787874
PE of passing NI Water Only works = 1775151

1775151 / 1787874 x 100 = 99.29
Reported to one decimal place = **99.3%**

Line 24a – Percentage of total PE served by WwTWs compliant with numeric consents excluding upper tier failures

The PE served by compliant WWTW was calculated as a percentage of the PE served by the total number of WWTW. As referred to above it should be noted that Upper Tier Limits (UTL) were not applied in determining this compliance. The figure reported is based on the total population.

Line 24a Calculations – Taken from AIR 19 Calculation Spreadsheet

PE of failing NI Water Only works (Exc UT) = 12723
Total PE of NI Water Only works = 1787874
PE of passing NI Water Only works = 1775151

1775151/ 1787874 x 100 = 99.29
Reported to one decimal place = **99.3%**

The data reported in this table was new for AIR16. As more information is developed in future AIR reporting cycles, further commentary can be developed on emerging trends for these measures.
The application of confidence grade A1 to lines 24 and 24a is considered appropriate as these lines are reporting a percentage of total consented PE values, the values of which are agreed with NIEA. The change from C5 to A1 was made in response to the Reporter's recommendation in AIR15 commentary that a much higher confidence grade should be applied to these lines.

Line 25 - Small WwTW compliance (works greater than or equal to 20 p.e. but less than 250 p.e.)

A new compliance measure has been introduced for PC15 for small works in the band 20 – 249 population equivalent (pe). This measure is directly linked to delivery of small works under the Rural Wastewater Improvement Project (RWIP) project. All sites to be upgraded under RWIP are agreed with NIEA. The starting position for compliance projections throughout PC15 was based on NIEA's assessment of works as passing or failing in calendar year 2013. Compliance was projected to improve year on year through delivery of works agreed with NIEA for upgrade via the RWIP project.

Line 26 - Delivery of improvements to nominated UIDs as part of a defined programme of work

NI Water has established the process for the identification, monitoring and review of UIDs. This included linking CAR and FD identifiers, developing CPMR to hold all relevant UID information and introducing review steps for all potential UIDs identified. In addition, NIEA have full visibility of the programme and sign off individual outputs within overall schemes: consequently, UIDs are claimed on a rolling basis rather than waiting for overall scheme completion.

The PC15 Final Determination indicated a target of 54 UID improvements for the 6-year period, with 10 of these profiled for delivery in 2017/18. One of these PC15 FD nominated outputs profiled for 2018/19 was delivered between 01 April 2018 and 31 March 2019, Killaney WwPS. 6 PC15 FD UIDs which had been profiled for delivery in 2016/17 and 1 which had been profiled for delivery in 2015/16 were delivered between 01 April 2018 and 31 March 2019.

8 UIDs in total were delivered during 2018/19.

Confidence grades

NI Water has maintained improvements in the reporting process and the cross checking process for this line which were initially implemented for the AIR14 submission. Improvements in the management of Beneficial Use dates were implemented in January 2016. For 2018/19, the confidence grades for this line was determined using the reporting guidance and assessed as A1 – based on sound, time specific data captured relevant to each individual UID.

UIDs Delivered during the fourth year of PC15 – AIR19 Period

Catchment	UID Address	FD Ref.	Project ID	Comments	Operational Date
North Down WwTW	Killaney WwPS 3	UID012	KS872	Upgraded	04/06/2018
Tullygarley WwTW	Galgorm WwPS	UID399	KB486	Upgraded	09/04/2018
New Holland WwTW	Antrim Street CSO 05	UID223	KT391	Upgraded	31/01/2019
Belfast WwTW	Dublin Road CSO 81	UID194	KR417	Closed	31/03/2019
Belfast WwTW	Sandy Row	UID265	KR417	Closed	31/03/2019
Belfast WwTW	Cromac Street CSO 95	UID191	KR417	Upgraded	31/03/2019
Belfast WwTW	Holiday Inn CSO 97	UID192	KR417	Closed	31/03/2019
Belfast WwTW	Dublin Road CSO 96	UID193	KR417	Closed	31/03/2019

Line 27 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

6 WwTW nominated outputs were delivered between 01 April 2018 and 31 March 2019. Maghaberry, Dundrum, Cloughey, Moneyreagh, Clabby and Mullans are all PC15 outputs.

Changes to the definition of how Beneficial Use can be claimed on a WwTW project were agreed with the Regulator in year and as such, Clabby WwTW and Mullans WwTW are now deemed to have achieved Beneficial Use in 18/19 as opposed to 19/20.

Confidence grades

NI Water has maintained improvements in the reporting process and the cross checking process for this line which were initially implemented for the AIR14 submission. Improvements in the management of Beneficial Use dates were implemented in January 2016. For 2018/19, the confidence grades for this line was determined using the reporting guidance and assessed as A1 – based on sound, time specific data captured relevant to each individual WwTW.

WwTW Delivered during the fourth year of PC15 – AIR19 Period

Project Name	Project Code	Beneficial Use Date
Maghaberry WwTW	KG041	01/11/18
Dundrum WwTW	KS962	05/12/18
Cloughey WwTW	KS111	29/03/19
Moneyreagh WwTW	KS235	15/08/18
Clabby WwTW	KP586	31/3/19
Mullans WwTW	KA239	31/3/19

Line 28 - Investment in improvements to small wastewater treatment works as part of the Rural Wastewater Investment Programme.

Ten small wastewater treatment works achieved Beneficial Use during 2018/19. Details of the actual works and year delivered are listed in the table below.

As with WwTW in line 27, a change in how Beneficial Use may be claimed was agreed in year, as such the figures claimed within AIR 19 may differ from those reported in year to ORG however the AIR figures are to be taken as the accurate reflection of what is claimed.

CAR Site Reference	Project title	Year claimed
S01137	Bellany WwTW	2018/19
S03104	Edenderry WwTW	2018/19
S01447	Newtown Crommelin WwTW	2018/19
S03088	Drumenny WwTW	2018/19
S01581	Kilbaskey WwTW	2018/19
S02566	Cladymore WwTW	2018/19
S02164	Dougan Place WwTW	2018/19
S01569	Donaghey WwTW	2018/19
S01643	Waterfoot Road WwTW	2018/19
S01163	Mayboy WwTW	2018/19

The confidence grades for this line were determined using the reporting guidance and were assessed as A2, based on the evidence within the methodology and the visibility of programme as defined within the 'Project Sites' section on CPMR.

Line 29 - CSO Monitoring

NI Water has installed 115 monitors up to now. We plan to install all necessary monitoring equipment in the PC15 period.

WwPS CSO Complete Sites.xlsx

Line 30 – WWTW's upgraded to comply with PPC Regulations

A new compliance measure was introduced for AIR16 for Wastewater Treatment Works upgraded to comply with PPC Regulations. There are currently 28 qualifying works reported for this measure. In agreement with NIEA the PPC permit for Sion Mills WwTW was

surrendered in May 2017 as the site was treating significantly less sludge than the PPC permitted daily limit of 49.3 m^3/d and a PLC inhibitor was installed.

During 2019/20, NI Water will continue to work with NIEA to identify potential additional sites for PPC permit surrender, which are in a similar position to Sion Mills.

Improvement works have been carried out a number of sites under the PC15 Year 1 Base Maintenance Programme. These improvement works include PPC compliance measures such as odour abatement unit media replacement, sludge thickener replacements, refurbishment of sludge import screens, replacement of odour control unit blowers, replacement of sludge holding tanks, additional sludge cake conveyors as back up to the duty system and replacement of poly dosing pumps.

Odour modelling is required to demonstrate what impact, if any, each installation is having on the surrounding environment. Given the cost associated with odour modelling, NIEA set out their priorities for completion of odour modelling. This required 23 odour modelling assessments to be undertaken, with 5 sites being assessed by NIEA as not requiring odour modelling.

An Odour Modelling plan has been prioritised and agreed with NIEA.

To date, odour modelling has demonstrated that 8 sites do not require capital investment to achieve compliance. A further 6 sites became compliant between 2017 and 2019 following improvement works:

2017/18: Whitehouse
2018/19: Ballyclare, New Holland (Lisburn), Carrickfergus, Culmore and Cookstown

Upon completion of the odour modelling, NI Water and NIEA will be in a position to assess each of the remaining sites and determine if the PPC Regulations are satisfied, or if additional investment is required to comply. If so, a work programme will be developed, in conjunction with NIEA, to deliver the necessary improvements to meet PPC Compliance for each site. Until such times, the remaining 14 sites are assessed as non-compliant at this stage.

For the sites not requiring odour modelling NI Water will progress all site documentation, such as site specific management plans, accident management plans and odour management plans to obtain sign-off by NIEA.

In 2018/2019, NI Water completed a survey of chemical storage and site drainage at a number of sites, including PPC permitted sites. The findings from this survey may identify additional work at PPC sites to maintain compliance. Further details of any required work will be assessed during 2019/2020 and reported in AIR 20.

NI Water Odour Modelling Implementation Plan:

WwTW	NIEA Priority	Import site	Phase 1 Target Completion Date	Phase 1 Actual Completion Date	Phase 2 Olfactory Study (If required) Target date	Phase 2 Target Completion Date	Phase 2 Actual Completion Date	Financial Year Completion date	BRAG Status
Dungannon (Moygashel)	1	Yes	Nov-16	Nov-16	Aug/Sep 16	Nov-16	Nov-16	2016/17	Complete
New Holland (Lisburn)	1	Yes	Nov-16	Nov-16	Aug/Sep 16	Nov-16	Nov-16	2016/17	Complete
Carrickfergus	1	No	Nov-16	Nov-16	Aug/Sep 16	Nov-16	Nov-16	2016/17	Complete
Whitehouse	1	No	Nov-16	Nov-16	Aug/Sep 16	Nov-16	Nov-16	2016/17	Complete
Newcastle	3	No	Mar-17	Mar-17	Aug/Sep 16	TBC	30th Nov 18	2016/17	Complete
Culmore	2	Yes	Jun-17	31/05/2017	Oct-17	Dec-17	Jan-18	2017/18	Complete
Ballymena (Tullygarley)	2	Yes	On hold pending completion of new SHT construction.	8th Jan 19	Spring 19	Jun-19		2018/19	On Target
Antrim	2	Yes	Jun-17	31/05/2017	Not required	Not required	Not required	2017/18	Complete
Dunmurry	2	Yes	Jun-17	31/05/2017	Not required	Not required	Not required	2017/18	Complete
Cookstown	2	Yes	Jun-17	31/07/2017	Oct-17	Dec-17	Jan-18	2017/18	Complete
Glenstall (Ballymoney)	2	Yes	Jun-17	31/07/2017	Not required	Not required	Not required	2017/18	Complete
Limavady	2	Yes	Oct-17	02/11/2017	Not required	Not required	Not required	2017/18	Complete
Downpatrick	2	Yes	Dec-17	31/07/2017	Not required	Not required	Not required	2017/18	Complete
North Coast	3	No	Nov-17	15/11/2017	Not required	Not required	Not required	2017/18	Complete
Enniskillen	3	No	Apr-18	Apr-18	Summer 18	Oct-18	7th Dec 18	2018/19	Complete
Omagh	3	No	Apr-18	Apr-18	Summer 18	Sep-18	20-Sep-18	2019/20	Complete
Banbridge	3	No	On Hold pending deregulation					2019/20	On Target
Larne	3	No	Nov-17	17/11/2017	Not required	Not required	Not required	2017/18	Complete
Tandragee	3	No	On Hold pending deregulation			TBC		2019/20	On Target
Magherafelt	3	No	Oct-17	02/11/2017	Summer 18	Oct-18	Dec-18	2020/21	Complete
Waringstown	3	No	On Hold pending deregulation			TBC		2020/21	On Target
Greenisland	3	No	Apr-18	09-May-18	Not required	not required		2020/21	Complete
Ballyclare WwTW	3	No	Apr-18	18-May-18	Summer 18	Oct-18	Dec-18	2020/21	Complete
Newry	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Strabane	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Newtownbreda	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Dromore	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	On Target
Lisnaskea	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	Complete

Line 31 Impermeable Surface Area

NI Water removed 34,103 m2 of impermeable surface water from the combined sewerage system. This was achieved from the completion of five schemes as listed below.

Project No.	Project Name	Impermeable Surface removed
KS935	College Ave/Shandon Drive Bangor Storm Sewer	24,180
KR622	McClintock Street, Belfast Storm Sewer	6,750
KV233	Canal Street, Newry Storm Sewer	1,665
KA278	The Square, Ballyclare Storm Sewer	1,410
KS962	Dundrum WWTW	98
	Total	**34,103**

Copy of AIR 19 Sewers Raw Data.xlsx

Line 32 - Number of sustainable WwTW solutions delivered (p.e. ≥ 250)

1 WwTW sustainable solution with a p.e. greater than 250 was delivered in 2018/19: this was Maghaberry WwTW.

Maghaberry is an upgraded waste water treatment works with a new Biological Filter Process with capacity to treat to a maximum PE of 5,172.

Line 33 - Number of sustainable WwTW solutions delivered (p.e. < 250)

No WwTW sustainable solutions with a p.e. less than 250 were delivered in 2018/19 due to difficulties in meeting land requirements. However, NI Water intends to fully deliver the target within the 6 year PC15 Period and is focussed on managing lands related issues.

APPENDIX 1

Table 3 – Permitted Exceedances

No of Samples	Permitted Exceedances
4-7	1
8-16	2
17-28	3
29-40	4
41-53	5

APPENDIX 2

NORMAL OPERATING CONDITIONS UNUSUAL SITUATIONS AND NORMAL LOCAL CLIMATIC CONDITIONS

1. THE REGULATIONS' TERMINOLOGY

1.1 The term "normal operating conditions" is used in paragraph 4(b) of Part II of Schedule 3; the phrase "unusual situations such as those due to heavy rain" is used in paragraph 5 of Part II of Schedule 3; "normal local climatic conditions" are referred to in regulation 4(4)(a).

2. INTERPRETATION

2.1 In order to assist in interpreting the weather conditions that might be considered to be abnormal or unusual; a definition of exceptional weather conditions is given below, together with an example of what might be considered to be other kinds of abnormal or unusual operating conditions.

2.2 The abnormal conditions set out below include capital works construction and periods of industrial action. Both are being considered by the Regulatory Committee, along with other possible exceptions suggested by other Member States. An amendment to this guidance note will be issued in the light of any guidance from the Regulatory Committee.

2.3 Definitions

2.3.1 For the purpose of this *registered standard / consent* the works shall be deemed to have been under 'normal operating conditions' except during a period when the following apply:

a. 'Unusual weather conditions' which shall include the following:
   i) low ambient temperature as evidenced by effluent temperature of 5^{o}C or less, or by the freezing of mechanical equipment in the works;
   ii) significant snow deposits;
   iii) fluvial flooding;
   iv) weather conditions causing unforeseen loss of power to the works which could not be ameliorated by the reasonable provision and operation of standby generator facilities.
b. A reduction in the level of treatment due to periods of industrial action or acts of vandalism that could not have been reasonably prevented.
c. When the Regulator has issued a variation of the registered standard for reasons such as construction of capital works.

NORTHERN IRELAND WATER LIMITED - ANNNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17a SEWERAGE EXPLANATORY FACTORS

SEWERAGE SUB - AREA EXPLANATORY FACTORS (TOTAL)

	DESCRIPTION	UNITS	DP	1 AREA 1	CG	2 AREA 2	CG	3 AREA 3	CG	4 AREA 4	CG	5 AREA 5	CG	6 AREA 6	CG	7 AREA 7	CG	8 AREA 8	CG	9 Total	CG
A	**SEWERAGE SUB AREAS GENERAL**																				
	Area name:-																				
1	Annual average resident connected population	000	1																	1,517.6	C3
2	Annual average non-resident population	000	1																	33.1	C3
3	Volume of sewage collected (daily average)	Ml/d	1																	348.2	B2
4	Total connected properties	nr	0																	709,180	A2
5	Area of Sewerage District	km^2	0																	13520	B2
B	**SEWERAGE DATA**																				
6	Total length of sewer	km	0																	16009	B3
C	**Costs**																				
7	Sewerage: Direct Costs	£000	0																	13,486	
8	Sewerage: Power Costs	£000	0																	4,362	
9	Sewerage: Service Charges	£000	0																	0	
10	Sewerage: General & Support Expenditure	£000	0																	7,719	
11	Sewerage: Functional Expenditure	£000	0																	21,205	

Table 17a Sewerage Explanatory Factors- Sewerage Sub-Area Explanatory Factors

Line 1 - Annual average resident connected population (Total)

The guidance for Table 17a includes the following text:
"Companies must check that the following data are consistent. Companies must explain in the commentary any reasons why this data is not consistent.

- *Annual average resident connected population in table 17a (line 1, 'total' column) plus annual average non-resident population in table 17a (line 2, 'total' column) should equal the total connected population in table 13 (line 10)"*

NI Water has not calculated the Total Annual Average Resident Connected Population independently of the Total Annual Average Non-Resident Population and the Total Connected Population. Instead, the Company has used the consistency check *(above)* to derive the Total Annual Average Resident Connected Population.

- According to AIR19: Table 13: Line 10, the total connected population (comprising resident and non-resident population) is 1,550.715 x 10^3
- According to AIR19: Table 17a: Line 2, the annual average non-resident population is 33.097 x 10^3
- By calculation, the annual average resident connected population = 1,550.715 x 10^3 - 33.097 x 10^3 = **1,517.618 x 10^3**

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figure

AIR17	Confidence Grade	AIR18	Confidence Grade	AIR19	Confidence Grade
1,505.6 x 10^3	C3	1,512.0 x 10^3	C3	**1,517.6 x 10^3**	**C3**

The estimated annual average resident sewerage connected population has increased from 1,512.0 x 10^3 in AIR18 to 1,517.6 x 10^3 in AIR19, an increase of 5.6 x 10^3 *(0.37%)*.

Confidence Grade

There are two figures associated with the calculation of AIR19: Table 17a: Line 1: Column 9. The first figure is derived from AIR19: Table 13: Line 10 and was allocated a confidence grade of B3. The second figure is derived from AIR19: Table 17a: Line 2: Column 9 and was allocated a confidence grade of C3. Since the lower of the two confidence grades is C3, a confidence grade of **C3** has been allocated to Table 17a: Line 1: Column 9.

Line 2 - Column 9 - Annual average non-resident population (Total)

AIR17	Confidence Grade	AIR18	Confidence Grade	AIR19	Confidence Grade
31.1 x 10^3	C3	32.4 x 10^3	C3	**33.1 x 10^3**	**C3**

NI Water has included holiday and tourist population connected to the sewerage system, averaged over the year.

NI Water has not included any allowance for daily commuters or day visitors.

Changes in Methodology

Background

The methodology for calculating the average non-resident sewerage population relies heavily on the ability to source a figure from available tourism statistics for the number of **non-resident visitor nights**. In the past, this figure has been available for either the most recent calendar year *(as in the case of AIR17)* or the first three quarters of the most recent calendar year *(as in the case of AIR18)* but not the financial year in question.

These limitations have caused NI Water to base its reporting of the average non-resident sewerage population on a calendar year and to estimate the number of non-resident visitor nights in the calendar year when the figure has not been readily available. Estimates are based on the assumption that there is a direct relationship between the number of non-resident visitor nights and the occupancy figures for hotels and guest houses/B&Bs.

AIR19 Methodology

This year, NISRA has identified delays in both the provision of key data from the Central Statistics Office (CSO) and in the assessment of that data to determine its quality. The data from CSO provides information on residents from the Republic of Ireland taking overnight trips in Northern Ireland. This information is an important part of the overall statistical picture of tourism in Northern Ireland and is used to determine amongst other things, the number of non-resident visitor nights. As of 14/05/19, NISRA were in a position to confirm that the publication of quarterly and annual tourism statistics would resume on 06/06/19.

In view of the circumstances highlighted above, NI Water has used the last available published figure *(for the 12-month period from April 2017 to March 2018)* and has estimated the annual number of non-resident visitor nights in 2018.

Impact of Change in AIR19 Methodology on Reported Outturn

The change in methodology described is not believed to have had a significant impact on the reported outturn. This can be illustrated as follows:

Ref: Table 1.3 of the NISRA publication *'Northern Ireland Tourism Statistics (2011 – 2018)'* dated 07/02/2019.
Total bed-spaces sold (Apr 16 to Mar 17) = 4,218,445
Estimated non-resident visitor nights (Apr 16 to Mar 17) =
4,218,445 x 2.684 = 11,323,087
Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2017 – March 2018)'* dated 23/08/2018.
Actual non-resident visitor nights (April 16 to March 17) = 11,405,498
Difference between actual and estimate =
11,405,498 - 11,323,087 = 82,411
Percentage difference = 82,411 / 11,405,498 = 0.72%

As the difference between the actual and estimate is less than 1%, this is deemed to be a suitable method for estimating the number of non-resident visitor nights and the result is still within the tolerance of any previously assigned confidence grading for this measure.

Statement detailing estimation method used including date of data on which estimate is made

Assumption: There is a direct relationship between bed-spaces sold and non-resident visitor nights.

Ref: Table 1.3 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (2011 – 2018)'* dated 07/02/2019.

- *Northern Ireland Hotel Rooms and Beds Sold by Month*
- *Northern Ireland Guesthouse, Bed & Breakfast and Guest Accommodation Rooms and Beds Sold by Month*

Total bed-spaces sold (Apr 17 to Mar 18) = 4,351,784
Total bed-spaces sold (Jan 18 to Dec 18) = 4,500,616
Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2017 – March 2018)'* dated 23/08/2018.

- *Estimated number of overnight trips, nights and expenditure in Northern Ireland (excluding NI residents) for the 12 months to March 2017 and March 2018'*

Non-resident visitor nights (Apr 17 to Mar 18) = 11,680,995
11,680,995 / 4,351,784 = 2.684
Estimated non-resident visitor nights (Jan 18 to Dec 18) =
4,500,616 x 2.684 = 12,080,487

Annual average non-resident population = 12,080,488 / 365 nights = **33,097**
In obtaining the estimated number of visitor nights, NI Water has avoided the assumption specified in the guidance of *'a two-thirds occupancy rate of estimated bed-spaces available for non-residents for four months in the year'*.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figures

At the time of reporting on AIR18, a non-resident visitor nights figure was available for only the first nine months of 2017 and a figure for the entire twelve months had to be estimated. In accordance with the AIR18 Reporter Recommendation for Table 2 Line 20, NI Water has recalculated the AIR18 outturn for Table 17A Line 2 using a figure now published for the entire twelve months. The recalculation is as follows:
Annual average non-resident population = 11,645,693 / 365 nights = **31,906**

The recalculated AIR18 outturn of 31,906 is only 535 properties (1.65%) lower than the original AIR18 outturn of 32,441 which was based on an estimated number of non-resident visitor nights in 2017 of 12,168,411. This is well within the tolerance of the assigned confidence grading.

Last year, the Company reported a Table 17A Line 2 outturn of 32.4 x 10^3. Based on the AIR19 outturn, the estimated annual average non-resident sewerage population has increased by 0.7 x 10^3 *(2.02%)*. This increase can be attributed to an increase in the number of non-resident visitor nights. The 2018 estimate was 12,080,487 compared to the 2017 confirmed figure of 11,645,693.

Despite the absence of information relating to Q2 to Q4 of 2018, a comparison of the statistics for Q2–2016 to Q1–2017 and Q2–2017 to Q1–2018 reveals an increase in tourism and hence, an increase in the annual average non-resident sewerage population (Table 17a Line 2).

	Visitor Nights (Q2–2016 to Q1–2017)	**Visitor Nights (Q2–2017 to Q1–2018)**
GB Visitors	5,605,283	5,733,746
RoI Visitors	1,005,492	1,102,196
Visitors from outside UK & RoI	4,794,723	4,845,053
All Visitors (excluding NI)	**11,405,498**	**11,680,995**

The statistics show that external visitors are on average staying longer, leading to an increase in overall visitor nights. The increase has been driven largely by increases in visitors from GB and the Republic of Ireland.

Line 3 – Volume of Sewerage Collected

This figure has been copied from AIR19 Table 14 Line 7 – Volume Waste Water Returned.

Line 4 – Total Connected Properties

NI Water's data on property counts and classifications is reported monthly from RapidXtra within the Rapid Property Summary (RPS). The data is extracted from the Diamond Warehouse via Microsoft SQL Server to produce the RPS report.

Our AIR19 methodology has remained consistent with previous years – using the automated Property Model tool to populate the Table 17a Line 4 figure (this was first introduced in AIR12 – the RPS as the input).

The RPS provides us with a snapshot at the end of each month in terms of net movement; however it currently does not support us in the explanation of gross movements within the data. The CSD Services MI & Data Team are currently exploring the use of Power BI to determine the gross movement.

Customer/Property information is updated through:

- BAU ('business as usual') customer contacts, such as new connection requests, customer move in/move outs, or
- through Data Quality initiatives/Projects, and/or
- Metering work streams e.g. UNHH (Selectives), Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water were required to install meters on all new household connections from April 2007. This practice has stopped as directed by a change in legislation, which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NI Water of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

The difference between the AIR18 and the AIR19 figures is 10,862. The breakdown can be explained as follows:

1. New Connections during the 2018/19 reporting year. The figures are based on data supplied by our Customer Connections Team and represent completed connections during the reporting year. The projections for New Connections remain in line with the agreed PC15 forecasts, however we have noted a downturn and will review mid-

year (during the draft Principle Statement) to ascertain if projections should be changed.

2. Added as a result of a customer contact. i.e. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    (a) The adding of properties NI Water allegedly did not know about
    (b) The adding of duplicates as the customer's address could not be found on Rapid. Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time of New Connection to that of customer contact (street names can change in the early stages of site development).
3. Removal/reclassification of properties as a result of data quality initiatives/projects
    a. Duplicate properties
    b. Reclassification of properties that were recorded in error
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.

For NI Water, accurate property data is fundamental for many systems and processes, including customer service, metering, billing, consumption, leakage and Major Incident Planning & Response. The Rapid Customer Contact System contains the master property data for NI Water.

As Data Owner for Property Standing Data, The Head of CSD Services is responsible for the property standing data held by NI Water; this is monitored and managed through the Property Information Group (PIG). The CSD Services MI & Data Team chairs this group.

The role of PIG is to ensure that there is appropriate governance, controls and reporting for changes made to core data on the system. As Property Data Owners, we need to ensure the processes around creation, maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. Control is key for us; as such we have identified the systems, processes and people using property information across the business, alongside confirming data accuracy and endeavouring to reduce the opportunities for erroneous data entry and creation (such as the inability to recreate demolished properties or duplicate properties).

The issues under consideration were identified as of corporate relevance, therefore to ensure appropriate direction and governance the PIG was formalised. Key objectives include:

1. To agree a single consistent source of property data.
2. To ensure the source property data represents accurate, up-to-date information appropriate for use by the business.
    a. To understand and agree data primacy in respect of data updates from NI Water and external (Land & Property Services - LPS) sources
    b. To ensure the processes around creation (i.e. New Connections), maintenance and demolition of properties are governed and appropriate control points and associated reporting are in place. i.e. through CBC Data Validation (Phase 1, Phase 2, Phase 3, 105 Days DV)
    c. To co-ordinate property reconciliations between NI Water & external sources i.e. Data Sharing Agreements between NI Water & LPS, NI Water & Belfast City Council (BCC) etc. and understand the reasons and validity of any differences

   d. To understand and ensure the adequacy of long term procedures for database maintenance, including the updating of data standards and associated CDE M&M Plans
3. To ensure the reporting requirements for the business are met relating to data held on Rapid, particularly, but not exclusively, in respect of tariffs, leakage, Annual Information Returns (AIR) & Principle Statement (PS) returns.
4. Challenge the data in the areas of
   a. Data categorisation & structure
   b. Data robustness – i.e. where is our data good and where is there opportunity for improvement? Identify projects that could aid improvement
   c. Data alignment – both internally and externally. Internally between systems such as Rapid, Ellipse, GIS, Diamond, Netbase, IMS etc. Externally through data reconciliations, such as LPS above.
5. To agree measures to improve the quality and integrity of the data, particularly the key CDEs as monitored by IMU
6. To agree the content and frequency of reports required by NI Water.
7. To agree the quality checking criteria for the above data and reporting and develop a Quality Plan including the determination of responsibilities and audit trails.
8. To produce & circulate an 'operate and maintain' programme for property data to the business.

During 2018/19, the focus for PIG included analysis and action on:

- Volume of properties coming onto the Rapid billing system on a monthly basis
  - new connections
  - customer contact
  - project work
- Volume of properties coming off the Rapid billing system (demolished)
  - sample check to ensure reason for demolition has been noted and on system audit trail recorded
- Volume of properties amended on the Rapid billing system
  - In particular, address fields -> building number, street name, town and postcode
  - sampling to identify if the data changes are data improvement or data regression
  - if data regression, further analysis into the process is undertaken
- Review of access privileges
  - Rapid audit
  - Through monthly audit samples
  - Internal CRs require sign off from PIG as BAU
  - Working with Echo to review access privileges on an ongoing basis
- Interruptions to supply notices – returned mail
  - This returned mail was brought to the attention of LPS and include properties that LPS have classified as live properties despite being returned as 'no such address' etc.
  - The 2 way communication with LPS will help underpin our governance work and provide direction to the business on practices
- Car Parking Spaces
  - The group identified that 'car parking' spaces were being added to Rapid as properties. One of the project teams added them because they were live on LPS, however they are not physically a property, nor do they require a water supply, therefore this practice has now ceased.

The PIG Strategy for 2019/20 will include the following:

- New Connections - A move to on-system reporting following the Business Improvement New Connections Review
- Rapid-POINTER Reconciliation - follow on actions to be worked through and benefits realised. i.e. Uploading of UPRNs from POINTER where a property can move from an A match to an A* match
- Running of a mini data cleanse project within the CSD Services MI & Data Team to prepare the Rapid property data for the switch on of system validations. There were 4 phases of system validation functionality introduced to Rapid as part of the CBC Implementation Project. Off system data cleanse is required before some of the system validation rules can be applied. The data will need prepared offline to ensure accuracy and that it conforms to the system validation rules. It will then need tested before being uploaded to Rapid through the bulk upload tool. There will be some further testing to ensure all has uploaded correctly before the functionality is switched on.
- Data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – NDA has been signed off, data sharing project to commence during June 19 for a 12 month period.
- Continuation of the 2 way communication with LPS - This will help underpin our governance work and provide direction to the business on practices that will work alongside LPS
- Student Accommodation – further case studies on student accommodation re-development sites. How does Rapid hold these properties? Liaise with Belfast City Council to understand at what stage they can inform NI Water of properties that are to be re-developed as student accommodation.
- Test Meters – follow up on ‘retain for review meters’
- Properties with ‘no water supply’ (no water/well water) – review and validate on a monthly basis

Annex A details the Line Methodology followed to produce the figures for Table 17a Lines 3-4.

Line 5 - Area of sewerage district

The figure provided equates to the total land mass of Northern Ireland excluding major bodies of inland water. The same LPS product has been used to determine the Area of Sewerage District. There remains only one sewerage district for all of Northern Ireland. The confidence grade of the data will remain the same as the previous year.

Line 6 - Total length of sewer

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

C Costs Lines 7-11

The overall approach and allocation process for Table 17a has not changed since AIR08. There are still some limitations and it has not been possible to fully complete the Information Returns for 2019. Work is on-going, through the Cost to Serve Project. Cost to Serve is not

fully implemented and therefore could not be used for AIR19. The figures populated in Column 9 have been taken from Table 22 (NIW only).

Line 7 – Direct Costs

It is not yet possible to split the costs into areas. A total figure has been supplied in Column 9 which agrees to the direct sewerage costs in Table 22, column 1 line 9. See Table 22 commentary. Direct Costs have increased by circa £0.5M from AIR18.

The main reason for this was increased power costs (see below), Hired and Contracted Services and Materials and Consumables.

Line 8 – Power Costs

The figure for Power costs agrees to Table 22, line 2 column 1. See Table 22 commentary. Power costs have increased by £0.3M from AIR18 mainly due to increased energy tariffs.

Line 9 – Services Charges

The figure for Service Charges agrees to Table 22, line 7 column 1. They are minimal for AIR19.

Line 10 – General & Support

The figure for General & Support expenditure agrees to Table 22, line 10 column 1. See Table 22 commentary and methodology. These costs have decreased by £0.2M from AIR 18.

Line 11 – Functional Expenditure

This is a calculated cell and is the total of line 7 and line 10. This figure agrees to Table 22, line 11 column 1. The costs in this line have increased by approx. £0.2m since AIR18. This is due to the combination of higher power costs and decreased general and support as explained above.

Annex A Table 4 Lines 6-8 - Total Connected Properties

Total properties connected for sewerage services (including voids) at year end.

This figure is taken from the AIR19 Rapid Property Summary, as attached.

RPS March YE 2019.xlsx

Total Gross Sewerage Properties	End March 2019
Household – Unmeasured	630987
Household - Sewerage Only	7
Household – Measured - Not Charged (test meters)	104
Household - Measured	35289
Household – Site Meters	1882
Household - Unmeasured - Not Charged	13
Non-Household - Unmeasured	12266
Non-Household – Sewerage only	18
Non-Household - Measured	28614
Total	**709180**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17b SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LARGE WORKS INFORMATION DATABASE (NIW Only

	DESCRIPTION	UNITS	DP	TOTAL	1	CG	2	CG	3	CG	4	CG	5	CG	6	CG	7	CG	8	CG	9	CG	10	CG	11	CG	12	CG	13	CG	14	CG	15	CG
1	Works Name				Belfast		Culmore		Ballymena		Whitehouse		North Coast		Newry		Lisburn		Antrim		Dunmurry		Omagh		Dungannon		Newtownbreda		Carrickfergus		Enniskillen		Larne	
A	**WORKS SIZE**																																
2	Population equivalent of total load received	000	0	1,345	485	C5	134	C5	74	C5	88	C5	76	C5	61	C5	71	C5	66	C5	46	C5	37	C5	89	C5	34	C5	32	C5	25	C5	27	C5
B	**EFFLUENT CONSENT STANDARD**																																
3	Suspended solids consent	mg/l	0		50	A1	50	A1	25	A1	50	A1	50	A1	50	A1	15	A1	20	A1	25	A1	50	A1	40	A1	30	A1	50	A1	30	A1	50	A1
4	BOD5 consent	mg/l	0		30	A1	30	A1	15	A1	30	A1	30	A1	30	A1	10	A1	10	A1	10	A1	30	A1	25	A1	15	A1	30	A1	20	A1	30	A1
5	COD consent	mg/l	0		125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1
6	Ammonia consent	mg/l	1		0.0	0	10.0	A1	3.0	A1	0.0	0	0.0	0	0.0	0	2.5	A1	15.0	A1	2.5	A1	10.0	A1	7.0	A1	5.0	A1	0.0	0	10	A1	0	0
7	Phosphates consent	mg/l	1		0.0	0	0.0	##	1.0	A1	0.0	0	0.0	0	0.0	0	2.0	A1	1.0	A1	2.0	A1	2.0	A1	1.0	A1	2.0	A1	0.0	0	1	A1	0	0
C	**TREATMENT CATEGORY**																																
8	Classification of Treatment Works				TA2		SAS		TA2		TA2		SAS		SAS		TA2		TA2		TA2		TA2		TA2		TA2		TA2		TA2		TA2	0
D	**COSTS**																																
9	Direct cost	£000	0	6,853	1,741		502		498		376		251		425		492		376		335		208		446		324		299		279		300	
10	Power costs	£000	0	4,002	1,306		242		230		232		186		265		242		179		140		103		282		142		142		122		189	
11	Service Charges	£000	0	250	34		27		16		13		2		17		18		15		19		12		18		15		17		14		12	
12	General and support expenditure	£000	0	3,908	536		418		244		201		38		271		285		237		300		184		281		241		262		223		186	
13	Functional expenditure	£000	0	10,760	2,277		921		742		578		290		696		776		614		635		392		727		565		561		502		486	
14	Estimated terminal pumping costs	£000	0	0	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	
15	Estimated sludge costs	£000	0	0	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	

Table 17b – Sewerage Explanatory Factors (NIW only)
Sewage Treatment Works – Large Works Information Database

This table was populated in the same way as AIR18. The costs are a further breakdown by location of the Band 6 expenditure detailed in Table 17f line 6. It is populated with the information available for the year ended 31 March 2019. The Population Equivalent (PE) information used to complete this table was received from Asset Management on 30 May 2019. No PPP costs are included in this table.

Line 9 – Direct Costs

Direct costs include power 521x, contractors 531x, other contractors 532x, materials 541x, chemicals 548x, cost reallocations 611x (this includes direct labours costs and & overhead charges) and service charges.

In AIR19 there are 15 works that fall into Band 6. Larne is now included in Band 6, it was included in Band 5 in AIR18.

Direct costs have increased by approx. £0.8M from AIR18. This is mainly due to increased power costs (see below) and the inclusion of Larne in Band 6.

Line 10 – Power Costs

Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. The power costs have increased in AIR19 by £0.6M mainly in Belfast WWTWs and also due to the inclusion of Larne in Band 6.

Belfast WWTW's was treated separately as there is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTW's and the two Incinerators operated by PPP. The power team supplied an estimated 51:49 split between the Belfast WWTWs and the Incinerators (based on an estimated KWhr usage and a number of sub-meters) which has been used to calculate the amount relating to Sewage Treatment at Belfast WWTW's. The split in AIR18 was 44:56 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR19.

Line 11 – Service Charges

Service Charges for AIR19 are in line with AIR18.

Line 12 – General & Support

The total general & support expenditure was taken from Table 22 line 10 column 2 (see Table 22 commentary). This figure was apportioned across all the WWTWs in this table based on the cost reallocations 611X (this includes direct labours costs & overhead charges). This figure has increased by £0.1m since AIR18. See commentary on Table 22 for further breakdown and explanation.

Line 13 – Functional Expenditure

This is a calculated line and is the total of line 9 and line 12. The total in the workings agrees to Table 22 (NIW Only) column 2 line 11. Costs have increased since AIR18 by £0.9M mainly due to the increased power costs and the inclusion of Larne in Band 6 as explained above.

Line 14 – Terminal Pumping Costs

This information was populated in the same way as AIR18. No Power costs for Terminal Pumping Stations have been included in the table.

Line 15 – Sludge Costs

Sludge treatment is a separate activity in the accounts and the direct costs are not included in line 9 to line 13.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0	240	21	509		0	3	2	0	0	5	780
2	Number of STWs in size band 2	nr	0	0	5	32	3	1	10	6	1	1	0	59
3	Number of STWs in size band 3	nr	0	1	13	45	7	12	15	8	1	0	1	103
4	Number of STWs in size band 4	nr	0	1	15	8	1	15	2	5	3	1	0	51
5	Number of STWs in size band 5	nr	0	0	5	0	2	7	0	1	0	0	0	15
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	3	0	0	12	0	0	0	0	0	15
7	Total numbers of STWs	nr	0	242	62	594	13	47	30	22	5	2	6	1023
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH_3 consent (5 - 10mg/l)	nr	0	44										
9	Number of small STWs with NH_3 consent (< = 5mg/l)	nr	0	59										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			TOTAL
					ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0	0	0	0	0	0	0	0	0	0	0	0
2	Number of STWs in size band 2	nr	0	0	0	0	0	0	0	0	0	0	0	0
3	Number of STWs in size band 3	nr	0	0	0	0	1	0	0	0	0	0	0	1
4	Number of STWs in size band 4	nr	0	0	0	0	0	0	0	0	0	0	0	0
5	Number of STWs in size band 5	nr	0	0	0	0	0	1	0	0	0	0	0	1
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	1	0	0	3	0	0	0	0	0	4
7	Total numbers of STWs	nr	0	0	1	0	1	4	0	0	0	0	0	6
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH3 consent (5 - 10mg/l)	nr	0	0										
9	Number of small STWs with NH3 consent (< = 5mg/l)	nr	0	2										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0	240	21	509	0	0	3	2	0	0	5	780
2	Number of STWs in size band 2	nr	0	0	5	32	3	1	10	6	1	1	0	59
3	Number of STWs in size band 3	nr	0	1	13	45	8	12	15	8	1	0	1	104
4	Number of STWs in size band 4	nr	0	1	15	8	1	15	2	5	3	1	0	51
5	Number of STWs in size band 5	nr	0	0	5	0	2	8	0	1	0	0	0	16
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	4	0	0	15	0	0	0	0	0	19
7	Total numbers of STWs	nr	0	242	63	594	14	51	30	22	5	2	6	1029
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH3 consent (5 - 10mg/l)	nr	0	44										
9	Number of small STWs with NH3 consent (< = 5mg/l)	nr	0	61										

Table 17c- Sewage Treatment Works Numbers

NIW only

It should be noted that the banding of the WWTWs is based on the latest Populations Equivalents minus tourist PEs (i.e. hotels and caravan parks only as information does not exist on proportion of PE to commuters). PEs for 80 WWTWs (which were live during AIR19) have been updated.

Changes regarding WWTWs from the AIR18 period are as follows:

- 4 WWTWs have been upgrade and achieved beneficial use in the last financial year – i.e. Cloughey WwTW, Dundrum WwTW, Maghaberry WwTW and Moneyreagh WwTW.
- 10 WWTWS had 'turn of flow' under the RWwIP project (including upgrades to Bellany, Edenderry, Newtown-Crommelin, Drumenny, Kilbaskey, Cladymore, Dougan Place, Donaghey and Mayboy WWTWs and refurbishment to Waterfoot Road WwTWs)

There is no net change in the number of WWTWs from AIR18 reporting, with 1023 WWTW live on 31st March 2019.

The total number of WWTWs in Table 17c line 7 is the total of all works in this table i.e. 1,023 including the screened outfalls (2 No.) and the unscreened outfalls (6 No). The number of WWTWs in Table 15 line 8 is 1,015 as the screened and unscreened outfalls are not to be included in the total for this line.

The UR Chapter 17c guidance also requests the following cross check to be carried out, which has been completed:

- The number of large WWTWs in each treatment category in table 17c (line 6, columns 1-10) should equal the corresponding total number of large WWTWs reported in table 17b (line 8) – which for AIR19 is 15 No WWTWs.

It should be noted that the AIR19 PEs, used to populate tables 17c and 17d, were forwarded to others within the organisation who are responsible for the population of tables 17b and 17f, which should ensure consistency of reporting.

The Reporters Report for AIR09 recommended that the difference in the total population used to calculate the size bands and the population given in Table 13 Line 10 should be investigated and consideration given to a harmonised approach. The table below shows the AIR19 comparison between the two figures.

Total Residential Population used to Calculate Table 17c for AIR19	1,247,625
Total Population connected to the sewerage system based on Table 13 Line 10	1,552,068
Difference	**30,4443**

As can be seen there is a difference of 304,443. However the Table 17c information does not include the residential population within PPP catchments. An exercise was carried out during February 2012 to establish a Theoretical Desktop PE for the PPP sites and these have been updated with the latest AIR19 Trade PE. The non-residential aspect of these PEs have been subtracted from the overall AIR19 PPP PE (based on the reported AIR19 PPP BOD Load and divided by 60g/head/day).

Name of WWTWs	Equivalent Population (From PPP Section)	Non-Residential PE held against PPP Catchments (Includes Non-Residential, Trade, Schools, Large Water Consumers, Caravan Parks)	Residential Population (Based on PPP Equivalent Population. Includes Residential Homes)
North Down WWTW	59,921	9,275	50,646
Armagh WWTW	14,157	7,259	6,898
Richhill WWTW	1,852	191	1,661
Newtownards (Ballyrickard)	40,871	17,200	23,671
Ballynacor WWTW	151,683	76,522	75,161
Kinnegar	68,784	33,392	35,392
Total	**337,268**	**143,839**	**193,429**

As can be seen the residential population for the PPP sites is now approximated to be 193,429. If this is added to the 17c figure (1,247,625) then the total is 1,441,054 which is 111,014 less than the figure held in Table 13. However the Table 13 Line 10 residential figure includes nursing homes and tourist population. Nursing homes are included in the Trade PE so if this element (7742) and the AIR18 tourist population for both NIW sites (34,292 PE) and PPP sites (1,964) are included this gives a revised figure of 1,485,052 which is 67,016 PE less than the figure held in Table 13, approximately 4.3% of a difference.

It should be noted that the Residential PE for most of the NIW WWTWs has been derived from GIS pointer data and that inaccuracies do exist in that some residential properties are labelled as commercial or industrial, and visa-versa.

The AIR11 Reporters Report stated '***The Asset Performance team collates all information into the central spreadsheet from which Band Size for each WwTW can be assessed and any changes highlighted. The size banding of each works is added manually. For AIR12, we consider this process should be automated, for the avoidance of any misrepresentation.'*** Hence NIW has incorporated a means within the central spreadsheet to automate this process.

The Reporters Report for AIR09 recommended that a consistent approach for population figures used in the 17 series tables should be adopted. The population figures used in Table 17c are the same as in 17d. These figures have also been supplied to the other parts of the business which populate Tables 17a, 17b & 17f etc., so population figures should be consistent.

With reference to the WWTWs in Size Band 1:

- the number of WWTWs with a PE less than or equal 100 (excluding tourist PE) is 698, and
- the number of WWTWs with a PE greater than 100 but less than or equal to 250 (excluding tourist PE) is 82.

The table below highlights the changes in band sizes from AIR18 to AIR19.

Name of Works	CAR ID	AIR18 Band Sizes	AIR19 Band Sizes	Comment
Longfield (Eglinton)	S03173	Band 2	Band 1	A population study was carried out for this site and reviewed and adopted for AIR19.

It should be highlighted that for AIR14 NIW re-assessed the treatment categories for a number of sites. This followed a query from NIW with OFWAT as to the definition of what constitutes a tight consent. At this time it was confirmed that that a company is given a tight consent if it has a Suspended Solids consent of less than or equal to 30mg/l AND a BOD of less than or equal to 20mg/l. Also a company is given a tight consent if its ammonia consent is less than or equal to 5mg/l.

The AIR definition on treatment categories states that Tertiary A2 can be defined as *Works with a secondary activated sludge process whose treatment methods also include* ***nutrient control using physic-chemical and biological methods****.* Likewise Tertiary B2 can be defined as *Works with a secondary biological process whose treatment methods also include* ***nutrient control using physic-chemical and biological methods.***

NIW has historically oversized secondary assets to meet tight ammonia consents and it is now felt that this falls within the definition of Tertiary Treatment described above i.e. ***nutrient control using physic-chemical and biological methods.*** In total NIW re-designated the treatment category for 33 WWTWs based on this definition for AIR14, changing 22 WWTWs from Sec Act to Ter A2 & 11 from Sec Bio to Ter B2. The treatment categories for these sites remain unchanged, following a review of the ammonia consents and treatment methods for AIR17. In line with the AIR15 Reporter's Recommendation No 33 (Table 17c S7) NI Water will monitor the possible impact of this interpretation of tertiary treatment in future reporting.

The table below highlights the changes in treatment category from AIR18 to AIR19.

Name of Works	CAR ID	AIR17 Treatment Category	AIR18 Treatment Category	Comment
Cloughey (WWTW)	S00224	Sec Bio	Ter B2	Tertiary treatment added to process to meet sensitive waters requirements.

Difference between AIR18 and AIR19 for total in Table 17c (column 11, row 7)

Total Number of Works for AIR 19 -	**1,023**
Total Number of Works for AIR 18 -	**1,023**
Total Difference -	**0**

With reference to lines 8 and 9, data regarding the ammonia consents of the Small WWTWs (Bands 1 to 5 inclusive) was obtained from a spreadsheet of standards obtained from the Environmental Regulation Team.

Changes to lines 8 and 9 of this table, from AIR18 to present are summarised below:

Line	Nr AIR18	Nr AIR19	Difference	Comment
8	44	44		No consent changes during AIR19 with regards to line 8 Net change - zero
9	59	59		No consent changes during AIR19 with regards to line 9 Net Change - 0

It is to be noted that NIEA did not recognise the AIR15 PEs for the WWTWs in the table below, and will probably not recognise the updated AIR19 PEs for these sites, for compliance reporting. They view the PEs in the last column of the table as the PEs to be used for the latter. NIEA require daily flow and load studies for a full year to substantiate drops in PE which cross UWWTD boundaries i.e. 2000pe, 50,000pe and 100,000pe. These flow and load studies were not identified in the PC15 Business Plan submission and given the reduction in funding over the first 3 years of PC15 they are not currently prioritised for inclusion in the capital works programme.

WWTWs	Site ID	AIR19 Actual PE	Actual PE recognised by NIEA
Ballymena (WWTW)	S01456	73,664	113825
Dromore (Tyrone)	S03083	1919	2032
Dunmurry	S00346	46,284	53605

PPP

Lines 1-6

The category of Richhill WwTW has been changed to Category 3 to reflect the third consecutive year that the loading rate has dropped below the lower threshold of Category 4 works.

Line 9

The category of Richhill WwTW has been changed to Category 3 to reflect the third consecutive year that the loading rate has dropped below the lower threshold of Category 4 works.

Specific required commentary

- There are no doubts about the classification of any of the PPP works.
- The data is consistent with the data provided on Table 15 Line 8 (PPP Only) table.
- Based on the calculated loads treated at the PPP sewage works in the AIR19.
- Reporting period, there are no size band 1 PPP works on which to provide extra detail.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY										TOTAL	CG
					SECONDARY		TERTIARY				SEA OUTFALLS				
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED		
A	**SMALL WORKS**														
1	Load received by STWs in size band 1	kg BOD_5/day	0	141	99	1,399	0	0	62	25	0	0	32	1,757	C3
2	Load received by STWs in size band 2	kg BOD_5/day	0	0	121	692	61	18	213	139	248	69	0	1,562	C3
3	Load received by STWs in size band 3	kg BOD_5/day	0	91	1,019	2,482	426	817	995	538	42	0	55	6,464	C3
4	Load received by STWs in size band 4	kg BOD_5/day	0	350	3,519	1,542	130	4,195	335	1,194	778	205	0	12,248	C3
5	Load received by STWs in size band 5	kg BOD_5/day	0	0	4,728	0	1,710	7,345	0	1,125	0	0	0	14,907	C3
B	**LARGE WORKS**														
6	Load received by STWs in size band 6	kg BOD_5/day	0	0	16,324	0	0	64,492	0	0	0	0	0	80,817	C3
7	Total loads rec'd (daily average all size bands)	kg BOD_5/day	0	581	25,811	6,115	2,327	76,867	1,605	3,020	1,068	274	87	117,754	C3
C	**SMALL WORKS WITH AMMONIA CONSENTS**														
8	Load rec'd by small STW w. NH_3 consent (5 - 10mg/l)	kg BOD_5/day	0	5,113											
9	Load rec'd by small STW w. NH_3 consents (< = 5mg/l)	kg BOD_5/day	0	14,031											

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY											
					SECONDARY		TERTIARY				SEA OUTFALLS				
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL	CG
A	SMALL WORKS														
1	Load received by STWs in size band 1	kg BOD5/day	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Load received by STWs in size band 2	kg BOD5/day	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Load received by STWs in size band 3	kg BOD5/day	0	0	0	0	111	0	0	0	0	0	0	111	B3
4	Load received by STWs in size band 4	kg BOD5/day	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Load received by STWs in size band 5	kg BOD5/day	0	0	0	0	0	849	0	0	0	0	0	849	B3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	4,127	0	0	15,148	0	0	0	0	0	19,275	B3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	0	4,127	0	111	15,997	0	0	0	0	0	20,235	B3
C	SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0	0											
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0	960											

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY											
					SECONDARY		TERTIARY				SEA OUTFALLS				
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL	CG
A	SMALL WORKS														
1	Load received by STWs in size band 1	kg BOD5/day	0	141	99	1,399	0	0	62	25	0	0	32	1,757	C3
2	Load received by STWs in size band 2	kg BOD5/day	0	0	121	692	61	18	213	139	248	69	0	1,562	C3
3	Load received by STWs in size band 3	kg BOD5/day	0	91	1,019	2,482	537	817	995	538	42	0	55	6,575	C3
4	Load received by STWs in size band 4	kg BOD5/day	0	350	3,519	1,542	130	4,195	335	1,194	778	205	0	12,248	C3
5	Load received by STWs in size band 5	kg BOD5/day	0	0	4,728	0	1,710	8,194	0	1,125	0	0	0	15,756	C3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	20,451	0	0	79,640	0	0	0	0	0	100,092	C3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	581	29,938	6,115	2,438	92,864	1,605	3,020	1,068	274	87	137,989	C3
C	SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0	5,113											
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0	14,991											

Table 17d - Sewage Treatment Works Loads

NIW only

Future Improvements

As part of the PC21 submission an asset management plan (NIAMP5) is being undertaken. This includes a WWTW PE refresh/update. The update is a theoretical desk top exercise, primarily based on Land Property Services (LPS) Pointer data sets and the current Asset Standard - Wastewater Flow and Population Determination – v1.6 – January 2019. It is hoped the update will be automated so as NI Water's GIS system is updated with pointer data, the WWTW PE system will be updated accordingly. Early indications are there will be substantial changes across the WWTW actual PEs.

It should be noted that the banding of the WWTWs is based on the latest Population Equivalent minus tourist PEs (i.e. hotels and caravan parks only as information does not exist on proportion of PE to commuters). PEs for 80 WWTWs (which were live during AIR19) have been updated.

The allowance for the tourist population, which has been deducted for the purposes of band size determination, has been the proportion of PE allocated to hotels, and caravan and tent pitches only. No deduction has been made for commuters as such information has not been captured.

The loads reported in this table are the sums of the loads received by each WWTWs or outfall in each particular category, and hence include the proportion of PE allocated to hotels, and caravan and tent pitches. Hence the loads reported in this table include the non-resident population.

1,023 WWTWs were reported on in Table 17d for AIR18. There have been no additions or reductions in the number of WWTWs being reported from AIR18 to AIR19.

Trade effluent information was obtained from NIW's Trade Effluent Section, for each individual consented trader, which enabled easy conversion to PEs. The COD: BOD conversion factor of 2:1 was not used as more accurate flow based information was available to the Trade Effluent Section.

The Water and Sewerage Services (NI) Order 2006 designated that the discharge from hospitals, nursing homes & clinics should no longer be considered as Trade Effluent, therefore for AIR19 these have been removed from the Trade Effluent Submission. For the majority of hospitals a certain % of hospital discharges has been included due to discharges from x-ray departments and bathing pools. The AIR11 Trade Information, for nursing homes and clinics, has been maintained for AIR19 in order to allow for this proportion of the influent entering the WWTWs. Similarly the PEs for the hospitals has been factored up to 100% of their total discharge to give a more accurate figure of load discharging to the sewerage network.

In AIR13 it was reported that flow & load information was validated for Belfast and a figure of 365,000Pe was agreed. Since then the only update to Belfast PE figure has been the latest trade information. As part of the Living with Water Programme, a population review for Belfast WWTW has been undertaken. The review is a theoretical approach based on the current Asset Standard – Wastewater Flow & Population Determination v1.6 and provides a PE of 485,234. Please note an element of this figure, 123,688, is made up of trade effluent information provided by NIW's Trade Effluent Section and is based on measured data. The trade figure includes returns from the sludge incinerator which is operated by a PPP

concessionaire on behalf of NI Water. For previous returns the incinerator returns were excluded, the thinking being it did not form part of Belfast catchment. For this review this understanding has been challenged and, as the return from the incinerator is a significant loading and can have a major impact on the process, it has been included. The PE figure of 485,234 has been adopted for AIR19.

We have assumed the Bands to be:

Small works

a. size band 1 <= 15kg BOD5/day (population equivalent: 0 - 250)
b. size band 2 >15 but <= 30kg BOD5/day (population equivalent: 251 - 500)
c. size band 3 >30 but <= 120kg BOD5/day (population equivalent: 501 – 2,000)
d. size band 4 >120 but <= 600kg BOD5/day (population equivalent: 2,001 –10,000)
e. size band 5 >600 but <= 1500kg BOD5/day (population equivalent: 10,001 – 25,000)

Large works

f. size band 6 > 1500kg BOD5/day. (population equivalent: > 25,000)

It should be noted that the bandings of b, c, d and e above are slightly different from those listed in the UR Chapter 17c guidance, to ensure no duplication of works which may have 250, 500, 2000 or 10,000 PE.

The total number of WWTWs in Table 17c line 7 is the total of all NIW only works in this table i.e. 1,023 including the screened outfalls (2 No.) and the unscreened outfalls (6 No.).

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total WWTW loads due to the inclusion of offices/commercial premises. The majority of the residential and non-residential element of PEs used to calculate tables 17c and 17d was based on Pointer information from MapInfo.

However it should be noted that the non-residential element of Pointer is made up of both commercial and unknown properties. At this present time it is not known what proportion of the unknowns are actually residential and which are non-residential and therefore it has been decided to include both elements when calculating the PEs for the band sizes.

It is difficult to estimate the proportion of load at a WWTW due to commuters, or the load which should be deducted from/added to a particular WWTW due to population commuting out of/into the catchments, which that WWTW serves. Hence no allowance to WWTWs loads has been made either way for Table 17d.
The only allowance made for newly connected properties is where a population studies have been carried out for a drainage catchment during the reporting year and the recommendations have been considered and agreed upon. Where a population study has not been completed for a drainage catchment no allowance has been made for newly connected properties. It should be noted that some drainage catchments may not have had a population review undertaken for several years. Going forward the exercise explained under ‘Future Improvement’ above will address this shortfall.

The confidence grades of the data in lines 1 - 7 remain as C3 as stated in AIR18.

The AIR11 Reporter’s report stated ‘***We suggest that NI Water consider comparing the results from the ongoing programme of flow and load surveys against the previous assumptions for each site to determine if there is a statistically significant difference which should be extrapolated into the larger population of WWTW sites.’***

There was some analysis on this within the AIR13 commentary however it was concluded that there was not a large enough sample to justify extrapolating the differences. Since AIR13 only one additional Flow & Load PE has been adopted and this was for Kilkeel WWTWs and therefore the sample is still not large enough to extrapolate.

The reporter also recommended in AIR11 that significant variances in load of WWTWs (i.e. greater than 15%) should be investigated. Below is a table detailing these sites and the reason for the change in PEs. There are 11 no. WWTWs included in the table.

Name of Works	**CAR ID**	**AIR18 Actual PE**	**AIR19 Actual PE**	**Difference* *(-ve indicates AIR19 figure larger)**	**Comments**
Ballylintagh (New)	S01135	59	97	-38	PE updated with AIR19 Trade Information
Belfast (WWTW)	S00345	365139	485234	-120096	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Bovean	S02793	30	24	6	Actual PE updated following RWwIP PE review
Broagh	S01607	33	28	5	Actual PE updated following RWwIP PE Review
Buckna (WWTW)	S01432	40	33	7	Actual PE updated following RWwIP PE Review
Carmean	S01608	51	43	8	Actual PE updated following RWwIP PE Review
Derrycrin	S01567	456	397	59	Actual PE updated following APT PE assessment
Derryhale	S02570	1284	1102	182	PE updated with AIR19 Trade Information
Larne (WWTW)	S02044	23275	26535	-3260	Catchment flow & load assessment carried out by WSP as part of Larne WwTW capacity assessment. PE updated with AIR19 Trade Information

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	Difference* *(-ve indicates AIR19 figure larger)	Comments
Longfield (Eglinton)	S03173	270	232	38	Actual PE updated following APT PE Review PE updated with AIR19 Trade Information
Tartaraghan	S02421	50	42	8	Actual PE updated following RWwIP PE Review

***(-ve indicates AIR19 figure larger)**

It should be highlighted that for AIR14 NIW re-assessed the treatment categories for a number of sites. This followed a query from NIW with OFWAT as to the definition of what constitutes a tight consent. At this time it was confirmed that a company is given a tight consent if it has a Suspended Solids consent of less than or equal to 30mg/l and a BOD of less than or equal to 20mg/l. Also a company is given a tight consent if its ammonia consent is less than or equal to 5mg/l.

The AIR definition on treatment categories states that Tertiary A2 can be defined as *Works with a secondary activated sludge process whose treatment methods also include* ***nutrient control using physico-chemical and biological methods****.* Likewise Tertiary B2 can be defined as *Works with a secondary biological process whose treatment methods also include* ***nutrient control using physico-chemical and biological methods.***

NIW has historically oversized secondary assets to meet tight ammonia consents and it is now felt that this falls within the definition of Tertiary Treatment described above i.e. ***nutrient control using physico-chemical and biological methods.*** In total NIW re-designated the treatment category for 33 WWTWs based on this definition for AIR14, changing 22 WWTWs from Sec Act to Ter A2 & 11 from Sec Bio to Ter B2. The treatment categories for these sites remain unchanged, following a review of the ammonia consents and treatment methods for AIR18.

NIW has a number of WWTWs (Belfast, Whitehouse and Carrickfergus) which have a total nitrogen (TN) standard in place, which is applicable to marine discharges, as opposed to an ammonia standard which is applied to freshwater discharges. Treatment category TA2 is applicable to these WWTWs as nutrient control is in place through the biological process.

The total load of 117,754.4kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of 42,980.36*t BOD/year*, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 581.3kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of *212.19t BOD/yr.*

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 115,744.6kg BOD/day is consistent (allowing for rounding up/down and

conversions) with total load receiving secondary treatment in table 15 (line 2) i.e. 42,246.77 *t BOD/yr*.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1067.7kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving preliminary treatment in table 15 (line 4) (both include non-resident population) of 389.71*t BOD/yr.*

The table below depicts changes in PEs at WWTWs from AIR18 to AIR19.
The following table depicts how PE changes have occurred at WWTWs during the last financial year.

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	Difference*	AIR18 Band	AIR19 Band	Band Size Change
Aghanloo (1)	S02989	703	786	-83	Band 3	Band 3	
Annalong (WWTW)	S00300	3096	3421	-325	Band 4	Band 4	
Annsborough	S02687	6031	5921	110	Band 4	Band 4	
Antrim (WWTW)	S01422	64937	66009	-1073	Band 6	Band 6	
Ardglass (WWTW)	S00268	2730	2806	-76	Band 4	Band 4	
Ballyclare	S01467	16316	16393	-77	Band 5	Band 5	
Ballyhornan Outfall	S04090	912	912	-1	Band 3	Band 3	
Ballykelly (L/Derry)	S03016	3619	3652	-33	Band 4	Band 4	
Ballylintagh (New)	S01135	59	97	-38	Band 1	Band 1	
Ballymena (WWTW)	S01456	66375	73664	-7289	Band 6	Band 6	
Ballyronan (WWTW)	S01558	1107	1000	106	Band 3	Band 3	
Banbridge (WWTW)	S02102	20689	20666	24	Band 5	Band 5	
Beagh	S01605	36	35	1	Band 1	Band 1	
Belfast (WWTW)	S00345	365139	485234	-120096	Band 6	Band 6	
Bovean	S02793	30	24	6	Band 1	Band 1	
Broagh	S01607	33	28	5	Band 1	Band 1	
Buckna (WWTW)	S01432	40	33	7	Band 1	Band 1	
Bushmills (WWTW)	S01178	5544	5553	-9	Band 4	Band 4	
Carmean	S01608	51	43	8	Band 1	Band 1	
Carrickfergus (WWTW)	S00261	32408	32493	-85	Band 6	Band 6	
Coalisland	S02828	10010	10071	-61	Band 5	Band 5	
Cookstown (WWTW)	S01582	21591	20242	1348	Band 5	Band 5	
Craignasasonagh	S00308	17	15	2	Band 1	Band 1	
Craigywarren	S01437	166	157	10	Band 1	Band 1	
Culmore (WWTW)	S03071	135976	134208	1768	Band 6	Band 6	
DerrycrinDonemana	S03103	813	1195	-382	Band 3	Band 3	
Derryhale	S02570	1284	1102	182	Band 3	Band 3	
Dervock (WWTW)	S01102	970	969	1	Band 3	Band 3	
Donaghmore (WWTW)	S02840	1982	2058	-76	Band 3	Band 4	Y
Donemana	S03103	1195	1046	149	Band 3	Band 3	
Donnybrewer	S03080	5229	5229	1	Band 4	Band 4	
Downpatrick (WWTW)	S00771	19710	18426	1283	Band 5	Band 5	
Draperstown	S01615	3254	3253	1	Band 4	Band 4	
Dromara (WWTW)	S00316	1385	1388	-2	Band 3	Band 3	
Dromore (Down)	S02127	7722	7746	-24	Band 4	Band 4	
Drumaness (WWTW)	S00293	2420	2649	-229	Band 4	Band 4	
Drumard Primate (WWTW)	S02404	37	33	4	Band 1	Band 1	
Dungannon	S02850	77643	88920	-11277	Band 6	Band 6	
Dungiven	S03101	4745	4744	1	Band 4	Band 4	
Dunmurry	S00346	45939	46284	-346	Band 6	Band 6	
Eglish (Tyrone)	S02843	527	606	-80	Band 3	Band 3	
Enniskillen	S03218	25948	25298	649	Band 6	Band 6	
Fivemiletown (WWTW)	S03113	2854	2879	-25	Band 4	Band 4	
Glenstall	S01109	21276	20758	519	Band 5	Band 5	
Grange (Taylorstown)	S01442	572	569	3	Band 3	Band 3	
Greenisland (WWTW)	S00263	11614	11904	-291	Band 5	Band 5	

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	Difference*	AIR18 Band	AIR19 Band	Band Size Change
Greysteel (WWTW)	S03123	2187	2180	7	Band 4	Band 4	
Hilltown (WWTW)	S02701	2058	2056	2	Band 4	Band 4	
Irvinestown	S03137	2680	2679	1	Band 4	Band 4	
Keady (Armagh)	S02553	4571	4572	-1	Band 4	Band 4	
Kilkeel (WWTW)	S00313	14497	14569	-72	Band 5	Band 5	
Killinchy (WWTW)	S00252	2975	2664	311	Band 4	Band 4	
Kilrea	S01156	2563	2759	-196	Band 4	Band 4	
Larne (WWTW)	S02044	23275	26535	-3260	Band 5	Band 6	Y
Limavady (WWTW)	S03162	16267	16164	103	Band 5	Band 5	
Lisburn (New Holland)	S00329	72630	70738	1892	Band 6	Band 6	
Lisnamuck (Magherafelt)	S01626	49	45	4	Band 1	Band 1	
Lisnaskea (WWTW)	S03171	6840	6473	368	Band 4	Band 4	
Longfield (Eglinton)	S03173	270	232	38	Band 2	Band 1	Y
Maghera (L/Derry)	S01629	6682	6729	-47	Band 4	Band 4	
Magherafelt (WWTW)	S01621	17151	18745	-1594	Band 5	Band 5	
Moneymore (WWTW)	S01589	2826	2827	-2	Band 4	Band 4	
Mountfield (WWTW)	S03192	479	485	-6	Band 2	Band 2	
Mountnorris	S02248	892	894	-2	Band 3	Band 3	
Moy (WWTW)	S02859	3770	4139	-369	Band 4	Band 4	
Newmills (WWTW)	S02852	727	726	1	Band 3	Band 3	
Newry (WWTW)	S02685	58886	61400	-2515	Band 6	Band 6	
Newtownbreda (WWTW)	S00342	34507	34496	11	Band 6	Band 6	
Newtownbutler (WWTW)	S03200	1290	1300	-10	Band 3	Band 3	
North Coast (WWTWs)	S04150	76554	76461	93	Band 6	Band 6	
Omagh (WWTW)	S03999	33591	37068	-3476	Band 6	Band 6	
Portaferry (2)	S05200	3801	3804	-3	Band 4	Band 4	
Rocktown	S01635	17	16	1	Band 1	Band 1	
Roughfort (WWTW)	S01470	435	443	-8	Band 2	Band 2	
Strabane	S03223	23943	23700	243	Band 5	Band 5	
Tamnamore (WWTW)	S02862	617	619	-2	Band 3	Band 3	
Tandragee	S02174	11344	11962	-618	Band 5	Band 5	
Tartaraghan	S02421	50	42	8	Band 1	Band 1	
Tirquin	S03230	24	28	-4	Band 1	Band 1	
Tullyroan	S02600	45	40	5	Band 1	Band 1	
Warrenpoint (WWTW)	S02720	17361	15830	1531	Band 5	Band 5	
Whitehouse	S00265	88115	88132	-17	Band 6	Band 6	
			Total	--142932			

***(-ve indicates AIR19 figure larger)**

The change in PE equates to an increase in load of 8,575.92kg BOD/day (i.e. 142932 x 0.06 for 60g/hd/day) from AIR18 to AIR19

Difference between AIR19 and AIR18 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR19 -	**117754**
Total Load Received at WWTWs for AIR 18 -	**109179**
Total Difference -	**8,575**

The differences between the above totals is due to rounding.

The interpretation of the treatment categories is as below:-

AIR19 Treatment Category	Highest Form of Treatment at WWTWs	Treatment Category Abbreviation
Primary	Primary Settlement Septic Tank	Prim
Secondary Activated Sludge (Whether followed by Final settlement or not)	Oxidation Ditch Extended Aeration Activated Sludge SAF BAF MBR SBR	Sec Act
Secondary Biological (Whether followed by Final settlement or not)	Biological Filter RBC RBC Package Bioclere Package ; Reed Bed (If used as secondary treatment stage)	Sec Bio
Tertiary A1	Secondary Activated Sludge processes whose treatment methods also include prolonged settlement in conventional lagoons or raft lagoons, irrigation over grassland, constructed wetlands, root zone treatment (where used as a tertiary stage), drum filters, microstrainers, slow sand filters, tertiary nitrifying filters, Lockertex screens, gravel clarifiers, wedge wire clarifiers or Clariflow installed in humus tanks, where used as a tertiary treatment stage;	Ter A1
Tertiary A2	Secondary Activated Sludge processes whose methods also include phosphorous reduction, rapid-gravity sand filters, moving bed filters, pressure filters, nutrient control using physico-chemical and biological methods, disinfection, hard COD and colour removal and MBRs where used as a tertiary treatment stage;	Ter A2

AIR19 Treatment Category	Highest Form of Treatment at WWTWs	Treatment Category Abbreviation
Tertiary B1	Secondary Biological processes whose treatment methods also include prolonged settlement in conventional lagoons or raft lagoons, irrigation over grassland, constructed wetlands, root zone treatment (where used as a tertiary stage), drum filters, microstrainers, slow sand filters, tertiary nitrifying filters, Lockertex screens, gravel clarifiers, wedge wire clarifiers or Clariflow installed in humus tanks, where used as a tertiary treatment stage;	Ter B1
Tertiary B2	Secondary Biological processes whose methods also include phosphorous reduction, rapid-gravity sand filters, moving bed filters, pressure filters, nutrient control using physico-chemical and biological methods, disinfection, hard COD and colour removal and MBRs where used as a tertiary treatment stage;	Ter B2

AIR19 Treatment Category	Highest Form of Treatment at WWTWs	Treatment Category Abbreviation
Sea Outfalls	Where a load is discharged to sea having received only Preliminary treatment (including Grit removal and screenings conditioning) or simple screening (Bar Screen) or no screening or no treatment (Includes Retention Tanks)	Sea Out Prel Sea Out Screen Sea Out Unscreen

Changes in Line 8 - Small works with ammonia consent (between 5 and 10) from AIR18 to AIR19

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	PE Change*	Comments
Ballyronan (WWTW)	S01558	1107	1000	106	Actual PE updated following APT PE assessment.
Derryhale	S02570	1284	1102	182	PE updated with AIR19 Trade Information
Donaghmore (WWTW)	S02840	1982	2058	-76	PE updated with AIR19 Trade Information
Draperstown	S01615	3254	3253	1	PE updated with AIR19 Trade Information
Hilltown (WWTW)	S02701	2058	2056	2	PE updated with AIR19 Trade Information
Lisnaskea (WWTW)	S03171	6840	6473	368	PE updated with AIR19 Trade Information
Maghera (L/Derry)	S01629	6682	6729	-47	PE updated with AIR19 Trade Information
Mountnorris	S02248	892	894	-2	PE updated with AIR19 Trade Information
Strabane	S03223	23943	23700	243	PE updated with AIR19 Trade Information
			Total	777	

***(-ve Indicates AIR19 PE Higher)**

The change in PE equates to a load change of 46.62 kg/d (i.e. 777 x 0.06 for 60g/hd/day) from AIR18 to AIR19, for line 8.

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR19-	**5113**
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR18-	**5160**
Total Difference –	**47**

Changes in Line 9 - Small works with ammonia consent (between 0 and 5) from AIR18 to AIR19

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	PE Change*	Comments
Annsborough	S02687	6031	5921	110	PE updated with AIR19 Trade Information
Ballyclare	S01467	16316	16393	-77	PE updated with AIR19 Trade Information
Banbridge (WWTW)	S02102	20689	20666	24	PE updated with AIR19 Trade Information
Coalisland	S02828	10010	10071	-61	PE updated with AIR19 Trade Information
Cookstown (WWTW)	S01582	21591	20242	1348	PE updated with AIR19 Trade Information
Downpatrick (WWTW)	S00771	19710	18426	1283	Sludge import PE removed as imports have reverted back to reception centre following screen being brought back into serve. PE updated with AIR19 Trade Information
Dromara (WWTW)	S00316	1385	1388	-2	PE updated with AIR19 Trade Information
Dromore (Down)	S02127	7722	7746	-24	PE updated with AIR19 Trade Information

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	PE Change*	Comments
Drumaness (WWTW)	S00293	2420	2649	-229	Actual PE updated following Consultant PE Review
Dungiven	S03101	4745	4744	1	PE updated with AIR19 Trade Information
Grange (Taylorstown)	S01442	572	569	3	PE updated with AIR19 Trade Information
Irvinestown	S03137	2680	2679	1	PE updated with AIR19 Trade Information
Keady (Armagh)	S02553	4571	4572	-1	PE updated with AIR19 Trade Information
Killinchy (WWTW)	S00252	2975	2664	311	PE updated with AIR19 Trade Information
Limavady (WWTW)	S03162	16267	16164	103	Sludge Import/export info updated. PE updated with AIR19 Trade Information
Magherafelt (WWTW)	S01621	17151	18745	-1594	Design PE updated. Correct design PE identified through NIAMP5 PE review. PE updated with AIR19 Trade Information
Moneymore (WWTW)	S01589	2826	2827	-2	PE updated with AIR19 Trade Information

Name of Works	CAR ID	AIR18 Actual PE	AIR19 Actual PE	PE Change*	Comments
Mountfield (WWTW)	S03192	479	485	-6	Actual PE updated following APT assessment
Newtownbutler (WWTW)	S03200	1290	1300	-10	PE updated with AIR19 Trade Information
Tandragee	S02174	11344	11962	-618	PE updated with AIR19 Trade Information
			Total	560	

***(-ve Indicates AIR19 PE Higher)**
****(Integrated Constructed Wetland)**

The change in PE equates to a load change of 33.6kg/d (i.e. 560 x 0.06 for 60g/hd/day) from AIR18 to AIR19 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR18-	**14064.2**
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR19-	**14030.6**
Total Difference -	**33.6**

PPP

Lines 1 – 7

The variation in load data from AIR18 is solely due to the variation in influent loads received by the same PPP works from the NI Water catchments over the AIR19 Period. While in some cases there has been little difference, the North Down WwTW has experienced an 18% reduction in averaged Daily BOD over the entire year. This issue has been rechecked and the calculations verified. The prevailing rainfall can enable a partial explanation, as the AIR19 period experienced 1039.2mm while the AIR18 period experienced 1241.5mm of rainfall which is a 16.3% reduction during the AIR19 period; while the 100 year average [AREAL series] for Northern Ireland is 1100mm. The Contractor has reported there were no apparent operational reasons for the reduction.

The load attributed to Richhill WwTW has been changed to Category 3 to reflect the third consecutive year that the loading rate has dropped below the lower threshold of Category 4 works.

Line 9

The variation in load data is due to the variation in influent loads received by the Richhill WwTW and Armagh WwTW over the AIR19 Period.

Specific company commentary

- The category of Richhill WwTW has been changed to Category 3 to reflect the third consecutive year that the loading rate has dropped below the lower threshold of Category 4 works.
- There are currently the following Capital Works Project plans which could close, or divert flows arriving to, PPP operated works.
- There are currently a number of Capital Works Projects proposed in PPP catchments;

KA270	Neillsbrook WwPS Upgrade Appraisal
KS913	Upper Crescent WWPS Upgrade
KI601	Strategic Sewerage Network Modelling, Bathing Waters Excluding Belfast Lough
JZ005	Water Resource and Supply Resilience Plan
KI607	NI Long Term Sludge Strategy
KS874	Bangor DAP Works Package 3 - Belfast Lough UIDs
KR576	Belfast WWTW PLC Upgrade
KR417	Ormeau Avenue Sewerage upgrade for pollution resolution
KZ008	Wastewater Networks Modelling/Surveys
KR504	Portaferry Road, N’Ards WWPS Upgrade

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Direct costs of STWs in size band 1	£000	3	50.097	77.062	508.729	0.000	0.000	19.447	15.356	0.000	0.000	6.535	677.225
2	Direct costs of STWs in size band 2	£000	3	0.000	61.483	277.321	34.818	14.401	94.028	61.406	69.545	24.221	0.000	637.223
3	Direct costs of STWs in size band 3	£000	3	13.209	504.891	899.442	155.602	420.782	295.950	215.453	14.937	0.000	8.050	2,528.315
4	Direct costs of STWs in size band 4	£000	3	26.841	901.451	326.985	41.177	1,354.970	41.299	181.734	81.958	5.890	0.000	2,962.305
5	Direct costs of STWs in size band 5	£000	3	0.000	694.269	0.000	318.554	1,524.091	0.000	204.975	0.000	0.000	0.000	2,741.889
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3	0.000	1,178.724	0.000	0.000	5,674.005	0.000	0.000	0.000	0.000	0.000	6,852.729
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3	90.147	3,417.879	2,012.477	550.150	8,988.250	450.724	678.923	166.440	30.111	14.585	16,399.685
8	Sludge Treatment and Disposal Adjustments	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	Sewage Treatment: Direct costs	£000	3	90.147	3,417.879	2,012.477	550.150	8,988.250	450.724	678.923	166.440	30.111	14.585	16,399.685
10	Sewage Treatment: Power costs	£000	3	7.240	1,824.141	524.544	299.807	5,274.785	105.744	237.548	69.543	1.250	0.352	8,344.953
11	Sewage Treatment: service charges	£000	3	7.679	153.066	145.792	23.010	332.739	36.490	39.697	10.269	2.290	1.236	752.268
12	Sewage Treatment: General and Support	£000	3	119.983	2,391.664	2,278.016	359.538	5,199.070	570.151	620.271	160.452	35.782	19.315	11,754.243
13	Sewage Treatment: Functional Expenditure	£000	3	210.130	5,809.544	4,290.493	909.688	14,187.319	1,020.875	1,299.194	326.892	65.893	33.901	28,153.928

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (PPP only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	SMALL WORKS													
1	Direct costs of STWs in size band 1	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	Direct costs of STWs in size band 2	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Direct costs of STWs in size band 3	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	Direct costs of STWs in size band 4	£000	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
5	Direct costs of STWs in size band 5	£000	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
B	LARGE WORKS													
6	Direct costs of STWs in size band 6	£000	3	0.000	0.000	0.000	0.000	2,184.448	0.000	0.000	0.000	0.000	0.000	2,184.448
C	ALL WORKS													
7	Total direct costs of STWs - all sizes	£000	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
8	Sludge Treatment and Disposal Adjustments	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	Sewage Treatment: Direct costs	£000	3	0.000	0.000	0.000	42.185	2,314.338	0.000	0.000	0.000	0.000	0.000	2,356.523
10	Sewage Treatment: Power costs	£000	3	0.000	0.000	0.000	42.185	2,314.338	0.000	0.000	0.000	0.000	0.000	2,356.523
11	Sewage Treatment: service charges	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	Sewage Treatment: General and Support (NIW)	£000	3	0.000	43.334	0.000	28.270	113.080	0.000	0.000	0.000	0.000	0.000	184.684
13	Sewage Treatment: Functional Expenditure	£000	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Direct costs of STWs in size band 1	£000	3	50.097	77.062	508.729	0.000	0.000	19.447	15.356	0.000	0.000	6.535	677.225
2	Direct costs of STWs in size band 2	£000	3	0.000	61.483	277.321	34.818	14.401	94.028	61.406	69.545	24.221	0.000	637.223
3	Direct costs of STWs in size band 3	£000	3	13.209	504.891	899.442	155.602	420.782	295.950	215.453	14.937	0.000	8.050	2,528.315
4	Direct costs of STWs in size band 4	£000	3	[redacted]										
5	Direct costs of STWs in size band 5	£000	3	[redacted]										
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3	0.000	1,178.724	0.000	0.000	7,858.453	0.000	0.000	0.000	0.000	0.000	9,037.177
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3	[redacted]										
8	Sludge Treatment and Disposal Adjustments	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	Sewage Treatment: Direct costs	£000	3	90.147	3,417.879	2,012.477	592.335	11,302.588	450.724	678.923	166.440	30.111	14.585	18,756.208
10	Sewage Treatment: Power costs	£000	3	7.240	1,824.141	524.544	341.992	7,589.123	105.744	237.548	69.543	1.250	0.352	10,701.476
11	Sewage Treatment: service charges	£000	3	7.679	153.066	145.792	23.010	332.739	36.490	39.697	10.269	2.290	1.236	752.268
12	Sewage Treatment: General and Support	£000	3	119.983	2,434.998	2,278.016	387.808	5,312.150	570.151	620.271	160.452	35.782	19.315	11,938.927
13	Sewage Treatment: Functional Expenditure	£000	3	[redacted]										

Table 17f - Sewage Treatment Works (NIW only)

An updated Population Equivalent (PE) database with treatment type by WWTW's was sent from Asset Management on the 30 May 2019 which was used to populate Line 1-13. No PPP sites are included in this table. Ballycastle WWTW's falls into Band 5 – Line 5. Ballycastle does not have a separate W finance location however with the further implementation of Cost to Serve the costs can be separately identified. Larne is included in Band 6 for AIR19, it was included in Band 5 in AIR18.

Table 17f has been completed based on the figures available at for the year ended 31 March 2019 for sewage treatment – Activity 510 less M&E expenditure which is treated as general & support.

Line 1-4 – Size band 1-4

Each WWTW's was assigned a finance location code, W or X. W codes are for a specific works and X codes include the costs of a number of small works. Nearly 90% of the costs can be directly allocated to WWTW's through the further implementation of Cost to Serve and the remaining direct costs are apportioned across the appropriate WWTW's based on PE or direct labour.

Direct Costs include power 521x, contractors 531x, other contractors 532x, materials 541x, chemicals 548x, cost reallocations 611x (this includes direct labours costs and & overhead charges) and service charges.

Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. There is one electric meter at each site and all the power costs are coded to each individual works to sewage treatment. The Field Managers responsible for each WWTW's estimated the percentage use for sludge treatment and sewage treatment at each WWTW's. This was multiplied by the Power costs at the site to calculate the portion relating to sewage treatment.

The type of treatment at each WWTW's was provided by Asset Management and this was used to assign costs to Column 1-10.

In total the costs have increased in Lines 1-4 from AIR18 by circa £0.1M.

Line 5 – Size band 5

Direct costs for sewage treatment, at each location in Size Band 5, were recorded and matched to the appropriate type of treatment.

The costs against this line are in line with AIR18.

Line 6 – Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

The costs have decreased from AIR18 by circa £0.9M. See Table 17b commentary.

Line 7 – Total Direct Costs

This is a calculated line and it's the total of Line 1-6. This figure agrees with Table 22, Column 2 Line 9.

The total direct costs have increased since AIR18 by circa £0.8M. This is primarily due to an increase in costs at the Band 6 sites and the inclusion of Larne in Band 6.

Line 8 – Sludge Treatment & Disposal Adjustment

These costs are not included in the total of Line 7 therefore this line is zero.

Line 9 – Direct Costs

This line is equal to Line 7 and is the total direct costs for each type of treatment. This figure agrees with Table 22, Column 2 Line 9.

Line 10 – Power Costs

Through the cost to serve project all power costs are allocated to individual sites and a report was provided by the Energy Finance Business Partner for the full year power cost per WWTW's. This figure agrees with Table 22, Column 2 Line 2.

Line 11 – Service Charges

£0.8M of environmental regulatory charges are included in Sewage, this is an increase of £0.1M from AIR18.

Line 12 – General & Support

The Total General & Support expenditure was taken directly from Table 22 (NIW only) Line 10 Column 2 (see Table 22 commentary) and apportioned across the locations based on direct costs.

This figure has decreased by £0.7M from AIR18. Overall General and Support costs have decreased in AIR19 and the apportionment of costs to Sewage Treatment has decreased. See commentary on Table 22 for further breakdown and explanation.

Line 13 – Functional Expenditure

This is a calculated line and is the total of Line 9 and Line 12. The total agrees to Table 22 (NIW Only) Column 2 Line 11. The total costs have increased from AIR18 by circa £0.2M for all the reasons mentioned under the lines above. Refer to Table 22 commentary for further explanation.

PPP Only

Lines 1- 3 – Size bands 1- 3

There are no PPP sites sized within these categories. Therefore, this is a nil return for these size bands.

Line 4 – Size band 4

Direct costs associated with Richhill (TA1) include power costs only derived from the Oracle system using the appropriate location code.

Line 5 – Size band 5

Direct costs associated with Armagh (TA2) include power costs only derived from the Oracle system using the appropriate location code.

Line 6 – Size band 6

No costs are reported for Kinnegar (SAS) direct costs as Kinnegar power costs are part of the Concessionaire's payment to the Operating Company.

Costs for North Down, Ballyrickard and Ballynacor (all TA2) include power costs only derived from the Oracle system using appropriate location codes.

Line 9 - Direct costs

This refers to power only. See comments on Line 10 below.

Line 10 - Power

Kinnegar (SAS) remains unreported as power costs are not incurred by NIW directly but through the Concessionaire payments.

Power costs have increased from AIR18 as a result of higher tariffs in 2018/19. The increase is partially reduced due to lower wastewater volumes.

The total of this line reconciles to table 22 line 2 column 2.

Line 12 – General & support

General and support costs have been calculated using all staff and overhead costs for the contracts management team together with PPP related professional managed service costs – PPP Professional Advisors. Costs have been attributed to schemes in accordance with management's estimated time spent by each member of staff on each contract, with such costs spread equally on schemes therein. Professional Advisors costs are attributable to a contract by invoice. General and support costs have been allocated to facilities on a straight line basis according to the number of facilities in each scheme.

The total on this line reconciles to table 22 line 10 column 2.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17g SEWERAGE EXPLANATORY FACTORS
SLUDGE TREATMENT AND DISPOSAL INFORMATION (NIW Only)

	DESCRIPTION	UNITS	DP	1 FARMLAND UNTREATED	G	2 FARMLAND CONVENTIONAL	G	3 FARMLAND ADVANCED	G	4 INCINERATION	G	5 TO PPP	G	6 LANDFILL	CG	7 COMPOSTED	G	8 LAND RECLAMATION	CG	9 OTHER	G	10 TOTAL	G
1	Resident population served	000	1	0.0	0	0.0	0	0.0	0	0.0	0	1,487.6	C3	30.0	C3	0.0	0	0.0	0	0.0	0	1,517.6	C3
2	Amount of sewage sludge	ttds	1	0.0	0	0.0	0	0.0	0	0.0	0	34.7	A2	0.7	B2	0.0	0	0.0	0	0.0	0	35.4	B2
3	Sludge treatment: direct costs	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000	
4	Sludge disposal: direct costs	£000	3	0.000		0.000		0.000		0.000		2,333.411		181.215		0.000		0.000		0.000		2,514.627	
5	Sludge treatment & disposal: direct costs	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000	
6	Sludge treatment & disposal: power costs	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000	
7	Sludge treatment & disposal: service charges	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000	
8	Sludge treatment & disposal: general & support exp.	£000	3	0.000		0.000		0.000		0.000		2,236.327		0.000		0.000		0.000		0.000		2,236.327	
9	Sludge treatment & disposal: functional expenditure	£000	3	0.000		0.000		0.000		0.000		2,236.327		0.000		0.000		0.000		0.000		2,236.327	

Table 17g - Sewerage explanatory factors - sludge treatment and disposal information

The methodology has not changed from AIR18. All Sludge is transported and disposed of at the Incinerator or another PPP site.

The costs in Table 17g are populated with the information available for the year ended 31 March 2019.

Line 1 - Resident population served

The resident population served is that reported in T17a:L1 as required in the Utility Regulator's guidance documentation.

Lines 1.5 & 1.6 have been estimated using a pro-rata value based on the total sewage sludge disposal data from SLS and the WW Sludge Management monthly report. The pro-rata population figures have been assigned CGs of C3 accordingly based on the C3 CG of the base population data.

Line 2 – Amount of sewage sludge

This is the total sewage sludge produced (NIW Only) for 2018/19 (tds) as recorded by PPP and monthly by Ww Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report along with an estimated quantity of WwTW & WwPS grit & screenings removed as part of the treatment process and disposed of under Tender C821.

Line 2.5 has been based on the total sewage sludge disposal (NIW Only) data from SLS and the WW Sludge Management monthly report.

Line 2.6 is an estimated quantity of WwTW's & WwPS`s grit & screenings removed as part of the treatment process and disposed of under Tender C821.

Line 3 – Sludge Treatment: Direct Costs

Expenditure has been input in Column 9. These costs have increased by £0.3M from AIR18.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

Power costs in AIR19 do not include the Incinerator or any PPP sites.

Line 4 - Sludge Disposal: Direct Costs

Columns 5 and 6 have been populated on this line. The direct costs have increased by £0.1M from AIR18.

Line 5 - Sludge Treatment & Disposal: Direct Costs

This is a calculated line and is the total of line 3 and line 4. The figure agrees with Table 22 (NIW only) column 3 line 9. Costs have increased by circa £0.4M from AIR18 (see below).

Line 6 – Sludge Treatment & Disposal: Power Costs

Power costs associated with Sludge Treatment are used to populate Column 9. Power costs have been allocated to every site through cost to serve. There is only one electric metre at each WWTW's so an estimate was received for each WWTW's from the wastewater field mangers so that a split could be calculated at each works between sludge and sewage

treatment at the sites where both activities occur. The power team supplied a split between the Incinerators and Belfast WWTW's which was used apportion a cost to the works. The split for this in AIR18 was 44:56 and in AIR19 is 51:49 for the Belfast and Incinerators (based on an estimated KWhr usage and a number of sub-meters). No costs for the Incinerator have been included in this table in AIR19.

Line 7 - Sludge treatment & disposal: Service Charges

The Service Charges figure is approx. £0.3m in AIR19 and this is similar to what the costs were in AIR18. PPC (Pollution Prevention Control) Permits are included as Sludge Treatment and therefore included in Column 9. The Service Charges figure agrees to Table 22, Line 7 Column 3.

Line 8 - Sludge treatment & disposal: General & Support

This figure was taken directly from Table 22 (NIW only) Column 3 Line 10 and apportioned across the columns in Table 17g based on direct labour costs. This is following the same methodology as AIR18. Overall General and Support costs have decreased from AIR18. See Table 22 commentary. A detailed breakdown of general & support is included in the commentary for Table 21 & 22.

Line 9 – Sludge treatment & disposal: Functional Expenditure

This is a calculated line and is the total of Line 5 and Line 8. Total costs have increased by £0.1M due to the reasons given above.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)

PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31 MARCH

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Turnover	£m	3	366.398	361.313	364.407	367.287	372.851	381.099	409.662		
2	Operating costs (excluding HCD)	£m	3	-202.316	-209.933	-205.450	-207.727	-210.758	-219.231	-186.971		
3	Historical cost depreciation	£m	3	-44.871	-48.580	-47.523	-54.364	-55.773	-56.418	-82.165		
4	Operating income	£m	3	0.334	0.276	0.525	0.799	0.656	1.035	0.551		
5	Operating profit	£m	3	119.545	103.076	111.959	105.995	106.976	106.485	141.077		
6	Other income	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
7	Net interest receivable less payable	£m	3	-55.067	-48.580	-51.957	-53.609	-53.804	-56.253	-63.684		
8	Profit on ordinary activities before taxation	£m	3	64.478	54.496	60.002	52.386	53.172	50.232	77.393		
9	Current tax	£m	3	0.000	0.000	-0.017	-0.017	-0.012	-0.009	0.000		
10	Deferred tax	£m	3	-24.872	13.798	-24.037	2.536	-6.430	-18.286	-14.018		
11	Profit on ordinary activities after taxation	£m	3	39.606	68.294	35.948	54.905	46.730	31.937	63.375		
12	Extraordinary items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
13	Profit for the year	£m	3	39.606	68.294	35.948	54.905	46.730	31.937	63.375		
14	Dividends	£m	3	-26.587	-21.391	-21.562	-22.888	-21.510	-21.153	-23.759		
15	Retained profit for the year	£m	3	13.019	46.903	14.386	32.017	25.220	10.784	39.616		
	ADDITIONAL DISCLOSURES											
16	IFRIC 18 Income	£m	3							12.303		
17	IFRS 15 Income	£m	3							34.295		

Table 18 – HC Profit and Loss account for the year ending 31 March 2019

- Results of unappointed activities are shown separately in the published regulatory accounts.
- There are no exceptional charges or income.
- There are no minority interests.
- PPP charges for 2018/19 can be analysed as follows:

	Gross Charge	**Lease repayment**	**Capital maintenance**	**HC Depreciation**	**Net P&L Charge**
	£m	£m	£m	£m	£m
[redacted]	20.119	(2.650)	(1.516)	3.804	19.757
[redacted]	26.251	(2.568)	(2.018)	4.250	25.915
[redacted]	2.449	(0.488)	(0.124)	0.339	2.176
[redacted]	**48.819**	**(5.706)**	**(3.658)**	**8.393**	**47.848**

* includes lease interest of Alpha [redacted], Omega [redacted], Kinnegar of [redacted] – shown in line 7 of Table 18.

- PPP elements of line 2 'Operating Costs' are [redacted].
  Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of [redacted], Omega [redacted] and Kinnegar of [redacted]

The Current and Deferred tax charge

Factors affecting the tax charge for the current period

*Due to a change in accounting standards (IFRS 15) 'Revenue from contracts with customers' adopted during 2018/19, revenue has been taken to a deferred credit reserve and amortised over the life of the related asset..

The income tax expense in the statutory accounts for the period is £14.018m which is lower than the charge based on the standard rate of corporation tax in the UK (19%). The differences are explained below:

Reconciliation of effective tax rate	**2018 £m**	**2019 £m**
Profit for the year	85.329	66.078
Income tax expense	18.108	14.018
Profit before income tax	103.437	80.096
Income tax using the Company's domestic tax rate (19%)	19.653	15.218
Reduction in tax rate	(2.026)	(1.643)
Non-deductible expenses	0.210	0.200
Other timing differences	-	-
Adjustment to prior years	0.192	0.049
Group relief not chargeable	0.079	0.194
	18.108	14.018

The statutory accounts income tax expense of £14.018m can be shown as follows:

Tax recognised in profit and loss

	2018 £m	**2019 £m**
Current tax expense		
Current year	(0.183)	-
Adjustment for prior years	0.005	-
	(0.178)	-
Deferred Tax		
(Origination)/ reversal of timing differences	20.123	15.612
Adjustment to prior years	0.189	0.049
Reduction in tax rate	(2.026)	(1.643)
Tax charge on profit on ordinary activities	18.108	14.018

This statutory income tax expense of £14.108m under IFRS is shown in the Regulatory Accounts as follows:

	Appointed activities	**Unappointed activities**	**Total**
	£m	**£m**	**£m**
Current tax	-	-	-
Deferred tax	14.018	-	14.018
Total	**14.018**	**-**	**14.018**

The statutory accounts deferred tax expense of £14.018m is wholly allocated to appointed activities since the temporary tax timing differences associated with the deferred tax charge reside only in the appointed part of the business.

The statutory deferred tax liability at 31st March 2019 is £163.983m. Table 19 shows a deferred tax liability on the appointed balance sheet of £170.041m (with zero balance at 31st March 2019 for unappointed activities). This liability reconciles to the IFRS based statutory accounts balance at 31st March 2019 of £163.983m as the Accounts are required to show the deferred tax asset of £6.057m associated with the pension liability within the deferred tax balance rather than the approach of showing this amount separately within the pension account. The regulatory accounts balance of £163.983m can be summarised as follows:

	2019 £m Excluding Pension	2019 £m Pension	**2019 £m Total**
Opening liability	221.641	(3.875)	**217.766**
Restated(Impact of restatement)*	(65.874)		**(65.874)**
Open liability after adjustment	155.767	(3.875)	**151.892**
Current year deferred tax charge/(credit) to profit and loss account	14.272	(0.254)	**14.018**
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	(1.928)	**(1.928)**
Closing liability	170.039	(6.057)	**163.982**

Deferred tax is shown separately in the Regulatory Accounts and rolled up into the balance shown within the pension asset on the balance sheet as follows:

	2019
	£m
Benefit obligation at end of year	(273.909)
Fair value of plan assets at end of year	238.277
Net liability	(35.632)
Less deferred tax	6.057
Pension liability after deferred tax	**(29.575)**

The actuarial assumptions underpinning the valuation of the NIW defined benefit scheme assets and liabilities can be shown as follows:

Weighted average assumptions used to determine benefit obligations at:	**31-Mar-19**	**31-Mar-18**
Discount rate	2.50%	2.65%
Rate of compensation increase	2.10% for the next 4 years, 3.10% thereafter	2.00% for the next 4 years, 3.00% thereafter
Rate of increase in pensions in payment	3.15%	3.05%
Rate of increase in pensions in deferment	3.15%	3.05%
Inflation RPI	3.10%	3.00%
Inflation CPI	2.10%	2.00%
Weighted average assumptions used to determine net pension cost for year ended:	**31-Mar-19**	**31-Mar-18**
Discount rate	2.65%	2.60%
Rate of compensation increase	2.00% for the next 5 years 3.00% thereafter	2.10% for 3 years 3.10% thereafter
Rate of increase in pensions in payment	3.05%	3.10%
Inflation	3.00%	3.10%

Any changes to the assumptions from 2018 to 2019 have been advised by the independent actuaries.

There is a pension liability at 31 March 2019 of £29.575m (after deferred tax).
A dividend of £26.461m was proposed, approved and paid in 2018/19 and thus there is a dividend in Table 18 for the current year.

The approach to dividends is to allocate an amount of dividend to unappointed activities in the year that will reduce the ongoing build-up of cash balances within the unappointed balance sheet. This is achieved by allocating dividend to unappointed activities to achieve nil profit on these activities.

In the year ended 31st March 2019 £23.759 m of the statutory dividend of £26.461m was allocated to appointed activities and £2.702m allocated to unappointed activities.

Operating Costs

Cost components in Operating Costs

The following cost components of Line 2 (£186.971m) are provided below:

Employment Costs	22.594m*^
Power	33.831m*
Rates	26.941m*
Contractors	19.726m*
Customer services	9.021m
Materials and consumables	5.924m
General and support expenditure	42.615m
PPP Operating Charges – [redacted]	9.721m
PPP Operating Charges [redacted]	9.790m
PPP Operating Charges – [redacted]	1.118m
Other	5.69m
Total	**186.971m (97.0% of total operating costs)**

* includes an amount relating to unappointed activities that cannot be extracted out for the summary above.
^ stated before an amount is capitalised (see later in commentary).

Interest

Interest received and payable can be summarised as follows:

	£m	£m
Interest received		
Bank Interest	0.100	
Cash Pooling	0.361	
Total Interest received		**0.461**
Interest Payable:		
On bonds held as security	(0.085)	
On all other loans	(44.774)	
On PPP finance lease	(18.826)	
On Pension Fund	(0.460)	
Total Interest Payable		**(64.145)**
Net Interest		**(63.684)**

Capitalisation of costs

During 2018/19 £15.118m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	**£m**
Staff Costs	12.743
Labour charge	0.210
Temporary staff	0.110
Consultants	-
Overheads capitalised	2.055
Total	**15.118**

The majority of costs capitalised relate to staff costs and overheads. These costs relate to the NIW staff who spend their time on capital projects e.g. Engineering Procurement or Asset Management staff. These costs will add to the value of the completed asset.

Comparison to prior year and PC15

A comparison to 2017/18 and to PC15 can be shown as follows:

	Actual	**Actual**	**PC15**
	2018 - 2019	**2017 – 2018**	**2018 - 2019**
	£m	**£m**	**£m**
Sales	409.662	381.099	394.048
Expenditure	(268.585)	(274.614)	(282.954)
Net Operating Profit	141.077	106.485	111.093
Operating Margin	*34.4%*	*27.9%*	*28.0%*
Interest payable	(63.684)	(56.253)	(64.040)
Tax charge	(14.018)	(18.295)	(8.660)
Profit for the year	63.375	31.937	38.394
Net Profit Margin	*15.5%*	*8.38%*	*9.7%*

Explanation of variances on sales, operating profit and interest payable are outlined in the commentary to Table 20.

Systems and controls

The company uses the Oracle financial system to produce monthly and annual accounting information. The Oracle General Ledger produces a trial balance and the detailed accounts are summarised to produce the year end statutory accounts. A series of spreadsheets are then used to analyse appointed and non-appointed sales and costs to produce the financial information for the Regulatory Accounts and AIR Tables.

The company is progressing a major project to develop a costing system. In terms of regulatory reporting the main tables requiring costing information are Tables 21 and 22 and the commentaries for these tables detail how an interim costing solution is being used to populate these tables until the new costing system is in place.

This new costing solution is also intended to provide better information for the allocation of costs to non-appointed activities (which is currently based on a set of high level costing assumptions).

Internal Controls

The company continues to place great emphasis on internal financial controls throughout the organisation.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18c REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	CAPITAL EXPENDITURE CATEGORIES											
1	Profit for the year	£m	3	13.019	46.903	14.386	32.017	25.220	10.784	39.616		
2	Actuarial gains/losses on post employment plans	£m	3	-11.535	8.012	-11.081	4.294	-46.621	41.180	-9.413		
3	Other gains and losses	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	-0.013		
4	Total recognised gains and losses for the year	£m	3	1.484	54.915	3.305	36.311	-21.401	51.964	30.190		

Table 18c – STRGL (HCA)

Line 2 shows £9.413m of actuarial losses on post-employment plans.

Line 3 shows £0.013m of fair value losses on shares classified as equity instruments at fair value through other comprehensive income.

The Regulatory Accounts for 2018/19 are based on IFRS and the actuarial loss and fair value loss noted above are taken from the IFRS Statutory Accounts.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18d REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
ANALYSIS OF DIVIDENDS AND INTEREST CHARGES FOR YEAR

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**DIVIDEND ANALYSIS**											
1	Dividends in respect of a financial re-organisation	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
2	Other ordinary dividends	£m	3	-26.587	-21.391	-21.562	-22.888	-21.510	-21.153	-23.759		
3	Total dividends	£m	3	-26.587	-21.391	-21.562	-22.888	-21.510	-21.153	-23.759		
B	**INTEREST ANALYSIS**											
4	Interest receivable/payable on intercompany balances	£m	3	0.000	0.000	0.000	0.000	0.000	0.115	0.361		
5	Interest receivable/payable in respect of a financial re-organisation	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
6	Indexation element of index-linked bonds	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
7	Preference share dividends	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
8	Other interest receivable	£m	3	0.134	0.112	0.079	0.096	0.070	0.052	0.100		
9	Other interest payable	£m	3	-44.137	-41.459	-45.367	-46.604	-47.111	-48.414	-44.859		
10	Other finance charges - post employment costs	£m	3	0.849	-0.300	0.155	-0.400	-0.200	-1.600	-0.460		
11	Other finance charges	£m	3	-11.913	-6.933	-6.824	-6.701	-6.562	-6.406	-18.826		
12	Total net interest	£m	3	-55.067	-48.580	-51.957	-53.609	-53.803	-56.253	-63.684		
13	Capitalisation of Interest	£m	3							5.014		

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2018/19 and this is shown on line 2. The full dividend for 2018/19 was £26.461m with £23.759m apportioned to appointed activities and £2.702m apportioned to unappointed activities.

See commentary to Table 18 in relation to the approach to the apportionment of dividend to appointed and unappointed activities.

Interest receivable (£0.461m) relates to intercompany cash pooling interest.

Interest payable of £49.873m is comprised of £49.789m relating to the loan notes held with DfI and £0.085m relating to interest payable on cash bonds. The interest on loan notes has increased from last year by £1.424m (2.9%). The increase, as in the prior year, is due to the additional interest on the drawdown of £64m additional loan notes in 2018/19 (Generally the interest payable on loan notes will rise year on year as the outstanding liability steadily rises. This occurs as new loans are taken out to cover in year capital expenditure whilst at the same time the loans are not repayable until 2027/2034).

Other finance charges – post employment plans is a cost of £0.460m for the finance interest cost relating to post employment plans calculated by the actuaries of the pension fund at year end.

During 2018/19 an amount of £18.826m (restated 2017/18: £19.332m) has been included as other finance charges. [redacted]

The following table compares the actual net interest payable and balance of loan notes with the 2018/19 budget and PC15:

	Actual	Budget	PC15
	£m	£m	£m
Net Interest payable	68.698	68.549	76.634*
Loan notes	1,146.560	1,134.560	1,219.828

The drawdown of loans is £73.268m less than the PC15 projected for 2018/19. This is primarily driven by reduced funding in the capital programme and a lower working capital requirement than was anticipated particularly for capital creditors.

* [redacted] and [redacted] were not included in the FD.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 19 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH (TOTAL)

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**FIXED ASSETS**											
1	Tangible fixed assets	£m	3	1907.525	1994.848	2073.392	2139.613	2201.787	2262.482	3128.612		
2	Investment - loan to group company	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
3	Investment - other	£m	3	0.106	0.091	0.091	0.091	0.091	0.091	0.015		
4	Total fixed assets	£m	3	1907.631	1994.939	2073.483	2139.704	2201.878	2262.573	3128.627		
B	**CURRENT ASSETS**											
5	Stocks	£m	3	2.379	2.021	2.269	2.368	2.347	2.469	2.947		
6	Debtors	£m	3	28.824	27.167	30.759	29.832	30.386	62.428	70.856		
7	Cash	£m	3	9.102	1.637	0.792	2.015	0.412	0.723	5.711		
8	Short term deposits	£m	3	5.300	0.600	0.020	1.000	2.501	2.508	1.270		
10	Total current assets	£m	3	48.946	31.475	33.840	35.215	35.646	71.701	80.784		
C	**CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR**											
11	Overdrafts	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
13	Creditors	£m	3	-118.022	-124.404	-132.752	-131.139	-136.204	-129.195	-128.224		
14	Borrowings	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
15	Corporation tax payable	£m	3	0.000	0.000	0.000	-0.189	-0.189	0.228	0.232		
16	Ordinary share dividends payable	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
17	Preference share dividends payable	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
18	Total creditors	£m	3	-118.022	-124.404	-133.454	-137.172	-137.314	-128.967	-127.992		
19	Net current assets	£m	3	-69.076	-92.929	-99.614	-101.957	-101.668	-57.266	-47.208		
D	**CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR**											
20	Borrowings	£m	3	-882.560	-911.560	-947.560	-983.560	-1013.560	-1082.560	-1337.867		
21	Other creditors	£m	3	-96.187	-95.302	-93.773	-91.751	-89.305	-87.360	-1.500		
22	Total creditors	£m	3	-978.747	-1,006.862	-1,041.333	-1,075.311	-1,102.865	-1,169.920	-1,339.367		
E	**PROVISION FOR LIABILITIES AND CHARGES**											
23	Deferred tax provision	£m	3	-187.416	-173.693	-197.982	-195.465	-202.263	-221.641	-170.041		
24	Deferred income - grants and contributions	£m	3	-19.456	-19.785	-21.969	-22.301	-23.070	-25.769	-426.885		
25	Post employment asset / (liabilities)	£m	3	-4.123	2.784	-9.304	-5.880	-54.767	-18.915	-29.575		
26	Other provisions	£m	3	-9.589	-10.315	-5.837	-5.035	-4.886	-4.739	-4.170		
F	**PREFERENCE SHARE CAPITAL**											
27	Preference share capital	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
28	Net assets employed	£m	3	639.224	694.139	697.444	733.755	712.359	764.323	1111.381		
G	**CAPITAL AND RESERVES**											
29	Called up share capital	£m	3	500.000	500.000	500.000	500.000	500.000	500.000	500.000		
30	Share premium	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
31	Profit and loss account	£m	3	-32.466	22.449	25.754	62.065	40.669	92.633	439.691		
32	Other reserves	£m	3	171.690	171.690	171.690	171.690	171.690	171.690	171.690		
33	Capital and reserves	£m	3	639.224	694.139	697.444	733.755	712.359	764.323	1111.381		

Table 19 – HC Balance Sheet as at 31 March 2019

The balance sheet in the published regulatory accounts includes a separate analysis of unappointed activities.

The retained profit for the year is £39.616m (post dividend).

The P&L reserves in the Balance Sheet increased by £30.190m and this movement can be shown as follows:

Retained profit for the year	£39.616m
Equity investments at FVOCI-net changes In fair value	(£0.013m)
Pension scheme actuarial losses net of deferred tax	(£9.413m)
Movement in P&L Account	**£30.190m**

The company has adopted International Financial Reporting Standards (IFRS) in its statutory accounts for the year end 31st March 2019. The regulatory accounts will be produced under International Financial Reporting Standards (IFRS) for the year end 31st March 2019 as directed by the Utility Regulator.

No minority interests exist.

The elements of PPP included in the table are as follows:

Line 1 - Tangible Fixed Assets

	[redacted]	[redacted]	[redacted]	**Total**
	£m	£m	£m	**£m**
Gross	123.45	146.95	12.0	**282.40**
Acc. Deprec	(36.92)	(42.45)	(6.77)	**(86.14)**
NBV	**86.53**	**104.50**	**5.23**	**196.26**

Line - 13 Creditors falling due within one year

	[redacted]	[redacted]	[redacted]	**Other PPP expense**	**Total**
	£m	£m	£m	£m	£m
Lease obligation due < 1 yr	2.947	3.092	0.658	-	**6.697**
Accruals	1.718	16.413	0.286	-	**18.417**
Total	**4.665**	**19.505**	**0.944**	**-**	**25.114**

Line 21 - Other creditors falling due after more than one year

	[redacted]	[redacted]	[redacted]	**Total**
	£m	£m	£m	£m
Lease obligation due > 1 yr	82.404	107.032	1.871	191.307

Line 26 - Other provisions

	[redacted]
	£m
Provisions	-

Significant features and movements

Fixed Assets

Increase of £130m in line with in year additions of £213m, capital contributions of £12.3m, HC depreciation of £82m, disposals of £0.551m.

Debtors

Increased by £4.317m from £66.539m to £70.856m (6.4%). This is primarily due to:

- Measured, unmeasured and TE debtors decreased by £2.6m
- Measured, unmeasured and TE bad debt provision decreased by £0.7m
- Accrued income from measured and TE customers increased by £1.2m.
- VAT receivable debtors increased by £0.6m.
- DfI Subsidy debtor decreased by £0.1m
- Other Prepayments increased by £1.4m
- PPP Capital maintenance decreased by £0.2m
- Intercompany debtor cash pooling increased by £2.9m

Cash and Short term deposits

Cash has increased by £4.986m from £0.726m to £5.712m (686.78%) and Short term deposits have decreased by £1.238m from £2.508m to £1.270m (49.36%).

The cashflow statement in Table 28 illustrates the uses of these cash and deposit monies in contributing to meeting the non opex expenditure needs for the year. This can be summarised as follows:

Non opex expenditure

Capex	£184.266m
Net Interest paid	£ 67.596m
Dividend paid	£ 23.742m
PPP Lease payments	£ 5.706m
Increase in cash	£ 4.986m
Increase in deposit monies	£ 1.237m
Total	**£287.533m**

Funded by:

Generated from operations	£221.058m
Loans	£ 64.000m
Total	**£285.058m**

Deferred tax

The deferred tax balance has increased from £155.767m to £170.041m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year (Capital loan notes)

Borrowings have increased by £64m from £1,082.560m to £1,146.560m. The additions to capital expenditure during the year were £184m. The increase in borrowings were used to partly fund these additions to capital expenditure with the balance of capital being financed through capital contributions and working capital.

Post-employment asset/(liabilities)

The Pension liability of £18.915m increased to a Pension liability of £29.574m (a change in value of (56.35%)).

This can be shown as follows:

	£m
Opening balance at 1.4.18	**(18.915)**
Current Service Costs	(11.900)
Administration Costs	(1.000)
Past Service Costs	(0.037)
Contributions	11.895
Finance Cost	(0.460)
Actuarial Loss	(11.341)
Decrease in Deferred tax asset on liability	2.184
Closing balance 31.3.19	**(29.574)**

Other provisions

Decreased from £5.449m to £4.170m (23.5%).

This decrease of £1.279m can be summarised as follows:

	£m
Transfer from other provisions to accruals	(1.000)
Increase in holiday pay provision	0.064
Decrease in Public Liabilityprovision	(0.193)
Decrease in Employer Liability provision	(0.044)
Decrease in Early retirement provision	(0.106)
Total	**(1.279)**

PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)

– Capital Maintenance

The table below summarises the IRC, IRE and capital maintenance during 2018/19 in relation to the PPP projects:

	[redacted]	[redacted]	[redacted]	**Total**
	£m	£m	£m	**£m**
IRE	-	-	-	**-**
IRC	-	-	-	**-**
Capital maintenance	1.253	2.142	-	**3.395**

[redacted] is treated as 'on balance sheet' and an amount of the unitary charge for [redacted] is deemed to be related to the carrying out of capital maintenance by the operator. For 2018-19 this is confirmed by the operator to be £1.253m. This amount is credited to the Profit and Loss account and debited to [redacted] fixed assets.

[redacted] is treated as 'on balance sheet' and an amount of the unitary charge for [redacted] is deemed to be related to the carrying out of capital maintenance by the operator. For 2018-

19 this is confirmed by the operator to be £2.142m. This amount is credited to the Profit and Loss account and debited to [redacted] fixed assets.

[redacted] is treated as 'on balance sheet' and an amount of the unitary charge for [redacted] is deemed to be related to the carrying out of capital maintenance by the operator. For 2018-19 this is confirmed by the operator to be £0.0m. This amount is credited to the Profit and Loss account and debited to [redacted] fixed assets.

This capital maintenance is assumed to be 100% non-infrastructure and there are no infrastructure additions to [redacted] in 2018-19 (2017-18: nil). There has therefore been no apportionment of IRC in 2018-19 (2017-18: nil).

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 19a ANALYSIS OF BORROWINGS DUE AFTER MORE THAN ONE YEAR (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH

	1	2	3	4	5	6	7	8	9
	DESCRIPTION	YEARS TO MATURITY years 0dp	PRINCIPAL SUM £m 3dp	Years to maturity x principle sum £m 3dp	REAL COUPON % 2dp	NOMINAL INTEREST RATE % 2dp	FULL YEAR EQUIVALENT NOMINAL INTEREST COST £m 3dp	FULL YEAR EQUIVALENT REAL CASH INTEREST PAYMENT £m 3dp	CARRYING VALUE £m 3dp
A	BORROWINGS IN HEDGING RELATIONSHIPS								
A1	Fixed rate instruments								
1									
~									
50									
A2	Floating rate instruments								
51									
"									
100									
A3	Index linked instruments								
101									
"									
150									
	TOTAL FOR HEDGING INSTRUMENTS								
B	BORROWINGS DESIGNATED AT FAIR VALUE THROUGH PROFIT AND LOSS								
B1	Fixed rate instruments								
151									
"									
200									
B2	Floating rate instruments								
201									
"									
250									
B3	Index linked instruments								
251									
"									
300									
	TOTAL FOR BORROWINGS DESIGNATED AT FAIR VALUE THROUGH PROFIT AND LOSS								
C	OTHER BORROWINGS								
C1	Fixed rate instruments								
301	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	627.560	5020.480	2.85%	5.25%	32.947	32.947	627.560
302	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	20.000	160.000	2.63%	5.03%	1.006	1.006	20.000
303	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	20.000	160.000	2.49%	4.89%	0.978	0.978	20.000
304	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	20.000	160.000	2.08%	4.48%	0.896	0.896	20.000
305	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	10.000	80.000	2.73%	5.13%	0.513	0.513	10.000
306	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	10.000	80.000	2.76%	5.16%	0.516	0.516	10.000
307	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	10.000	80.000	2.87%	5.27%	0.527	0.527	10.000
308	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	20.000	160.000	2.65%	5.05%	1.010	1.010	20.000
309	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	2.40%	4.80%	0.240	0.240	5.000
310	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	15.000	120.000	1.99%	4.39%	0.659	0.659	15.000
311	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	7.000	56.000	1.10%	3.50%	0.245	0.245	7.000
312	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	10.000	80.000	0.97%	3.37%	0.337	0.337	10.000
313	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	15.000	120.000	1.22%	3.62%	0.543	0.543	15.000
314	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	18.000	144.000	1.28%	3.68%	0.662	0.662	18.000
315	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	8.000	64.000	1.24%	3.64%	0.291	0.291	8.000
316	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	8.000	64.000	0.96%	3.36%	0.269	0.269	8.000
317	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	0.82%	3.22%	0.161	0.161	5.000
318	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	20.000	160.000	0.66%	3.06%	0.612	0.612	20.000
319	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	10.000	80.000	0.73%	3.13%	0.313	0.313	10.000
320	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	24.000	192.000	0.82%	3.22%	0.773	0.773	24.000
321	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	1.59%	3.99%	0.200	0.200	5.000
322	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	8.000	64.000	1.70%	4.10%	0.328	0.328	8.000
323	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	1.55%	3.95%	0.198	0.198	5.000
324	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	11.000	88.000	1.51%	3.91%	0.430	0.430	11.000
325	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	1.46%	3.86%	0.193	0.193	5.000
326	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	1.32%	3.72%	0.186	0.186	5.000
327	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	1.51%	3.91%	0.196	0.196	5.000
328	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	0.75%	3.15%	0.158	0.158	5.000
329	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	0.80%	3.20%	0.160	0.160	5.000
330	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	8.000	64.000	0.40%	2.80%	0.224	0.224	8.000
331	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	3.000	24.000	0.21%	2.61%	0.078	0.078	3.000
332	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	13.000	104.000	0.26%	2.66%	0.346	0.346	13.000
333	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	0.66%	3.06%	0.153	0.153	5.000
334	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	8.000	64.000	0.52%	2.92%	0.234	0.234	8.000
335	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	0.27%	2.67%	0.134	0.134	5.000
336	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	8	5.000	40.000	0.08%	2.48%	0.124	0.124	5.000
337	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.55%	2.95%	0.148	0.148	5.000
338	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.00%	2.40%	0.120	0.120	5.000
339	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.31%	2.71%	0.136	0.136	5.000
340	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.21%	2.61%	0.131	0.131	5.000
341	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	10.000	150.000	0.03%	2.43%	0.243	0.243	10.000
342	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	28.000	420.000	0.02%	2.42%	0.678	0.678	28.000
343	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	12.000	180.000	0.21%	2.61%	0.313	0.313	12.000
344	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.15%	2.55%	0.128	0.128	5.000
345	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.18%	2.58%	0.129	0.129	5.000
346	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	5.000	75.000	0.01%	2.41%	0.121	0.121	5.000
347	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	6.000	90.000	0.17%	2.57%	0.154	0.154	6.000
348	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	8.000	120.000	0.09%	2.49%	0.199	0.199	8.000
349	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	17.000	255.000	0.24%	2.64%	0.449	0.449	17.000
350	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	8.000	120.000	0.26%	2.66%	0.213	0.213	8.000
351	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	10.000	150.000	0.04%	2.44%	0.244	0.244	10.000
352	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	7.000	105.000	0.08%	2.48%	0.174	0.174	7.000
353	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	7.000	105.000	-0.06%	2.34%	0.164	0.164	7.000
354	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	15	15.000	225.000	-0.21%	2.19%	0.329	0.329	15.000
C2	Floating rate instruments								
360									
"									
400									
C3	Index linked instruments								
401									
"									
450									
	TOTAL FOR OTHER BORROWINGS		1146.560				50.906	50.906	1146.560
D	TOTALS		1146.560	10313.480			50.906	50.906	1146.560

E	RPI assumption	2.4%

F	ANALYSIS	
F	INDICATIVE INTEREST RATES	
F1	Nominal interest	4.4%
F2	Cash interest	4.4%
G	INDICATIVE DEBT PORTFOLIO BREAKDOWN	
G1	Floating rate debt as percentage of total debt	0
G2	Fixed rate debt as percentage of total debt	100.0%
G3	Index linked debt as percentage of total debt	0
G4	Fixed rate debt and index linked debt as percentage of total debt	100.0%
G5	Weighted average years to maturity	9

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2019 NIW borrowings related to Capital Loan Notes issued under two loan note agreements; £1,280,200,000 Fixed Coupon Unsecured Loan note 2027 & £600m Fixed Coupon Unsecured Loan note 2034.

The Loan notes were issued under £600m Fixed Coupon Unsecured Loan Note 2034 facility in the period from April 2017 to 31 March 2019 as the £1,280,200,000 Fixed Coupon Unsecured Loan note 2027 facility expired on 31 March 2016.

Both facilities provide finance for capital investment only.

The loan note subscription agreements provide that the loan notes in issue before 31 March 2010 carry a fixed rate of interest of 5.25%. Loan notes issued after this date carry fixed interest rates based on a margin of 0.85% above the reference gilt rate published by FTSE-Tradeweb on the date of issue of the loan note. FTSE-Tradeweb prices are the successor prices to those produced by the UK HM Government Debt Management Office (UK DMO) up until 21 July 2017 when the UK DMO ceased producing reference prices for gilts.

In 2018/19 Capital loan notes were accounted for as held to maturity borrowings.

In addition to the capital loan note instrument NIW had a committed facility available as a £20m overdraft which is available to March 2021. That facility was not utilised during 2018/19.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE (NIW Only)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	**DIRECT COSTS**					
1	Employment costs	£m	3	4.586	8.654	13.240
2	Power	£m	3	5.412	3.854	9.266
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	3.034	8.000	11.034
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	4.164	0.389	4.553
7	Service charges	£m	3	0.691	0.000	0.691
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.008	0.040	0.048
10	Total direct costs	£m	3	17.895	20.937	38.832
11	General and support expenditure	£m	3	10.129	10.285	20.414
12	Functional expenditure	£m	3	28.024	31.222	59.246
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			4.935
14	Scientific services	£m	3			1.886
15	Other business activities	£m	3			0.544
16	Total business activities	£m	3			7.365
17	Rates	£m	3			8.988
18	Doubtful debts	£m	3			-0.041
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			75.558
21	Third party services - opex	£m	3			0.001
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			75.559
22a	Payment by concessionaire to operator	£m	3			
C	**OPEX)**					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	9.538	9.538
24	Reactive and planned maintenance non-infrastructure	£m	3	0.865	5.248	6.113
D	**CAPITAL MAINTENANCE**					
26	Historical cost depreciation (allocated)	£m	3	10.199	18.022	28.221
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities historical cost depreciation (non-allocated)	£m	3			0.001
30	Capital maintenance excluding third party services	£m	3			28.222
31	Third party services - historical cost depreciation	£m	3			0.000
33	Total capital maintenance	£m	3			28.222
34	Total operating costs	£m	3			103.621
E	**ADDITIONAL DISCLOSURES**					
35	Infrastructure renewals charge (excluding third party services)	£m	3	15.077	0.000	15.077
36	Amortisation of deferred credits	£m	3			-0.160
37	Third party services - infrastructure renewals charge	£m	3			0.000

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE - (PPP Only)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	**DIRECT COSTS**					
1	Employment costs	£m	3			
2	Power	£m	3	6.758	0.000	6.758
3	Agencies	£m	3			
4	Hired and contracted services	£m	3			
5	Associated companies	£m	3			
6	Materials and consumables	£m	3			
7	Service charges	£m	3	0.085	0.000	0.085
8	Bulk supply imports	£m	3			
9	Other direct costs	£m	3	0.000	0.000	0.000
10	Total direct costs	£m	3	6.843	0.000	6.843
11	General and support expenditure (NIW Only)	£m	3	0.148	0.000	0.148
12	Functional expenditure	£m	3	6.991	0.000	6.991
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			
14	Scientific services	£m	3			0.000
15	Other business activities	£m	3			
16	Total business activities	£m	3			0.000
17	Rates	£m	3			7.784
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			14.775
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			[redacted]
22	Total operating expenditure	£m	3			[redacted]
22a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]
C	**OPEX)**					
23	Reactive and planned maintenance infrastructure	£m	3			
24	Reactive and planned maintenance non-infrastructure	£m	3			
D	**CAPITAL MAINTENANCE**					
26	Historical cost depreciation (allocated)	£m	3	3.804	0.000	3.804
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities historical cost depreciation (non-allocated)	£m	3			0.000
30	Capital maintenance excluding third party services	£m	3			3.804
31	Third party services - historical cost depreciation	£m	3			0.000
33	Total capital maintenance	£m	3			3.804
34	Total operating costs	£m	3			[redacted]
E	**ADDITIONAL DISCLOSURES**					
35	Infrastructure renewals charge (excluding third party services)	£m	3	0.000	0.000	0.000
36	Amortisation of deferred credits	£m	3			0.000
37	Third party services - infrastructure renewals charge	£m	3			0.000

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE - (TOTAL)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	**DIRECT COSTS**					
1	Employment costs	£m	3	4.586	8.654	13.240
2	Power	£m	3	12.170	3.854	16.024
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	3.034	8.000	11.034
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	4.164	0.389	4.553
7	Service charges	£m	3	0.776	0.000	0.776
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.008	0.040	0.048
10	Total direct costs	£m	3	24.738	20.937	45.675
11	General and support expenditure	£m	3	10.277	10.285	20.562
12	Functional expenditure	£m	3	35.015	31.222	66.237
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			4.935
14	Scientific services	£m	3			1.886
15	Other business activities	£m	3			0.544
16	Total business activities	£m	3			7.365
17	Rates	£m	3			16.772
18	Doubtful debts	£m	3			-0.041
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			90.333
21	Third party services - opex	£m	3			0.001
21a	PPP Unitary Charges (Opex element)	£m	3			[redacted]
22	Total operating expenditure	£m	3			[redacted]
22a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]
C	**OPEX)**					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	9.538	9.538
24	Reactive and planned maintenance non-infrastructure	£m	3	0.865	5.248	6.113
D	**CAPITAL MAINTENANCE**					
26	Historical cost depreciation (allocated)	£m	3	14.003	18.022	32.025
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities historical cost depreciation (non-allocated)	£m	3			0.001
30	Capital maintenance excluding third party services	£m	3			32.026
31	Third party services - historical cost depreciation	£m	3			0.000
33	Total capital maintenance	£m	3			32.026
34	Total operating costs	£m	3			[redacted]
E	**ADDITIONAL DISCLOSURES**					
35	Infrastructure renewals charge (excluding third party services)	£m	3	15.077	0.000	15.077
36	Amortisation of deferred credits	£m	3			-0.160
37	Third party services - infrastructure renewals charge	£m	3			0.000

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

The costs in Tables 21 & 22 are populated with the updated information available at 31st May 2019 for the year ended 31st March 2019. AIR19 costs are reported using IFRS and the AIR18 figures quoted below are restated to IFRS for comparison purposes.

Allocation of costs between expenditure types

Expenditure is classified as capital expenditure if it satisfies the following criteria:

- It exceeds the threshold limit set at £1,000 (Note: land has a capital threshold of zero) and,
- It was used for one or more of the following purposes:
    1. Initial construction or purchase of a fixed asset (e.g. land, buildings, vehicles, plant, computers);
    2. Extension of a fixed asset which increases its size or operating capacity;
    3. Improvement of a fixed asset beyond the assets original condition on construction or acquisition;
    4. To substantially extend the original life of a fixed asset;
    5. To renew or replace an existing fixed asset; and
    6. Contributions paid to another body towards the cost of work that would be fixed asset expenditure were it undertaken by NI Water, provided that the resultant ownership of the assets is vested in NI Water.

Some items, individually, may be valued at less than £1,000 but because they form part of an operational configuration they should be capitalised; for example workstations which comprise a monitor, keyboard, central processor, mouse and printer should be capitalised.

Cost includes own work capitalised comprising the direct costs of materials, labour and applicable overheads. Interest costs relating to the acquisition of fixed assets have not been capitalised in AIR19. This is consistent with past years.

Fixed assets comprise:

- **Infrastructure assets**
  Infrastructure assets comprise a network of systems consisting of mains and sewers, impounding and pumped raw water storage reservoirs, sludge pipelines and sea outfalls. The infrastructure renewals charge for infrastructure assets is included in Tables 21 and 22 and is the estimated level of annual expenditure required to maintain the operating capability of the network, which is based on the Company's Asset Management Plan.
- **Other assets**
  Other assets comprise:
  a) Land and non-operational buildings;
  b) Operational assets (consisting of sites used for water and wastewater treatment, pumping or storage where not classified as infrastructure); and
  c) Vehicles, mobile plant and equipment.

Allocation of costs between service areas

All costs entered to NI Water's Oracle General Ledger (GL) have a 5-segment coding combination (account, cost centre, service activity, location and project). For the purpose of Tables 21 & 22 Opex costs from the General Ledger have been allocated between Water and Sewerage services and between service areas within the Water and Sewerage activities by mapping NI Water's Oracle General Ledger to the tables using the coding structure.

Expense Groups are mapped to the NIAUR cost categories – **Appendix 1** provides details of this mapping. The Services Activities segment is mapped to the NIAUR service areas – **Appendix 2** provides details of this mapping.

The only exception to this is in direct General & Support expenditure, which can relate to more than one service area or activity. These costs are collated into 5 separate 'Overhead Pots' and are apportioned either on the basis of the directly coded spend; on the basis of the total direct costs or in the case of M&E function costs using a split provided by the business. The quantum of the apportionment of the General Overhead Pots has decreased from AIR18 to AIR19 (by circa £1.5M). This is explained in the General & Support section further on in the commentary. The table below shows the basis of apportionment of 'indirect' General & Support expenditure between service activities in AIR19.

Allocation of General and Support	Water		Sewerage			
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	Comments
G&S Overhead Pot 1	29.2%	25.5%	16.4%	21.9%	7.0%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	53.4%	46.6%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	36.2%	48.3%	15.4%	Sewerage activities only
G&S Overhead Pot 3 SA 390	29.2%	25.5%	16.4%	21.9%	7.0%	Water and sewerage networks spend only
G&S Overhead Pot 3 M&E	6.2%	15.5%	24.9%	53.4%	0.0%	M&E Function split based on split supplied by M&E Function

The percentage splits in AIR19 used to allocate General & Support expenditure are consistent with AIR18. The allocation to Water from General & Support Overhead Pot 1, which contains approx. 77% of the costs, is the main change in allocation where the allocation has increased from 54% in AIR 18 to 54.7% in AIR 19.

The costs of the CRC Energy Efficiency Scheme are included within Power.

During the year NI Water incurred less than £0.1M in fines, associated costs and provisions for fines. These costs are included within General & Support costs. In 2018-19 NI Water has not paid any fines under the Streetworks (NI) Order.

Allocation of costs to business activities and rates

All costs which relate to business activities e.g. Customer Services, Scientific Services and Regulation, were collated using the relevant cost centre segment from the Oracle General Ledger. The total expenditure attributable to these activities is apportioned to Water and Sewerage on the basis of the directly coded spend. This basis is consistent with past returns. The allocation to Water has increased from 54.0% in AIR18 to 54.7% in AIR19 while allocation to Sewerage has decreased from 46.0% in AIR18 to 45.3% in AIR19.

The table below shows the basis of apportionment for AIR19.

Apportionment of business activities		Water		Sewerage		
Description	Total £	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (Includes general & Support)	83,168,420	28.9%	25.8%	16.4%	21.8%	7.1%
Apportionment						
Water / Sewerage split	100%	54.7%		45.3%		

Rates were allocated between Table 21 and Table 22 using the rates bills. The rates charge can be specifically identified from the rates bill. In AIR19 overall rates are split 62.3% Water and 37.7% Sewerage which is consistent with AIR18.

Allocation of costs to unappointed activities

A final allocation of costs has been made to unappointed activities based on an assumption that these activities are either charged on a full cost recovery basis, and thus costs broadly mirror income generated, or the income does not give rise to any additional operational costs (e.g. rents received or fishing rights). This is consistent with previous AIR returns.

Atypical costs and provisions

2018/19 Atypical costs and credits

Description	Amount	Comment
Extreme weather	£1.2M	Costs arising from extreme weather events in Jul'18 and Jan'19.
VER/VS costs	£0.2M	Costs incurred releasing employees via the VER/VS schemes.
BI consultancy	£0.9M	Only BI related consultancy costs are deemed to be atypical. In addition to consultancy costs, NIW also incurred £2.0M in staff related costs and £0.1M in other costs in order to deliver the BI (ACE) programme in 2018-19.
PPP atypicals	[redacted]	Primarily relating to performance deductions. See PPP section of this commentary for further information.
Omega Claims & Legal	£0.5M	Technical and legal advisors costs in relation to Omega.
RPDM & UR credit	(£0.5M)	Balance of 2017-18 accrual released in 2018-19.
Total	[redacted]	

Business Improvement (BI) Programme.

The Business Improvement Programme, also known as ACE (Achieving Customer Excellence) seeks to address four strategic strands:

- Improve services to Customers;
- Develop the NI Water people;
- Build a more efficient and effective organisation; and
- Exceed, where possible, quality compliance standards.

Total opex on the BI Programme in AIR19 was £3.0M which is £0.2M lower than AIR18 (£3.2M). This is due to a decrease in Employment Costs (£0.1M) and Consultant Fees (£0.1M).

Voluntary Early Retirement / Voluntary Severance / Ill Health retirement

During 2018-19 NI Water further reduced the workforce resulting in the release of Voluntary Early Retirement (VER), Voluntary Severance (VS) and Ill Health Retirement schemes. Further details on the staff reduction programme is contained within the Annual Report.

The payments made during the year totalled £0.2M in relation to the 2018-19 scheme which is a decrease of £1.3M from AIR18. This is due to a decrease in the number of Ill Health retirements in 2018-19.

Negative Opex

NIW generate income from the sale of electricity and Renewable Obligation Certificates (ROCs) by way of water turbine and solar installations. In 2018-19 this income amounted to £0.7M which is an increase of £0.3M from AIR18. This is a result of having more Solar Panels, which generated more electricity.

Employment Costs

Staff costs for total NI Water come to circa £53.5M as detailed below which has decreased from AIR18 (£53.9M). These costs include the £0.2M VER\VS costs outlined above. Only circa £22.6M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR18 circa £21.6M).

The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£17.0M	
Salaries	£33.6M	
Temporary Staff	£0.6M	
Other Costs of Employment	£1.3M	
Staff Expenses	£1.1M	
Total NI Water staff costs	**£53.5M**	
Less:		
Customer Services	(£4.3M)	Customer Services
Scientific Services	(£1.6M)	Scientific Services
Regulation	(£0.6M)	Other Business Activities
Unallocated	(£24.6M)	General & Support
Total Employment Costs	**£22.6M**	**£13.2M Table 21 and £9.4M Table 22**

The unallocated amount of circa £24.6M is included in General & Support and has been apportioned between Table 21 and 22, across each of the columns, based on total direct costs, with the exception of M&E Employment costs which are allocated on the basis of a split provided by the business.

Total NI Water staff costs have decreased by approximately £0.4M from AIR19 (£53.9M) due to a decrease in Temporary Staff of £0.7M and Other Costs of Employment of £0.4M offset by an increase in Wages of £0.3M and Salaries of £0.5M.

Wages and Salaries have increased due to the annual inflationary pay rise. The decrease in Other Employment Costs is due to the decrease in Ill Health retirements in 2018-19.

Hired & Contracted

Hired and Contracted Services of circa £19.7M in Table 21 and Table 22 are split out in the table below. The corresponding charge in the AIR18 was circa £19.5M.

Hired & Contracted Services:	Table 21	Table 22	TOTAL
Operational Contractors	£10.3M	£8.7M	£19.0M
Other Contractors	£0.7M	£0.0M	£0.7M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	**£11.0M**	**£8.7M**	**£19.7M**

Within the Contractors costs of £11.0M in Table 21, circa £3.0M relates to the cost of contractors for Water Treatment with the balance being the cost for the hire of plant and contractors to facilitate the maintenance of the networks. This is a £0.3M increase on AIR18 which will be explained in Table 21 Line 4 below. Within the Operational Contractors cost of £8.7M in Table 22, circa £2.2M is for the cost of the various Sludge Disposal Routes, circa £4.4M is for the maintenance of the Sewerage network and the balance relates to the costs of Sewage Treatment (including the costs of Skip Hire etc.). The Cost of the maintenance of the Sewerage Network has decreased by £0.2M from AIR18. This will be explained in Table 21 Line 4 below.
There is £25k spend on Consultants Fees within Hired and Contracted in AIR19.

General & Support Costs

General & Support costs have decreased by circa £1.5M from AIR18 (£44.1M) to AIR19 (£42.6M).

The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£24.6M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.4M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£7.6M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.6M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£4.8M	Included in General & Support (Removed from Other Direct Costs)
V&P Repairs	£0.5M	General & Support
Mobile V&P Charges	£2.2M	General & Support
Other	£0.9M	General & Support
Total	**£42.6M**	**£20.6M Table 21 and £22.0M Table 22**

General & Support costs were apportioned across Table 21 & Table 22 based on either the total direct costs allocated to each column or in the case of the M&E Function based on a split as supplied by the Function. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This approach was consistently applied to both AIR19 and AIR18. See the **Allocation of costs between service areas** section at the start of the commentary.

The main difference from AIR18 is in Unallocated Employment Costs (£1.6M decrease).

The decrease in Unallocated Employment Costs has been explained under Employment Costs.

Table 21 PPP only

Line 2 - Power costs

Power costs for the PPP Alpha sites of [redacted] has increased by 23.6% from the AIR18 reported figure of [redacted]. This increase is due to a combination of an increase in volumes of water taken from PPP Alpha sites (circa 2.4%) plus an increase in rate (circa 18% at total NI Water level).

Line 7 - Service charges

This line includes the costs of abstraction licences at each of the PPP Alpha sites. The figure has increased by an inflationary amount from AIR18.

Line 11 - General & support expenditure

General and support expenditure has been calculated on the same basis as in AIR18. These costs have increased from that reported in AIR18 [redacted] due an increase in the proportion of time and consultancy costs allocated to Alpha.

Line 14 - Scientific services

The company does not incur any net costs associated with scientific services for Alpha as costs are offset by a reduction in the payment to the PPP Concessionaire.

Line 17 - Rates

Rates costs have risen by 1.4% from AIR18. The proportion of DI being taken from PPP sites has fallen slightly from 47.3% to 47.1%.

Line 21a - PPP unitary charges (Opex)

This line data is drawn directly from the Company's accounts. No additional reconciliation is required.

During the reporting year the Alpha Concessionaire recognised performance deductions of [redacted] and this is reflected in the [redacted] opex charge. The charge also includes an atypical credit of [redacted] as follows:

Quality Monitoring Change credit	[redacted]
EIB Step-down	
Refund in respect of reorganisation costs	
Operating cost claim	
Total	

Further details on each of these are given in the commentary to table 42 line 10.
The increase of [redacted] in the unitary charge cost from AIR18 is made up as follows:

Inflationary increase in capacity charge	[redacted]
Increase in volumetric charge (inflation and flow related)	
Increase in performance deductions	)
Decrease in atypical credits	
Increase in amounts capitalised	
Decrease in interest element of charge	

Line 22a - Payment by concessionaire to operator

Inputs for this line are obtained directly from the PPP contractor.

Table 21 – NI Water Total

A - Direct Costs

Table 21 Total Expenditure in AIR19 has increased by circa £4.7M from AIR18 to AIR19. This is mainly driven by a number of substantial increases in Power £2.8M and Employment Costs £0.6M. Various other variances which are explained on a line by line basis below:

- Line 1: Employment costs have increased by circa £0.6M from AIR18. This is due to the annual inflationary pay rise.
- Line 2: Power costs include electricity costs, fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall the costs have increased by £2.8M from AIR18. The main reason for this is due to increased energy tariffs.
  Power costs include [redacted] related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have increased by circa £0.3M from AIR18. The increase has been driven by an increase in Water Resources & Treatment (WRT) of £0.4M and a decrease of £0.1M in Water Distribution (WD). The main reason for the increase in WRT was increased expenditure on maintenance costs at Water Treatment Works.
- Line 5: Associated companies – there are no costs in this line.
- Line 6: Materials & Consumables have decreased from AIR18 by £0.2M. This is mainly within WD in Materials & Equipment £0.2M due to M&E carrying out a higher proportion of work in WD with M&E costs removed to G&S Overhead.
- Line 7: Service Charges – the costs are £0.8M with the majority of the costs in WRT for abstraction licences. These are consistent with AIR19. Service Charges include circa [redacted] for PPP.
- Line 8: Bulk Supply imports – there are no costs in this line.
- Line 9: Other Direct Costs are immaterial and in line with AIR18.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR19 direct costs are £3.6M higher than AIR18. This is driven by the increase in Power costs and Employment Costs as detailed above.
- Line 11: General & Support expenditure has decreased by circa £0.4M from AIR18 to AIR19. The reason for the decrease in the costs in Table 21 is the decrease in the overall General & Support expenditure (as already discussed) combined with the changes in allocation.
  The percentages used are calculated on the total of Direct Costs for General & Support Pot 1 & 2 which have remained in line with AIR18. See the Allocation of costs between service areas section at the start of the commentary. Service Activities are mapped to the NIAUR service areas in **Appendix 2**.
  The NI Water total costs are immaterial for PPP.
- Line 12: This is the calculated total line for functional expenditure which has increased by £3.2M from AIR18 as a result of the increase in Total Direct Costs as already discussed above and the decrease in General & Support Costs as explained in Line 11 above. Line 12 includes [redacted] of costs associated with PPP (AIR18 [redacted]).

B - Operating Expenditure

- Line 13: Customer Services costs have increased £0.3M from AIR18 in Table 21. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR19 the percentage split was calculated at 54.7% Table 21 and 45.3% Table 22. In AIR18 the percentage split was 54.0% and 46.0% between Table 21 & 22 respectively.
- Line 14: Scientific Services costs have increased by £0.4M from AIR18. This is due to increased Sampling Costs in 2018-19. Scientific Services costs have been split using the same percentage basis as Customer Services as detailed above in line 13.

- Line 15: Other Business Activities – Regulatory costs have remained in line with AIR18. These costs are apportioned on the same basis as Line 13 and Line 14.
- Line 16: Total Business Activities – this is a calculated line and is the total of Line 13, 14 and 15. The increase from AIR18 of circa £0.7M is driven by the increases as detailed above.
- Line 17: Local authority rates have increased £0.5M from AIR18. This is due to increases in poundages from AIR 18. Rates include circa [redacted] relating to PPP sites.
- Line 18: Doubtful debts have decreased by £0.1M from AIR18 due to the improvement of Debtors Days. The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR18.
- Line 19: Exceptional items– there are no costs in this line.
- Line 20: Total Opex less third party services – this is a calculated line and is the total of line 12,16,17,18 and 19. This has increased by circa £4.3M from AIR18 driven by the increases in the costs as detailed above.
- Line 21: Third party services are immaterial.
- Line 21a: Total PPP Unitary Charge has increased by circa [redacted] from the AIR18 charge at [redacted] in AIR19. See Table 42 commentary for details.
- Line 22: Total operating expenditure, this is a calculated line and is the total of line 20, 21 and 21a. This line has increased by £4.7M from AIR18 due to the increase in the costs as discussed. This agrees to Table 35 line 24.
  Total operating expenditure includes circa [redacted] relating to PPP (AIR18 [redacted]).
- Line 22a: This figure is an increase of £0.2M from AIR18 and can vary from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation. See Table 42 commentary for details.

C Reactive & Planned Maintenance

- Line 23: Infrastructure, this figure has decreased by circa £0.1M from AIR18. This is as a result of an increase in capitalisation repair work and thus a reduction in Opex costs.
- Line 24: Non-infrastructure, this figure has decreased by circa £0.2M from AIR18. This is as a result of an increase on spend on all the activities that feed into this line in WRT and WD. The decrease is a combination of decreased activity and rates.

Leakage costs

Operating costs relating to leakage have decreased from £6.8M in AIR18 to £6.3M in AIR19. This is due to a reduction in the number of Leakage defects repaired. Capital expenditure has remained consistent from AIR18 to AIR19.

Table 22 PPP only

Line 2 - Power costs

Power costs have increased from AIR18 by 4.0%. This was due to a number of factors including increased tariffs in the reporting year, offset by lower wastewater volumes and an increase in self generation at the incinerator. This has reduced grid requirements and hence cost.

The allocation of the Ballynacor site costs between Sludge & WW has been revised to reflect actual usage, however there is still a 1 year lag with 2017-18 actuals being used as a proxy for 2018-19 as outturn reports are not available until July. The allocation to sludge has increased from 12.5% in AIR18 to 14.15% in AIR19. All other allocations are consistent with AIR18.

Kinnegar: Power costs are not recorded as

i) they are not paid directly by the Company and
ii) they are part of the Unitary Charge payment to the Concessionaire.

Line 8 - Other direct costs

Nil

Line 10 - General & support expenditure

The general and support expenditure has been calculated in the same way as for AIR18 reflecting all costs associated with P101 cost centre. These costs have increased from that reported in AIR18 due to an increase in time allocation plus additional consultancy costs incurred.

Total general and support costs associated with the Omega contract were calculated at [redacted] and two sevenths of this has been allocated to column 3 to reflect costs associated with Duncrue and Ballynacor sludge facilities, the remaining five sevenths are associated with the 5 Omega WWTW facilities and are reported along with Kinnegar in column 2.

Line 13 - Scientific services

Scientific Services costs reflect the contract sampling and analysis costs borne by the Company in providing its sampling and analytical contractual obligations to the Kinnegar and Omega Facilities in Service: Kinnegar, North Down, Richhill, Ballyrickard, Ballynacor and Armagh. This cost has increased from AIR18 mainly as a result of increased emergency sampling costs within R113 cost centre plus an increase in the proportion of PPP samples from 17.6% to 19% of total NIW

.

Line 16 - Rates

The rates figure for Kinnegar and each of the Omega sites were taken directly from the rates bills. The bill for the Duncrue site was allocated between PPP and NIW in line with the total area of the site occupied by PPP. PPP occupy 15% of the Duncrue site. The increase in rates cost in AIR19 is 2.1% and is largely inflationary related.

Line 20a - PPP unitary charges (Opex)

Work has progressed during 2018/19 with the Utility Regulator (UR) to determine the changes to be made to the basis for accounting for the 2018/19 Regulatory Accounts and AIR19 tables. The UR has provided guidance that the basis of accounting for the Regulatory Accounts and AIR tables for 2018/19 and its comparatives should move from the old UK GAAP basis to IFRS (similar to the basis on which the statutory accounts are prepared). This change has impacted Table 22 in that 2 of the 3 PPP contracts [redacted]

are classified as off-balance sheet under UK GAAP and on-balance sheet under IFRS. This change has resulted in significant change to the number reported in line 20a.

The charge for [redacted] included in this line of [redacted] is down from [redacted] reported in AIR18. The change reflects the removal of the residual interest adjustment and inclusion of capital and interest elements on the notional finance lease.

The [redacted] charge of [redacted] is down from [redacted] in AIR18. The again reflects the removal of the residual interest adjustment and inclusion of capital and interest elements on the notional finance lease.

This line includes atypical costs of [redacted] on [redacted] and [redacted] on [redacted]. Further details on all of these atypical amounts are given in the commentary to line 10 of table 42.

Line 21a - Payment by concessionaire to operator

Inputs for this line are obtained directly from the PPP contractor.

Table 22 – NI Water Total

A - Direct Costs

Total Expenditure in Table 22 has increased £0.7M from AIR18. This is mainly driven by an increase in Power Costs of £1.8M offset by a decrease in General and Support costs of £1.0M and various other variances which are explained on a line by line basis below:

- Line 1: Employment costs increased £0.3M from AIR18. This is due to the annual inflationary pay rise
- Line 2: Power costs include electricity costs and fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall the costs have increased by £1.8M in AIR19 from AIR18. The main reason for this is due to increased energy tariffs.

  In AIR19 the Wastewater Field Managers provided a percentage estimate of power costs between Sewage Treatment and Sludge Treatment at each of the WWTWs where there are both activities. These percentages were applied to the power costs to calculate the costs for each activity. This is the same rationale as AIR18.

  There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs and the Incinerators which are operated by PPP. The power team supplied an estimated 51:49 split between the Belfast WWTWs and the Incinerators (based on an estimated KWhr usage and a number of sub-meters) which has been used to calculate the amount relating to Sewage Treatment at Belfast and Sludge Treatment at the Incinerators. In AIR18 the estimated split was 44:56.

  Power costs include [redacted] for PPP (AIR18 [redacted]).
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted services have decreased £0.1M from AIR18. This is due to a decrease in Sewerage costs.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables are in line with AIR18.
- Line 7: Service Charges are in line with AIR18.
- Line 8: Other Direct Costs are immaterial.
- Line 9: Total Direct Costs – this is a calculated line and is the total of lines 1-8. AIR19 direct costs are £2.0M higher than AIR18. This is driven by the increase in Power costs as detailed above.
- Line 10: General & Support expenditure has decreased by circa £1.0M from AIR18 to AIR19. The reason for the decrease in the costs in Table 22 is the decrease in the overall General & Support expenditure (as already discussed).
  The percentages used are calculated on the total of Direct Costs for General & Support Pot 1 & 2 which have remained in line with AIR18. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. See the **Allocation of costs between service areas** section at the start of the commentary.
  The NI Water Total costs include circa [redacted] for PPP. This is consistent with AIR18.
- Line 11: This is the calculated total line for Functional Expenditure which has increased by £1.0M. This increase is driven by the increase in Power costs offset by the decrease in General & Support Costs as discussed above. Line 11 includes costs of [redacted] associated with PPP (AIR18 [redacted]).

B - Operating Expenditure

- Line 12: Customer Services costs have increased by circa £0.1M compared to AIR18 in Table 22. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR19 the percentage split was calculated at 54.7% Table 21 and 45.3% Table 22. In AIR18 the percentage split was 54.0% and 46.0% between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have increased £0.3M from AIR18. This is due to increased Sampling Costs in 2018-19. Scientific Services costs have been split using the same percentage basis as Customer Services as detailed above in line 12.
- Line 14: Other Business Activities have are in line with AIR18. These costs have been apportioned on the same basis as line 12 and line 13.
- Line 15: Total Business Activities – this is a calculated line and is the total of Line 12, 13 and 14. There has increased by circa £0.4M from AIR18.
- Line 16: Local authority rates have increased by circa £0.2M from AIR18. This is due to increases in poundages from AIR 18. Line 16 includes circa [redacted] for PPP rates.
- Line 17: Doubtful debts are in line with AIR18. The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR18.
- Line 18: Exceptional items– there are no costs in this line.
- Line 19: Total Opex less third party services – this is a calculated line and is the total of Line 11, 15, 16, 17 and 18. This has increased by £1.7M from AIR18. This is primarily driven by the increase in Power as detailed above.
- Line 20: Third party services are immaterial.
- Line 20a: Total PPP Unitary Charge has decreased by circa [redacted] from AIR18. See Table 42 commentary for details.
- Line 21: Total operating expenditure, this is a calculated line and is the total of line 19, 20 and 20a. This line has increased by £0.7M from AIR18.
  Total operating expenditure includes [redacted] of costs associated with PPP (AIR18 [redacted]).
- Line 21a: Payments to Operators for Sewerage Services has changed to reflect:
  i) The variation in flows (and loads; in the case of Kinnegar) received from the NIW Catchment upon which the Contractor / Concessionaire and Operators revenue payments are based;
  ii) Any non-performance issues encountered by either Operator under their own contract arrangements with the Contractor / Concessionaire.

  The costs have increased by £1.1M to £12.0M in AIR19.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has decreased £0.3M from AIR18 to £2.3M.
- Line 23: Non-infrastructure, this figure has increased by circa £1.5M from AIR18 to £12.2M. There has been a £0.9M increase in Sewerage and £0.6M increase in Sewage Treatment and is due to an increase in M&E expenditure in both areas in the financial year.

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR18. However there still remain some limitations to the coding which means that some expenditure, for example building and ground maintenance, cannot be split separately.

Pensions

Pension costs per the actuarial information at 31st March 2019 were £13.4M (AIR18 £17.6M) which amounts to £12.9M before interest costs of £0.5M (AIR18 £16.0M before interest costs of £1.6M) and these were charged to the profit and loss account. This is made up of current service costs of £11.9M (AIR18 £13.5M) and past service costs of £0.04M (AIR18 £1.5M). These costs have been included in general and support costs and employment costs in Tables 21 and 22 on the basis outlined in the cost allocation section above.

The total employer pension contributions for the year were £11.9M (AIR18 £11.2M) including £1.2M relating to payment of 2017/18 past service costs.

These costs have been included in general and support costs and employment costs in Tables 21 and 22. Pension costs for those employees who can be directly attributed to service or business activities will be mapped directly to these areas via the wages and salaries codes as outlined in the cost allocation methodology. Pension costs that relate to either employees not engaged directly on service/business activities or that relate to past service costs (i.e. VER provision) will be apportioned to activities in line with the treatment of general and support expenditure as detailed in the cost methodology.

Pension costs and finance charges associated with employees involved with unappointed activities have not been specifically excluded from pension figures within the profit and loss account. However as noted in the costing section above an estimate of the costs of unappointed activities has been adjusted for during the costs allocation process and it has been assumed that an element of this allocation would cover pension costs.

The pension fund at 31st March 2019 has remained in a liability position.

Further disclosures on pensions are contained in the statutory accounts which are based on the company's actuarial report at 31st March 2019.

Third party costs

Third party costs remain negligible in AIR19 and relate primarily to services recharged to third parties. The associated income is reported in Table 23 as third party income.

Infrastructure Renewals Charge (IRC)

See Commentary for Table 33.

Appendix 1 – Expense group mapping

Expense Group	Desc	Table 21 & 22 mapping
511X	Industrial Wages	Employment
513X	Other Wage Costs	Employment
514X	Other Costs of Employment	Employment
515X	Salaries	Employment
516X	Non-Industrial Expenses	Employment
517X	Temporary Support Staff	Employment
611X	Cost Reallocations	Employment
612X	N/A	Employment
613X	N/A	Employment
614X	N/A	Employment
521X	Power	Power
531X	Operational Contractors	Hired and Contracted
532X	Other Contractors	Hired and Contracted
534X	Out sourcing	Hired and Contracted
538X	Consultants Fees	Hired and Contracted
541X	Materials and Equipment	Materials & consumables
544X	Non Operations Materials	Materials & consumables
547X	Stock Adjustments	Materials & consumables
548X	Chemicals	Materials & consumables
5562 & 5565	Environmental Regulator & Crown Estates	Service Charges
536X	Office and Computer Services	Other direct costs
537X	Legal and other professional fees	Other direct costs
551X	Accommodation	Other direct costs
553X	Insurance - Premiums	Other direct costs
553Y	Insurance - Claims	Other direct costs
554X	Public Liability	Other direct costs
555X	Employer's Liability	Other direct costs
616X	N/A	Other direct costs
695X	Management Task	Other direct costs
759X	Overheads Capitalised	Other direct costs
518X	Staff Training & Hospitality	General & support
533X	V&P repairs	General & support
539X	Audit	General & support
546X	Mobile V&P Charges	General & support
552X	Communication	General & support
556X	Other Grants and Subscriptions	General & support
557X	Advertising and Publicity	General & support
641X	Intra Departmental Notionals	General & support
651X	Inter Departmental Notionals	General & support
772X	Bad Debts	Doubtful debts
775X	Discount Allowed	Customer services
558X	Rates	Rates
5561	Regulatory Costs	Other Business Activities
534Y	PPP	PPP unitary charge

Appendix 2 – Service activity mapping

NIW Service Activity	Service Activity description	Table 21/22 Mapping
310	Pumping (Inc Highlift at WTW)	Water - Distribution
311	Service Resv Wat Tower Tanks	
312	Service Resv cleaning	
313	Distribution and Water Operations	
320	Repair and Maintenance (Mains Repair)	
321	Repair and Maintenance (Service Repair)	
322	Repair and Maintenance (Hydrant & Valve Repairs)	
323	R&M (NIFRS Hydrant & Valve Repairs)	
324	Repair and Maintenance (Mains Cleansing)	
326	Repair and Maintenance (Lead Replacement)	
331	Repair and Maintenance of 'Street Furniture' (Water)	
340	Leakage - Monitoring	
341	Leakage - Detection	
342	Hydrant & Valve Repairs as identified by	
343	Service Repairs as identified by active	
344	Mains Repairs as identified by active Le	
351	Consumer Meter Repair & Maintenance	
360	Investigations	
362	Customer Contacts excluding meter query	
363	Regulatory Plumbing Inspection	
380	'In House' Investigations and Attendance	
385	Health & Safety - Networks	
391	Networks Function Activity -Query	
399	Networks Stores	
920	Connection (Water)	
110	Impounding Reservoir	Water - Resource & Treatment
111	Loughs	
112	River Intakes	
113	Boreholes,Springs & Wells	
120	Repairs & Maint A/duct/Main	
140	Recreation & Amenity	
150	Water Treatment	
151	Water Sludge Treatment	
152	Water Sludge Disposal	
185	Health & Safety - Supply	
190	Supply Function Activity	
191	Supply Function Activity - Query	
822	Instrumental Control Activity M & E Water Supply	
410	Repair & Maintenance of Sewers	Sewerage - Sewerage
411	Blockage	
412	Desilting	
413	Inspection of Sewers	
414	Repair and Maintenance of 'Street Furniture' (Sewerage)	
415	Sewerage Tankering	
430	Pumping (Foul & Combined)	
431	Pumping (Surface Water)	
460	'In House' Investigations and Attendance	
462	Rodent Control	
940	Rechargeable (Sewerage)	
950	Connection (Sewerage)	
510	Sewage Treatment	Sewerage - Sewage Treatment
591	Waste Water Function Activity - Query	
620	Sludge Treatment - Tankering Between Works	Sewerage - Sludge Treatment
621	Sludge Treatment	
630	Sludge Disposal to Agricultural Land Transportation	
631	Instrumental Control Activity M & E WasteWater	
632	Sludge Cake Transportation to Landfill	
633	Sludge Cake Disposal to Landfill	
635	Sludge Logger Maintenance (Contract)	
636	Incinerator Sludge Treatment	
637	Sludge Disposal Tankering from Strategic Collection Centres to Dewatering Centres	
638	Sludge Cake Disposal to Incinerator	
639	Incinerator Ash Disposal to Landfill	
640	Private Septic Tank Desludging	Customer Services
710	General	
711	Customer Services (Meter Read & Customer Queries)	
712	Disconnection / Reconnection	
714	Consumer Meters Repair And Maintenance	
790	Customer Services Function Activity	
730	Water Analysis	Scientific Services
731	Sewerage General	
732	Labs Water & Sewerage General	
733	Sampling	
734	Labs Sewage Sampling	
003	Rates DRC - Water	Rates
013	Rates DRC - Sewerage	
910	Rechargeable Work	Third Party Opex
000	Default	Overhead Pot 1 - General
021	GAE	
023	Invest to Save Revenue	
810	Vehicle & Plant Maintenance	
811	Vehicle & Plant Accident Repair	
812	Garage Overheads	
813	Roads Service	
820	Telemetry	
890	TMG Function Activity	
050	Ops & Maint General (Water)	Overhead Pot 2 - Water
055	Ops & Maint General (Sewerage)	Overhead Pot 2 - Sewerage
585	Health & Safety - WW	
590	Waste Water Function Activity	
735	Trade Effluent	
821	Radio & Monitoring Wastewater	
390	Networks Function Activity	Overhead Pot 3 - Networks Water & Sewerage

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (NIW Only)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3	4.296	4.740	0.318	9.354
2	Power	£m	3	4.362	8.345	1.367	14.074
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	4.597	1.878	2.217	8.692
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.220	0.679	0.472	1.371
7	Service charges	£m	3	0.000	0.752	0.283	1.035
8	Other direct costs	£m	3	0.009	0.006	0.000	0.015
9	Total direct costs	£m	3	13.484	16.400	4.657	34.541
10	General and support expenditure	£m	3	7.719	11.754	2.339	21.812
11	Functional expenditure	£m	3	21.203	28.154	6.996	56.353
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				4.086
13	Scientific services	£m	3				1.435
14	Other business activities	£m	3				0.450
15	Total business activities	£m	3				5.971
16	Rates	£m	3				9.046
17	Doubtful debts	£m	3				-0.226
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				71.144
20	Third party services - opex	£m	3				0.000
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				71.144
21a	Payment by concessionaire to operator	£m	3				
C	**OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3	2.283	0.000	0.000	2.283
23	Reactive and planned maintenance non-infrastructure	£m	3	9.350	2.889	0.000	12.239
D	**CAPITAL MAINTENANCE**						
25	Historical cost depreciation (allocated)	£m	3	8.973	35.736	0.840	45.549
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities historical cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				45.549
30	Third party services - historical cost depreciation	£m	3				0.000
32	Total capital maintenance	£m	3				45.549
33	Total operating costs	£m	3				113.348
E	**ADDITIONAL DISCLOSURES**						
34	Infrastructure renewals charge (excluding third party services)	£m	3	11.379		0.000	11.379
35	Amortisation of deferred credits	£m	3				-3.345
36	Third party services - infrastructure renewals charge	£m	3				0.000

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (PPP Only)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3				
2	Power	£m	3	0.000	2.356	1.376	3.732
3	Agencies	£m	3				
4	Hired and contracted services	£m	3				
5	Associated companies	£m	3				
6	Materials and consumables	£m	3				
7	Service charges	£m	3				
8	Other direct costs	£m	3	0.000	0.000	0.000	0.000
9	Total direct costs	£m	3	0.000	2.356	1.376	3.732
10	General and support expenditure (NIW Only)	£m	3	0.000	0.184	0.057	0.241
11	Functional expenditure	£m	3	0.000	2.540	1.433	3.973
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				
13	Scientific services	£m	3				0.127
14	Other business activities	£m	3				
15	Total business activities	£m	3				0.127
16	Rates	£m	3				1.123
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				5.223
20	Third party services - opex	£m	3				
20a	PPP Unitary Charges (Opex element)	£m	3				[redacted]
21	Total operating expenditure	£m	3				[redacted]
21a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]	[redacted]
C	**OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3				
23	Reactive and planned maintenance non-infrastructure	£m	3				
D	**CAPITAL MAINTENANCE**						
25	Historical cost depreciation (allocated)	£m	3	0.000	4.590	0.000	4.590
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities historical cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				4.590
30	Third party services - historical cost depreciation	£m	3				0.000
32	Total capital maintenance	£m	3				4.590
33	Total operating costs	£m	3				[redacted]
E	**ADDITIONAL DISCLOSURES**						
34	Infrastructure renewals charge (excluding third party services)	£m	3	0.000		0.000	0.000
35	Amortisation of deferred credits	£m	3				0.000
36	Third party services - infrastructure renewals charge	£m	3				0.000

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (Total)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3	4.296	4.740	0.318	9.354
2	Power	£m	3	4.362	10.701	2.743	17.806
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	4.597	1.878	2.217	8.692
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.220	0.679	0.472	1.371
7	Service charges	£m	3	0.000	0.752	0.283	1.035
8	Other direct costs	£m	3	0.009	0.006	0.000	0.015
9	Total direct costs	£m	3	13.484	18.756	6.033	38.273
10	General and support expenditure	£m	3	7.719	11.938	2.396	22.053
11	Functional expenditure	£m	3	21.203	30.694	8.429	60.326
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				4.086
13	Scientific services	£m	3				1.562
14	Other business activities	£m	3				0.450
15	Total business activities	£m	3				6.098
16	Rates	£m	3				10.169
17	Doubtful debts	£m	3				-0.226
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				76.367
20	Third party services - opex	£m	3				0.000
20a	PPP Unitary Charges (Opex element)	£m	3				[redacted]
21	Total operating expenditure	£m	3				[redacted]
21a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]	[redacted]
C	**OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3	2.283	0.000	0.000	2.283
23	Reactive and planned maintenance non-infrastructure	£m	3	9.350	2.889	0.000	12.239
D	**CAPITAL MAINTENANCE**						
25	Historical cost depreciation (allocated)	£m	3	8.973	40.326	0.840	50.139
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities historical cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				50.139
30	Third party services - historical cost depreciation	£m	3				0.000
32	Total capital maintenance	£m	3				50.139
33	Total operating costs	£m	3				[redacted]
E	**ADDITIONAL DISCLOSURES**						
34	Infrastructure renewals charge (excluding third party services)	£m	3	11.379		0.000	11.379
35	Amortisation of deferred credits	£m	3				-3.345
36	Third party services - infrastructure renewals charge	£m	3				0.000

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 23 REGULATORY ACCOUNTS
ANALYSIS OF TURNOVER AND OPERATING INCOME

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	25	26	27	28	29
				2012-13			2013-14			2014-15			2015-16			2016-17			2017-18			2018-19						2019-20			2020-21		
				WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	SUBSIDY WATER INCLUDED	SUBSIDY SEWERAGE INCLUDED	CG	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS
A	**TURNOVER**																																
1	Unmeasured - household	£m	3	121.195	143.905	265.100	122.139	138.161	260.300	126.574	135.825	262.399	125.277	138.923	264.200	123.828	141.172	265.000	124.853	145.747	270.600	126.735	151.465	278.200	126.735	151.465	A2						
2	Unmeasured - non- household	£m	3	2.211	2.766	4.977	2.049	2.545	4.594	1.762	2.102	3.864	1.829	2.125	3.954	2.041	2.401	4.442	1.891	2.203	4.094	2.027	2.360	4.387	0.966	1.134	A2						
3	Unmeasured	£m	3	123.406	146.671	270.077	124.188	140.706	264.894	128.336	137.927	266.263	127.106	141.048	268.154	125.869	143.573	269.442	126.744	147.950	274.694	128.762	153.825	282.587	127.701	152.599	A2						
4	Measured - household	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2						
5	Measured - non- household	£m	3	38.751	22.144	60.895	38.465	24.148	62.613	39.872	26.168	66.040	39.955	24.739	64.694	41.096	27.518	68.614	42.541	26.865	69.406	44.369	27.908	72.277	9.908	6.699	A2						
6	Measured	£m	3	38.751	22.144	60.895	38.465	24.148	62.613	39.872	26.168	66.040	39.955	24.739	64.694	41.096	27.518	68.614	42.541	26.865	69.406	44.369	27.908	72.277	9.908	6.699	A2						
7	Trade effluent	£m	3		4.326	4.326		3.889	3.889		3.561	3.561		4.557	4.557		4.278	4.278		4.777	4.777		5.236	5.236	0.000	0.000	A2						
7a	Roads Drainage Revenue	£m	3	0.000	20.911	20.911		20.049	20.049		19.154	19.154		20.030	20.030		20.593	20.593		21.047	21.047		21.861	21.861	0.000	0.000	A2						
8	Large user and special agreement	£m	3	5.354	4.290	9.644	5.243	4.041	9.284	5.136	3.711	8.847	4.980	4.286	9.266	4.980	4.105	9.085	5.517	4.811	10.328	6.024	5.229	11.253	0.000	0.000	A2						
9	Revenue grants	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2						
10	Non potable water large user and special agreements	£m	3	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	0.000	A2						
11	Rechargeable works	£m	3	0.093	0.093	0.186	0.092	0.092	0.184	0.056	0.056	0.112	0.065	0.065	0.130	0.064	0.064	0.128	0.055	0.055	0.110	0.142	0.142	0.284	0.000	0.000	A2						
12	Bulk supplies/inter company payments	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2						
13	Other appointed business (third party)	£m	3	0.172	0.187	0.359	0.162	0.238	0.400	0.191	0.239	0.430	0.196	0.260	0.456	0.368	0.343	0.711	0.403	0.334	0.737	6.349	9.815	16.164	0.000	0.000	A2						
14	Third party services (excluding non-potable water)	£m	3	0.265	0.280	0.545	0.254	0.330	0.584	0.247	0.295	0.542	0.261	0.325	0.586	0.432	0.407	0.839	0.458	0.389	0.847	6.491	9.957	16.448	0.000	0.000	A2						
15	Other sources (excluding large users, third parties and special agreements	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2						
16	Total turnover	£m	3	167.776	198.622	366.398	168.150	193.163	361.313	173.591	190.816	364.407	172.302	194.985	367.287	172.377	200.474	372.851	175.260	205.839	381.099	185.646	224.018	409.662	137.609	159.298	A2						
B	**OPERATING INCOME**																																
17	Not used																																
18	Exceptional items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			A2						
19	Other operating income	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.243	0.308	0.551			A2						
20	Total operating income	£m	3	-0.133	-0.170	-0.303	0.208	0.000	0.208	0.255	0.233	0.488	-0.083	0.174	0.091	0.523	-0.034	0.489	0.000	0.000	0.000	0.243	0.308	0.551			A2						
C	**WORKING CAPITAL ADJUSTMENT**																																
21	Not used																																
D	**REVENUE CORRECTION MECHANISM**																																
22	Net revenue movement out of the tariff basket	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2						

Table 23 – Analysis of turnover and operating income

Working Capital Adjustment

The commentary to Table 27 outlines the methodology for the Working Capital Adjustment.

Monthly Non-domestic Income Monitoring Process

The process for monitoring income is laid out in the flow diagram in Appendix A.

By 3.00pm on the third working day (Day 3) of each month, NI Water's billing partner, Echo Managed Services Ltd (Echo), e-mails to NI Water a spreadsheet which includes details of summary billed income, accrued income, cash, bad debt write-off and debtor information, as well as the general ledger postings for the month. In addition, the following reports are provided at that time:

- Bank reconciliation;
- Aged debt analysis;
- Listing of all refunds;
- Listing of all transactions;
- Accrued income details;
- Cash received listing;
- List of returned payments.

Billed income comes in the form of both invoices (first-time round billing, arising from a meter reading or an estimate) and system adjustments (adjustments made to a previously invoiced bill). The transaction listing, mentioned above, is reviewed by both Finance & Regulation (F&R) and Billing & Revenue (B&R) to analyse the system adjustments made in the month and to understand better any budget/forecast variances in the month.

During Day 3 and Day 4, NI Water performs the general ledger posting on to Oracle and then assesses and posts the following:

- The amount of income on "N-stop" i.e. invoices held back for a variety of reasons, to be recognised in the accounts;
- Any adjustments to the accrued income (see Appendix H); and
- The amount of provision to be made against the accrued income (based on those items of accrued income greater than 210 days old).

A draft income summary is prepared showing income to date across the five income categories (measured water, measured sewerage, unmeasured water, unmeasured sewerage and trade effluent) for both the month and the year to date, together with comparative figures for the budget and/or the latest forecast. An initial meeting between F&R and B&R is held on the afternoon of Day 4 to ascertain high-level reasons for any budget/forecast variances in the month.

A written report is then prepared by the F&R Business Partner on the income and debt performance (including commentary on the level of provisions held), in advance of the Monthly Accounts meeting held with the Director of F&R (which normally occurs on the morning of working day 5 in the month).

On Day 5, Echo finalises the Day 5 data, and is saved on to an NI Water Public drive. This contains a number of detailed spreadsheets, such as VAT reports and suspense account (see Appendix B).

On Day 8, the final income meeting is held between F&R and B&R, at which the variance analysis is discussed in greater depth. The final income summary is then sent out to all relevant staff, including the Director of F&R and the Director of Customer Services Delivery (CSD).

A short commentary on the total NI Water income for the month is prepared for the Board to be included in the monthly Finance Report (though this may be completed in advance of the Day 8 meeting, depending on the date of the Board Meeting in the month).

NI Water also analyses billed income each month by volume and consumption, in what is termed the "Actuals Report". If there are any major issues, a monthly meeting between F&R and B&R is held to review this, though always some time after the Day 8 meeting.

Movements in Income against PC15

Following on from the monitoring process detailed above, the 2018/19 year-end position of income against PC15 submission was as follows:

Income	Actual Income 2018/19 £m	PC15 Income 2018/19 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	126.7	127.9	(1.2)
Domestic phasing subsidy - sewerage	151.5	154.2	(2.7)
Non-domestic phasing subsidy - water	1.0	1.1	(0.1)
Non-domestic phasing subsidy - sewerage	1.1	1.2	(0.1)
Domestic allowance - water	9.9	8.8	1.1
Domestic allowance - sewerage	6.7	4.8	1.9
Septic tank subsidy	3.0		3.0
Total subsidy	299.9	298.0	1.9
Non-domestic income:			
Measured water	40.5	38.4	2.1
Measured sewerage	23.0	24.3	(1.3)
Unmeasured water	1.1	1.1	0.0
Unmeasured sewerage	1.2	1.2	0.0
Trade effluent	8.6	6.9	1.7
Total non domestic income	74.4	71.9	2.5
Road drainage income	21.9	23.5	(1.6)
Other regulated income	1.1	0.7	0.4
Other non-regulated income	3.9	0.0	3.9
TOTAL INCOME	**401.2**	**394.1**	**7.1**

The above table includes both appointed and un-appointed income.

Specific reasons for the £7.1m increase over PC15 are:

- The domestic phasing subsidy represents a volumetric measured water tariff of £1.1167 per m^3 used at the time of PC15 for 2018/19, as opposed to the actual tariff of £1.07; with measured sewerage, the PC15 tariff was £1.8538 per m^3, against the actual of £1.76.
- Septic tank subsidy is not included within the PC15 submission.
- The domestic allowance subsidy reflects the rateable allowances being claimed by customers, which are refunded to NI Water. The PC15 figures represented the assumptions at the time; the actual figures reflect the fact that a new report was developed (after the PC15 submission) to capture domestic allowances which were not being picked from the previous report. In addition, there were domestic allowances arising from a pro-active exercise to encourage larger customers to make a claim for the allowance.
- With measured water:
    - There was a 4.2% reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £1.3m.
    - The PC15 submission assumed a water volume of 28.8 million m^3; actual consumption was more like 32.0 million m^3. This c£3.2m difference is due to the following:
        - The Metering and Billing project has generated new customers;
        - Other new customers e.g. [redacted]
        - Increased consumption from some larger customers e.g. [redacted], the three [redacted] sites;
        - Increased consumption during the hot weather of June and July;
        - Income from properties, previously designated as voids (and hence not being billed).
- Measured sewerage:
    - There was a 5.1% reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £1.0m.
    - In addition for 2018/19, there was a £0.5m reduction for the forthcoming laundrette project, where a number of customers, who currently run laundry facilities, are to be switched from the more expensive metered sewerage tariff to the less expensive trade effluent tariff.
    - At the same time, there was c£0.1m of old provisions released in 2018/19 e.g. void provision.
    - The PC15 submission assumed a sewerage volume of 10.9 million m^3; actual consumption was more like 11.0 million m^3. This c£0.2m difference is due to the following:
        - The Metering and Billing project has generated new customers;
        - New customers e.g. [redacted]
        - Increased consumption e.g. [redacted], and other borewell users, [redacted].
- For unmeasured income, income was roughly in line with PC15 estimates.
- For trade effluent income:
    - There was a reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £0.3m.
    - There was £0.2m accrued to income arising from customers with a laundrette function about to be billed trade effluent, rather than measured sewerage.

  - Around £1.8m for a mixture of new customers (e.g. [redacted]), increased strengths and increased consumption (e.g. [redacted]).
- For Road Drainage, higher TE tariffs were used in the PC15 calculation.
- Other income in the PC15 submission only contains regulated income, and excludes income from the likes of vehicle maintenance, rental of aerial sites and sales of Renewable Obligation Certificates (ROCs). The £0.4m increase is largely due to increased rechargeable works e.g. transport of tankered waste from [redacted]

Movements in Income against budget

Following on from the monitoring process detailed above, the 2018/19 year-end position of income against budget was as follows:

Income	Actual Income 2018/19 £m	Budget Income 2018/19 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	126.7	126.7	0.0
Domestic phasing subsidy - sewerage	151.5	151.5	0.0
Non-domestic phasing subsidy - water	1.0	1.0	0.0
Non-domestic phasing subsidy - sewerage	1.1	1.1	0.0
Domestic allowance - water	9.9	9.8	0.1
Domestic allowance - sewerage	6.7	6.0	0.7
Septic tank subsidy	3.0	2.9	0.1
Total subsidy	299.9	299.0	0.9
Non-domestic income:			
Measured water	40.5	40.0	0.5
Measured sewerage	23.0	23.5	(0.5)
Unmeasured water	1.1	1.0	0.1
Unmeasured sewerage	1.2	1.2	0.0
Trade effluent	8.6	7.6	1.0
Total non domestic income	74.4	73.3	1.1
Road drainage income	21.9	21.9	0.0
Other	5.0	4.4	0.6
TOTAL INCOME	**401.2**	**398.6**	**2.6**

The above table includes both appointed and un-appointed income.

Specific reasons for the £2.6m increase over budget are:

- During 2018/19, a number of larger customers, who had not already done so, were contacted to encourage them to apply for domestic allowances. A number of customers applied, many who had back-dated domestic allowances e.g. [redacted] and [redacted]
- With measured water non-domestic income:
  - There have been consumption increases (£0.3m) for some of the larger customers e.g. [redacted] and the three [redacted] sites [redacted].
  - Increases in consumption for other customers e.g. [redacted] of £0.2m.
  - Increase in the consumption of water during the hot weather in June and July, estimated to be c£0.1m.
  - Some negative adjustments for back-dated domestic allowances e.g. [redacted] t and [redacted], of c£0.2m.
- Measured sewerage:
  - Some negative adjustments for back-dated domestic allowances e.g. [redacted] and [redacted] c£0.2m.
  - A £0.1m increase in the provision set aside for the laundrette project.
  - A £0.1m decrease for certain mis-readings e.g. [redacted], [redacted]
- For unmeasured income, income was very close to budget.
- For trade effluent income, there has been:
  - A £0.3m increased consumption at the three [redacted] sites.
  - A £0.3m rise in consumption/strengths for other customers e.g. [redacted], [redacted] and [redacted].
  - A £0.4m increase in strength/consumption for other food companies e.g. [redacted] et al.

Movements in Income between 2018/19 and 2017/18

The table below details the income for the year ended 31 March, for both 2019 and 2018:

Income	Actual Income 2018/19 £m	Actual Income 2017/18 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	126.7	124.9	1.8
Domestic phasing subsidy - sewerage	151.5	145.7	5.8
Non-domestic phasing subsidy - water	1.0	0.9	0.1
Non-domestic phasing subsidy - sewerage	1.1	1.1	0.0
Domestic allowance - water	9.9	9.3	0.6
Domestic allowance - sewerage	6.7	5.9	0.8
Septic tank subsidy	3.0	2.7	0.3
Total subsidy	299.9	290.5	9.4
Non-domestic income:			
Measured water	40.5	38.8	1.7
Measured sewerage	23.0	22.6	0.4
Unmeasured water	1.1	1.0	0.1
Unmeasured sewerage	1.2	1.1	0.1
Trade effluent	8.6	7.9	0.7
Total non domestic income	74.4	71.4	3.0
Road drainage income	21.9	21.0	0.9
Other	5.0	4.9	0.1
TOTAL INCOME	**401.2**	**387.8**	**13.4**

The above table includes both appointed and un-appointed income.

The income has increased by £13.4m, due to:

- An increase in the subsidy for domestic properties of £7.6m, which reflects the fourth year of the PC15 Final Determination.
- A £1.4m rise in the level of the rateable allowances being claimed by customers, arising from a pro-active targeting of larger customers.
- For measured water, there was only a 2.88% tariff increase (equivalent to around £1.1m). Furthermore:
    - There have been £0.3m of consumption increases for some of the larger customers e.g. [redacted] the three [redacted] sites.
    - Increases in consumption for other customers e.g. [redacted] of £0.2m.
    - Increase in the consumption of water during the hot weather in June and July, estimated to be c£0.1m.

  - Some negative adjustments for back-dated domestic allowances e.g. [redacted] and [redacted], of c£0.2m.
- For measured sewerage, there was a 3.53% tariff increase against 2017/18 (equivalent to around £0.8m). Again, as in the analysis against budget, the big movements against the previous year were:
  - Some negative adjustments for back-dated domestic allowances e.g. [redacted] and [redacted], of c£0.2m.
  - A £0.1m increase in the provision set aside for the laundrette project.
  - A £0.1m decrease for certain mis-readings e.g. [redacted], [redacted].
- For unmeasured income, there was a slight increase in income, largely due to new customers being identified.
- For trade effluent income, there has been:
  - Tariff increase of roughly £0.8m.
  - A £0.4m increased consumption at the three [redacted] sites.
  - A £0.5m release of the provision for [redacted] in 17/18.
  - A £0.2m rise in consumption/strengths for other customers e.g. [redacted] and [redacted].
  - A £0.1m reduction for the decreased non-return to sewer allowance agreed with [redacted].

Reconciliation of Billed Income to Income in the Accounts

The tables below detail, for both measured/unmeasured income and for trade effluent, how the income billed reconciles to the income reported at 31 March 2019:

Measured and unmeasured income	
	£m
Billed income	67.8
Movement in accrued income	0.9
2019/20 unmeasured billing deferred	(2.4)
Movement in referred bills	
Provisions released e.g. RSE, voids, etc.	0.1
[redacted] provision	(0.1)
Laundrette provision	(0.5)
Total income per accounts	65.8

Accrued income at 31 March 2019 represented 21% (2018: 21%) of annual billed income.

Trade effluent	
	£m
Billed income	8.3
Movement in accrued income	0.0
Laundrette provision	0.3
Total income per accounts	8.6

Accrued income at 31 March 2019 represented 11% (2018: 9%) of annual billed income.

The two tables above show the total income per accounts prior to the classification in the accounts of elements of total income to large user revenue.

Of the adjustments detailed above, the following are “one-off” adjustments in 2017/18, and are not expected to recur

- Provisions released – released in 2018/19

The following adjustments may recur in future years:

- Movement in accrued income – there will always be a small variance over a period of a year.
- 2019/20 unmeasured billing deferred – the annual unmeasured billing will always be deferred, assuming that the invoicing is done in March.
- Movement in referred bills – there will always be a small variance over a period of a year.
- [redacted] provision – likely to be released in 2019/20.
- Laundrette provision –the project commenced in 2018/19, there will be movement in the provision in 2019/20.

Reconciliations and Controls carried out

A number of reconciliations are carried out on Echo’s income information:

- The Day 3 income information received from Echo is reconciled back to what has been entered on Oracle (see Appendix C). This reconciliation is signed off monthly by both Management Accounts (MA) and Financial Accounts (FA) within F&R.
- The debtor account in the balance sheet is reconciled each month, and signed off by MA and FA (see Appendix D).
- The accrued income account is reconciled monthly (see Appendix E).
- The number of meters to be billed is reconciled to what has actually been billed (see Appendix F).
- The items in the monthly Transaction Report are reconciled back to the GL posting within the Day 3 report (see Appendix G).
- The billed income for monthly customers and for the relevant six-monthly customers is compared to what was accrued in the previous month, on a meter by meter basis. The results from this are discussed at the Day 8 meeting.
- An income sheet, listing various checks on the Day 3 report, is adhered to (see Appendix J).

In addition, Echo carry out controls on meter readings, such that a bill is “held” and not sent out to the customer if its value has exceeded a certain level, known as the “bill ceiling”. The bill will then be investigated.

Review by Internal Audit

There were no internal audit reviews carried out in 2018/19 on income reporting.

Balance Sheet Nominal Ledger Accounts

The table below gives details of the relevant balance sheet accounts as at 31 March 2019, together with a comparison to the balances as at 31 March 2018.

	Balance 2018/19 £m	Balance 2017/18 £m	Variance £m
Debtors	7.9	9.7	(1.8)
Bad debt provision	(1.5)	(2.2)	0.7

Within the £1.8m fall in debtors there was:

- A fall of £1.6m in debit balances, largely due to increased cash received during the year across all customers. This also included a £0.8m drop in aged debt i.e. debt greater than 6 months old.
- An increase of £0.2m in credit balances;

There was a decrease in the bad debts provision, largely due to:

- The reduction in debtors, as mentioned above, especially within debt > 6 months old.

Accrued Income

There are two reports which Echo uses for accrued income, both in the form of Excel spreadsheets included within the Day 3 data: the E039 Accrual Detail report (formerly called the Dynamic Consumption Report (DCR)), and a separate report for Trade Effluent, which is an excel spreadsheet model.

Measured customers are billed either every month (mainly larger customers) or every six months, in arrears, and income needs to be accrued for them for a period of up to six months. Therefore, there are seven “bill frequency” periods:

- Monthly
- Jan/Jul six monthly
- Feb/Aug six monthly
- Mar/Sep six monthly
- Apr/Oct six monthly
- May/Nov six monthly
- Jun/Dec six monthly

The E039 report takes information directly from the RAPID system, and is based on the latest reading date (as opposed to billing date) and the average consumption of previous bills. If estimated readings have been made, these are used in the calculation. If there is not the necessary information available, the report will use the industry average consumption (for the industry sector which the customer has been assigned to). Any system adjustments made to the original bill meter reading will automatically over-ride the original bill, and it will be system adjustment readings which are used for the calculation of the accrual.

Accruals for trade effluent income are based on an excel spreadsheet model built by Echo. This takes billing data from 1 April of the previous year i.e. close to 2 years of data when March accrual is being calculated, and a year is shut down at the start of April each year. The model contains a price tariff % to either increase or decrease the accrual, depending on the % uplift/reduction in prices from the previous year. The model designates customers

as monthly or six-monthly, but does not break six-monthly down into the relevant month in which the six monthly bills are issued.

A high level reconciliation is performed by Echo each month, looking for any major differences in the month from the previous month.

Each month, the E039 report is reviewed by B&R for any unusual items, and an adjustment made for those (see March 2018 adjustments in Appendix H).

The accrued income in the last two years has been:

	Accrued Income 2018/19 £m	Accrued Income 2017/18 £m	Variance £m
Accrued income:			
Measured water and sewerage	10.4	10.0	0.4
Trade effluent	1.3	1.1	0.2
TOTAL ACCRUED INCOME	**11.7**	**11.1**	**0.6**

The rise of £0.6m against the previous year can be explained as follows:

- There was a £0.9m increase in MW and MS, reflecting some increases in average daily consumption. In addition, the number of days seems to have increased, due to the simple timing of the billing.
- For MS, there was a £0.5m decrease for refunds expected, arising from the laundrette project
- For trade effluent, there has been a £0.2m increase in the increased income expected from the laundrette project.

Subsidy Income

In 2018/19, NI Water had total subsidy income of £299.9m. This was broken down as follows:

- £278.2m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.1m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £16.6m for domestic allowance subsidy, representing the domestic allowance claimed by customers for both water and sewerage (restricted to 200m^3 of water per year, for each building on which the customer pays business rates). A number of larger customers were targeted to this year, to encourage them to apply for the allowance; hence the increase over budget and last year.
- £3.0m for septic tank subsidy. NI Water receives subsidy income for all septic tanks which it empties, except for those customers who receive a charge if they have more than one empty in a 12 month period. There was a pro-active decision to make customers aware of this service, during AIR19.

Road Drainage Income

The road drainage charge for 2018/19 was based on the projections of NI Water's costs of operation (see the table below). The basis for the calculation has been approved by both the Regulator and by the Department for Infrastructure (DfI). A total of £21.9m was invoiced

in 2018/19 to DfI, compared to £21.0m in 2017/18. A more detailed breakdown of the assumptions behind the calculation is provided in Appendix I.

	Combined	Storm Water	Total
Split of sewers for run off from roads and footpaths	50.35%	49.65%	100%
Total volume of Water (cubic metres)	32,325,198	31,874,802	64,200,000
Mogden Formula element	R+V	R	
Cost of Element	£0.4621 / m^3	£0.2172 / m^3	
Cost of Run off	£14,937,474	£6,923,207	£21,860,681

Non-tariff Basket Income

There is no net income movement out of the tariff basket for either water or sewerage.

Other Income

Other income was £5.0m for the 2018/19 year, against a budget of £4.4m, largely due to increases in vehicle maintenance income (£0.3m) from work done for Roads NI and in rechargeable works (£0.2m).

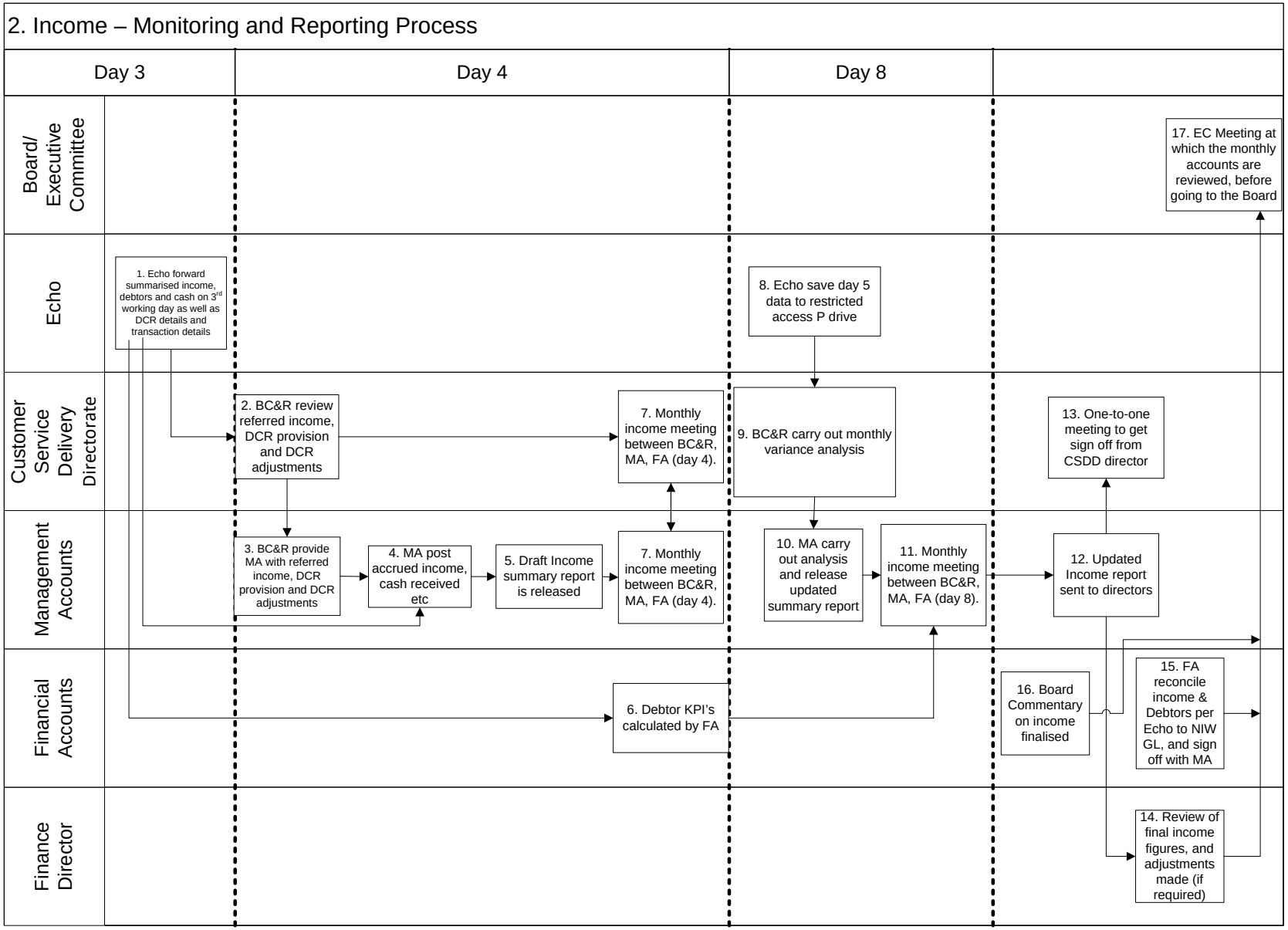
The increase in sundry income from the 2017/18 figure was only £0.1m.

IFRIC 18 / IFRS 15 Income

AIR 19 has been prepared on the basis of the new RAGs being applied for the year 2018/19 with the new RAGs being amended from UK Generally Acceptable Accounting Practice (UK GAAP) to International Financial Reporting Standards (IFRS) as instructed by the Utility Regulator.

Under IFRS, all capital contributions are recorded as turnover under IFRIC 18 Income. With IFRS 15 Revenue being adopted from 1 April 2018, NIW took the approach of deferring all sewerage assets adopted from 1 April 2007 to date and amortising them in line with the depreciation policy of each asset categories.

Appendix A - Monthly Process for Monitoring Income



Appendix B – Day 3 & Day 5 Data received from Echo

Along with the actual summary Day 3 report, Echo also send:

- Bank reconciliation as at the end of the month;
- Aged debt reports as at the end of the month, by SIC code, industry code, etc.;
- An accrued income report, by meter reference, as at the end of the month.
- List of all income-related transactions in the month;
- List of refunds for the month;
- List of returned payments for the month;
- List of all cash payments, aged, for the month; and
- List of accounts on “n-stop”, as at the end of the month.

On Day 5, Echo send:

- VAT reports for the month;
- Consumption reports; and
- List of cash received transactions in the suspense account, as at the end of the month.

Appendix C – Reconciliation of Echo Day 3 Information at 31 March 2019

Extract for Finance Summary

		YTD income 1st Apr to end of Previous Month	31-Mar-19 from Echo Disc Dr/(Cr)	Accrued Income Reverse Previous Dr/(Cr)	Accrued Income For this month Dr/(Cr)	Referred Income Reverse Previous Dr/(Cr)	Referred Income For this month Dr/(Cr)	Deferred Income Reverse Previous	Deferred Income For this month	Monthly Movement	Closing Balance	GL01 report	Diff
4211	Measured Water	37,241,099	2,769,335	(8,072,723)	8,510,803	25,247	(22,323)			3,210,338	40,451,437	40,482,979	31,542
4311	Measured Sewerage	21,263,881	1,365,505	(5,128,162)	5,641,701	5,561	(13,677)			1,870,929	23,134,810	23,038,384	(96,426)
4251	Unmeasured Water	967,765	1,103,507					94,278	(1,104,678)	93,107	1,060,872	1,060,873	1
4351	Unmeasured Sewerage	1,115,376	1,291,684					107,832	(1,289,390)	110,126	1,225,502	1,225,502	(0)
4411	Trade Effluent	7,918,252	582,167	(760,005)	874,975	0				697,137	8,615,389	8,633,871	18,482
		68,506,373	7,112,198	15,735,146	15,027,479	30,808	(36,000)	202,110	(2,394,068)	5,981,637	74,488,010	74,441,609	(46,401)

		DIFFERENCES DCR provision movement reversal	DIFFERENCES DCR movement provision	DIFFERENCES Adj in accrued income reversal	DIFFERENCES Adj in accrued income	Industry average adj reversal	Industry average adj	Income prov reversal	Income prov adj	Prov against MS customers reversal	Prov against MS customers	Back-billing provision reversal	Back-billing provision
		536,828	-536,828										
4211	Measured Water	(142,853)	131,445	8,110	(26,097)	63,000	(63,000)	55,000	(55,000)			225,000	(225,000)
4311	Measured Sewerage	(99,487)	91,542	(26,853)	(10,553)			25,000	(25,000)	50,000	(50,000)	200,000	(200,000)
4251	Unmeasured Water												
4351	Unmeasured Sewerage												
4411	Trade Effluent	(12,755)	11,736									25,000	(25,000)
		281,734	(302,105)	(18,743)	(36,650)	63,000	(63,000)	80,000	(80,000)	50,000	(50,000)	450,000	(450,000)

		M&B provision reversal	M&B provision	Increase to Mar 15 level reversal	Increase to Mar 15 level	Jul 16 provision reversed	Jul 16 provision	Additional back-billing provision reversed	Additional back-billing provision	Void provision reversed	Void provision	[redacted] reversed	[redacted]	[redacted]	Accrued income cut-off for LUT	Laundrette provision reversed	Laundrette provision	Diff
4211	Measured Water	135,000	(135,000)	60,000	(60,000)	100,000	(100,000)	50,000	(50,000)	40,000	(40,000)	40,000	(40,000)	16,471	44,466			(0)
4311	Measured Sewerage	155,000	(155,000)					50,000	(50,000)	30,000	(30,000)	70,000	(70,000)	(16,471)	6,396	944,000	(985,000)	0
4251	Unmeasured Water	30,000	(30,000)															1
4351	Unmeasured Sewerage	20,000	(20,000)															(0)
4411	Trade Effluent															(448,500)	468,000	0
		340,000	(340,000)	60,000	(60,000)	100,000	(100,000)	100,000	(100,000)	70,000	(70,000)	110,000	(110,000)	0	50,862	495,500	(517,000)	1

Appendix D – Reconciliation of Debtors account on Oracle

NORTHERN IRELAND WATER LIMITED AS AT 31 MARCH 2019	
Summary of Debtors	
Water & Sewerage Debtors GL code 1210	**Mar-19**
Opening Balance	**£8,457,320.43**
Take on Bills/New Bills- TOTAL	**£6,185,639.43**
Take on Bills/New Bills- Sewerage	1,272,495.03
Take on Bills/New Bills- Water	2,315,282.23
Take on Bills/New Bills- VAT	133,479.78
Annual Billing	2,394,067.88
Annual Billing - VAT	70,314.51
Discounts	0.00
System Adjustments- Total	**£699,618.96**
System Adjustments- Sewerage	119,114.70
System Adjustments- Water	525,775.92
System Adjustments- VAT	54,728.34
Manual Adjustments- Total	**-£97,581.64**
Manual Adjustments- Sewerage	(18,279.63)
Manual Adjustments- Water	(78,958.23)
Manual Adjustments- VAT	(343.78)
Write Off Adjustments Total	**£1,178.45**
Write Off Adjustments- Sewerage	**1,714.39**
Write Off Adjustments- Water	**(535.94)**
Write Off Adjustments- VAT	**0.00**
NIWS Bad Debt Authorised Write Off- Total	**-£56,701.18**
NIWS Authorised Write Off- Sewerage	(23,662.91)
NIWS Authorised Write Off- Water	(31,557.91)
NIWS Authorised Write Off- VAT	(1,480.36)
Net Cash	**(6,662,605.16)**
Refunds	317,998.99
Water & Sewerage GL code 1210 Closing Balance	**£8,844,868.28**
Check	
Metered & Unmetered Water & Sewerage Debtors	**£8,844,868.28**
(As per Echo)	
Per Tb GL code 1210	**6,818,551.99**
Variance	**£2,026,316.29**
Due to:	
Variance (Oct = w/off Income 0708 in Oct08)	
Referred Bills **NOT** Recognised NET	(36,018.10)
KWS write-off accrual	
Echo costs for 18/19 charges leaflet	
Write-off of mixed supply debt > 3 years	(300,000.00)
System Adjustment Reduction	(1,550,000.00)
Various MS Adjustments	(140,000.00)
Unknown	-£298.19
Trade Effluent Debtors GL code 1213	
Opening Balance	**£1,253,654.95**
Take on Bills/New Bills	585,731.68
Referred Bills	
Annual Billing	
System Adjustments	**-£3,564.25**
Manual Adjustments	**£0.00**
Write Off Adjustments	
NIWS Authorised Bad Debt Write Off	**£0.00**
Net Cash	**-£763,547.78**
Refunds	**£0.00**
Trade Effluent GL code 1213 Closing Balance	**£1,072,274.60**
Variance	**-£14.05**
Per Trial Balance general ledger code 1213	**1,072,289**
Due to:	
Trade Effluent	
Referred Bills	
Total Opening Balance GL code 1213 & 1210	**£9,710,975.38**
Take on Bills/New Bills	**£4,377,303.23**
Annual Billing	**£2,394,067.88**
Discounts	**£0.00**
System Adjustments	**£696,054.71**
Manual Adjustments	**-£97,581.64**
Write Off Adjustments	**£1,178.45**
NIWS Authorised Bad Debt Write Off	**-£56,701.18**
Net Cash	**-£7,426,152.94**
Refunds	**£317,998.99**
Total Closing Balance GL code 1213 & 1210	**£9,917,142.88**
Balance as per FN012 Summary	**£9,916,674.99**
Difference	**£467.89**
Echo Debtor Ledger	£9,904,316.67
Balance as per FN012 Summary	**£9,916,674.99**
Suspense Ac FN012 Summary	**£88,067.61**
Difference	**-£100,425.93**
Prepared By	
Date	
Reviewed By	
Date	

E – Reconciliation of Accrued Income Account

	Mar-19
Per Echo	
Measured Water	8,511
MW Accrued Income Adj	
Measured Sewerage	5,642
Trade Effluent	875
Accrued income	**15,027**
Accrued income adjustments	
DCR Provision	-302
DCR Further	-500
Accrued Income provision	-37
Increase in provision	-110
Industry average adj	-63
Income prov adj	-80
Future System Adjustments	-620
BackBilled Income Provision	-700
M&B Provision	-170
July '16 Provision	-100
Void back-billing	-70
Laundrette project	-517
[redacted]	-110
Accrued income cut-off for LUT	51
Accrued income posted	11,700
Per TB (1420/1423)	11,699
Difference	0
Miscellanous accrued Income	987
Interest Received Accrual	0
Total Accrued Income	**12,687**
Signed:	
TB Check	
1420 - Metered Water Accrued Income	10,350,118.70
1423 - Trade Effluent Accrued Income	1,348,993.99
1426 - Miscellaneous Accrued Income	987,336.58
1451 - Interest Received Accrual	445.57
	12,686,894.84

Appendix F – Reconciliation of Meters

2018/19 - Meter Reconciliation Analysis

Meters to be read	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Estimated	175	188	119	152	136	119	200	260	138	185	330	163
No Read	717	724	474	454	568	616	685	699	462	454	549	627
Read	12,191	12,431	10,837	11,337	12,337	12,500	12,210	12,384	10,870	11,304	12,167	12,450
Total Meters	13,083	13,343	11,430	11,943	13,041	13,235	13,095	13,343	11,470	11,943	13,046	13,240
No Reads to be investigated - Code Red	28	15	11	8	10	23	27	16	9	9	3	6

Meters to be billed	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters	12,378	12,606	10,959	11,461	12,466	12,624	12,417	12,631	11,005	11,459	12,478	12,598
Non-Billable Meters	705	737	471	482	575	611	678	712	465	484	568	642
Total Meters	13,083	13,343	11,430	11,943	13,041	13,235	13,095	13,343	11,470	11,943	13,046	13,240
Total Meters Billed	12,237	12,475	10,847	11,340	12,319	12,503	12,280	12,503	10,893	11,336	12,340	12,490
Meters to be investigated	141	131	112	121	147	121	137	128	112	123	138	108
Billable Meters	12,378	12,606	10,959	11,461	12,466	12,624	12,417	12,631	11,005	11,459	12,478	12,598
Meters to be investigated - Code Red	42	8	8	8	20	16	35	9	10	17	14	13

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Estimated reads as % of Total Meters to be read	1%	1%	1%	1%	1%	1%	2%	2%	1%	2%	3%	1%	1%
No Reads as a % of Total Meters to be read	5%	5%	4%	4%	4%	5%	5%	5%	4%	4%	4%	5%	
Read Meters as % of Total Meters to be read	93%	93%	95%	95%	95%	94%	93%	93%	95%	95%	93%	94%	
Total Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Code Red as % of Meters to be investigated	4%	2%	2%	2%	2%	4%	4%	2%	2%	2%	1%	1%	
													Average
Estimated % (Excl 'No Reads')	1%	1%	1%	1%	1%	1%	2%	2%	1%	2%	3%	1%	1%

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters as % of Total Meter Records	95%	94%	96%	96%	96%	95%	95%	95%	96%	96%	96%	95%
Non - Billable Meters as % of Total Meter Records	5%	6%	4%	4%	4%	5%	5%	5%	4%	4%	4%	5%
Total Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Meters Billed as a % of Billable Meters	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Meters to be investigated as a % of Billable Meters	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Billable Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Code Red as % of Meters to be investigated	30%	6%	7%	7%	14%	13%	26%	7%	9%	14%	10%	12%

Appendix G – Reconciliation of invoices and system adjustments as at 31 March 2019

	Trans Rpt	GL Posting	Variance
Measured Water	2,769,335	2,769,335	(0)
Measured Sewerage	1,365,505	1,365,505	(0)
Unmeasured Water	1,103,507	1,103,507	0
Unmeasured Sewerage	1,291,684	1,291,684	0
TE	582,167	582,167	0
Sub-total	7,112,198	7,112,198	(0)
Discount	645	645	0
VAT	258,179	258,179	(0)
TOTAL	**7,371,023**	**7,371,022**	**0**

Appendix H – Accrued Income Adjustments at 31 March 2019

	Customer	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Days	Read History	Water volume	Water volume per day	Sewerage Volume	Sewerage volume per day	Water Standing Charges	Water Volume Charges	Total Water Charges	Sewerage Standing Charges	Sewerage Volume Charges	Total Sewerage Charges	Total accrual standing charges	Total accrual volume charges	Total Accrual
Per DCR	7795761	237500	[redacted]	Food Mani	20mm/.75i	Monthly	5	IND AVE	160	32	152	32	£1	£168	£169	£1	£262	£263	£2	£430	£432
Correction	7795761	237500		Food Mani	20mm/.75i	Monthly	5	IND AVE	30	6	29	6	£1	£31	£32	£1	£49	£50	£2	£81	£83
														Variance	(£136)		Variance	(£213)		Variance	(£350)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	31106	294722	[redacted]	Bus/rail De	75mm/3.0i	Six Monthl	151	READINGS	7,944	53	7,944	53	£272	£8,411	£8,683	£318	£426	£744	£590	£8,837	£9,427
Correction	31106	294722		Bus/rail De	75mm/3.0i	Six Monthl	151	READINGS	3,020	20	2,869	20	£272	£3,198	£3,469	£318	£154	£472	£590	£3,351	£3,941
														Variance	(£5,214)		Variance	(£272)		Variance	(£5,486)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	7802002	291000	[redacted]	Food Mani	100mm/4.(	Monthly	11	IND AVE	353	32	353	32	£36	£371	£407	£42	£0	£42	£78	£371	£449
Correction	7802002	291000		Food Mani	100mm/4.(	Monthly	11	IND AVE	1,540	140	1,463	140	£36	£1,620	£1,656	£42	£0	£42	£78	£1,620	£1,697
														Variance	£1,249		Variance	£0		Variance	£1,249
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	252508	227110	[redacted]	Hospitals	100mm/4.(	Six Monthl	165	IND AVE	4,969	30	4,969	30	£537	£5,221	£5,758	£628	£8,158	£8,786	£1,165	£13,378	£14,544
Correction	252508	227110		Hospitals	100mm/4.(	Six Monthl	165	IND AVE	2,475	15	2,351	15	£537	£2,600	£3,138	£628	£3,860	£4,488	£1,165	£6,460	£7,626
														Variance	(£2,620)		Variance	(£4,298)		Variance	(£6,918)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9115642	3858	[redacted]	Cross Bord	20mm/.75i	Monthly	30	READINGS	14,948	498	14,948	498	£0	£0	£0	£7	£16,742	£16,748	£7	£16,742	£16,748
Correction	9115642	3858		Cross Bord	20mm/.75i	Monthly	30	READINGS	22,500	750	21,375	750	£0	£0	£0	£7	£23,940	£23,947	£7	£23,940	£23,947
														Variance	£0		Variance	£7,198		Variance	£7,198
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8955392	802760	[redacted]	Drinks Mai	100mm/4.(	Six Monthl	118	IND AVE	2,897	25	2,754	25	£762	£2,722	£3,484	£890	£4,657	£5,548	£1,653	£7,379	£9,032
Correction	8955392	802760		Drinks Mai	100mm/4.(	Six Monthl	118	IND AVE	118	1	112	1	£762	£111	£873	£890	£190	£1,080	£1,653	£300	£1,953
														Variance	(£2,611)		Variance	(£4,468)		Variance	(£7,079)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	7962379	291815	[redacted]	Food Mani	40mm/1.5i	Six Monthl	118	IND AVE	3,782	32	3,782	32	£68	£3,977	£4,045	£80	£40	£121	£148	£4,018	£4,166
Correction	7962379	291815		Food Mani	40mm/1.5i	Six Monthl	118	IND AVE	2,360	20	2,242	20	£68	£2,482	£2,550	£80	£24	£104	£148	£2,506	£2,654
														Variance	(£1,495)		Variance	(£16)		Variance	(£1,512)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8955392	802705	[redacted]	Drinks Mai	25mm/1.0i	Six Monthl	118	IND AVE	2,972	25	2,823	25	£37	£3,180	£3,217	£44	£4,968	£5,012	£80	£8,149	£8,229
Correction	8955392	802705		Drinks Mai	25mm/1.0i	Six Monthl	118	IND AVE	118	1	112	1	£37	£126	£163	£44	£197	£241	£80	£324	£404
														Variance	(£3,054)		Variance	(£4,771)		Variance	(£7,825)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9550034	7054	[redacted]	Energy pro	50mm/2.0i	Six Monthl	124	IND AVE	3,311	27	3,145	27	£112	£3,470	£3,582	£132	£5,421	£5,553	£245	£8,891	£9,135
Correction	9550034	7054		Energy pro	50mm/2.0i	Six Monthl	124	IND AVE	1,240	10	1,178	10	£112	£1,290	£1,402	£132	£2,033	£2,165	£245	£3,310	£3,555
														Variance	(£2,170)		Variance	(£3,390)		Variance	(£5,561)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9223106	298063	[redacted]	Hotels	40mm/1.5i	Monthly	10	READINGS	70	7	66	7	£6	£70	£75	£7	£107	£114	£13	£177	£189
Correction	9223106	298063		Hotels	40mm/1.5i	Monthly	10	READINGS	280	28	266	28	£6	£278	£284	£7	£433	£439	£13	£711	£723
														Variance	£209		Variance	£325		Variance	£534
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8608648	370050	[redacted]	Cattle Trou	15mm/.50i	Six Monthl	143	READINGS	9,891	69	0	69	£27	£10,366	£10,393	£0	£0	£0	£27	£10,366	£10,393
Correction	8608648	370050		Cattle Trou	15mm/.50i	Six Monthl	143	READINGS	429	3	0	3	£27	£910	£938	£0	£0	£0	£27	£910	£938
														Variance	(£9,917)		Variance	£0		Variance	(£9,917)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8999446	825976	[redacted]	Energy pro	25mm/1.0i	Six Monthl	181	IND AVE	4,833	27	4,591	27	£57	£5,171	£5,228	£67	£8,080	£8,147	£123	£13,251	£13,375
Correction	8999446	825976		Energy pro	25mm/1.0i	Six Monthl	181	IND AVE	181	1	172	1	£57	£194	£250	£67	£303	£370	£123	£496	£620
														Variance	(£4,978)		Variance	(£7,778)		Variance	(£12,755)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8205026	728548	[redacted]	Hospitals	15mm/.50i	Six Monthl	142	IND AVE	4,277	30	0	30	£26	£4,576	£4,603	£0	£0	£0	£26	£4,576	£4,603
Correction	8205026	728548		Hospitals	15mm/.50i	Six Monthl	142	IND AVE	284	2	0	2	£26	£304	£330	£0	£0	£0	£26	£304	£330
														Variance	(£4,273)		Variance	£0		Variance	(£4,273)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	6559300	1393862	[redacted]	Hotels	75mm/3.0i	Six Monthl	182	IND AVE	1,700	9	1,615	9	£0	£0	£0	£0	£2,842	£2,842	£0	£2,842	£2,842
Correction	6599300	1393862		Hotels	75mm/3.0i	Six Monthl	182	IND AVE	5,460	30	5,187	30	£0	£0	£0	£0	£9,129	£9,129	£0	£9,129	£9,129
														Variance	£0		Variance	£6,287		Variance	£6,287
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8693056	827350	[redacted]	Energy pro	20mm/.75i	Six Monthl	55	IND AVE	1,469	27	1,396	27	£10	£1,572	£1,582	£12	£2,457	£2,469	£22	£4,029	£4,051
Correction	8693056	827350		Energy pro	20mm/.75i	Six Monthl	55	IND AVE	55	1	52	1	£10	£59	£69	£12	£82	£104	£22	£151	£173
														Variance	(£1,513)		Variance	(£2,365)		Variance	(£3,878)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	252900	781848	[redacted]	Food Mani	75mm/3.0i	Six Monthl	131	READINGS	2,690	21	2,690	21	£236	£2,801	£3,037	£276	£2,314	£2,590	£511	£5,116	£5,627
Correction	252900	781848		Food Mani	75mm/3.0i	Six Monthl	131	READINGS	6,550	50	6,223	50	£236	£6,821	£7,057	£276	£5,354	£5,629	£511	£12,175	£12,686
														Variance	£4,020		Variance	£3,039		Variance	£7,059
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	119960	423082	[redacted]	Chemical I	50mm/2.0i	Six Monthl	116	READINGS	3,931	34	3,931	34	£105	£4,138	£4,243	£124	£1,721	£1,845	£229	£5,859	£6,088
Correction	119960	423082		Chemical I	50mm/2.0i	Six Monthl	116	READINGS	10,440	90	9,918	90	£105	£10,989	£11,094	£124	£4,343	£4,466	£229	£15,332	£15,561
														Variance	£6,851		Variance	£2,622		Variance	£9,473
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	37682	782496	[redacted]	District Co	150mm/6.(	Six Monthl	10	IND AVE	452	2	429	2	£46	£369	£415	£54	£577	£631	£100	£946	£1,047
Correction	37682	782496		District Co	150mm/6.(	Six Monthl	10	IND AVE	1,080	108	1,026	108	£46	£1,112	£1,159	£54	£1,709	£1,764	£100	£2,822	£2,922
														Variance	£743		Variance	£1,132		Variance	£1,875
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	37682	782502	[redacted]	District Co	15mm/.50i	Six Monthl	10	READINGS	0	0	0	0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Correction	37682	782502		District Co	15mm/.50i	Six Monthl	10	READINGS	520	52	0	52	£0	£556	£556	£0	£0	£0	£0	£556	£556
														Variance	£556		Variance	£0		Variance	£556
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	117029	418761	[redacted]	Hospitals	75mm/3.0i	Monthly	16	IND AVE	482	30	482	30	£29	£281	£310	£34	£255	£289	£62	£537	£599
Correction	117029	418761		Hospitals	75mm/3.0i	Monthly	16	IND AVE	800	50	760	50	£29	£824	£853	£34	£1,026	£1,060	£62	£2,090	£2,153
														Variance	£543		Variance	£1,011		Variance	£1,554
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	411754	1379762	[redacted]	Hotels	15mm/.50i	Six Monthl	61	IND AVE	570	9	570	9	£0	£0	£0	£0	£632	£632	£0	£632	£632
Correction	411754	1379762		Hotels	15mm/.50i	Six Monthl	61	IND AVE	3,050	50	2,898	50	£0	£3,142	£3,142	£0	£4,827	£4,827	£0	£7,969	£7,969
														Variance	£3,142		Variance	£4,195		Variance	£7,337
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9561420	1400776	[redacted]	Army Base	20mm/.75i	Six Monthl	82	IND AVE	2,586	32	2,457	32	£15	£2,767	£2,782	£18	£4,377	£4,395	£34	£7,144	£7,178
Correction	9561420	1400776		Army Base	20mm/.75i	Six Monthl	82	IND AVE	82	1	78	1	£15	£84	£100	£18	£130	£148	£34	£214	£248
														Variance	(£2,682)		Variance	(£4,247)		Variance	(£6,929)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9279212	1402187	[redacted]	Hospitals	15mm/.50i	Six Monthl	30	IND AVE	904	30	859	30	£6	£967	£973	£7	£1,561	£1,568	£13	£2,528	£2,541
Correction	9279212	1402187		Hospitals	15mm/.50i	Six Monthl	30	IND AVE	150	5	143	5	£6	£155	£160	£7	£237	£244	£13	£392	£405
														Variance	(£813)		Variance	(£1,323)		Variance	(£2,136)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8809446	1247756	[redacted]	Hotels	100mm/4.(	Six Monthl	156	IND AVE	1,458	9	1,385	9	£508	£1,469	£1,977	£594	£2,295	£2,889	£1,102	£3,764	£4,866
Correction	8809446	1247756		Hotels	100mm/4.(	Six Monthl	156	IND AVE	7,020	45	6,669	45	£508	£2,881	£3,389	£594	£1,185	£1,779	£1,102	£4,061	£5,165
														Variance	£5,761		Variance	£8,816		Variance	£14,577
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8927462	297809	[redacted]	Vehicle / E	75mm/3.0i	Six Monthl	173	READINGS	6,073	35	5,769	35	£311	£6,179	£8,491	£364	£9,657	£10,021	£675	£15,836	£16,512
Correction	8927462	297809		Vehicle / E	75mm/3.0i	Six Monthl	173	READINGS	346	2	329	2	£311	£356	£668	£364	£548	£912	£675	£904	£1,579
														Variance	(£5,823)		Variance	(£9,110)		Variance	(£14,932)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Frec	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9568901	1365629	[redacted]	Hospitals	15mm/.50i	Six Monthl	60	IND AVE	1,807	30	1,717	30	£11	£1,933	£1,945	£13	£3,022	£3,035	£25	£4,955	£4,980
Correction	9568901	1365629		Hospitals	15mm/.50i	Six Monthl	60	IND AVE	60	1	57	1	£11	£62	£73	£13	£109	£122	£25	£157	£193
														Variance	(£1,872)		Variance	(£2,927)		Variance	(£4,799)
													Total Accrual Adj		(£26,097)			(£10,553)			(£36,650)

Appendix I – Calculation of Road Drainage Charges

The calculation of Road Drainage charges was prepared on the following basis:

i The total urban road and footway surface area was obtained (Source Roads Service),
   a. Urban road surface area = 39.3million m^2
   b. Urban footway surface area = 17.0million m^2
   c. Total Urban road & footway surface area = 56.3million m^2

ii The average annual rainfall in Northern Ireland over the last 10 years was obtained (Source: Met Office).

   Average annual rainfall = 1.14m

iii The average volume of rain and therefore the run-off from roads and footpaths discharged into NIW sewers and storm drains was calculated as follows:

   56.3million m^2 x 1.14m = 64.2million m^3

NIW's network information management system (NIMS) indicated that for the largest 105 urban areas in N Ireland the length of combined sewers and the length of stormwater sewers was split as detailed in the following table. These figures were adjusted to allow for those storm water sewers which rather than discharging into a watercourse were connected into the combined system.

	Km	% of total
Combined sewers	4,378	50.35%
Storm water sewers	4,317	49.65%
Total	8,695	100.00%

The unit costs of R & V applied were obtained using the Trade Effluent Mogden Formula as per the table below:

Mogden Formula element	Cost (£) Per cubic metre	Application
R (Reception)	0.2172	Run off into Storm water sewers
V (Volumetric)	0.2449	Run off into Combined sewers
R+V	0.4621	

Appendix J – Monthly Income Check Sheet

NI WATER

Income check for March 2019

		ACTION BY	COMPLETE BY
1.	Transaction report for income, bad debt and discount ties up to the GL posting.	PMcN	03/04/19
2.	DCR listing and TE accrual totals agree to the Table in the Day 3 report.	PMcN	03/04/19
3.	The number of days in the DCR detailed listing has been increased by the correct number of days in the month.	PMcN	03/04/19
4.	There are no obvious large incorrect items of accrued income in the DCR listing.	PMcN	03/04/19
5.	Review the DCR, for where there is volume in m^3, but no £.	PMcN/ DB	03/04/19
6.	Review the DCR, both MW and MS, for any negative items.	PMcN	03/04/19
7.	Review top 300 customers on DCR for any material over-statement arising from leakage/incorrect meter exchange/faulty meter, etc.	DB	03/04/19
8.	Total for “Ordinary Customers N-stops” agrees total per “Referred Bills Summary” agrees to total per “N-stop Detail”.	DB	03/04/19
9.	N-stop detail does not contain any duplicate or triplicate lines.	DB	03/04/19
10.	Debit balance and credit balances in the Day 3 report agree to the debt report.	PMcN	03/04/19
11.	Cash in the FN012 summary agrees to the cash report.	PMcN	03/04/19
12.	The FN012 Summary Total has the correct balance c/f and b/f.	PMcN	03/04/19
13.	Have all the correct adjustments been made for additional provisions/provision release?	PMcN	08/04/19
14.	Does the summary Excel income report agree to Oracle?	PMcN	05/04/19

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 25 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING)
ANALYSIS OF FIXED ASSETS BY ASSET TYPE (TOTAL)

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	UNITS	DP	WATER SERVICE				SEWERAGE SERVICE				
				INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	TOTAL
A	**GROSS REPLACEMENT COST**											
1	Gross replacement cost at 1 April	£m	3	868.749	452.838	64.775	1,386.362	1,091.348	1,063.484	67.881	2,222.713	3,609.075
2	AMP adjustment	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Not used											
4	Disposals	£m	3	-0.847	-0.009	-0.229	-1.084	-0.453	-0.068	-0.087	-0.608	-1.692
5	Additions	£m	3	32.797	32.936	6.342	72.075	65.543	66.582	8.427	140.552	212.626
6	Gross replacement cost at 31 March	£m	3	900.699	485.766	70.888	1,457.353	1,156.437	1,129.998	76.221	2,362.657	3,820.009
B	**DEPRECIATION**											
7	Depreciation at 1 April	£m	3	80.391	116.524	38.759	235.674	59.993	268.136	47.026	375.155	610.829
8	AMP adjustment	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	AMP adjustment - gross MEA revaluation	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	lives	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	Not used											
12	Disposals	£m	3	-0.847	-0.009	-0.183	-1.039	-0.453	-0.067	-0.038	-0.558	-1.597
13	Charge for year	£m	3	10.009	16.531	5.487	32.026	8.237	38.237	3.665	50.139	82.165
14	Depreciation at 31 March	£m	3	89.552	133.046	44.063	266.661	67.777	306.306	50.653	424.736	691.397
15	Net book amount at 31 March	£m	3	811.147	352.719	26.825	1,190.691	1,088.660	823.693	25.568	1,937.921	3,128.612
16	Net book amount at 1 April	£m	3	788.358	336.314	26.016	1,150.689	1,031.355	795.348	20.855	1,847.557	2,998.246

Table 25 – Analysis of Fixed Assets by Asset Type (Total)

The following asset categories have been analysed in the table as follows:

- 'Infrastructure assets' include infrastructure assets only.
- Operational assets' include land, buildings and civils.
- 'Other tangible assets' include surplus land, buildings and civils, mobile plant and IT.

Gross Book Value at 1 April and Depreciation at 1 April

The total opening balances for gross book value and depreciation at 1 April 2018 have been brought forward from the total closing balances for gross book value and depreciation at 31 March 2018. The analysis across asset categories is based on analysis within the fixed asset register and is based on the IFRS statutory accounts.

AMP Adjustment

There was no AMP adjustment during the year.

Impairment

There was no impairment required of surplus lands, buildings and civils during the year.

Disposals

Disposals during the year mainly consisted of surplus land, civils, mobile plants (vans) and fixed plant assets. All disposals have depreciation in the month of disposal.

Decommissioned Assets

A number of assets (NBV £712,433.40) were decommissioned during the year. Decommissioned assets are assets which are no longer in use but still have a net book value (NBV) value at the time. In order to account for this, the assets are fully depreciated in year to bring the NBV down to nil.

Additions

Additions consisted of capital expenditure incurred during the year plus adopted sewers and sewage pumping stations and PPP assets (see below). When the assets created by the capital expenditure are commissioned they are put onto the fixed asset register and depreciation commences the following month.

This following table is a reconciliation between total capital expenditure and additions to fixed assets: -

Total UK GAAP expenditure in CWP (incl.) Operations)	**168,176**
Less: expenditure classified as opex under IFRS	- 1,213
Add: Capital maintenance Omega	2,142
Total IFRS expenditure in CWP (incl.) Operations)	**169,105**
Add: Water and sewer connections	4,212
Add: adopted assets – infrastructure	32,886
Add: adopted assets – non-infrastructure	1,409
Add: capitalised interest	5,014
Total additions per statutory accounts	**212,626**
PPE note - additions	171,201
PPE note - customer contributions	34,295
Intangibles note - additions	7,130
Total additions per statutory notes	**212,626**

PPP Assets Additions
During the year, there were on-balance sheet additions to PPP assets. Therefore, there was an element in the table relating to PPP assets totalling to [redacted] relating to the [redacted] capital maintenance fund and [redacted] relating to [redacted] (Note [redacted] had zero additions in the year).

Depreciation Charge for Year
Historical cost depreciation charge during the year was calculated based on the opening GBV at 1 April 2018. Additions and disposals during the year were taken into account in calculating the depreciation charge.

Commentary
All assets were analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity assets, with a GBV of £26,178,060.90 (17/18 UK GAAP: £32,476,170.88) as at 31 March 2019, could not be readily identified as water and sewerage services and have been split as per IFM: Water 41% and Sewerage 59%.

Table 25 has also been adjusted to include only the appointed business and exclude the un-appointed business relating to vehicle maintenance carried out for third parties. This has been adjusted through the opening balances for Water Services – Other Assets.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 28 REGULATORY ACCOUNTS
CASH FLOW STATEMENT FOR YEAR ENDING 31 MARCH (TOTAL)

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Net cashflow from operating activities	£m	3	181.015	190.580	195.707	170.228	182.677	182.769	221.058		
A	**RETURN ON INVESTMENTS & SERVICING OF FINANCE**											
2	Interest received	£m	3	0.134	0.114	0.080	0.092	0.074	0.103	0.429		
3	Interest paid	£m	3	-42.208	-43.723	-45.339	-46.568	-46.945	-47.537	-49.199		
4	Interest in finance lease rentals	£m	3	-11.913	-6.933	-6.824	-6.701	-6.562	-6.406	-18.826		
5	Non-equity dividends paid	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
6	Net cashflow from returns on investments & servicing of finance	£m	3	-53.987	-50.542	-52.083	-53.177	-53.433	-53.840	-67.596		
B	**TAXATION**											
7	Taxation (paid)/received	£m	3	0.000	0.000	-0.017	0.000	0.000	0.000	0.000		
C	**CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT**											
8	Gross cost of purchase of fixed assets	£m	3	-130.590	-135.971	-134.620	-115.602	-128.215	-158.278	-183.297		
9	Receipts of grants and contributions	£m	3	5.757	6.586	7.333	7.980	11.550	12.910	1.384		
10	Infrastructure renewals expenditure	£m	3	-31.368	-30.118	-31.557	-20.144	-20.145	-30.250	0.000		
11	Disposal of fixed assets	£m	3	1.177	1.164	1.046	1.693	1.096	1.536	0.646		
12	Movements on long term loans to group companies	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	-2.998		
13	Net cashflow from investing activities	£m	3	-155.024	-158.339	-157.798	-126.073	-135.714	-174.082	-184.265		
D	**ACQUISITIONS AND DISPOSALS**											
14	Acquisitions and disposals	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
E	**EQUITY DIVIDENDS**											
15	Equity dividends paid	£m	3	-26.587	-21.391	-21.562	-22.887	-21.510	-21.153	-23.742		
F	**MANAGEMENT OF LIQUID RESOURCES**											
16	Net cashflow from management of liquid resources	£m	3	-5.300	4.700	0.580	-0.980	-1.501	-0.007	1.237		
17	Net cashflow before financing	£m	3	-59.883	-34.992	-35.173	-32.889	-29.481	-66.313	-53.308		
G	**FINANCING**											
18	Capital in finance lease rentals	£m	3	-3.675	-1.473	-1.672	-1.888	-2.122	-2.376	-5.706		
19	New bank loans taken out	£m	3	75.000	29.000	36.000	36.000	30.000	69.000	64.000		
20	Repayment of bank loans	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
21	Proceeds from share issues	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
22	Net cash inflow from financing	£m	3	71.325	27.527	34.328	34.112	27.878	66.624	58.294		
23	Increase/(decrease) in cash in the year	£m	3	11.442	-7.465	-0.845	1.223	-1.603	0.311	4.986		

Table 28 – Cashflow statement

Significant movements from last period

Line 1 - Net cashflow from operating activities

This has increased by £9.413m (4.45%) compared to the restated figures in the accounts following a move from UK GAAP to IFRS accounting. The reconciliation of operating profit to net cashflow from operating activities is shown in Table 29.
This is summarised in Table 29 as follows:

1	Current cost operating profit	£m	141.077
2	Movement in working capital	£m	3.535
3	Depreciation	£m	82.165
4	Current cost profit on sale of fixed assets	£m	(0.551)
5	Other non-cash profit and loss items	£m	(5.168)
6	Net cash flow from operating activities	£m	221.058

Line 3 – Interest paid

Interest paid has increased by 3.50% from £47.537m to £49.199m. This is consistent with an additional loan drawdown of £64m in 2018-2019. The balance on loans can be summarised as follows:

At 1 April 2007	£150m
At 31 March 2008	£307.56m (average for year £228.78m)
At 31 March 2009	£457.56m (average for year £382.56m)
At 31 March 2010	£627.56m (average for year £542.56m)
At 31 March 2011	£737.56m (average for year £682.56m)
At 31 March 2012	£807.56m (average for year £772.56m)
At 31 March 2013	£882.56m (average for year £845.06m)
At 31 March 2014	£911.56m (average for year £897.06m)
At 31 March 2015	£947.56m (average for year £929.56m)
At 31 March 2016	£983.56m (average for year £965.56m)
At 31 March 2017	£1,013.56m (average for year £998.56m)
At 31 March 2018	£1,082.56m (average for the year £1,048.06m)
At 31 March 2019	£1,146.56m (average for the year £1,114.56m)

Line 4 - Interest in finance lease rentals

The PPP project [redacted] during 2018-2019 gave rise to [redacted] (restated 2017/18: [redacted]) interest payable on the associated finance lease. This decrease arises as an element of the unitary charge paid to the concessionaire is allocated by NIW to reducing the principal on the lease (see Line 18).

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £5.874m (3.11%) due to the acquisition of Alpha in the prior year. This is consistent with capital expenditure plans for 2018-19 and the movement in capital creditors across the period. In 2017/18, purchase of subsidiaries of 29.126m had been included within purchase of fixed assets.

Line 16 - Net cashflow from management of liquid resources

Management of liquid resources represents the movement in monies held on short-term deposit accounts.

Monies on deposit have increased by £1.238m from the end of 2017-2018 to the end of 2018-2019 with a consequent increase in cashflow. The balance on deposit at the end of 31st March 2019 is £1.270m.

Line 18 - Capital in finance lease rentals.

An amount of [redacted] was made in payment against the Alpha, Omega and Kinnegar PPP finance lease.

Line 19 - New bank loans taken out

In 2018-2019 £64m of additional loan notes were drawn down from DfI. These new loans were required to part finance the ongoing capital expenditure programme with the balance of capital expenditure financed by working capital.

PPP

The elements of PPP included in the cashflow are as follows:
The PPP aspect to lines 4 and 18 in Table 28 are outlined in 'significant movements from last period' in this commentary.

Included in Line 8: Gross cost of purchase of fixed assets in Table 28 is [redacted] in respect of capital maintenance additions for Alpha, Omega and Kinnegar PPP paid for via the unitary payments. All other capital expenditure for Alpha, Omega and Kinnegar is accounted for through the repayment of the finance lease.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 29 REGULATORY ACCOUNTS (HISTORIC COST ACCOUNTING
RECONCILIATION OF OPERATING PROFIT TO NET CASH FLOW FROM OPERATING ACTIVITIES (TOTAL

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Historical cost operating profit	£m	3	19.872	19.799	59.111	53.738	56.925	106.485	141.077		
2	Not used											
3	Movement in working capital	£m	3	0.595	8.388	12.045	-9.675	-1.670	-5.910	3.535		
4	Receipts from other income	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
5	Depreciation	£m	3	150.895	135.458	104.185	110.522	110.854	56.418	82.165		
6	Historical cost profit on sale of fixed assets	£m	3	-0.303	-0.208	-0.488	-0.091	0.489	-1.035	-0.551		
7	Infrastructure renewals charge	£m	3	30.761	33.409	32.309	25.286	25.008	25.757	0.000		
8	Other non-cash profit and loss items	£m	3	-18.164	-4.265	-10.615	-8.036	-5.897	1.054	-5.168		
9	Net cash flow from operating activities	£m	3	181.015	190.580	195.707	170.228	182.677	182.769	221.058		

Chapter 30 – Capital investment Summary Report

Introduction

This chapter provides a consolidated report on Capital investment which draws on Chapters 32, 35, 26, 36a and 40 and associated tables.

PPP

No PPP expenditure is reported in these tables. There was no Capital spend in 2018/19 relating to PPP that is not included within the unitary charge payments. In relation to Capital additions the only Capital not included in this table is the PPP Alpha Capital maintenance charge of [redacted]

Capital investment driver allocation (Service categorisation and purpose allocation)

The Capital Investment Driver Allocation (CIDA) methodology has remained consistent as per recent PC10/PC13 years. NI Water captures Service Categorisation, Life Categories (as reported in Table 34) and Purpose Allocation within our CIDA data capture. This data is captured within CPMR at project level and used for CIM (Table 40) and the other related AIR tables.

Based upon the PC15 query responses on CIDA allocation NI Water have revised the CIDA allocation manual to reflect the revisions. These are being integrated into the capital projects. A CIDA training programme should be delivered to ensure project managers and consultants, maintain an understanding of the CIDA allocation process. This will enable new staff to be trained and current staff to have a refresher.

No apportionment has taken place during the analysis and table population stage as this was completed by Project Managers at the initiation of the project, and reviewed at appropriate gateways for EP projects.

During 2018/19 all CIM (Table 40) information has been reported directly from CPMR without the detailed manual assessment required in previous years. For the related AIR Tables M & G spend has been reported from CPMR, but Operational Capital has had to be analysed manually as per previous years as the data on CPMR is not in a format that allows for robust reporting. Further refinements have been delayed to allow for more automation for the completion of the tables. As a result the same process used in AIR 18 has been adopted for AIR 19.

Assets Adopted at Nil Cost

Sewer adoptions paid by third parties of £34.295m are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £1.409m are included in Col 5, line 12 within Sewerage non infrastructure enhancements.

All of the investment reported in block D of Table 36 is reported as ‘Supply Demand Balance: New Development’.

The calculation of gross asset valuation for adopted sewerage assets is based on the unit costs derived from NI Water sewer framework rates.

The unit costs are applied by diameter banding and total lengths laid. The costs include pipe laying, pipe supply, laterals, manholes and compensation.

Total Asset Additions reconciliations

NI Water moved to IFRS accounting from GAAP in 2018/19

- Total asset additions – Water Service – Check to Table 25 line 5 col 4.
  For AIR 19 the reported numbers in these two tables are as follows:
  Table 25 – £72.075m
  Table 36 – £70.162m

The main variances in the above two figures are explained as follows:

a) PPP Alpha Capital maintenance of [redacted] is not included in Table 36
b) No decapitalised projects in 2018/19
c) An element of Capital Interest (Total value £5m) is included in table 25

- Total asset additions – Sewerage Service – Check to Table 25 line 5 Col 8.
  For AIR 19 the reported numbers in these two tables are as follows:
  Table 25 – £140.552m
  Table 36 – £135.119m

The main variances in the above two figures are explained as follows:

d) PPP Omega Capital Maintenance of [redacted] was not included in Table 36.
e) No decapitalised projects in 2018/19
f) An element of Capital Interest (Total value £5m) is included in table 25

Expenditure to reduce leakage

The table below provides a breakdown of the leakage expenditure in 2018/19. This includes the purpose allocations which have followed the principle as set out in PC10 Final Determination.

It should be noted that the figures reported include Leakage repair costs. These are completed by the Water Networks function, but the Leakage and Water Networks are now part of the Water Production Function. The opex costs reported in the table are the total opex costs relating to Leakage. This is comprised of Leakage Function staff costs and leakage repair costs incurred by both the Leakage and Water Network function.

Activity	**In Year actual spend per category (£m)**	**Purpose allocation**
Leakage detection costs - opex	4.500	OPEX
Leakage repair costs - opex	1.100	OPEX
Leakage detection costs - capex	0.314	Base
Leakage infra replacement repair costs - capex	0.675	Base
Leakage detection equip	0.028	Base
Leakage software upgrades and developments	0.026	Base
New leakage technology	0.000	Base
DMA[1] studies	0.388	Base
Trunk Main studies	0.023	SDB Growth
DMA optimisation	0.079	SDB Growth
Water balance asset data assessments	0.119	Base
ELL[2] reviews	0.000	Base

[1] District Metered Area – zoned area of water distribution network.

[2] Economic Level of Leakage – assessment of benefits gained from fixing leakage against costs of fixing.

Activity	In Year actual spend per category (£m)	Purpose allocation
Pressure Management	1.151	SDB Growth
PRV[3] replacements	0.104	Base
GSM[4] Loggers/Meter studies/Meter replacement	0.307	Base
Other	0.003	Base
Total (OPEX)	**5.600**	
Total (Capex)	**3.216**	
Total Leakage investment	**8.816**	

Capital programme variance

The Capital programme for 2018/19 when compared to the PC15 final determination has under delivered in the 'Water Service' but delivered in the 'Sewerage Service'. It is important to note however that NI Water was not funded to deliver the PC15 Final Determination and produced an adjusted budget which reflected the reduced funding allocation. This adjusted budget reduced PE funding by £15.54m (once other funding considerations are taken into consideration), from £142.60m to £127.06m.

The main reasons for variance in 2018/19 are as follows:

a) The largest variances are found in Sub programme 06 (Service reservoirs and clear water tanks) and Sub Programme 12 (Sewerage Maintenance, Flooding and DG5). This is due to the acceleration of Clear Water Tank schemes within the PC15 period. One of the largest overspends has occurred in Sub Programme 12 where Phase 1 of Queens Bridge Syphons was accelerated and brought into the PC15 programme resulting in approximately £1.8m of an overspend. The remaining overspend in sub programme 12 has been the result of additional sewer rehabilitation work identified during DAP investigations as well as increased costs associated with the UID & DG5 Programmes resulting in an overspend of around £8.7m. This overspend is being assessed and expenditure in subsequent years shall be moderated in line with PC15 budgets.
b) Sub Programme 8 had a large underspend due to adjustments made to accommodate the Capital Programme in year review. Sub Programme 2 was managed to reduce the PC15 early Investment which had already taken place within the Base Maintenance Programme, resulting in a reduction of around £6m against the Baseline figure.

Year 4 saw the PC15 overspend in base maintenance being managed with an in-year baseline of £82.75m against an actual figure of £84.87m and will continue to be addressed as PC15 proceeds.

Energy efficiency and renewable energy schemes

A summary of Energy efficiency and renewable energy schemes is included in Annex A at the end of this document.

[3] Pressure Reducing Valve – used to manage pressure within the infrastructure network.

[4] Global System for Mobile Communication – used where conventional telemetry/radio systems are not appropriate.

2018/19 Q4 Capital Investment Monitoring Return (Table 40)

Company Baseline

A PC15 baseline is included in this Capital Investment Monitoring (CIM) submission. The PC15 capital baseline is a detailed listing of projects and programmes of work, the costs and outputs which have been presented to the Utility Regulator through the Price Control process. The baseline is expressed in 2012/13 prices, post efficiency.

Capital Expenditure Commentary

This submission is completed primarily using CPMR with full reconciliation completed to ORACLE.

The following is a summary of CAPEX expenditure in 2018/19 (excluding contributions) at the end of Q4 as per ORACLE and reconciled to the CIM submission shown in money of the day.

	£m
Total Gross capital expenditure as per ORACLE	169.390
Capital works programme expenditure	121.969
Operations Capital from CPMR	24.020
M & G capital from CPMR	8.766
Capitalised Salaries and overheads	14.630
Rounding from ORACLE to CAPTRAX/CPMR	0.005
Reconciled Total	169.390

During the period (April 2018 – March 2019) there has been Capital income in the form of Grants and Contributions totalling to £11.150m. This figure is not included on the CIM submission.

Inflation Assumptions

The project costs reported in the 'current actual or projected' portion of the CIM are in current prices. All project costs are captured in nominal prices as no inflation assumptions are applied within CPMR.

Capital expenditure within the Final Determination was inflated by RPI which was linked to projections made by the Office for Budgetary Responsibility (OBR) in March 2014. This allowed 3.4% RPI annually through the six year period. Table 2 shows actual RPI in 2015/16, 2016/17, 2017/18 and OBR forecast figures for the years 2018/19 to 2020/21 (based on November 2018 economic and fiscal outlook). This shows a reduction in inflation levels from that assumed in the PC15 FD. NI Water continue to monitor the OBR view of RPI.

Inflation (RPI) projections

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PC15 FD assumed Indices	266.800	275.871	285.250	294.949	304.977	315.346
	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
Current actual and projected indices (OBR Nov 2018)	259.433	264.992	274.908	284.230	292.849	301.965
	1.1%	2.1%	3.7%	3.4%	3.0%	3.1%

Reconciliation with Table 36

Table 36 - Water service nominal expenditure

Gross Capital expenditure - Water Service		T36 £m	CIM £m	Variance £m	Variance %
1	MNI (gross of grants and contributions)	21.415	20.857	-0.558	-2.68
2	Infrastructure renewals expenditure (gross)	17.725	17.508	-0.217	-1.24
3	Capex: Total quality enhancement programme	11.233	11.467	0.234	2.04
4	Capital expenditure - customer service	5.068	5.204	0.136	2.62
5	Capital expenditure - supply demand balance	14.867	14.523	-0.344	-2.37
6	Gross Capital expenditure - Water Service	70.308	69.559	-0.749	-1.08

Table 36 - Sewerage service nominal expenditure

Gross Capital expenditure - Sewerage Service		T36 £m	CIM £m	Variance £m	Variance %
7	MNI (gross of grants and contributions)	43.019	42.306	-0.713	-1.69
8	Infrastructure renewals expenditure (gross)	14.864	14.834	-0.030	-0.20
9	Capex: Total quality enhancement programme	19.301	18.284	-1.017	-5.56
10	Capital expenditure: customer service	10.517	10.642	0.125	1.18
11	Capital expenditure supply demand balance	13.127	13.771	0.644	4.68
12	Gross Capital expenditure - Sewerage Service	100.828	99.837	-0.991	-0.99

The above table shows the comparison between the CIM (Table 40) and Table 36. Assets adopted at NIL cost reported in Table 36 have been excluded from this comparison. The variances shown arise because the data held for population of the AIR tables has direct links between the asset type, service area and investment driver. Where there are complex projects this detail is required to provide an accurate analysis of the expenditure. The summary detail on the CIM does not give a full transparency of this detail as the direct link between asset type, service area and investment area is lost but does give a reasonable interpretation of the investment. In addition direct comparison is difficult as Capitalised Salaries and overheads are a single line on the CIM which has had a service allocation and purpose allocation applied based on the rest of the programme. For AIR 19 the Capital salaries and overheads were applied by examining each of the three elements of the programme namely, CWP, M & G and Operations Capital and assigning Salaries and Overheads against each of these programmes before combining into a single line. Whilst still not exact it more closely reflects the way salaries are allocated to individual projects. Within AIR the Capitalised Salaries and overhead information is included within individual project costs.

Sixteen Box Summary

2018/19 Current Actual Projected 16 box summary showing expenditure £m (nominal)

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	7.22	17.51	1.83	8.34	34.90
Water Non-Infrastructure	4.25	20.86	3.37	6.18	34.66
Sewerage Infrastructure	6.89	14.83	6.90	6.99	35.62
Sewerage Non-Infrastructure	11.39	42.31	3.74	6.78	64.22
Totals	29.75	95.50	15.85	28.29	169.39

2018/19 Current Actual Projected 16 box summary in percentages

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	4.3%	10.3%	1.1%	4.9%	20.6%
Water Non-Infrastructure	2.5%	12.3%	2.0%	3.6%	20.5%
Sewerage Infrastructure	4.1%	8.8%	4.1%	4.1%	21.0%
Sewerage Non-Infrastructure	6.7%	25.0%	2.2%	4.0%	37.9%
Totals	17.6%	56.4%	9.4%	16.7%	100.0%

2018/19 Baseline 16 box summary showing expenditure £m (2012/13 prices)

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	10.93	14.81	0.76	8.77	35.26
Water Non-Infrastructure	5.41	19.71	2.25	3.65	31.03
Sewerage Infrastructure	4.34	11.75	1.72	4.17	21.98
Sewerage Non-Infrastructure	8.20	36.49	2.89	5.91	53.48
Totals	28.88	82.75	7.62	22.50	141.75

2018/19 Baseline Projected 16 box summary in percentages

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	7.7%	10.4%	0.5%	6.2%	24.9%
Water Non-Infrastructure	3.8%	13.9%	1.6%	2.6%	21.9%
Sewerage Infrastructure	3.1%	8.3%	1.2%	2.9%	15.5%
Sewerage Non-Infrastructure	5.8%	25.7%	2.0%	4.2%	37.7%
Totals	20.4%	58.4%	5.4%	15.9%	100.0%

PC15 16 box FD baseline (2012/13 prices): Expenditure across the PC15 programme £m

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	65.28	87.47	4.42	48.93	206.09
Water Non-Infrastructure	21.46	129.85	15.44	30.16	196.90
Sewerage Infrastructure	26.26	64.64	18.07	23.54	132.51
Sewerage Non-Infrastructure	53.66	222.75	20.38	30.88	327.67
Totals	166.66	504.71	58.30	133.50	863.17

PC15 16 box summary: Baseline expenditure by percentage across the PC15 programme

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	7.56%	10.13%	0.51%	5.67%	23.88%
Water Non-Infrastructure	2.49%	15.04%	1.79%	3.49%	22.81%
Sewerage Infrastructure	3.04%	7.49%	2.09%	2.73%	15.35%
Sewerage Non-Infrastructure	6.22%	25.81%	2.36%	3.58%	37.96%
Totals	19.31%	58.47%	6.75%	15.47%	

Variance on Nominated Outputs (2012/13 prices)

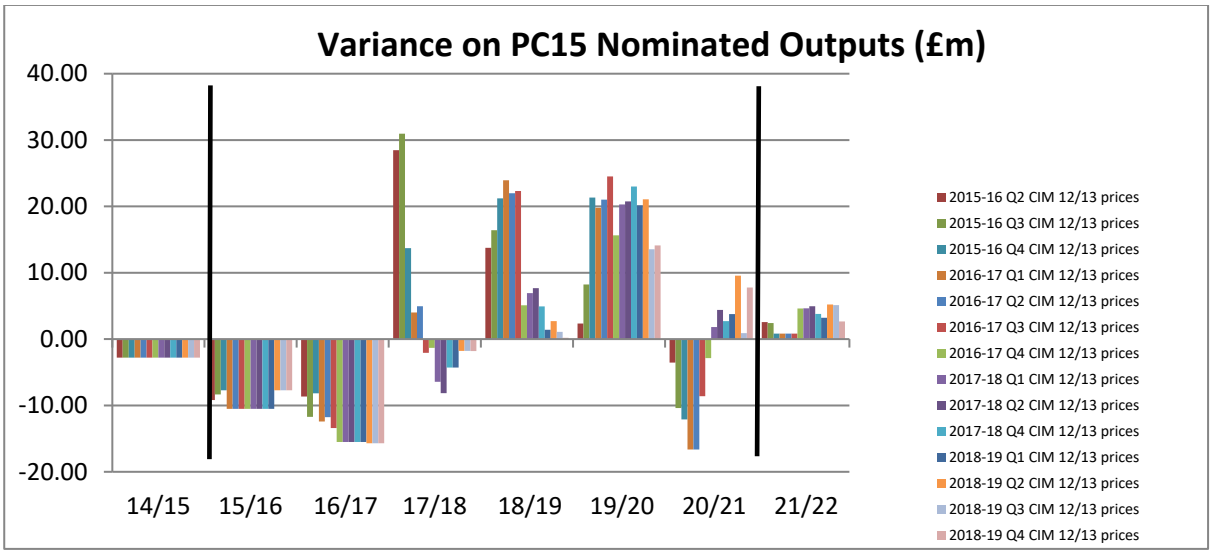
Figure 1 illustrates the movement in the PC15 nominated output projects: this is based on the PC15 FD baseline and assumes a fully funded Final Determination budget with catch-up. In 2014/15 a number of nominated projects were delayed and carried into PC15. In addition, PE reductions have had an impact in PC15 year 1, 2, 3 and 4. The variance showing in 2021/22 is due to spend on KF350 Dungannon WWTW and KR489 Glenmachan Strategic Project Phase 1a Sicily & Marguerite Park Flood Alleviation.

Each year from 2015/16 up until 2017/18 has had a negative variance however 2018/19 is showing a positive variance to give a cumulative total of -£25m.
This is reflected in Figure 1 showing:

-£7.72m in 2015/16; -£15.70m in 2016/17; -£1.79m in 2017/18; £0.21m in 2018/19.

Overall this is an improvement from the maximum previous variance shown to date (being -£34.15m at end of Q2 in 2017/18), and is further offset by the positive variance forecast for the years from 2018/19 – 2020/21. However NI Water must continue to ensure sustained focus on delivery as the catch-up will require significant effort and is currently forecasting a negative variance in the order of -£3.11m within the PC15 period.

Figure 1: Variance on Nominated Outputs



CIM summary Table

Code	Title	Baseline £m (2012/13 prices)	Current actual or projected 2018/19 £m (nominal)	Current actual or projected 2018/19 £m (2012/13 prices using latest OBR RPI forecast)
0	Staff Salaries and on-costs	22.24	14.63	12.59
1	Base maintenance (Water)	4.07	6.79	5.85
2	Base maintenance (sewerage)	18.57	24.30	20.92
3	Water resources	2.21	1.91	1.65
4	Water treatment works	4.56	5.63	4.85
5	Water trunk mains	2.50	1.00	0.86
6	Service reservoirs and clear water tanks	1.96	7.21	6.21
7	Service reservoir rehabilitation	2.53	1.47	1.26
8	Water mains rehabilitation	17.62	13.26	11.41
9	Leakage	2.63	2.55	2.19
10	Ops capital Water	6.09	9.09	7.83
12	Sewerage Maintenance, UIDs, Flooding	12.53	24.71	21.27
15	Wastewater treatment (carryover)	0.00	0.06	0.05
16	Wastewater treatment (new starts)	13.51	17.83	15.35
17	Small wastewater treatment works	1.86	3.00	2.59
18	Ops capital Sewerage	7.20	11.01	9.48
19	Meter installation and maintenance	3.58	1.40	1.20
20	Management and general	10.19	12.31	10.60
23	Minor watermain repairs, requisitions, road schemes and public realm	4.37	6.45	5.56
24	Minor sewer repairs, requisitions, road schemes and public realm	3.28	4.76	4.10
98	Additional Outputs Programme (Enhancement)	0.00	0.00	0.00
99	PC15 balancing line (Base)	1.11	0.00	0.00
Total	Excluding additional outputs	142.60	169.38	145.81
Total	Including additional outputs	142.60	169.38	145.81

Nominated Outputs

Refer to Table 40a and associated commentary for full detail on nominated outputs over Year 3 of the PC15 period.

Water

Beneficial Use was not claimed on any Water Schemes during 2018/19.

Sewerage

Beneficial Use was claimed on the following UIDs during 2018/19:

Ref	UID	Scheme	UID Name	Quarter claimed
1	12	KS872	Killaney WWPS 3	2018/19
2	399	KB486	Galgorm WwPS	2018/19
3	223	KT391	Antrim Street CSO 05	2018/19
4	194	KR417	Dublin Road CSO 81	2018/19
5	265	KR417	Sandy Row	2018/19
6	191	KR417	Cromac Street CSO 95	2018/19
7	192	KR417	Holiday Inn CSO 97	2018/19
8	193	KR417	Dublin Road CSO 96	2018/19

Beneficial Use was achieved at the following Waste Water Treatment Works within 2018/19:

Scheme	Site	Quarter claimed
KR409	Moneyreagh WwTW	2018/19 Q2
KS962	Dundrum WwTW	2018/19 Q3
KG041	Maghaberry WwTW	2018/19 Q3
KS111	Cloughey WwTW	2018/19 Q4
KP586	Clabby WwTW	2018/19 Q4
KA239	Mullans	2018/19 Q4

Beneficial Use was achieved at the following Waste Water Treatment Works from the Rural WwTW Programme:

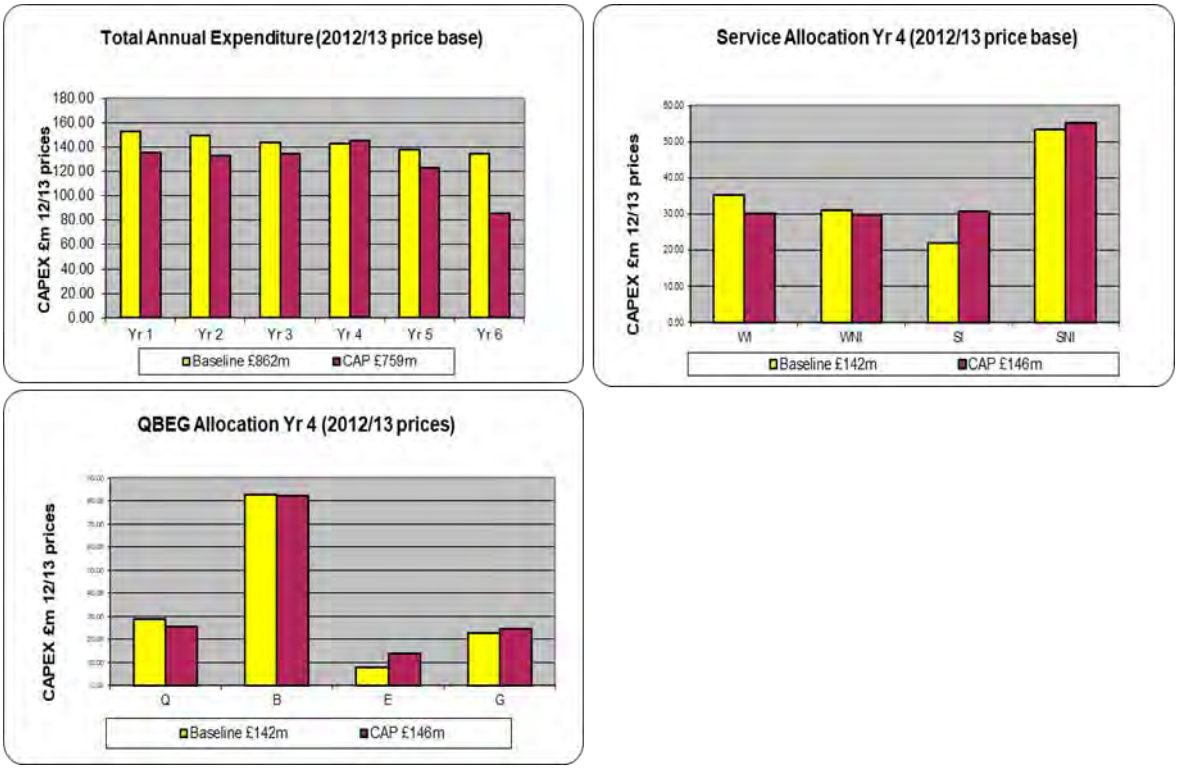
Scheme	Site	CAR ID	Quarter claimed
KI556	Bellany WwTW	S01137	2018/19 Q1
KI556	Edenderry WwTW	S03104	2018/19 Q1
KI556	Newtown Crommelin	S01447	2018/19 Q2
KI556	Drumenny WwTW	S03088	2018/19 Q2
KI556	Kilbaskey WwTW	S01581	2018/19 Q2
KI556	Cladymore WwTW	S02566	2018/19 Q2
KI556	Dougan Place WwTW	S02164	2018/19 Q3
KI556	Donaghey WwTW	S01569	2018/19 Q3
KI556	Waterfoot Road WwTW	S01643	2018/19 Q3
KI556	Mayboy WwTW	S01163	2018/19 Q4

Regulatory Dashboard

Figure 2 is an extract of the Regulatory Dashboard for period to end of December 2018/19. Only graphs that are currently meaningful have been included. 2012/13 prices are used in the graphs and the following is a summary of the main points to note:

- Graph 1: Total Annual Expenditure. The Graph shows a £3.20m increase in 2018/19 in funding available, when the baseline funding and Current Actual Projected are stated in 2012/13 terms.
- Graph 2: Service allocation. Service allocation for 2018/19 shows an element of imbalance between water and wastewater: Water Infrastructure (WI) is below the baseline profile while the Water Non-infrastructure (WNI) is broadly on target. Sewerage Infrastructure (SI) and Sewerage non-infrastructure (SNI) are both above profile.
- Graph 3: QBEG. 2018/19 indicates £82.21 actual expenditure on base against a £82.75m baseline. This £0.54m variance shows an ongoing improvement however requires careful monitoring over the remainder of the PC15 Period.

Figure 2: 2018-19 Q4 CIM. RPI as per current actual and NI Water projected.



Capital expenditure commentary

This submission is completed primarily using CPMR with full reconciliation completed to ORACLE.

Annex A

1. Purpose and background

This Annex A is a report on capital projects associated with the NI Water Energy Efficiency programme for inclusion in the NI Water Annual Information Return (AIR 17) Chapter 30. This report was first requested in 2016, at which time the Utility Regulator specifically outlined reporting elements for inclusion as follows:

"Energy efficiency and renewable energy schemes"

3.13 The commentary should identify the total invested in energy efficiency and renewable energy schemes and the allocation of this investment by purpose.

3.14 The PC15 final determination included funding for a range of energy efficiency and renewable energy schemes proposed by the company intended to contribute cumulative energy reductions of around 12GWhr by the end of the PC15 period. This expenditure is spread across a range of investment categories within the capital expenditure tables. The company should summarise progress on delivery of energy efficiency and renewable energy savings through these schemes in a specific section within the consolidated report on capital investment. This should include an estimation of the cumulative energy reductions delivered against PC15 estimates and an explanation of how they have been derived. Explanations for any variance to original delivery plans should be provided.

3.15 In the PC15 final determination we noted that confirmation of the scope, costs and benefits for the sub-meter schemes were subject to the completion of a feasibility study and that NI Water needed to demonstrate that the investment was beneficial and confirm this to the Utility Regulator before embarking on wide spread sub-metering. Progress on this issue should also be addressed in this section of the consolidated report."

2. Context

The PC15 Final Determination includes capital funding of £9.0m for a range of energy efficiency and renewable energy schemes that were proposed by NI Water to contribute cumulative energy reductions of 12GWh by the end of the PC15 period.

Since the PC15 energy efficiency and renewable energy action plan was first drafted, the energy landscape and NI Water's role in it has changed. Decarbonisation, decentralisation and digitalisation are rapidly transforming electricity grids, alongside continuing technological advances in energy storage and the electrification of transportation and heat.

In addition, Government policy changes in 2015, particularly the closure of the Renewables Obligation, negatively impacted the investment profile of renewable energy generation projects.

These dramatic and unforeseen changes to policy instruments, together with rapid changes to the electricity grid, necessitated that NI Water strategically review the PC15 Final Determination to ensure that best value for money is achieved.

3. Reporting requirements 3.13 and 3.14

> 3.13 The commentary should identify the total invested in energy efficiency and renewable energy schemes and the allocation of this investment by purpose.
>
> 3.14 The PC15 final determination included funding for a range of energy efficiency and renewable energy schemes proposed by the company intended to contribute cumulative energy reductions of around 12GWhr/ by the end of the PC15 period. This expenditure is spread across a range of investment categories within the capital expenditure tables. The company should summarise progress on delivery of energy efficiency and renewable energy savings through these schemes in a specific section within the consolidated report on capital investment. This should include an estimation of the cumulative energy reductions delivered against PC15 estimates and an explanation of how they have been derived. Explanations for any variance to original delivery plans should be provided.

3.1. NI Water Response

Northern Ireland Water has a dedicated PC15 Energy Efficiency programme, some of which is a continuation of investments undertaken during PC13. Details of PC15 investment by purpose are further detailed in Appendix 1 and Appendix 2 of this report.

Table 3.1 below provides a high-level summary of expenditure profiles:

Capital funding as stated in PC15 DD Response Annex 6 (£k)	2015/16 investment (£k)	2016/17 investment (£k)	2017/18 Investment (£k)	Forecast Investment (£k)	Total (£)
9,204	0.982	1.54	0.332	2.039	4.893 *

Excludes JA312 - Dunore Point WTW Renewable Energy

For the first two years, the Energy Efficiency Programme has been managed under five work streams:

- Renewables
- Clean Water
- Wastewater
- PPP
- Negative Opex

Benefits from the energy efficiency and renewable energy schemes are expressed as:

- Reduced Consumption kWh;
- Reduced Rate of electricity (ppu);
- Self-Generation;
- Increased income, either via ROCs or exporting electricity to the grid.

3.1.1. Renewables

Renewable initiatives are split into two categories:

- Self-Generation from NI Water Assets
- Renewable Generation via Power Purchase Agreements (PPAs)

3.1.1.1. Self-Generation from NI Water Assets

EP017 Renewable Energy

Capital Requested in DD Business Plan: £2.176m
Current Assessment of Funding Required during PC15: £1.247m

Funding available for EP017 was allocated for the purpose of investing in renewable energy during PC15. Within the PC15 Business Plan, NI Water proposed to develop a single wind turbine at the North Coast WwTW. The business case for this project was deemed viable as the kWh generation could be consumed within the WwTW (at the North Coast WwTW) and would receive an income from the Governments Renewable Obligation Certificates (ROCS) incentive scheme. After two unsuccessful planning applications, the balance of this proposed expenditure was reallocated to the installation of Solar Photo Voltaic Systems.

Multiple Sites - Solar Photo Voltaic (<150kW each)

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £1.54m

NI Water installed approximately 8MW of Solar PV systems during PC15 to date. 57 installations have occurred across NI Waters Asset base (throughout Northern Ireland) during PC15. Funding for these installations was provided from EP017 and BE017.

Dunore WTW - Solar Photo Voltaic (5MW)

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £7.53

NI Water were previously seeking to take advantage of land adjacent to Dunore Water Treatment Works to procure renewable energy through a private wire Power Purchase Agreement (“PPA”). The land had planning permission for a 46MW solar farm, which would enable NI Water to utilise existing connection offers from NIE Networks. This opportunity concluded unsuccessfully when the tenderer withdrew their BAFO.

An alternative 5MW project was subsequently identified whereby NI Water would lease the land from the landowner, buy the development rights for the site and award the design and build contract through an existing framework.

Legal opinion confirmed that this project could be viewed as a lands transaction and was therefore compliant with the Utility Contract Regulations (UCRs). In addition, albeit under a challenging timeframe, the project could reasonably expect to qualify for ROCs if completed before 31 March 2018.

Following ECI approval, NI Water constructed the 5MW Solar PV array at Dunore Point WTW during the 2017/18 FY. The project was completed in advance of the closure of the ROC grace period deadline. Benefits from this windfarm were realised in the 2018/19 FY in line with Business Case estimates of £560k and 2,000 tCO_2 per annum.

Delivery of this project has received favourable public recognition and helped achieve a number of strategic objectives for NI Water, including:

- Reduce the cost per kWh of electricity supply at major energy consuming sites
- Reduce the net cost paid for electricity used at major consuming sites

- Reduce the longer term cost of electricity and volatility in electricity pricing at major consuming sites
- Increase NI Water's use of renewable energy to mitigate the effects of climate change

Funding for this installation was provided from JA312.

JI041 Hydro power from raw water

Capital Requested in DD Business Plan: £0.439m
Current Assessment of Funding required £0.051m
Within the PC15 business plan (after a feasibility exercise), ten potential hydro schemes were identified for delivery at eight sites.

This envisaged programme of work was impacted by the withdrawal of the incentive scheme from central Government and NIE Networks connection process.

A further feasibility assessment is underway to re-examine these projects to determine their viability at five sites, taking into account the following issues:

1. Silent Valley: A NIE grid connection was applied for in 2017 but cannot be progressed further as NIE Networks has confirmed that there is currently no export capacity available and reinforcement costs are prohibitive.
2. Dorisland WTW: A connection application was submitted to NIE Networks in 2015, but cannot be progressed further as NIE Networks has confirmed that there is currently no capacity available and reinforcement costs are prohibitive.
3. Altnaheglish (Caugh Hill): A connection application was submitted to NIE Networks in 2015, but cannot be progressed further as NIE Networks has confirmed that there is currently no export capacity available and reinforcement costs are prohibitive.
4. and 5. Two existing Hydro electricity generators are being evaluated for refurbishment and the design solutions are underway. Repurposing for potential application within a pumped storage scheme is also under consideration.

JI040 Recovering Energy from the water distribution System

Capital Requested in DD Business Plan: £1.350m
Current Assessment of Funding Required during PC15: £1.484m
Due to technical and connection uncertainties around this initiative, NI Water focused on sites with potentially attractive payback periods. Within the PC15 programme, NI Water planned to conduct a trial to assess the viability of generating electricity from Pressure Relief Valves in the water network. Due to technical difficulties, withdrawal of the government incentive schemes and NIE connection issues this project has been withdrawn for implementation during the PC15 period.

3.1.1.2. Renewable Generation via Power Purchase Agreements (PPAs)

Within the PC15 Energy Efficiency programme, PPAs have been identified as a credible efficiency measure. Under a PPA, a third party would fund and deliver the solution (e.g. a wind turbine). It is envisaged NI Water would enter into contracts to purchase the electricity generated at a rate below that available from the main electricity suppliers (from the grid), for a defined period e.g. 10 – 15 year duration. Such arrangements would contribute to renewable energy targets and should deliver an Opex cost saving over the contract duration.

Following submission and approval of an Outline Business Case, the Energy Team are progressing with market engagement to determine the business benefits of entering into Corporate PPA arrangements that include both 'private wire' and virtual/synthetic PPAs to inform the development of a Final Business Case. This Final Business Case is expected to be reviewed in Q4 19/20 FY. Both DfI and SIB were consulted during development of the

Outline Business Case and are expected to be involved in the development of the Final Business Case.

3.1.2. Clean Water Initiatives

Clean Water initiatives identified within NI Waters Energy Efficiency Programme for PC15 include:

JI069 WPS Pump Efficiency

Capital Requested in DD Business Plan: £1.286m (JI069 and JI075 combined)
Current Assessment of Funding Required during PC15: £0.879m
Five WPS had control optimisation or pumps replaced as part of this project during the 2016/17 and 2017/18 FY's. The benefits associated with these upgrades amounts to £47k.

JI075 - WPS Pump Efficiency

Phase 2 of this Water Pumping programme is being developed taking into account the learnings of Phase 1 (under JI069). Energy audits are being completed at two WPS sites to assist in identifying further WPS efficiencies – these audits were funded under JI075.

Further work on pump efficiency is planned for 19/20 FY with the key focus on ensuring that pumps are operating at their Best Efficiency Point (BEP) and realising ToD savings where possible.

JI071 – Electrical Sub-meters (water)

Capital Requested in DD Business Plan: £0.488m
Current Assessment of Funding Required: £0.007m
Sub-metering is viewed as an important enabler for energy efficiency. Trials have been conducted at one Water site and one Wastewater site (KI545).

Advances in sensor and communication technology have also caused NI Water to strategically review how optimal sub-metering may be cost effectively achieved in compliance with the NIS Directive. This is covered in more detail in section 4.1.1 of this report.

JI032 – Buildings, water treatment sites - water regulation compliance & energy efficiency

Capital Requested in DD Business Plan: £0.741m
Current Assessment of Funding Required: £0.216m
The Energy element of the PC15 Business Plan included funding for NI Water to place energy efficiency measures into buildings at its operational sites to improve energy efficiency. This work (mainly heating and lighting) has been undertaken during 17/18 with further sites completed in the 18/19 FY. Financial benefits in 18/19 amounted to £57k based on work completed in 17/18 FY, with outline benefits of £25k to be realised in 19/20 FY.

WD083 Seasonal Time of Day (STOD)

Capital Requested in DD Business Plan: £0m
Current Assessment of Funding Required: £0.272m
This programme of work moved electricity use from peak consumption periods to off peak consumption periods at 17 WPS during 2015/16 and 2016/17. Although the main driver for Time of Day pumping was to reduce the appu (average price per unit per kW) rate (i.e. a £Cash benefit) the analysis from this investment has concluded there has also been some savings due to reduced consumption (kWh). This is evidenced by more efficient pumping regimes (for these sites), that have provided reduced consumption and cost savings.

Expenditure during 2015/16 (£59k) and 2016/17 (£30K) on this project produced a cost saving of c. £40k during this same period. STOD savings in 18/19 amounted to £4k.

Water Energy Audits

NI Water are undertaking Energy Audit surveys at a number of Clean Water sites (WTW and Water Pumping Stations) to assist in identifying further energy efficiency opportunities. These audits were completed during 18/19 FY. From an energy efficiency point of view the payback period for replacing pump sets solely based on energy efficiency benefits ranges from 5 – 8 years and in a capital constrained environment is difficult to justify in terms of financial payback. The intention is to prioritise pump replacement in conjunction with Asset Delivery and the Base Maintenance programme where Asset Life Cycle Performance staff will be highlighting sites that have poor pump performance.

3.1.3. Wastewater Initiatives

KI514 – Buildings, wastewater treatment sites - water reg. compliance & energy efficiency

Capital Requested in DD Business Plan: £0.79m
Current Assessment of Funding Required: £0.193m

The Energy element of the PC15 Business Plan included funding for NI Water to place energy efficiency measures into buildings at its operational sites to improve energy efficiency. This work (mainly heating and lighting type work) was undertaken at 8 Wastewater sites and was complete in 18/19 FY, with benefits realisation during 2017/18 and 2018/19. The level of investment and subsequent benefits are anticipated to be lower than the initial business case with £28k of benefits forecast in 18/19 FY and £10k in 19/20 FY.

KI517 Energy efficiency at wastewater pumping stations

Capital Requested in DD Business Plan: £0.021m
Current Assessment of Funding Required: £0.003m

Appraisals were performed at wastewater pumping stations to identify where potentially highly cost effective energy efficiency measures could be delivered. NI Water has assessed the appraisals and concluded that energy efficiency opportunities at these WwPS are not economically viable purely on energy efficiency. NI Water are however looking at other alternatives in regards to energy efficiency measures for pumping in Wastewater.

KI553 - Energy efficiency at wastewater pumping stations

Capital Requested in DD Business Plan: £0m
Current Assessment of Funding Required: £0m

Appraisals were performed at wastewater pumping stations to identify where potential more marginal energy efficiency measures could be delivered. NI Water has assessed the appraisals and concluded that energy efficiency opportunities at these WwPS are not economically viable purely on energy efficiency. NI Water are however looking at other alternatives in regards to energy efficiency measures for pumping in Wastewater.

KI545 – Electrical Sub-meters (wastewater)

Capital Requested in DD Business Plan: £0.651m
Current Assessment of Funding Required: £0.01m

Sub-metering is viewed as an important enabler for energy efficiency. Trials have been conducted at one Water site and one Wastewater site (KI545).
Advances in sensor and communication technology have also caused NI Water to strategically review how optimal sub-metering may be cost effectively achieved in

compliance with the NIS Directive. This is covered in more detail in section 4.1.1 of this report.

PL005 Process Optimisation of WwTW

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £0.235m

BN048 Process Optimisation of WwTW

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £0.1m

Within the PC15 Energy Efficiency Delivery Programme, under PL005, £240K of Capital has been allocated and within BN048 (a further £100K) to fund a process optimisation project at a number of Waste Water Treatment Works (WwTW) across NI Water. The work optimises energy usage within the wastewater treatment processes and utilises a Programmable Logic Controller (PLC) at each WwTW where the technology is applicable. In general, optimisation modifications have been focused within a number of areas namely the site's capacity, flow/loading, historic energy consumption, process variables (flow management, Dissolved Oxygen (DO), Mixed Liquors (MLSS), RAS, and SAS) and regulatory requirements.

This programme of work across circa 40 large WwTW (a combined total) has produced in year consumption reductions of 957,683 kWh in 2015/16 and a further 1,176,603 kWh reduction in 2016/17.

During 2017/18 FY 7 WwTW were optimised with £41k of energy benefits being delivered in year with £59k of benefits being realised from 7 sites in the 18/19 FY.

Wastewater Energy Audits and Implementation (KI626)

NI Water are undertaking Energy Audit surveys at a number of Wastewater sites (WwTW and Wastewater Pumping Stations) to assist in identifying further energy efficiency opportunities. These audits were completed at 29 Wastewater sites during 18/19 FY. Following completion of the Energy Audits a programme of implementation work was developed to realise Energy savings. This programme of work related to the installation of Real Time Control (RTC) and Process Control measures at WW sites. Proof of concept trials were undertaken in January 2019 at Antrim and Tullygarley WwTW to install RTC technology in order to realise energy savings and also ensure compliance due to the ability of the technology to react in a timelier manner to effluent quality. There has been encouraging energy efficiency benefits identified at the Proof of Concept trials to date – and following conclusion of the proof of concept trial – it is intended to roll this technology out to further sites in the 19/20 FY in order to realise further energy efficiency benefits.

3.1.4. PPP

There were two PPP projects being considered under energy efficiency.
The first was investment in a Variable Speed Drive and a pump refurbishment programme with the Alpha contractor. This initiative was considered under NI Water governance and due to the nature of the contract, it was determined that this project was not viable at this stage.
The second project was with the Omega contractor where control improvements were being considered at Donaghadee Pumping Station and a number of other locations. This project has been completed with £4k of savings being realised from this project in 2017/18.

3.1.5. Negative Opex

NI Water currently generates revenue from existing electricity generation assets:

- Raw Water Turbines at Silent Valley and Oaklands
- Sale of ROCs
- Participation in an Aggregated Generation Unit with fixed standby generation
- Exporting electricity to the grid

This revenue is considered "unregulated" and has not been treated as "negative opex" in the UR's Corrected Ordinary Least Squares (COLS) econometric and unit cost models used for PC10, PC13 and PC15 determinations.

The UR is currently developing a new methodology for the assessment of NI Water's efficiency gap to inform the upcoming PC21 period. NI water are hopeful that the new methodology will allow revenue from energy generation to be treated as negative expenditure in line with the approach adopted by Ofwat in England and Wales.

3.1.6. Not Defined as Energy Efficiency Capital

KR627 and KS974 Energy Efficiency to Inlet and Primary Effluent Pumps, Return Activated Sludge Pumps. (Screw Pumps)

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £1.54m

Energy efficiency improvements to screw pumps is a further project identified as a key driver to assist NI Water reduce electricity consumption. NI Water have commenced a programme of work at Screw Pumps to reduce consumption (kWh) at a number of sites. This includes the six Inlet Screw Pumps, the three Pre-Treatment Effluent Screw pumps (PEPs) and the three Return Activated Sludge Pumps (RAS) at Belfast WwTW. The benefits realisation from this work is currently being reviewed with outline benefits estimated at £35k.

3.1.7. Additional PC15 Energy Efficiency Activity and Projects

Mindful of the need to stay cognisant of and respond accordingly to changes in the energy landscape, on February 24th 2018 the NI Water Executive Committee approved the NI Water Energy Sustainability and Resilience Strategy (ESRS) and Energy Action Plan (EAP) to collectively embed energy 'best practice' within the business.

The ESRS is an overarching strategy document.

The EAP is a live document that is used to capture energy related ideas and innovation from within the business. These saving opportunities are assessed and prioritised to inform the Energy Efficiency delivery programme on an ongoing basis.

Specific ESRS activities scheduled for delivery through the PC15 period, include:

- Achieve ISO 50001 accreditation. ISO 50001 is an internationally recognised energy management Standard (EnMs) that is aligned with ISO 14001 (a suite of environmental standards that NI Water has already attained). Encompassing existing and planned energy management activity within an internationally recognised energy management standard will embed energy management into NI Water's business processes and drive continual improvement.
- Conduct general sustainability and energy awareness training through a suite of eLearning modules and tools that have been specifically mapped to the competence, training and awareness requirements of ISO 50001.
- Deploy a Metering, Monitoring & Targeting system that will; detect avoidable energy waste, target energy efficiency activity; provide feedback for staff, improve budget setting, enable benchmarking, and quantify savings. NI Water has considerable

energy and process data but not all of the data sets are yet centralised or capable of being indexed to one another. Work is underway to address this.

- Undertake a series site surveys using a risk assessed technical evaluation process, underpinned by measurement, analysis and business case metrics to inform further PC15 optimisation activity and the PC21capital programme.
- Optimise NI Water energy income potential by; fully understanding Capacity & DS3 payment income structures; working with NIEN and the Utility Regulator to harness more NI water generating capacity; enhancing existing commercial arrangements for the third party management of these income related services; and by exploring the potential to stack revenue streams through the use of technological innovation.
- Contract for the supply of a significant proportion of NI Water's energy requirements via Corporate Power Purchase Agreements (CPPA), in particular those that are behind the meter (sometimes referred to as 'private wire'). CPPAs are relatively new to Northern Ireland but well established in GB, where large electricity users increasingly buy renewable energy via supply contracts negotiated for periods lasting 10 to 15 years. These contracts are attractive because they cut CO_2 emissions, provide price certainty and security of supply and are commercially competitive.

As in the case of the Dunore Solar Farm project, NI Water are working closely with the Strategic Investment Board (SIB) in their review of NI Public Sector arrangements for managing and procuring electricity, including CPPAs. The company anticipates being fully aligned with this strategy and playing an important role in the implementation of it.

4. Reporting requirement 3.5

> 3.15 In the PC15 Final Determination we noted that confirmation of the scope, costs and benefits for the sub-meter schemes were subject to the completion of a feasibility study and that NI Water needed to demonstrate that the investment was beneficial and confirm this to the Utility Regulator before embarking on wide spread sub-metering. Progress on this issue should also be addressed in this section of the consolidated report."

4.1. NI Water Response

Sub-metering pilots have been conducted at two sites - Antrim WwTW (KI545) and Brick Row WPS (JI071). These projects do not seek to deliver any direct energy reductions, rather their purpose was to quantify the full range of benefits and costs with which to inform the business case for further implementation.

Due to technical data retrieval difficulties, the data verification exercise for these pilot sites is still in progress. In an attempt to minimise costs, NI Water's in-house IT section have been developing bespoke IT architecture systems with which to retrieve the data.

Since identifying these projects in PC13 and conducting pilots in PC15, sensor, communications and cybersecurity innovation and compliance requirements have developed that will need to be considered in any future sub-metering business case.

4.1.1. NIS Directive

The UK is in the process of implementing the EU directive on the security of Networks and Information Systems (known as the NIS Directive). Under the NIS Directive, NI Water are categorised as an Operator of Essential Services (OES) within the drinking water supply

and distribution subsector, the definition for which is; supply of potable water to 200,000 or more people.

During the NIS Directive implementation period, OES, such as NI Water, have to take appropriate and proportionate security measures to manage risks to their network and information systems and are required to notify serious incidents to the relevant national authority.

With implementation of the NIS Directive underway, NI Water are strategically reviewing sub metering provision with a view towards compliance and cross cutting work streams under way; including the Digital Strategy and Business Analytics.

4.1.2. Industry 4.0

Industry 4.0 is a name for the current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, the Internet of things, cloud computing and cognitive computing. Industry 4.0 is commonly referred to as the fourth industrial revolution.

Industry 4.0 creates what has been called a "smart factory". Within the modular structured smart factories, cyber-physical systems monitor physical processes, create a virtual copy of the physical world and make decentralised decisions. This is consistent with NI Water's digital and data analytics aspirations and obligations under the NIS Directive.

NI Water Energy Team are investigating a trial of IoT technology, including an Industry 4.0 gateway, to collect energy data remotely through wireless sensors. This relatively new technology makes it easier, more cost effective and secure to collect energy data with which to make informed decisions. This technology will be trialled in 19/20 FY.

5. Conclusion

The PC15 Draft Determination Energy Efficiency programme outlined a requirement for approximately £9.0m of capital investment (nominal terms).

NI Water's 2016 response identified that the water regulations compliance elements of the clean and wastewater ("Buildings, water treatment sites - water regulation compliance & energy efficiency") projects were excluded. As a result, the baseline requirements for the Energy Efficiency programme were reduced to £7.43m.

NI Water has invested £0.98m in 2015/16, £1.54m in 2016/17 and £7.48m in 2017/18.

NI Water is seeing encouraging results from these investments. Overall electricity consumption within NI Water has out turned at 290GW in 17/18 and 286GW in 18/19 FY.

Up to 31 March 2019, cumulative energy efficiency benefits over the PC15 period amount to circa £2.6m with further efficiencies to be realised in the last 2 years of PC15.

6. Next steps & actions

The PC15 Energy Efficiency programme has been impacted by changes to the NIE Networks connection process and incentive mechanisms for renewable energy generation (e.g. ROCs). Whilst these issues impacted the programme as originally conceived, NI Water is pro-actively seeking alternative saving opportunities through a wide range of initiatives, including those outlined in section 3.1.7.

7. Appendices

Appendix 1 - Detailed list of investment in energy efficiency and renewable energy schemes and the allocation of this investment by purpose

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
Renewable	JI040	Recovering energy within the water distribution system	1.350	1.484	Y	The viability of this initiative was dependent on obtaining ROCs, with only 4 sites viable for ROCs. Updated profile reflects current expenditure incurred.	0	0	100	0
Renewable	JI041	Hydro power from raw water	0.439	0.051	Y	The viability of delivering all 10 Hydro Turbines was dependent on obtaining ROCs. 5 Hydro sites are still being considered for viability but grid connections will be difficult to obtain.	0	0	100	0
Renewable	BE017	Energy M&G	0.000	0.207	N	6 installations completed under this investment (before ROCs deadline). With a further 3 sites completed before end March 18 (BE020)	0	55	45	0

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
Renewable	EP017	Electricity generation from wind power or alternative green energy solution	2.176	1.247	Y	46 sites were completed before the 3 ROCs deadline of 30 Sept 16. Further extensions at Westland and New Holland WwTW also occurred in March 17 before the 2 ROCs deadline. 3 more sites were added prior to March 2018 end of ROCs deadline.	0	0	100	0
Cleanwater	JI032	Buildings, water treatment sites - water regulation compliance & energy efficiency	1.822	0.216	Y	Combined total of Water Regulation element and energy efficiency	59	40	0	0
Cleanwater	JI032	Water regulation compliance	1.081	N/A	Y	The Water Regulation element of this project can be considered distinct from the Energy element. The baseline has been split based on an assessment of the business case.	100	0	0	0
Cleanwater	JI032	Energy efficiency	0.741	N/A	Y	NIW has commenced with this project: Initial business case appears	0	100	0	0

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
						to have over-estimated the level of investment and benefits. NI Water has proceeded with caution, a reduced scope and therefore a reduced investment is envisaged.				
Cleanwater	JI069	WPS Pump Efficiency Capital Investment Phase 1	1.286	0.502	Y	This project has completed with benefits realisation in 16/17 and 17/18.	0	100	0	0
Cleanwater	JI075	WPS Pump Efficiency Capital Investment Phase 2	0.000	0.377	Y	NI Water are taking time to take stock of the output of JI069 and WPS analysis before proceeding with phase 2.	0	100	0	0
Cleanwater	JI071	Electrical Sub-meters (water)	0.488	0.007	Y	Spend profile broadly tracking PC15 baseline, but final form of delivery will depend on outcome of trends from data and success of data verification.	0	0	100	0
Cleanwater	WD083	Time of day pumping	0.000	0.243	N	Time of Day pumping was not included in the PC15 baseline. While not delivering any reductions in kWh, it does deliver more			100	

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
						efficient pumping practices and reduce overall costs.				
Wastewater	KI514	Buildings, wastewater treatment sites - water reg. compliance & energy efficiency	0.790	N/A	Y		65	35	0	0
Wastewater	KI514	Water regulation compliance	0.514	N/A	Y	The Water Regulation element of this project can be considered distinct from the Energy element. The baseline has been split based on an assessment of the business case.	100	0	0	0
Wastewater	KI514	Energy efficiency	0.277	0.193	Y	NIW has commenced with this project and is due to be completed in 2017/18. Initial business case appears to have over-estimated the level of investment and benefits. NI Water have proceeded with caution, reduced scope	0	100	0	0

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
						and therefore reduced investment required. 5 Wastewater sites completed under KI514 with energy benefits estimated at £40k with investment of £32k.				
Wastewater	KI517	Appraisal of Energy Efficiency at Waste Water Pumping Stations	0.021	0.003	Y		0	100	0	0
Wastewater	KI553	Energy efficiency at wastewater pumping stations	0.000	0.000	Y		0	100	0	0
Wastewater	KI545	Electrical Sub-meters -wastewater	0.651	0.01	Y	Spend profile broadly tracking PC15 baseline, but final form of delivery will depend on the outcome of trends identified from data analysis and success of data verification.	0	0	100	0

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
Wastewater	PL005	Energy Efficiency - Process Optimisation	0.000	0.253	N	Although not included in the scope of energy projects identified in Annex 6, this is a valuable project which has been successfully delivered during PC15.	0	55	45	0
Wastewater	BN048	Energy Efficiency - Process Optimisation	0.000	0.1	N	Although not included in the scope of energy projects identified in Annex 6, this is a valuable project which has been successfully delivered during PC15.	0	100	0	0
Renewable	JA312	Dunore Point WTW Renewable Energy	0	7.53	N	Completion of MW solar farm at Dunore Point WTW in 17/18 FY.	0	0	100	0
Wastewater	KI626	Energy Audit Implementation	0	1.2	N	Implementation capital funding following Water & Wastewater Audits	0	0	100	0
Total			**9.025**	**13.623**						

Appendix 2 – Energy related capital expenditure YTD

Type of project	Project code	Project title	15/16 expenditure, nominal (£m)	16/17 expenditure, nominal (£m)	17/18 expenditure, nominal (£m)	18/19 expenditure, nominal (£m)	19/20 onwards forecast spend nominal (£m)
Renewable	JI040	Recovering energy within the water distribution system	0.003	0	0	0	1.481
Renewable	JI041	Hydro power from raw water	0.009	0	0.03	-0.009	0
Renewable	EP017	Electricity generation from wind power or alternative green energy solution	0.003	1.173	0.018	-0.011	0.053
Renewable	BE017	Energy M&G	0.012	-0.002	-0.002	0	0
Cleanwater	JI032	Buildings, water treatment sites - water regulation compliance & EE	0.022	0.028	0.133	0.037	0
Cleanwater	JI032	Water regulation compliance	0	0	0	0	0
Cleanwater	JI032	Energy efficiency	0	0	0	0	0
Cleanwater	JI069	WPS Pump Efficiency Capital Investment Phase 1	0.432	0.064	0.006	0	0
Cleanwater	JI075	WPS Pump Efficiency Capital Investment Phase 2	0.037	0	0.006	0	0.33
Cleanwater	JI071	Electrical Sub-meters (water)	0.007	0	0	0	0
Cleanwater	WD083	Time of day pumping	0.059	0.03	0.137	0.086	0
Wastewater	KI514	Buildings, wastewater treatment sites - water reg. compliance & energy efficiency	0	0	0	0.034	0
Wastewater	KI514	Water regulation compliance	0	0	0	0	0
Wastewater	KI514	Energy efficiency	0.023	0.061	0.001	0	0
Wastewater	KI517	Appraisal of Energy Efficiency at Waste Water Pumping Stations	0.003	0	0	0	0
Wastewater	KI553	Energy efficiency at wastewater pumping stations	0	0	0	0	0
Wastewater	KI545	Electrical Sub-meters (wastewater)	0.011	0	-0.001	0	0
Wastewater	PL005	Energy Efficiency - Process Optimisation	0.176	0.072	0.004	0.001	0
Wastewater	BN048	Energy Efficiency - Process Optimisation	0	0.1	0	0	0
Renewable	JA312	Dunore Point WTW Renewable Energy	0	0	7.53	0.592	0
PC21 Energy Efficiency	KI626	PC21 Energy Efficiency	0	0	0	0.301	0.908
Total			**0.982**	**1.54**	**7.862**	**1.031**	**2.772**

Appendix 2 – Energy related capital expenditure YTD

Type of project	Project code	Project title	15/16 expenditure, nominal (£m)	16/17 expenditure, nominal (£m)	17/18 expenditure, nominal (£m)	18/19 expenditure, nominal (£m)	19/20 onwards forecast spend nominal (£m)
Renewable	JI040	Recovering energy within the water distribution system	0.003	0	0	0	1.481
Renewable	JI041	Hydro power from raw water	0.009	0	0.03	-0.009	0
Renewable	EP017	Electricity generation from wind power or alternative green energy solution	0.003	1.173	0.018	-0.011	0.053
Renewable	BE017	Energy M&G	0.012	-0.002	-0.002	0	0
Cleanwater	JI032	Buildings, water treatment sites - water regulation compliance & EE	0.022	0.028	0.133	0.037	0
Cleanwater	JI032	Water regulation compliance	0	0	0	0	0
Cleanwater	JI032	Energy efficiency	0	0	0	0	0
Cleanwater	JI069	WPS Pump Efficiency Capital Investment Phase 1	0.432	0.064	0.006	0	0
Cleanwater	JI075	WPS Pump Efficiency Capital Investment Phase 2	0.037	0	0.006	0	0.33
Cleanwater	JI071	Electrical Sub-meters (water)	0.007	0	0	0	0
Cleanwater	WD083	Time of day pumping	0.059	0.03	0.137	0.086	0
Wastewater	KI514	Buildings, wastewater treatment sites - water reg. compliance & energy efficiency	0	0	0	0.034	0
Wastewater	KI514	Water regulation compliance	0	0	0	0	0
Wastewater	KI514	Energy efficiency	0.023	0.061	0.001	0	0
Wastewater	KI517	Appraisal of Energy Efficiency at Waste Water Pumping Stations	0.003	0	0	0	0
Wastewater	KI553	Energy efficiency at wastewater pumping stations	0	0	0	0	0
Wastewater	KI545	Electrical Sub-meters (wastewater)	0.011	0	-0.001	0	0
Wastewater	PL005	Energy Efficiency - Process Optimisation	0.176	0.072	0.004	0.001	0
Wastewater	BN048	Energy Efficiency - Process Optimisation	0	0.1	0	0	0
Renewable	JA312	Dunore Point WTW Renewable Energy	0	0	7.53	0.592	0
PC21 Energy Efficiency	KI626	PC21 Energy Efficiency	0	0	0	0.301	0.908
Total			**0.982**	**1.54**	**7.862**	**1.031**	**2.772**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 32 FINANCIAL MEASURES

ANALYSIS OF FIXED ASSET ADDITIONS AND ASSET MAINTENANCE BY ASSET TYPE (HISTORIC COST ACCOUNTING) (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7
				WATER SERVICE			SEWERAGE SERVICE			
				INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	TOTAL
A	NIW ADDITIONS -NEW ASSETS (ENHANCEMENT)									
1	Water resource facilities	£m	3	0.371	0.395	0.766				0.766
2	Water treatment works	£m	3		3.704	3.704				3.704
3	Water distribution mains	£m	3	16.565	-0.010	16.555				16.555
4	Service reservoirs and water towers	£m	3		6.889	6.889				6.889
5	Pumping stations	£m	3		0.215	0.215				0.215
6	Water management and general	£m	3	0.854	2.184	3.037				3.037
7	Sewerage	£m	3				52.294	1.759	54.053	54.053
8	Sea outfalls and headworks	£m	3				0.133	0.216	0.349	0.349
9	Sewage treatment works	£m	3					14.113	14.113	14.113
10	Sludge treatment works	£m	3					1.497	1.497	1.497
11	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
12	In-line pumping stations	£m	3					4.291	4.291	4.291
13	Terminal pumping stations	£m	3					0.472	0.472	0.472
14	Sewerage management and general	£m	3				1.001	1.463	2.464	2.464
15	Total infrastructure additions (Enhancement)	£m	3	17.790		17.790	53.428		53.428	71.217
16	Total non-infrastructure additions (Enhancement)	£m	3		13.378	13.378		23.811	23.811	37.189
17	Total additions (Enhancement)	£m	3	17.790	13.378	31.167	53.428	23.811	77.239	108.406
B	NIW BASE SERVICE PROVISION									
18	Water resource facilities	£m	3	0.998	0.262	1.260				1.260
19	Water treatment works	£m	3		4.412	4.412				4.412
20	Water distribution mains	£m	3	15.632	2.626	18.258				18.258
21	Service reservoirs and water towers	£m	3		4.617	4.617				4.617
22	Pumping stations	£m	3		2.778	2.778				2.778
23	Water management and general	£m	3	0.949	6.720	7.669				7.669
24	Sewerage	£m	3				11.552	0.014	11.566	11.566
25	Sea outfalls and headworks	£m	3				0.001	0.018	0.019	0.019
26	Sewage treatment works	£m	3					30.745	30.745	30.745
27	Sludge treatment works	£m	3					0.156	0.156	0.156
28	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
29	In-line pumping stations	£m	3					6.720	6.720	6.720
30	Terminal pumping stations	£m	3					0.620	0.620	0.620
31	Sewerage management and general	£m	3				3.308	4.746	8.054	8.054
32	Total infrastructure renewals (Base)	£m	3	17.579		17.579	14.861		14.861	32.440
33	Total non-infrastructure expenditure (Base)	£m	3		21.415	21.415		43.019	43.019	64.434
34	Total expenditure (Base service provision)	£m	3	17.579	21.415	38.994	14.861	43.019	57.880	96.875

Table 32 – Analysis of Fixed Asset Additions and Asset Maintenance by Asset Type (Current Cost Accounting)

Refer to Chapter 30 for detailed commentary on this table. There are no reconciling items to report.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (HISTORIC COST ACCOUNTING)
DEPRECIATION CHARGE BY ASSET TYPE (NIW Only)

			1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23	24	25		26	27
			Water Service										Sewerage Service										Total									
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
A	**DEPRECIATION CHARGE FOR THE YEAR**																															
1	HCD as at 31 March of the year	£m	3	80.086	47.905	33.476	38.517	16.635	16.839		B3			66.802	83.520	66.627	67.861	35.670	36.141		B3			146.888	131.425	100.103	106.378	52.305	52.980		B3		
2	HCD on additions (enhancement assets) post 1 April 2014	£m	3							0.270	B3									0.657	B3									0.927	B3		
3	HCD on additions (MNI assets) post 1 April 2014	£m	3							0.831	B3									1.859	B3									2.690	B3		
4	Total depreciation charge for the year	£m	3							1.101	B3									2.516	B3									3.617	B3		
5	Total depreciation charged	£m	3	80.086	47.905	33.476	38.517	16.635	16.839	28.222	B3			66.802	83.520	66.627	67.861	35.670	36.141	45.545	B3			146.888	131.425	100.103	106.378	52.305	52.980	73.771	B3		

			1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23	24	25		26	27
			Water Service										Sewerage Service										Total									
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
B	**EXPENDITURE AND PROVISION**																															
6	Infrastructure renewals expenditure	£m	3	22.593	22.391	23.055	11.134	19.497	17.015	17.726	B2			8.775	7.727	8.502	9.010	10.434	13.235	14.864	B2			31.368	30.118	31.557	20.144	29.931	30.250	32.590	B2		
7	Infrastructure renewals charges	£m	3	19.902	23.935	22.488	14.410	10.253	14.679	15.077	C5			10.859	9.474	9.821	10.876	14.755	11.078	11.379	C5			30.761	33.409	32.309	25.286	25.008	25.757	26.456	C5		
8	Infrastructure renewals prepayment/ (accrual)	£m	3	12.134	10.590	11.157	7.881	17.125	19.462	22.111	C5			-10.312	-12.059	-13.378	-15.244	-19.565	-17.408	-13.923	C5			1.822	-1.469	-2.221	-7.363	-2.440	2.054	8.188	C5		

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (HISTORIC COST ACCOUNTING)
DEPRECIATION CHARGE BY ASSET TYPE (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23	24	25		26	27
				Water Service										Sewerage Service										Total									
				2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
A	**DEPRECIATION CHARGE FOR THE YEAR**																																
1	HCD as at 31 March of the year	£m	3	4.007	4.033	4.082	4.146	3.442	3.442		B3			0.000	0.000	0.000	0.000	0.000	0.000		B3			4.007	4.033	4.082	4.146	3.407	3.442		B3		
2	HCD on additions (enhancement assets) post 1 April 2014	£m	3							0.000	B3									0.000	B3									0.000	B3		
3	HCD on additions (MNI assets) post 1 April 2014	£m	3							0.141	B3									0.090	B3									0.231	B3		
4	Total depreciation charge for the year	£m	3							0.141	B3									0.090	B3									0.231	B3		
5	Total depreciation charged	£m	3	4.007	4.033	4.082	4.146	3.442	3.442	3.804	B3			0.000	0.000	0.000	0.000	0.000	0.000	4.590	B3			4.007	4.033	4.082	4.146	3.407	3.442	8.394	B3		

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23	24	25		26	27
				Water Service										Sewerage Service										Total									
				2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
B	**EXPENDITURE AND PROVISION**																																
6	Infrastructure renewals expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	B2			0.000	0.000	0.000	0.000	0.000	0.000	0.000	B2			0.000	0.000	0.000	0.000	0.000	0.000	0.00	B2		
7	Infrastructure renewals charges	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C5			0.000	0.000	0.000	0.000	0.000	0.000	0.000	C5			0.000	0.000	0.000	0.000	0.000	0.000	0.00	C5		
8	Infrastructure renewals prepayment/ (accrual)	£m	3	1.519	1.519	1.519	1.519	1.519	1.519	1.519	C5			0.000	0.000	0.000	0.000	0.000	0.000	0.000	C5			1.519	1.519	1.519	1.519	1.519	1.519	1.519	C5		

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (HISTORIC COST ACCOUNTING)
DEPRECIATION CHARGE BY ASSET TYPE (Total)

				1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23	24	25		26	27
				Water Service										Sewerage Service										Total								
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
A	**DEPRECIATION CHARGE FOR THE YEAR**																														
1	HCD as at 31 March of the year	£m	3	84.093	51.938	37.558	42.663	20.042	20.281		B3			66.802	83.520	66.627	36.141	35.670	36.141		B3			150.895	135.458	104.185	110.524	55.712	56.422		B3		
2	HCD on additions (enhancement assets) post 1 April 2014	£m	3							0.270	B3									0.657	B3									0.927	B3		
3	HCD on additions (MNI assets) post 1 April 2014	£m	3							0.972	B3									1.949	B3									2.921	B3		
4	Total depreciation charge for the year	£m	3							1.242	B3									2.606	B3									3.848	B3		
5	Total depreciation charged	£m	3	84.093	81.938	37.558	42.663	20.042	20.281	32.026	B3			66.802	83.520	66.627	36.141	35.670	36.141	50.139	B3			150.895	135.458	104.185	110.524	55.712	56.422	82.165	B3		

				1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23	24	25		26	27
				Water Service										Sewerage Service										Total								
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
B	**EXPENDITURE AND PROVISION**																														
6	Infrastructure renewals expenditure	£m	3	22.593	22.391	23.055	11.134	19.497	17.015	17.728	B2			8.775	7.727	8.502	9.010	10.434	13.235	14.864	B2			31.368	30.118	31.557	20.144	29.931	30.250	32.590	B2		
7	Infrastructure renewals charges	£m	3	19.902	23.935	22.488	14.410	10.253	14.679	15.077	C5			10.859	9.474	9.821	10.876	14.755	11.078	11.379	C5			30.761	33.409	32.309	25.286	25.008	25.757	26.456	C5		
8	Infrastructure renewals prepayment/ (accrual)	£m	3	13.653	12.109	12.676	9.400	18.644	20.981	23.630	C5			-10.321	-12.059	-13.378	-15.244	-19.565	-17.408	-13.923	C5			3.341	0.050	-0.702	-5.844	-0.921	3.573	9.707	C5		

Table 33 – Depreciation Charge by Asset Type

IFRS Depreciation Charge

The depreciation charge for the year has been populated using the same methodology used to populate Table 25. IFRS depreciation was calculated using the Fixed Asset Register (Real Asset Management).

The final IFRS depreciation report was used to analyse assets into each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity could not be readily identified as water and sewerage services and have used the following percentages split as per IFM: Water 41% and Sewerage 59%.

The table has been populated using actual depreciation figures for each financial year contained in the relevant Regulatory Accounts.

With respect to Confidence Grades this is reported as B3. This is applied given the close link with the CIDA allocations data source which has been reported as B3 in the capital expenditure tables 35 and 36.

Assets to be decommissioned or written off resulted in accelerated depreciation in the year. Assets with a NBV of £712,433.40 were decommissioned in 2018/2019 – the corresponding accelerated depreciation is included in Table 33.

There are three main PPP Projects – Alpha, Omega and Kinnegar. The depreciation for these PPP assets is shown separately in the second table for PPP only.

Depreciation for the year in relation to the PPP Alpha Project was [redacted] for 2018/19 (2017/18: [redacted]). Deprecation for Omega in 2018/19 is [redacted] and Kinnegar[redacted] (note these where previously not included in table 33 as it was prepared under UK GAAP in prior years and Omega and Kinnegar assets where not capitalised under UK GAAP).

The asset lives used in calculating depreciation are consistent with those that have been used to populate Table 34.

During the year, decommissioned assets with a net book value (NBV) of £712,433.40 were included within the current year depreciation charge.

	Water (18/19)	Sewerage (18/19)	Total (18/19)
IFRS Depreciation in year	£31,917,697.58	£49,534,794.75	£81,452,492.33
Accelerated Depreciation	£108,543.80	£603,889.60	£712,433.40
Total (2018/2019)	£32,026241.38	£50,138,684.35	£82,164,925.73

	Water (17/18)	Sewerage (17/18)	Total (17/18)
HC Depreciation in year	£20,120,139.15	£36,116,561.59	£56,236,700.74
Accelerated Depreciation	£161,294.70	£24,303.69	£185,598.39
Total (2017/2018)	£20,281,433.85	£36,140,865.28	£56,422,299.13

Note the depreciation charge for 2017/18 was under UK GAAP and therefore the charge is higher under IFRS in 2018/19. (Infrastructure and Capital Studies Infrastructure do not depreciate under UK GAAP).

Infrastructure Renewals accounting

The IRC calculation for 18/19 is based on the final determination arising from PC15. The Regulator determined that the IRC and IRE will be the same for the six year period of PC15. The projected IRE forms part of the PC15 capital expenditure plans.

The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

2018-2019 IRC

The IRC for 2018-19 based on PC15 can be summarised as follows:

Water - £15.077m
Sewerage - £11.379m
Total - £26.456m

The out-turn IRE for 2018-2019 can be shown as follows:

Water - £17.726m
Sewerage - £14.864m
Total - £32.591m

The accrual at 31 March 2019 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	17.726	14.864	32.590
IRC	(15.077)	(11.379)	(26.456)
In year (accrual)	2.649	3.485	6.134
c/f prepayment / (accrual)	20.981	(17.408)	3.573
Cumulative prepayment / (accrual)	23.630	(13.923)	9.707

At the end of the year to 31 March 2019 a prepayment balance of £9.707m was evident. This balance arose as the in-year prepayment of £6.134m for 2018-19 was added to the cumulative brought forward accrual balance of £3.573m, which existed at 31st March 2018.

In line with the underlying principles of infrastructure renewals accounting it is anticipated that the cumulative level of IRE and IRC should broadly match over the longer term. The water prepayment and sewerage accrual at 31st March 2019 will be monitored to ensure that the level of IRC charged in the future to the profit and loss account is appropriate given actual levels of IRE.

PPP

Alpha, Omega and Kinnegar have not given rise to any IRE for this year and therefore no IRC has been allocated to the PPP services.

The Statutory accounts are prepared under IFRS and infrastructure renewals accounting is not applied. Infrastructure depreciation is charged in the statutory accounts and the value of this would differ from the IRC in the regulatory accounts. However, AIR 19 has been prepared under IFRS as directed by the Utility Regulator. No IRC is reported in the regulatory accounts. IRC and IRE are only reported in Table 33.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 34 FINANCIAL MEASURES (HISTORIC COST ACCOUNTING)
ANALYSIS OF NON-INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES - NI WATER ONLY

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18
				Water Service										Sewerage Service									
				2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
A	ACCOUNTING FIXED ASSET ADDITIONS NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE																						
1	Very Short	£m	3	0.108	0.702	0.135	0.077	0.199	0.032	0.018	B2			-0.005	0.473	0.088	0.071	0.156	-0.001	0.025	B2		
2	Short	£m	3	2.457	3.136	2.779	1.154	2.954	2.858	1.710	B2			3.923	3.506	4.763	4.272	1.908	2.049	4.274	B2		
3	Medium	£m	3	2.610	2.425	7.433	2.279	1.536	7.662	3.562	B2			10.142	9.775	9.873	4.251	6.604	6.082	8.813	B2		
4	Medium long	£m	3	0.000	0.383	0.014	0.000	0.000	-0.003	0.000	B2			0.000	0.000	0.010	0.002	0.001	0.012	-0.003	B2		
5	Long	£m	3	2.640	1.566	4.926	2.715	2.094	3.405	7.858	B2			14.217	13.256	10.907	6.455	9.202	9.578	9.093	B2		
6	Land	£m	3	0.000	0.000	0.007	0.000	0.009	0.695	0.230	B2			0.102	0.050	0.021	0.261	0.340	0.538	0.201	B2		
7	Land Disposals	£m	3	-0.111	-0.351	-0.066	-0.164	-0.166	-0.128	0.046	B2			-0.160	-0.190	-0.079	-0.251	-0.120	-0.114	0.049	B2		
8	Total	£m	3	7.704	7.861	15.229	6.061	6.626	14.520	13.425	B2			28.219	26.870	25.583	15.060	18.091	18.144	22.452	B2		
B	NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE																						
9	Very Short	£m	3	2.119	1.948	0.950	1.705	2.044	1.504	0.959	B2			1.916	1.886	2.390	0.811	1.780	1.143	1.071	B2		
10	Short	£m	3	3.285	5.839	3.416	4.524	4.585	4.186	6.558	B2			4.859	6.151	5.762	4.545	4.560	4.781	9.834	B2		
11	Medium	£m	3	6.817	3.874	7.652	10.926	12.066	11.994	10.006	B2			24.145	30.514	14.642	22.828	25.713	23.372	19.223	B2		
12	Medium long	£m	3	0.000	0.134	0.506	0.380	0.481	0.149	0.053	B2			0.000	0.250	0.137	0.092	0.164	0.084	0.166	B2		
13	Long	£m	3	3.688	5.029	5.366	5.701	4.368	4.159	4.398	B2			10.338	12.185	7.153	14.523	14.031	13.473	13.574	B2		
14	Total	£m	3	15.909	16.825	17.891	23.235	23.543	21.992	21.974	B2			41.258	50.986	30.084	42.799	46.247	42.854	43.868	B2		
C	NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)																						
	Lines 15-19 not used	years	0																				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 34 FINANCIAL MEASURES (HISTORIC COST ACCOUNTING)
ANALYSIS OF NON-INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES - PPP

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16		17	18
				Water Service										Sewerage Service									
				2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CG	2019-20	2020-21
A	ACCOUNTING FIXED ASSET ADDITIONS NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE																						
1	Very Short	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
2	Short	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
3	Medium	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
4	Medium long	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
5	Long	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
6	Land	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
7	Land Disposals	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
8	Total	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a			0.000	0.000	0.000	0.000	0.000	0.000	0.000	n/a		
B	NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE																						
9	Very Short	£m	3																				
10	Short	£m	3																				
11	Medium	£m	3																				
12	Medium long	£m	3																				
13	Long	£m	3																				
14	Total	£m	3																				
C	NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)																						
15	Very Short	years	0																				

Table 34 – Financial Measures (Current Cost Accounting) - Analysis of Non-Infrastructure Fixed Asset Additions by Life Categories

Commentary and methodology

All the capital expenditure tables have been populated using project data extracted from the company's core project control system (CPMR), as well as ORACLE (Financial management system).

Internal training and mentoring has been ongoing with key staff mainly with Asset Delivery, Customer Service Delivery, PPP and Finance & Regulation directorates. This training has been delivered to external consultants where requested each year since 2010/11. Further training will be provided in future to provide refresher training for existing staff.

Methodology NIW Table

Capital expenditure is analysed in 3 separate streams as follows:

a) Capital Works Programme delivered by Engineering Procurement Directorate
b) Operations Capital
c) Management & General (M & G).

The methodology is explained in detail under these 3 areas as follows:

Capital works programme

Capital investment driver allocation (CIDA) processes have continued as per previous years.

a) CAPTRAX – CAPTRAX continues to be reconciled on a monthly basis with ORACLE so the final reports can be run directly from CAPTRAX. Two CIDA reports are generated from CAPTRAX as follows:
    - CIDA non lands – This reports the accrual in 2018/19 against each project, excluding land acquisition, with a full CIDA output.
    - CIDA lands – This reports the accrual in 2018/19 against land acquisition and the associated CIDA output.
b) CWP AIR reporting Model – The model developed in Excel for AIR09 and subsequent years has been adopted for AIR19 reporting. The model takes the outputs from the above reports from CAPTRAX and completes the tables 32, 34, & 36, 36a with the CWP element of Capital expenditure.

Costs are apportioned between infrastructure and non-infrastructure according to the process outlined in the CIDA manual.

NI Water continually review their existing processes regarding the application of CIDA and seek to ensure compliance and consistency. No major control weaknesses were identified during 2018/19.

M & G

As commenced in AIR14 CPMR M&G has been used to report M & G investment directly from the system in a similar way to the Capital Works Programme. A single report provides all the information from the CPMR system.

Operating capital

This area captures all Capital expenditure which is not managed via the CWP or included within M & G. For all Capital projects not on the CWP (herein referred to Operating Capital expenditure) the CIDA information has been captured at project level within CPMR Coptrax. This has been used in AIR19 for completion of Table 40. Unfortunately the system needs

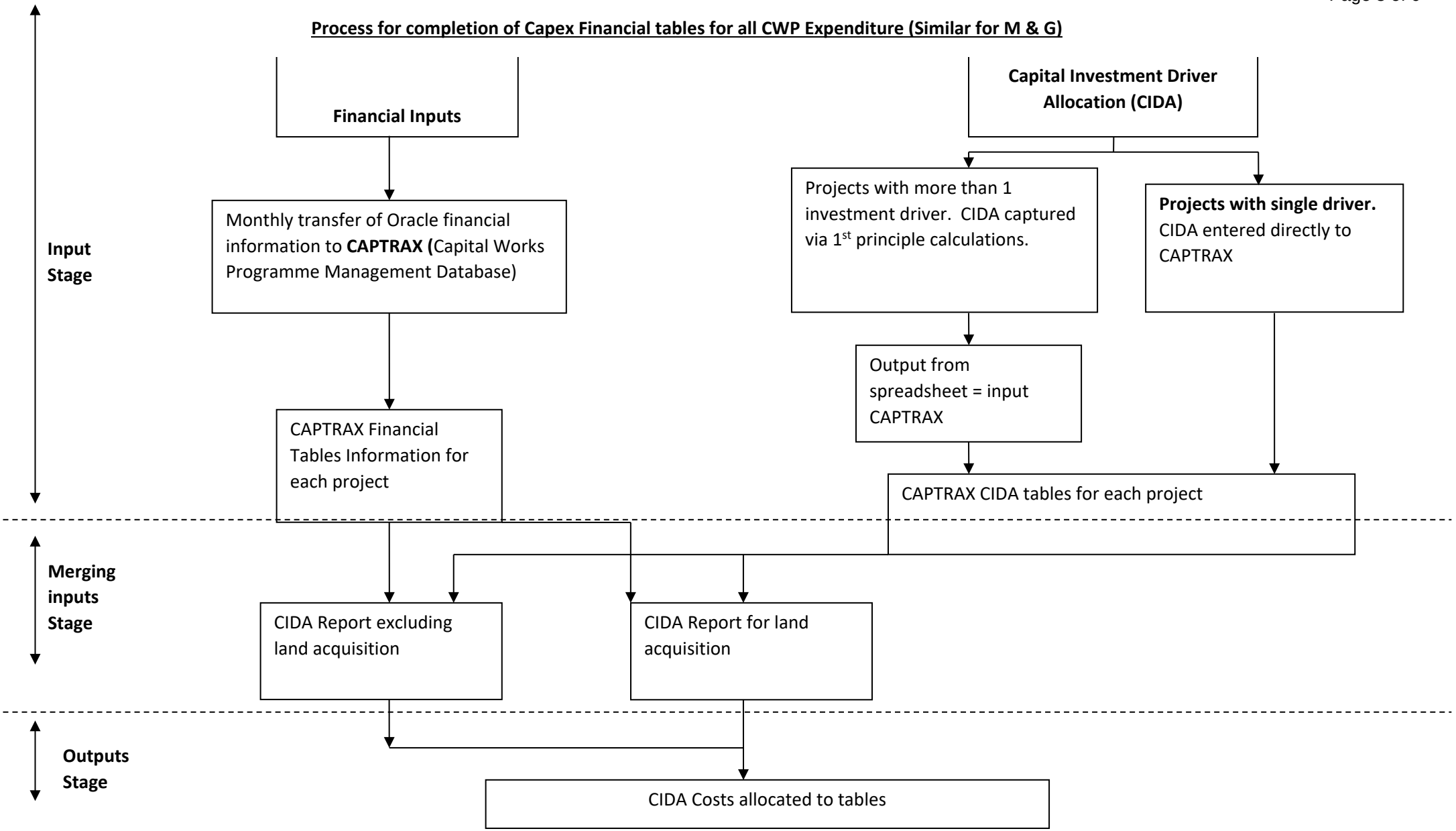
further refinement to enable reporting information for Tables 32, 34, 36 and 36a accurately as there are a significant number of contracts within each project with combinations of a number of service areas, asset types and financial categories. For reporting in AIR19, each of the contacts was verified manually in order to ensure that accurate information was used for the population of the AIR tables in a similar manner to recent years. This approach uses the Asset In Course of Construction (AICC) database and ORACLE as data sources.

Table population

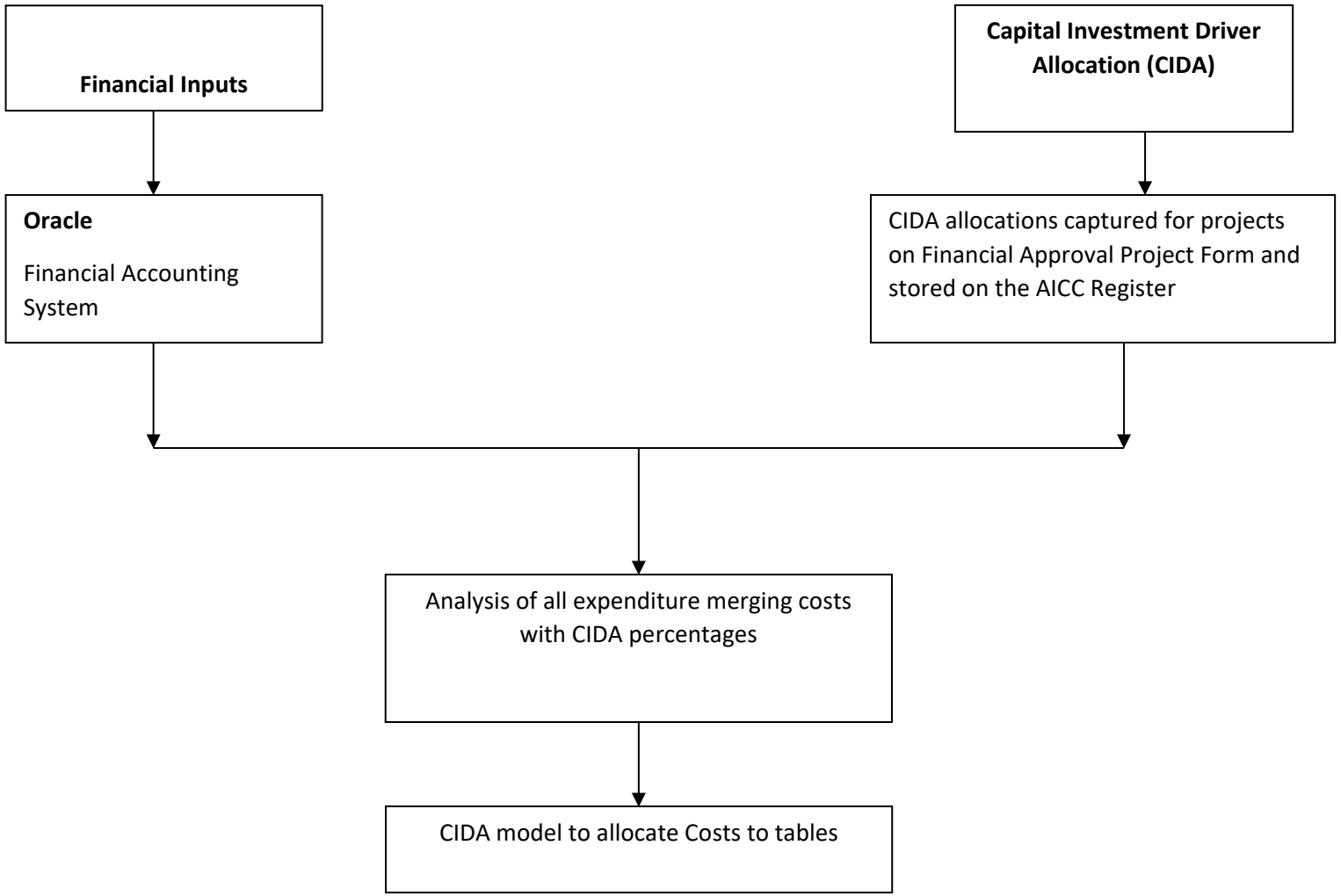
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. The small rounding figure of £3k of CWP expenditure (due to CATPRAX rounding finance to the nearest £k), is apportioned in each table in equal portions to the allocated expenditure.

Process diagrams below show the process for completing the tables.

Process for completion of Capex Financial tables for all CWP Expenditure (Similar for M & G)



Process for Completion of Capex financial tables for Operating Capital



Asset lives

The last comprehensive review of asset lives was completed as part of NIAMP2 in 2001. An interim review was completed in 2011/12 following the reporter recommendations in AIR11 and 8 new financial categories have been added to list used in NI Water. Any further changes will be processed as they occur. Asset lives on historic projects have not been amended to reflect new asset life categories. The new financial categories added and in use from April 2012 are as follows:

Table 1: New financial categories

Financial Category	Definition	Life in years
Fences	All fences around sites	40
Meters	Domestic Water Meters	17
Batteries	Batteries for loggers, toughbooks etc.	4
Filter Media	Media in Biological filters, Sand filters etc.	20
MBR Membranes	MBR membranes	5
Rotating Biological Filters	RBC package plants	20
Kiosks	All kiosk type structures including small control kiosks and prefabricated control buildings	20
Steel Tanks	All Steel tanks for storage and processes	40

Following reporter review of the PC15 plan a change initiated for AIR16 has been continued in AIR19. This change applies to the life for Meters which have been changed to 17 years to align with PC15 Business plan assumptions. Expenditure for meters has been moved from Short life to Medium life for AIR 19 report. No changes have been made to previous years' data in respect of Meter expenditure reporting.

The above categories have been added to CPMR/Captrax for CIDA allocation. The availability of the financial category is dependent on the asset type selected so for example MBR membranes are only available for selection within WwTW. The definitions have also been uploaded within the selection process, as a reminder to the project manager when selections are being made.

Individual judgements on asset lives are not made during this annual process of AIR collation.

Methodology PPP table

Figures for PPP Alpha Capital maintenance have been taken directly from the PPP Model and apportioned between Fixed Plant and Civils as per the PPP Model. This is the same process as adopted since AIR09.

PPP - Omega

No PPP OMEGA capital has been reported in the AIR19 financial tables for the following reasons:

- The Capital Cost split between Civils and M & E has been extracted from the PPP Model. This does not distinguish between infra and non infra elements and unlike

ALPHA no valid assumptions can be made to define individual projects as some of the projects contain both infra and non infra elements.

- QBEG information has been captured on each project within OMEGA in a similar basis as was captured for the SBP submission which includes backlog base. In order to maintain consistency within all the tables we have not populated any of the OMEGA capital expenditure within the tables.

PPP - Kinnegar

No PPP Kinnegar residual interest finance has been populated as NI Water has no information on either the QBEG or the Asset Life categories for this project.

NI Water Table

The asset lives adopted for Regulatory reporting are consistent with those in the Fixed Asset Register (FAR). The links for reporting purposes are outlined in the Capital investment Driver allocation manual.

The last comprehensive review of asset lives was completed as part of NIAMP2 in 2001. An interim review was completed in 2011/12 and new financial categories have been added to NI Water systems for application from April 2012.

Expenditure is charged to individual projects and these are assigned individual asset lives for regulatory reporting.

This table is consistent with the analysis in Table 32. All expenditure reported in Table 34 is in outturn prices, gross of grants and contributions.

PPP Table

The expenditure of [redacted] on this table relates to the Capital Maintenance element of PPP Alpha expenditure for 2018/19. The [redacted] is reported in Section B of the table and is split using the Asset lives split assumed in the PPP Model. There is no PPP Capital on Sewerage.

Land Disposal

NI Water has updated the figures in the former years for this line. The reason for the correction was due to incorrect understanding of the definition. In prior years the figures reported were the actual disposal receipts rather than the HCA book value. The HCA book value is determined from the Fixed Asset Register based upon the Asset Mgt plan completed in 2001. The figures stated are the HCA book values for all disposals in the stated year.

Assets fully depreciated but still in use at year-end

The total current cost Gross Book Value (GBV) of assets on the fixed asset register at 31st March 19 with zero Net Book Value (NBV) is £143,130,848.31.

Confidence grades

Confidence grades have been assigned to the elements of Table 34 based on guidance received from the Reporter in AIR11:

> "the Company should apply a confidence grade of B2 for most lines, with B3 for the smaller numbers (where a single misallocation could be more significant)."

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 35 FINANCIAL MEASURES
CAPITAL INVESTMENT - PUBLIC EXPENDITURE RECONCILIATION

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**Available PE capital budget in nominal prices**											
1	Public Expenditure capital budget available	£m	3									
B	**Capital budget statement in nominal prices**											
2	Public Expenditure capital budget used	£m	3	0.000	165.540	154.946	140.291	147.099	174.969	162.956		
3	Alpha PPP maintenance	£m	3									
4	Residual interest in off-balance sheet PPP	£m	3									
5	IFRS infrastructure renewal charge adjustment	£m	3	0.000	0.988	1.154	1.194	1.117	1.188	1.213		
6	*Further adjustments……*	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
6a	Unwinding of capital provision	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
6b	Rounding	£m	3	0.000	0.013	-0.006	-0.001	0.000	-0.003	0.002		
6c	Decapitalised assets	£m	3	0.000	0.000	0.238	0.005	0.000	0.000	0.000		
6d	Project Clear: Aquistion of Alpha PPP	£m	3						-29.179	0.000		
7	Capital grants and contributions	£m	3	0.000	6.586	7.331	7.985	11.550	14.009	14.005		
8	Capital grants and contributions transferred to deferred credits	£m	3	0.000	-0.693	-1.025	-0.999	-1.284	-1.452	-1.354		
9	NI Water gross capital budget	£m	3	0.000	167.566	158.898	143.691	154.337	152.620	171.135		

Table 35 – Financial Measures – Capital Investment – Public Expenditure Reconciliation

Introduction

This table provides a statement of the capital budget available and capital budget utilised in Public Expenditure terms and the gross capital expenditure by NI Water, all expressed in nominal terms. The table follows the content and structure of Table 3.2 of the PC15 information requirements to facilitate comparison between the Business Plan submission and actual expenditure.

Block A reports the available Public Expenditure capital budget agreed with the Department for infrastructure, DfI, for the relevant financial year. Block B provides a reconciliation between the Public Expenditure capital budget used and NI Water's gross capital expenditure, identifying differences arising from changes due to the treatment of PPP unitary charge, different accounting treatments and the impact of income from capital grants and contributions.

Line 1 - Public Expenditure capital budget available

Entries to line 1 represent the total budget 'Capital DEL Acquisitions' agreed with DfI for each financial year and includes movements to funding resulting from budget transfers within monitoring rounds. This is all expenditure which DfI classifies as 'capital DEL' and includes normal capital expenditure (both base & enhancement), PPP capital maintenance on on-balance sheet PPP contracts and residual interest on off-balance sheet PPP contracts.

As DfI have adopted IFRS as an accounting framework, the available PE will also be stated on an IFRS basis.

In the reporting year, the PE capital DEL budget available at the start of the financial year was £7.4m short of that assumed within the PC15 Final Determination (PC15 FD). This is set out in the table below and shows that the £7.4m reduction in capital DEL is equivalent to a £3.9m drop in gross capital expenditure, once other capital allocations are taken into account.

	Final Determination	Budget	Variance
	2018-19	2018-19	2018-19
	£M	£M	£M
PE Capital DEL Acquisitions	167.0	159.6	(7.4)
Alpha PPP maintenance / capex	[redacted]	[redacted]	[redacted]
Residual interest in off balance sheet PPP	[redacted]	[redacted]	[redacted]
IFRS infrastructure renewal charge adjustment	1.1	1.2	+0.1
Capital grants and contributions	6.7	11.1	+4.4
Capital grants and contributions transferred to deferred credits	(0.8)	(1.6)	(0.8)
NI Water gross capital budget	[redacted]	[redacted]	[redacted]

In terms of movements in funding within the current year, NI Water's 'Capital DEL Acquisitions' budget was increased by £2.8m in the October Monitoring Round and

increased again by £0.5m in Dec-18 for capital works required at Portrush prior to the arrival of the Open Championship in July 2019.

Capital disposals fell by £46k resulting in less spending power.

The PE capital DEL funding at the end of the reporting year is therefore as follows:

	2018/19
	£m
PE Capital DEL budget at start of year	159.600
October MR allocation	2.800
Open Championship	0.500
Reduction in spending power due to reduced capital disposals	(0.046)
PE Capital DEL budget at end of year	**162.954**

Taking into account these and other movements, gross capital expenditure available to NI Water was £171.1m, £2.2m higher than assumed in the PC15 FD.

	Final Determination	Final Outturn	Variance
	2018-19	2018-19	2018-19
	£M	£M	£M
PE Capital DEL Acquisitions	[redacted]	[redacted]	[redacted]
Alpha PPP maintenance / capex	[redacted]	[redacted]	[redacted]
Residual interest in off balance sheet PPP	[redacted]	[redacted]	[redacted]
IFRS infrastructure renewal charge adjustment	1.1	1.2	+0.1
Capital grants and contributions	6.7	14.0	+7.3
Capital grants and contributions transferred to deferred credits	(0.8)	(1.4)	(0.6)
NI Water gross capital budget	[redacted]	[redacted]	[redacted]

The changes allocated through the reporting year did not materially impact the efficient delivery of the programme or the choice of projects or categories of work delivered.

NI Water was subject to Public Expenditure capital budget reductions in the first three years of PC15. The Project Alpha acquisition in 2017/18 further reduced gross capital expenditure. Although the impact of these budget adjustments was somewhat mitigated by lower than expected inflation, the real terms budget reduction at the start of PC15 led to delays in capital output delivery which have continued to impact the PC15 programme.

In total, by the end of the reporting year, NI Water has received approximately £29m less gross capital funding than was assumed in the Utility Regulator's PC15 final determination. This is broadly in line with the level of funding needed to deliver the capital outputs identified in NI Water's PC15 Business Plan, but not enough to deliver the "additional outputs" proposed in the final determination.

NI Water recently advised DfI and principal stakeholders of the funding profile necessary in 2019/20 and 2020/21 to enable completion of PC15 nominated outputs. Whilst this does

not exceed the total anticipated funding envelope for PC15, it necessitates a capital budget in 2019/20 of c. £171m and c. £123m in 2020/21.

In the event that this level of funding is not available in 2019/20, it will not be possible for all nominated outputs to achieve beneficial use in the PC15 period.

Line 2 – PE capital budget used

Represents total 'Capital DEL Acquisitions' calculated as line 9 minus the sum of lines 3 – 8 inclusive.

Taking into account the additional budget transfers received (£2.8m & £0.65m), actual spend was in line with available 'Capital DEL Acquisitions'.

Note the PE capital used has been agreed to our 2018/19 'provisional outturn' return submitted to DfI on the 30th April 2019. The 2018/19 'final outturn' will be provided to DfI mid-July. At this time we are not aware of any potential change to the provisional figure we have used but will update the Utility Regulator of any change post submission.

Line 3 – Alpha PPP maintenance

Following the Alpha purchase in 2017/18, actual capital expenditure by the Alpha group of companies now scores as Capital DEL under Public Expenditure.

The amounts reported within line 3 includes [redacted] capital expenditure incurred directly by NI Water Alpha Ltd and [redacted] transitional capital expenditure incurred by NI Water. All transitional capital was recharged to NI Water Alpha Ltd in Mar-19.

This change now means that AIR19 Table 42 line 14 now represents an accrued amount of capital maintenance and no longer represents actual capital maintenance.

Line 4 – Residual interest in off-balance sheet PPP

This represents the element of the Omega and Kinnegar PPP unitary payments which is allocated against residual interest in the relevant year.

Although the Regulatory Accounts are now presented in IFRS, for government reporting purposes, Omega & Kinnegar remain off-balance sheet.

Each year a portion of the unitary charge is debited against a 'residual interest asset' on the balance sheet with the aim of building up an asset which can be transferred to NI Water at end of the PPP contract term. The value of this asset would equal the forecast residual value of the relevant assets at the time of transfer.

Values for residual interest are sourced directly from the original contractors' financial models. The breakdown between Omega & Kinnegar is shown below.

	2018/19
Kinnegar Residual Interest	[redacted]
Omega Residual Interest	[redacted]
Total	[redacted]

Due to the move to IRS, entries to this line no longer reconcile directly to AIR19 Table 42 line 15. This is due to Omega and Kinnegar remaining off balance sheet for Government reporting.

Line 5 – IFRS infrastructure renewals charge adjustment

This line represents a transfer of expenditure which is treated differently under IFRS and our current Regulatory Accounting Guidelines, RAG's.

DfI have adopted IFRS and require certain types of repair, which we currently classify as capital expenditure under the RAG's, to be reported as operational expenditure under IFRS and therefore under PE reporting.

The table summarises expenditure currently decapitalised under IFRS.

	Actual 2018-19 £
IFRS Adjustment on De-capitalised Repairs	
LN098103 - Leakage Detection South PC15	94,178
LN098104 - Leakage Detection East PC15	94,179
LN099103 - Leakage Detection North & North East PC15	62,786
LN099104 - Leakage Detection West & South West PC15	62,786
LN101103 - Repair of Defects identified as a result of leakage detection activities	404,613
LN110114 - High Volume DMA's SE (Consultants' fees)	107,637
LN110114- High Volume DMA's NW (Consultants' fees)	114,266
LN136103 - Active Leakage Control SE	81,315
LN136104 - Active Leakage Control SE	81,315
LN137103 - Active Leakage Control NW	54,210
LN137104 - Active Leakage Control NW	54,210
Other	1,870
TOTAL	**1,213,366**

Line 6 – Further adjustments

Rounding difference of £0.002m reported.

Line 7 – Capital grants and contributions

This represents the total of capital grants and contributions received in nominal prices.

Entries to this line are consistent with AIR19 Table 37 line 17.

Line 8 – Capital grants and contributions transferred to deferred credits

An element of the capital grants and contributions received is assumed to relate to non-infrastructure assets with an associated useful life. Adoption of the financial 'matching' principle, i.e. the process of linking revenue to associated costs means that we must match the amortisation of the contribution against the depreciation charge on the assets over their useful economic life.

We currently assume 30% of infrastructure charges relate to non-infrastructure and is transferred to a deferred capital contribution account and released to the P&L over a 20 year period.

We have also received and deferred a number of capital grants in 2018/19. These are being released over a period of 60 years. As noted above, a different approach has been adopted in PE for these grants.

Entries to this line are consistent with AIR19 Table 37 line 18.

Line 9 – NI Water gross capital expenditure

Represents gross capital expenditure as per AIR19 Table 36.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 36 FINANCIAL MEASURES
CAPITAL INVESTMENT - GROSS CAPITAL INVESTMENT SUMMARY

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**Water service**																			
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	15.909	16.825	B3	17.891	B3	23.235	B2	23.543	B3	21.992	B3	21.415	B3				
2	Infrastructure renewals expenditure (gross)	£m	3	22.593	22.391	B3	23.055	B3	11.133	B2	19.497	B3	16.687	B3	17.725	B3				
3	Capital expenditure - quality enhancement programme	£m	3	9.972	14.396	B3	21.913	B3	14.646	B2	14.177	B3	7.347	B3	11.233	B3				
4	Capital expenditure - customer service	£m	3	3.126	3.262	B3	2.616	B3	1.194	B2	3.175	B3	11.304	B3	5.068	B3				
5	Capital expenditure - supply demand balance	£m	3	17.782	15.049	B3	21.478	B3	13.791	B2	7.393	B3	5.554	B3	14.867	B3				
5a	Capex - new development	£m	3	8.323	4.777	B3	4.628	B3	5.258	B2	4.721	B3	3.045	B3	5.835	B3				
5b	Capex - growth	£m	3	0.244	0.309	B3	0.634	B3	0.051	B3	0.016	B3	-0.012	B3	4.118	B3				
5c	Capex - security of supply	£m	3	9.214	9.842	B3	16.099	B3	8.436	B2	2.625	B3	2.486	B3	4.890	B3				
5d	Capex - free meters	£m	3	0.000	0.121	B3	0.117	B3	0.046	B3	0.031	B3	0.034	B3	0.024	B3				
6	Gross capital expenditure - water service	£m	3	69.382	71.923	B3	86.953	B3	63.999	B2	67.786	B3	62.885	B3	70.308	B3				
B	**Sewerage Service**																			
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	41.258	50.986	B3	30.084	B3	42.799	B2	46.247	B3	42.854	B3	43.019	B3				
8	Infrastructure renewals expenditure (gross)	£m	3	8.775	7.727	B3	8.502	B3	9.010	B2	10.434	B3	10.475	B3	14.864	B3				
9	Capital expenditure - quality enhancement programme	£m	3	21.626	21.238	B3	15.179	B3	13.851	B2	13.559	B3	16.305	B3	19.301	B3				
10	Capital expenditure - customer service	£m	3	2.899	3.955	B3	4.137	B3	4.406	B2	5.359	B3	7.518	B3	10.517	B3				
11	Capital expenditure - supply demand balance	£m	3	18.318	11.736	B3	14.043	B3	9.626	B2	10.951	B3	12.584	B3	13.127	B3				
11a	Capex - new development	£m	3	17.871	11.579	B3	14.013	B3	9.626	B2	10.951	B3	12.578	B3	13.127	B3				
11b	Capex - sewage treatment	£m	3	0.447	0.158	B3	0.030	B3	0.000	B3	0.000	B3	0.007	B3	0.000	B3				
12	Gross capital expenditure - sewerage service	£m	3	92.876	95.643	B3	71.945	B3	79.692	B2	86.551	B3	89.735	B3	100.828	B3				
C	**Gross capital expenditure total**																			
13	Gross capital expenditure total	£m	3	162.258	167.566	B3	158.898	B3	143.691	B2	154.337	B3	152.620	B3	171.135	B3				
D	**Adopted assets, nil cost assets**	£m	3																	
14	Water service assets adopted at nil cost	£m	3	0.000	0.000	B3	0.000	B3	0.000	B3	0.000	B3	0.000	B3	0.000	B3				
15	Water service assets adopted in return for an payment	£m	3	0.000	0.000	B3	0.000	B3	0.000	B3	0.000	B3	0.000	B3	0.000	B3				
16	Sewerage service asset adopted at nil cost	£m	3	48.233	59.566	B3	48.406	B3	32.724	B2	32.071	B3	31.145	B3	34.295	B3				
17	Sewerage service assets adopted in return for a payment.	£m	3	0.000	0.000	B3	0.000	B3	0.000	B3	0.000	B3	0.000	B3	0.000	B3				
18	Total adopted assets and nil cost assets	£m	3	48.233	59.566	B3	48.406	B3	32.724	B3	32.071	B3	31.145	B3	34.295	B3				
E	**Infrastructure renewals expenditure (net)**																			
19	Water service infrastructure renewals expenditure (net) (NIW only)	£m	3	22.514	22.277	B3	23.022	A2	10.930	B2	19.430	A2	16.609	A2	17.579	A2				
20	Sewerage service infrastructure renewals expenditure (net) (NIW only)	£m	3	8.609	7.632	B3	8.438	A2	9.010	B2	10.434	A2	10.461	A2	14.861	A2				
21	Total infrastructure renewals expenditure (net) (NIW only)	£m	3	31.123	29.909	B3	31.460	A2	19.941	B2	29.864	A2	27.070	A2	32.440	A2				
F	**Total asset additions**																			
22	Water service total asset additions	£m	3	46.788	49.532	B3	63.898	B3	52.866	B2	48.289	B3	46.197	B3	52.582	B3				
23	Sewerage service total asset additions	£m	3	132.334	147.482	B3	111.849	B3	103.406	B2	108.188	B3	110.405	B3	120.258	B3				
24	Total asset additions	£m	3	179.122	197.014	B3	175.747	B3	156.272	B2	156.477	B3	156.603	B3	172.841	B3				

Table 36 - Capital Investment - Gross Capital Investment Summary

Refer to Chapter 30 for detailed commentary on this table. There are no reconciling items to report.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 36A FINANCIAL MEASURES
CAPITAL INVESTMENT - GROSS CAPITAL INVESTMENT VARIANCE

				1	2	3	4	5	6	7	8	9	10	11	12	13	14
				PC15 OUTTURN (£M)							PC15 FINAL DETERMINATION (£M)						
	DESCRIPTION	UNITS	DP	REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15	REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15
A	**Water service**																
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	23.235	23.543	21.992	21.415			90.186	22.576	23.060	23.673	24.292			93.601
2	Infrastructure renewals expenditure (gross)	£m	3	11.133	19.497	16.687	17.725			65.043	14.012	14.313	14.693	15.077			58.095
3	Capital expenditure - quality enhancement programme	£m	3	14.646	14.177	7.347	11.233			47.403	13.810	14.106	19.365	19.283			66.565
4	Capital expenditure - customer service	£m	3	1.194	3.175	11.304	5.068			20.741	4.036	4.123	3.707	3.459			15.325
5	Capital expenditure - supply demand balance	£m	3	13.791	7.393	5.554	14.867			41.605	14.109	14.411	15.309	15.410			59.239
6	Gross capital expenditure - water service	£m	3	63.999	67.786	62.885	70.308			264.978	68.544	70.013	76.748	77.520			292.825
B	**Sewerage Service**																
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	42.799	46.247	42.854	43.019			174.919	36.143	36.918	37.899	38.889			149.849
8	Infrastructure renewals expenditure (gross)	£m	3	9.010	10.434	10.475	14.864			44.783	10.575	10.802	11.089	11.379			43.845
9	Capital expenditure - quality enhancement programme	£m	3	13.851	13.559	16.305	19.301			63.015	20.380	20.817	14.489	17.616			73.302
10	Capital expenditure - customer service	£m	3	4.406	5.359	7.518	10.517			27.800	8.802	8.991	10.080	5.954			33.827
11	Capital expenditure - supply demand balance	£m	3	9.626	10.951	12.584	13.127			46.288	8.016	8.188	8.474	11.411			36.089
12	Gross capital expenditure - sewerage service	£m	3	79.692	86.551	89.735	100.828			356.806	83.917	85.715	82.031	85.249			336.912
C	**Gross capital expenditure total**																
13	Gross capital expenditure total	£m	3	143.691	154.337	152.620	171.135			621.784	152.461	155.728	158.779	162.769			629.737
D	**CAPITAL CONTRIBUTIONS NET OF DEFERRED CREDITS**																
14	Capital contributions for new connections	£m	3	7.782	11.483	13.917	13.917			47.099	4.174	4.263	4.431	4.575			17.443
15	Other capital contributions	£m	3	0.203	0.067	0.092	0.092			0.454	1.226	1.253	1.300	1.109			4.888
16	Total capital contributions net of deferred credits	£m	3	7.985	11.550	14.009	14.009			47.553	5.400	5.516	5.731	5.684			22.331
E	**TOTAL CAPITAL EXPENDITURE (NET)**																
17	Total capital expenditure (net)	£m	3	135.706	142.787	138.611	157.126			574.231	147.061	150.212	153.048	157.085			607.407

				15	16	17	18	19	20	21	22	23	24	25	26	27	28
				PC15 VARIANCE FROM FD (£M)							PC15 VARIANCE FROM FD (%)						
	DESCRIPTION	UNITS	DP	REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15	REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15
A	**Water service**																
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	-0.659	-0.483	1.680	2.877			3.415	-2.9	-2.1	7.1	11.842			3.6
2	Infrastructure renewals expenditure (gross)	£m	3	2.879	-5.184	-1.994	-2.648			-6.948	20.5	-36.2	-13.6	-17.565			-12.0
3	Capital expenditure - quality enhancement programme	£m	3	-0.835	-0.071	12.018	8.050			19.162	-6.0	-0.5	62.1	41.749			28.8
4	Capital expenditure - customer service	£m	3	2.842	0.947	-7.597	-1.609			-5.416	70.4	23.0	-204.9	-46.514			-35.3
5	Capital expenditure - supply demand balance	£m	3	0.318	7.018	9.755	0.543			17.634	2.3	48.7	63.7	3.522			29.8
6	Gross capital expenditure - water service	£m	3	4.545	2.227	13.863	7.213			27.847	6.6	3.2	18.1	9.304			9.5
B	**Sewerage Service**																
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	-6.656	-9.329	-4.955	-4.130			-25.070	-18.4	-25.3	-13.1	-10.619			-16.7
8	Infrastructure renewals expenditure (gross)	£m	3	1.565	0.368	0.614	-3.485			-0.938	14.8	3.4	5.5	-30.630			-2.1
9	Capital expenditure - quality enhancement programme	£m	3	6.529	7.258	-1.815	-1.685			10.286	32.0	34.9	-12.5	-9.566			14.0
10	Capital expenditure - customer service	£m	3	4.396	3.632	2.561	-4.563			6.027	49.9	40.4	25.4	-76.641			17.8
11	Capital expenditure - supply demand balance	£m	3	-1.610	-2.764	-4.110	-1.716			-10.199	-20.1	-33.8	-48.5	-15.034			-28.3
12	Gross capital expenditure - sewerage service	£m	3	4.225	-0.836	-7.704	-15.579			-19.894	5.0	-1.0	-9.4	-18.274			-5.9
C	**Gross capital expenditure total**																
13	Gross capital expenditure total	£m	3	8.770	1.391	6.159	-8.366			7.954	5.8	0.9	3.9	-5.140			1.3
D	**CAPITAL CONTRIBUTIONS NET OF DEFERRED CREDITS**																
14	Capital contributions for new connections	£m	3	-3.608	-7.220	-9.486	-9.342			-29.656	-86.4	-169.3	-214.1	-204.196			-170.0
15	Other capital contributions	£m	3	1.023	1.186	1.208	1.017			4.434	83.4	94.7	92.9	91.704			90.7
16	Total capital contributions net of deferred credits	£m	3	-2.585	-6.034	-8.278	-8.325			-25.222	-47.9	-109.4	-144.4	-146.466			-112.9
E	**TOTAL CAPITAL EXPENDITURE (NET)**																
17	Total capital expenditure (net)	£m	3	11.355	7.425	14.437	-0.041			33.176	7.7	4.9	9.4	-0.026			5.5

Table 36a – Capital Investment – Expenditure comparison by service and purpose

Refer to Chapter 30 for detailed commentary on this table. There are no reconciling items to report.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 37 FINANCIAL MEASURES
CAPITAL INVESTMENT - CAPITAL GRANTS AND CONTRIBUTIONS

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**Water Service - Maintenance grants and contributions**											
1	MNI - grants and contributions.	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
2	Infrastructure renewals grants and contributions.	£m	3	0.079	0.114	0.033	0.203	0.067	0.078	0.146		
3	Total maintenance grants and contributions	£m	3	0.079	0.114	0.033	0.203	0.067	0.078	0.146		
B	**Water Service - Enhancement grants and contributions**											
4	Infrastructure charge receipts - new connections	£m	3	1.127	1.272	1.426	1.800	2.284	2.561	2.446		
5	Enhancement requisitions, grants and contributions	£m	3	2.031	2.054	2.387	2.553	4.038	3.339	4.575		
6	*Other categories of capital grants and contributions to be added by NI Water*	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
7	Total enhancement capital grants and contributions	£m	3	3.158	3.326	3.813	4.353	6.322	5.900	7.021		
C	**Water Service - Deferred credits**											
8	Capital grants and contributions transferred to deferred credits	£m	3	0.500	0.382	0.666	0.545	0.685	0.768	0.734		
D	**Sewerage Service - Maintenance grants and contributions**											
9	MNI - grants and contributions.	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
10	Infrastructure renewals grants and contributions.	£m	3	0.166	0.095	0.064	0.000	0.000	0.014	0.003		
11	Total maintenance grants and contributions	£m	3	0.166	0.095	0.064	0.000	0.000	0.014	0.003		
E	**Sewerage Service - Enhancement grants and contributions**											
12	Infrastructure charge receipts - new connections	£m	3	0.911	1.036	1.195	1.515	1.997	2.280	2.065		
13	Enhancement requisitions, grants and contributions	£m	3	1.443	2.015	2.226	1.914	3.164	5.737	4.770		
14	*Other categories of capital grants and contributions to be added by NI Water*	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
15	Total enhancement capital grants and contributions	£m	3	2.354	3.051	3.421	3.429	5.161	8.017	6.835		
F	**Sewerage Service - Deferred credits**											
16	Capital grants and contributions transferred to deferred credits	£m	3	0.404	0.311	0.359	0.454	0.599	0.684	0.620		
G	**Totals for the Water and Sewerage Services**											
17	Total enhancement capital grants and contributions	£m	3	5.757	6.586	7.331	7.985	11.550	14.009	14.005		
18	Total capital grants and contributions transferred to deferred credits	£m	3	0.904	0.693	1.025	0.999	1.284	1.452	1.354		

Table 37 – Capital Investment - Capital Grants and Contributions

Line 1 – Water service MNI – grants and contributions

Nil for 2018-19.

Line 2 – Water service maintenance grants and contributions

This line shows £0.146m and represents contributions from developers towards the cost of watermains diversions.

Line 4 – Water service infrastructure charge receipts - new connections

This line shows £2.446m and represents the receipts from developers for water infrastructure charges. This is stated gross prior to accounting for the element that is deemed to contribute to non-infrastructure expenditure.

Line 5 – Water service enhancement requisitions, grants and contributions

This line can be summarised as follows:

New water connections	£ 3.266m
Water requisitions	£ 0.021m
Grants	£ 1.288m
Total Line 5	**£ 4.575m**

Line 6 – Water service other categories of capital grants and contributions

Nil for 2018-19.

Line 8 – Water service deferred credits

This line shows £0.734m and represents:

(i) the element of the receipts from developers for water infrastructure charges that are deemed to contribute to non-infrastructure expenditure.

This is calculated as follows:
Line 4 £2.446m x 30% = £0.734m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to non-infrastructure growth.

Line 9 – Sewerage service MNI – grants and contributions

Nil for 2018-19.

Line 10 – Sewerage service - maintenance grants and contributions

This line shows £0.003m and represents contributions from developers towards the cost of realignment of sewers.

Line 12 – Sewerage service - Infrastructure charge receipts - new connections

This line shows £2.065m and represents the receipts from developers for sewerage infrastructure charges. This is stated gross prior to accounting for the element that is deemed to contribute to non-infrastructure expenditure.

Line 13 – Sewerage service - enhancement requisitions, grants and contributions

This can be summarised as follows:

New sewerage connections	£1.625m
Sewerage requisitions	£0.580m
Sewers for adoption –application fees	£1.042m
Grants	£1.523m
Total Line 13	**£4.770m**

Line 14 – Sewerage service - other categories of capital grants and contributions

Nil for 2018-19.

Line 16 – Sewerage service deferred credits

This line shows £0.620m and represents the element of the receipts from developers for sewerage infrastructure charges that are deemed to contribute to non-infrastructure expenditure.

This is calculated as follows:
Line 12 £2.065m x 30% = £0.620m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to non-infrastructure growth.

Comparison of 2018-19 to PC15*

The following table shows a comparison of the actual contributions for 2018-19 compared to PC15.

	2018-19 Actual	**2018-19 PC15**	**2018-19 Variance**	**2018-19 Variance**
	£m	**£m**	**£m**	**%**
Water				
Infrastructure – base	0.0	0.0	0.0	N/A
Infrastructure charges - gross	2.5	1.5	1.0	66.7%
Connections	3.2	2.3	0.9	39.1%
Requisitions	0.0	0.1	-0.1	-100.0%
Grants	1.3	0.0	1.3	1300.0%
Total	**7.0**	**3.9**	**3.1**	**79.5%**
Included in the gross Infrastructure charges above the non infrastructure element - 30%	0.8	0.5	0.3	60.0%
Sewerage				
Infrastructure – base	0.0	0.0	0.0	N/A
Infrastructure charges – gross	2.1	1.2	0.9	75.0%
Connections	1.6	1.0	0.6	60.0%
Requisitions	0.6	0.2	0.4	200.0%
Sewers for adoption	1.0	0.5	0.5	100.0%
Grants	1.5	0.0	1.5	1500.0%
Total	**6.8**	**2.9**	**3.9**	**134.5%**
Included in the gross Infrastructure charges above the non infrastructure element - 30%	0.6	0.4	0.3	75.0%
Total contributions	**13.8**	**6.8**	**6.0**	**88.2%**
Which includes: *non-infrastructure contributions*	**1.4**	**0.9**	**0.6**	**66.7%**

**This table is rounded to one decimal place to reflect the presentation of these figures in the PC15 submission.*
Note: no base infrastructure contributions or new grants were assumed in PC15.

The level of activity around developer contributions is very difficult to project.

The Developers Services Team has made the following observations in regards to the current status of the new development market.

The development market has been relatively depressed over the past eight years with few developments brought to completion since 2009. However the development sector is now showing signs of strengthening with NIW noting an increase of approximately 30% in the activity in the sector over the last two years which is consistent with a recent NHBC UK Report. However the trend shows a smaller average number of units being constructed per development which will impact on all the associated developer contributions.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 38 FINANCIAL MEASURES

CAPITAL INVESTMENT - ADDITIONAL OPEX FROM CAPEX

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	OPEX from CAPEX											
1	Additional OPEX arising from Water Service projects	£m	3		0.215	0.004	0.027	0.026	0.022	0.029		
2	Additional OPEX arising from Sewerage Service projects	£m	3		1.483	0.403	0.003	-0.021	0.025	0.065		
3	Total additional OPEX	£m	3		1.698	0.407	0.030	0.005	0.047	0.094		

Table 38 - Capital investment - additional opex from capex

A list of sites with CAR ID's is obtained and the Opex costs for 2018/19 are calculated for these sites through various reports.

The Opex from Capex costs have been calculated by taking the difference between the total 2018/19 costs and the 2017/18 costs.

Line 1 Additional OPEX arising from water service projects

The total of water pumping stations and water treatment plants has been used to populate Line 1 in Table 38 which is £0.029M which is comparable to the PC15 submission amount for 2018-19.

Line 2 - Additional OPEX arising from sewerage service projects

The total of the sewage pumping stations and the wastewater treatment works have been used to populate Line 2 in Table 38 which is a reduction of £0.065M which is more than what was forecast in the PC15 submission for 2018-19. Work on the projects detailed in the PC15 submission has been accelerated due to prioritisation or deferred to later years or the PC21 period. NIW are now focussing on delivery of targets at a PC period level rather than in year.

Line 3 - Total additional OPEX

The total figure is £0.094M. This is comparable to the PC15 submission amount for 2018-19. Work on the projects detailed in the PC15 submission has been accelerated due to prioritisation or deferred to later years or the PC21 period. NIW are now focussing on delivery of targets at a PC period level rather than in year.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 40 CAPITAL INVESTMENT
CAPITAL INVESTMENT MONITORING - CIM
ANNUAL INFORMATION RETURN 2018-19

Project Identification / Baseline Milestone Dates

Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign-off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	2018_19 Q4	KV226	Dromore Street, Banbridge Foul Sewer Extension	00	KI551		07	24								
2	2018_19 Q4	KV229	Ben Crom Place, Kilkeel - Storm Sewer Extension	00	KI551		07	24								
3	2018_19 Q4	KV233	Canal St, Newry - Storm Sewer Extension	06	KI551		07	24								
4	2018_19 Q4	KV235	Pound Hill, Dromore - Storm Sewer Extension	06	KI551		07	24								
5	2018_19 Q4	KI605	Storm water separation pilot study phase 2	06	KI555		07	12								
6	2018_19 Q4	JN488	Aghyaran Road Booster Station	06	JR349		05	08								
7	2018_19 Q4	KR389	Ballyhalbert WwTW Interim Solution	01	KS111		09	15	NIEA			30/11/2009	23/12/2011		23/12/2011	22/12/2012
8	2018_19 Q4	KR391	Portavogie WwTW Interim Solution	01	KS111		07	15	NIEA			30/11/2009	25/09/2012		25/09/2012	25/09/2013
9	2018_19 Q4	KS887	Ballycranbeg WWTW	02	KS111		09	16	NIEA			01/04/2013	31/12/2013		30/03/2014	30/03/2015
10	2018_19 Q4	KR388	Ballywalter WwTW Interim Solution	01	KS113		09	15	NIEA			14/03/2008	04/09/2012		04/09/2012	04/09/2013
11	2018_19 Q4	KS927	Whitechurch Road Ballywalter Sewage Scheme	00	KS113		07	24	DRD							
12	2018_19 Q4	KS939	Central Promenade, Newcastle CSO Upgrade (Pattons Bridge)	03	KS848		07	12	NIEA							
13	2018_19 Q4	JA264	Crosskennan SR, Antrim, Water Pumping Station.	00			05	06	DWI	26/02/2010	12/04/2010	31/05/2010	28/04/2011		28/04/2011	27/04/2012
14	2018_19 Q4	JA271	Killylane WTW	02			06	01	DWI			01/04/2013	31/12/2013		31/03/2014	31/03/2015
15	2018_19 Q4	JA289	Lylehill WPS Templepatrick Site Security Improvements	00			05	01	DRD							
16	2018_19 Q4	JA290	Killylane Dunore East Phase 1	00			03	08	DRD							
17	2018_19 Q4	JA293	Lurgan Road, Glenavy, Watermain Extension	00			03	23	DRD							
18	2018_19 Q4	JA300	A31 Magherafelt By-Pass, Watermain Diversions	00			03	23	DRD							
19	2018_19 Q4	JA301	Niblock Road, Antrim, Watermain Extension.	00			03	23	DRD							
20	2018_19 Q4	JA306	Carrickfergus Road, Larne, Water Quality Schemes.	00			03	08								
21	2018_19 Q4	JA308	A6 Castledawson to Randalstown	00			03	23								
22	2018_19 Q4	JA310	WIIM Phase 2 Dunore East WP	06			03	08								
23	2018_19 Q4	JA311	WIIM Phase 2 Dunore Point WP	06			03	08								
24	2018_19 Q4	JA312	Dunore Point WTW Renewable Energy	06			06	01								
25	2018_19 Q4	JA313	Antrim North WIIM 2.1 Work Package	06			03	08								
26	2018_19 Q4	JA314	Antrim South WIIM 2.1 Work Package	06			03	08								
27	2018_19 Q4	JA315	Belraugh WPS	06			05	01								
28	2018_19 Q4	JA317	Antrim Ballyclare WIIM 2.1 WP	06			03	08								
29	2018_19 Q4	JA319	Dorisland Wtw treatability recommended improvements.	06			02	04								
30	2018_19 Q4	JB671	Glenlough Pumping Station & Pumping Main	01			03	01	DWI							
31	2018_19 Q4	JB692	Rathlin Island SR rationalisation	00			03	06	DRD							
32	2018_19 Q4	JB693	Carland to Cookstown Strategic Trunk Main	04			03	05	DRD				31/03/2021			
33	2018_19 Q4	JB694	Tully Rehab Work Packages.	03			03	08	DRD							
34	2018_19 Q4	JB695	Buckna WPS Upgrade - Ballymena Flow Optimisation	03			05	01	DRD							
35	2018_19 Q4	JB704	Desertcreat Road/ Lindsayville Road, Cookstown, Replacement Watermain	00			03	23	DWI							
36	2018_19 Q4	JB706	A26 Dualling: Glarryford to A44 (Drones Road) Junction - Water main repla	00			03	23	DRD							
37	2018_19 Q4	JB709	Lough Fea CWB Capacity Increase	06			04	06	DWI				30/09/2019			
38	2018_19 Q4	JB713	Replacement Watermains 2014/15 - Reactive, Bundle 1	03			03	08	DWI							
39	2018_19 Q4	JB717	Craigyhill Bungalows, Larne, Lead Supply Pipe Replacement Pilot	00			03	23								
40	2018_19 Q4	JB723	Moyola WTW to Mullaghaboy SR Trunk Main Replacement	06			03	23								
41	2018_19 Q4	JB724	Killylane WTW to Crosshill SR Trunk Main Replacement (part)	06			03	23								
42	2018_19 Q4	JB725	WIIM Phase 2 Lough Fea WP	06			03	08								
43	2018_19 Q4	JB726	WIIM Phase 2 Moyola Magherafelt WP	06			03	08								
44	2018_19 Q4	JB727	WIIM Phase 2 Altnahinch Bushmills WP	06			03	08								
45	2018_19 Q4	JB732	Killylane to Crosshill SR TM Replacement Stage 4, including 125mm distrib	06			03	05								
46	2018_19 Q4	JB735	Central Zone Resilience	06			01	23								
47	2018_19 Q4	JC385	Monaclogh SR Capacity Extension	06			04	06	DWI	25/10/2010						
48	2018_19 Q4	JC386	Craigpark SR Capacity Extension	06			04	06	DWI							
49	2018_19 Q4	JC387	Lagavara SR Capacity Extension	06			04	06	DWI							
50	2018_19 Q4	JC390	Rathlin Island Borehole Feasibility Study	00			01	04	DRD							
51	2018_19 Q4	JC391	Marine Apartments, Ballycastle, W/main ext.	00			03	23	DRD							
52	2018_19 Q4	JC397	Kilraughts Road Ballymoney Water Main Replacement	03			03	23	DRD							
53	2018_19 Q4	JC399	WIIM Phase 2 Ballinrees Limavady WP	06			03	08								
54	2018_19 Q4	JC400	WIIM Phase 2 Altnahinch Bushmills 2 WP	06			03	08								
55	2018_19 Q4	JC401	Royal Portrush - Open 2019 Watermains	06			03	23								
56	2018_19 Q4	JC402	Friary Road, Armoy, Watermain Replacement	00			03	23								
57	2018_19 Q4	JD343	Ballybollen Road Ahoghill - Watermain Extension	01			03	08								
58	2018_19 Q4	JF007	Seagahan Zone Watermain Improvements	00			03	08		26/04/2006		14/01/2008	29/09/2008		29/09/2008	29/09/2009
59	2018_19 Q4	JF606	WIIM Phase 2 Clay Lake Keady WP	06			03	08								
60	2018_19 Q4	JF607	Dorisland Impounding Reservior	06			02	03								
61	2018_19 Q4	JF608	Craigavon WIIM 2.1 Work Package	06			03	08								
62	2018_19 Q4	JF610	Southern Zone Resilience	06			01	23								
63	2018_19 Q4	JG035	Ballydougan to Newry Main Link Reinforcement	02			03	05	DWI	01/10/2009	26/10/2009	07/12/2009	28/08/2015		28/02/2015	28/02/2016
64	2018_19 Q4	JG036	Castor Bay to Dungannon Strategic Trunk Mains	01			03	05	DWI	11/12/2008	23/12/2008	14/09/2009	24/05/2011		24/05/2011	23/05/2012
65	2018_19 Q4	JG079	Legahory Craigavon, Replacement Watermains	00			03	23	DWI							
66	2018_19 Q4	JG080	Cranny Lane, Portadown Watermain Ext	00			03	23	DRD							
67	2018_19 Q4	JG082	Derryola Bridge Road, Craigavon, Replacement Watermain	00			03	23	DRD							
68	2018_19 Q4	JG084	Seagoe Refurbishment	06			15	20								
69	2018_19 Q4	JG085	Millennium Way, Lurgan (New Road Construction)	00			03	23								
70	2018_19 Q4	JG087	Castor Bay WTW to Ballydougan SR Upgrade	00			03	05	DWI							
71	2018_19 Q4	JI003	Water Mains Rehabilitation, New and Replacement incl FTS	00			03	08	DWI							
72	2018_19 Q4	JF592	Granville Dungannon Invest NI Watermain Extension	00	JI003		03	23	DRD							
73	2018_19 Q4	JR444	Newtownabbey Zone Watermain Improvements Phase 3	00	JI003		03	08	UR							
74	2018_19 Q4	JI005	Base Maintenance (Water)	00			02	01	UR							
75	2018_19 Q4	JF581	Clay Lake - Remedial Work	00	JI005		02	01	UR	19/02/2010	24/02/2010	06/04/2011	28/09/2012		28/09/2012	28/09/2013
76	2018_19 Q4	JI020	Assessment of requirements at WTWs to operate effectively in extreme col	00	JI005		02	01	DRD							
77	2018_19 Q4	JN482	Killymore Road, Gortin Pumping Station	00	JI005		03	01		16/08/2007	17/08/2007	10/12/2007	23/05/2008		23/05/2008	23/05/2009
78	2018_19 Q4	JR367	Service Reservoir Enhanced Security	01	JI005		04	07	UR			28/01/2008	13/10/2010		13/10/2010	13/10/2011
79	2018_19 Q4	JR460	Gravity II, McVeighs well to Old Park SR.	02	JI005		03	05	DRD			08/07/2011	30/11/2014		30/12/2014	30/12/2014
80	2018_19 Q4	JS297	Bloody Bridge Water Pumping Station & New Link Main for Major Incident M	00	JI005		03	23	DRD	22/02/2012	14/03/2012	26/09/2011	28/09/2012		28/09/2012	28/09/2013
81	2018_19 Q4	JI006	Panel Engineers Recommendation	00			01	03	DWI							
82	2018_19 Q4	JB662	Panel Engineer Recommendations - North Phase 1	00	JI006		01	03	DWI	15/02/2011	25/02/2011	14/12/2011	28/05/2012		28/05/2012	28/05/2013
83	2018_19 Q4	JR420	Panel Engineer Recommendations - East Phase 1	00	JI006		01	03	DWI	15/02/2011	28/02/2011	24/10/2011	22/06/2012		22/06/2012	22/06/2013
84	2018_19 Q4	JI007	WTW Effluent Quality	00			02	04	DWI							
85	2018_19 Q4	JI010	SEMD Surveys PC10 Water	01			02	04	UR							
86	2018_19 Q4	JI015	Enhanced Site Security	01			06	04	UR			30/08/2012	01/04/2013		01/04/2013	01/04/2014
87	2018_19 Q4	JI017	Capital Investment - WPS Pump Efficiency	01			05	01	UR			31/03/2011	28/03/2014		28/03/2014	28/03/2015
88	2018_19 Q4	JI069	WPS Pump Efficiency Capital Investment Phase 1	00	JI017		05	01	DRD							
89	2018_19 Q4	JI024	MIMP West (Major Incident Mitigation Project West Region) Freeze Thaw Ir	00			03	08	DRD				30/03/2014			
90	2018_19 Q4	JI025	MIMP South (Major Incident Mitigation Project South Region) Freeze Thaw	00			03	08	DRD	05/12/2011	08/12/2011	07/09/2011	18/06/2013		18/06/2013	18/06/2014
91	2018_19 Q4	JI026	MIMP North (Major Incident Mitigation Project North Region) Freeze Thaw	00			03	08	DRD				30/03/2015			
92	2018_19 Q4	JI027	MIMP Central (Major Incident Mitigation Project Central Region) Freeze Tha	00			03	08	DRD				30/03/2014			
93	2018_19 Q4	JI028	MIMP East (Major Incident Mitigation Project East Region) Freeze Thaw Im	00			03	08	DRD				30/03/2015			
94	2018_19 Q4	JI029	Service Reservoir Assessments - Site Access	00			04	01	UR							
95	2018_19 Q4	JI031	Offices & Depots -Water Regulation Compliance & Energy Efficiency Progra	01			06	20	DRD							
96	2018_19 Q4	JI035	Impounding Reservoir Future Use Assessment	00			01	03	DRD							
97	2018_19 Q4	JI037	Flood Resilience at NIW Water Supply Sites - Appraisal Study	02			02	01	DRD							
98	2018_19 Q4	JI038	Service Reservoir Security Phase 1	02			04	07	DRD			09/05/2013	20/12/2016		20/12/2016	20/12/2017
99	2018_19 Q4	JI039	Water Supply West - Turbidity Monitor Upgrade	00			02	01	DRD							
100	2018_19 Q4	JI040	Recovering Energy Within the Water Distribution System	00			02	01	DRD							
101	2018_19 Q4	JI041	Hydro Power from Raw Water - Feasibility Study	00			02	01	DRD							
102	2018_19 Q4	JI043	Lough Bradan WTW & Altaveedan SR Sludge Lagoons	00			02	01	DRD							
103	2018_19 Q4	JI046	WP134 High Priority Water Mains Ph1	00			03	08	DRD							
104	2018_19 Q4	JI047	High Priority Watermains Phase 2 Work Package.	00			03	08	DRD							
105	2018_19 Q4	JI048	Appraisal of NIW infrastructure at Railways, DRD Road & Pipe Bridges	00			03	23	DRD							
106	2018_19 Q4	JI050	Service Reservoir Rehab (Parent)	00			04	07	DWI							
107	2018_19 Q4	JA309	Tully Hill South SR Rehabilitation	00	JI050		04	07								
108	2018_19 Q4	JB722	Gortaclady SR Rehabilitation	00	JI050		04	07								
109	2018_19 Q4	JB728	Mormeal North SR Rehabilitation	06	JI050		04	07								
110	2018_19 Q4	JC398	North Garvagh SR Refurbishment	06	JI050		04	07								
111	2018_19 Q4	JF603	Benraw SR Rehabilitation	00	JI050		04	07								
112	2018_19 Q4	JF604	Castlehill SR Refurbishment	06	JI050		04	07								
113	2018_19 Q4	JF605	Seagahan CWB Refurbishment	06	JI050		04	07								
114	2018_19 Q4	JG078	Ballydougan Command 2B 3A 3B SR Rehabilitation	00	JI050		04	07	DRD							
115	2018_19 Q4	JG083	Ballyvally Old SR Rehabilitation	06	JI050		04	07								
116	2018_19 Q4	JG086	Cleomack SR Rehabilitation	06	JI050		04	07								
117	2018_19 Q4	JI009	Service Reservoir Rehab	00	JI050		04	07	DWI							
118	2018_19 Q4	JB710	Killylane CWB Refurbishment	03	JI009		04	07								
119	2018_19 Q4	JF597	Doochrock West SR Rehabilitation	00	JI009		04	07	DRD							
120	2018_19 Q4	JL758	Reservoir Rehabilitation Programme Phase 3	00	JI009		04	07	DWI	02/02/2009	09/02/2009	06/04/2009	18/05/2009		18/05/2009	18/05/2010
121	2018_19 Q4	JR481	Ballyridley New SR Rehabilitation	03	JI009		04	07								
122	2018_19 Q4	JR482	Muldersleigh Hill SR Rehabilitation	03	JI009		04	07								
123	2018_19 Q4	JV866	Deehommed High Level SR Rehabilitation	03	JI009		04	07								
124	2018_19 Q4	JL777	Carmoney WTW - Old CWT Outlet Pipework	00	JI050		04	07	DRD							
125	2018_19 Q4	JL779	Carmoney CWB 1 and 2 Refurbishment	03	JI050		04	07								
126	2018_19 Q4	JL780	Carmoney CWB 3 and 4 Refurbishment	03	JI050		04	07								
127	2018_19 Q4	JL782	Tamneymore SR Rehabilitation	06	JI050		04	07								
128	2018_19 Q4	JN522	Omagh Phase 2 Service Reservoir Inner Works	04	JI050		03	07								
129	2018_19 Q4	JN523	Killybrack 1 SR Rehabilitation	00	JI050		04	07								
130	2018_19 Q4	JN524	Brookeborough Sr Rehabilitation	00	JI050		04	07								
131	2018_19 Q4	JN525	Botera SR Rehabilitation	00	JI050		04	07								
132	2018_19 Q4	JN531	Barravey SR Rehabilitation	00	JI050		04	07								
133	2018_19 Q4	JN533	Glenchuil SR Refurbishment	06	JI050		04	07								
134	2018_19 Q4	JN536	Killyclogher No.2 Sr Refurbishment	06	JI050		04	07								
135	2018_19 Q4	JP686	Rathmore SR Rehabilitation	00	JI050		04	07								
136	2018_19 Q4	JP689	Derrylin SR Rehabilitation	00	JI050		04	07								
137	2018_19 Q4	JR476	Lisnabreeny Road SR1 and SR2 Rehabilitation	03	JI050		04	07	DRD							
138	2018_19 Q4	JR486	Breda SR Rehabilitation	00	JI050		04	07								
139	2018_19 Q4	JR491	Ballygrainey SR Rehabilitation	00	JI050		04	07								
140	2018_19 Q4	JR492	Ballyhowne SR Rehabilitation	00	JI050		04	07								
141	2018_19 Q4	JR500	Ballywonard No.1 SR Rehabilitation	06	JI050		04	07								
142	2018_19 Q4	JV857	Newry West SR Rehabilitation	03	JI050		04	07	DRD							
143	2018_19 Q4	JV869	Senrty Hill SR Rehabilitation	00	JI050		04	07								
144	2018_19 Q4	JV873	Newtown SR Rehabilitation	00	JI050		04	07								
145	2018_19 Q4	JV875	Sturgan SR Rehabilitation	00	JI050		04	07								
146	2018_19 Q4	JV876	Babylon Hill SR Rehabilitation	00	JI050		04	07								
147	2018_19 Q4	JV877	Camlough Derry Beg CWB Rehabilitation	00	JI050		04	07								
148	2018_19 Q4	JV878	Camly New SR Rehabilitation	00	JI050		04	07								
149	2018_19 Q4	JV882	Tullymurry Newry SR Rehabilitation	06	JI050		04	07								
150	2018_19 Q4	JV883	Mill Road SR Rehabilitation	06	JI050		04	07								
151	2018_19 Q4	JI051	Watermains Rehabilitation, New and Replacement incl FTS - Professional	00			03	08	DRD							
152	2018_19 Q4	JI052	WTWs Five Treatability Appraisal Studies	03			02	04	DWI				31/12/2020			
153	2018_19 Q4	JI053	Water Mains Rehabilitation (Planned)	03			03	08	UR				31/03/2014			
154	2018_19 Q4	JA210	Tardree Zone WM Imps	02	JI053		03	08	DRD	15/06/2009	23/06/2009	12/08/2009	27/04/2011		27/04/2011	26/04/2012
155	2018_19 Q4	JA270	Bellahill, Ballycarry, Co Antrim, WM Replacement.	00	JI053		03	08		24/06/2009	07/07/2009	11/11/2009	10/05/2011		10/05/2011	01/07/2011
156	2018_19 Q4	JA283	A8 Belfast to Larne Dual Carriageway – Water main & sewer replacements	00	JI053		03	23	DRD							
157	2018_19 Q4	JB458	Dunore West Zone Watermain Improvements	00	JI053		03	08		02/04/2010	22/04/2010	11/06/2010	07/08/2012		07/08/2012	07/08/2013
158	2018_19 Q4	JB460	Moyola Zone Watermain Improvements	00	JI053		03	08		02/04/2010	26/04/2010	20/09/2010	13/03/2012		13/03/2012	13/03/2013
159	2018_19 Q4	JB679	The Glens Zone Watermain Improvements	00	JI053		03	08	UR	16/09/2011	20/09/2011	26/09/2011	21/12/2012		21/12/2012	21/12/2013
160	2018_19 Q4	JB680	Dungonnell Zone Watermain Improvements	00	JI053		03	08	UR	05/07/2011	06/07/2011	25/03/2011	30/11/2012		30/11/2012	30/11/2013
161	2018_19 Q4	JB687	Cookstown Phase 2 Watermain Improvements	00	JI053		03	08	UR	16/09/2011	20/09/2011	03/05/2011	21/12/2012		21/12/2012	21/12/2013
162	2018_19 Q4	JB688	Cookstown Phase 3 Watermain Improvements	00	JI053		03	08	UR	17/10/2011	19/10/2011	27/05/2011	15/04/2013		15/04/2013	15/04/2014
163	2018_19 Q4	JC349	Portballintrae Zone Wm Improvements	00	JI053		03	08		26/09/2007	08/10/2007	05/11/2007	15/09/2008		15/09/2008	15/09/2009
164	2018_19 Q4	JC350	Ballycastle Zone Wm Improvements	00	JI053		03	08		26/02/2009	20/03/2009	06/04/2009	28/04/2011		28/04/2011	27/04/2012
165	2018_19 Q4	JC351	Ballynahone Zone Wm Improvements	00	JI053		03	08		26/09/2007	08/10/2007	21/04/2007	29/09/2008		29/09/2008	29/09/2009
166	2018_19 Q4	JC388	Rasharkin Zone Watermain Improvements Phase 2	00	JI053		03	08	UR	19/05/2011	01/06/2011	19/01/2011	01/06/2012		01/06/2012	01/06/2013
167	2018_19 Q4	JF593	Altmore Phase 2 Watermain Rehabilation	00	JI053		03	08	DRD							
168	2018_19 Q4	JL693	Cityside Zone Watermain Improvements	00	JI053		03	08				18/07/2005	19/06/2006		19/06/2006	19/06/2007
169	2018_19 Q4	JL699	Limavady Zone Watermain Improvements	00	JI053		03	08		04/11/2008	21/11/2008	29/12/2008	12/01/2011		12/01/2011	12/01/2012
170	2018_19 Q4	JN355	North Tyrone Zone Watermain Improvements	00	JI053		03	08		12/03/2008	21/03/2008	11/08/2008	12/01/2011		12/01/2011	12/01/2012
171	2018_19 Q4	JN430	Alleyhill Zone Wm Improvements	00	JI053		03	08		01/04/2010	26/04/2010	24/06/2010	13/01/2012		13/01/2012	12/01/2013
172	2018_19 Q4	JN505	Omagh Watermain Improvements	00	JI053		03	08	UR	17/10/2011	19/10/2011	02/08/2011	30/05/2013		30/05/2013	30/05/2014
173	2018_19 Q4	JP670	Rosslea Water Supply	01	JI053		03	23	DRD	16/09/2011	20/09/2011	19/09/2011	03/09/2012		03/09/2012	03/09/2013
174	2018_19 Q4	JR321	Breda North Zone Watermain Improvements	00	JI053		03	08		02/04/2010	26/04/2010	15/06/2010	14/08/2012		14/08/2012	14/08/2013
175	2018_19 Q4	JR437	South Belfast Urban	00	JI053		03	08		07/09/2010	27/09/2010	10/11/2011	05/12/2011		05/12/2011	05/12/2011
176	2018_19 Q4	JR438	Newtownabbey Zone Watermain Improvements Phase 1	00	JI053		03	08	UR	03/06/2011	07/06/2011	01/02/2011	27/02/2014		27/02/2014	27/02/2015
177	2018_19 Q4	JR439	Carrickfergus Zone Watermain Improvements Phase 1	00	JI053		03	08	UR	19/05/2011	01/06/2011	19/01/2011	16/11/2012		16/11/2012	16/11/2013
178	2018_19 Q4	JR440	Newtownabbey Zone Watermain Improvements Phase 2	00	JI053		03	08	UR	05/07/2011	06/07/2011	02/02/2011	11/07/2012		11/07/2012	11/07/2013
179	2018_19 Q4	JR441	Ballysillan Zone Watermain Improvements	00	JI053		03	08	UR	05/07/2011	06/07/2011	19/01/2011	31/01/2013		31/01/2013	31/01/2014
180	2018_19 Q4	JR442	Ballywonard Zone Watermain Improvements	00	JI053		03	08	UR	22/04/2011	06/05/2011	17/01/2011	25/07/2012		25/07/2012	25/07/2013
181	2018_19 Q4	JR450	Queensfort Road Watermain Upgrade	00	JI053		03	23	DRD	20/02/2012	27/02/2012	04/04/2012	25/04/2012		25/04/2012	25/04/2013
182	2018_19 Q4	JR453	Ballygomartin North Phase 1 Watermain Improvements	00	JI053		03	08	UR							
183	2018_19 Q4	JR454	Ballygomartin South Phase 1 Water Mains Improvements	00	JI053		03	08	UR							
184	2018_19 Q4	JR455	Whiterock Phase 1 Watermains Improvements	00	JI053		03	08	UR							
185	2018_19 Q4	JS226	Downpatrick Zone WM Imps	00	JI053		03	08		21/07/2009	03/08/2009	07/06/2010	26/01/2012		26/01/2012	26/01/2012
186	2018_19 Q4	JS227	South Down Zone WM Imps	00	JI053		03	08		21/07/2009	03/08/2009	27/09/2011	13/03/2012		13/03/2012	13/03/2013
187	2018_19 Q4	JS229	Mourne Coast Zone Watermain Improvements	00	JI053		03	08		21/07/2009	03/08/2009	07/06/2010	26/01/2012		26/01/2012	26/01/2012
188	2018_19 Q4	JS293	North Down Bangor Phase 2 Watermain Improvements	00	JI053		03	08	UR	17/10/2011	19/10/2011	02/08/2011	26/03/2013		26/03/2013	26/03/2014
189	2018_19 Q4	JT252	Lisburn North Rural Phase 2 Watermain Improvements	00	JI053		03	08	UR	03/11/2011	08/11/2011	02/08/2011	24/06/2013		24/06/2013	24/06/2014
190	2018_19 Q4	JV024	Ballintemple Zone Watermain Improvements	00	JI053		03	08		17/11/2011	18/11/2011	23/05/2011	06/05/2013		06/05/2013	06/05/2014
191	2018_19 Q4	JV025	Lough Ross Zone Watermain Improvements	00	JI053		03	08		02/04/2010	26/04/2010	06/09/2010	30/07/2012		30/07/2012	30/07/2013
192	2018_19 Q4	JV707	Drumnahare Dist Imps	00	JI053		03	08				01/06/2000	01/10/2001		01/10/2001	01/10/2002
193	2018_19 Q4	JV841	Fofanny Banbridge Zone Watermain Improvements Phase 2	00	JI053		03	08	UR	24/05/2011	01/06/2011	12/01/2011	16/05/2012		16/05/2012	16/05/2013
194	2018_19 Q4	JV844	WP101 Newry Phase2	00	JI053		03	08	DWI	03/11/2011	08/11/2011	02/08/2011	21/06/2013		21/06/2013	21/06/2014

Baseline Service Cost Allocation / Baseline Expenditure Profile (£m 2012-13 prices) / Baseline Purpose Allocation

Sort Ref	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	18	19	20	21	22	23	24	25	26	27	28	29	30	36	37	38	39
1																	
2																	
3																	
4																	
5																	
6																	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	5	95	0.047	0.00390632	0.12576432	0.663911073	0.045696578	0	0	0	0	44.30873607	26.15210654	0	29.53915738
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11																	
12	0	0	100	0	0	0	0	0	0	0	0	0	0	100	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	100	0	0	0.061	0.00292974	0	0.922098712	0.134401699	0	0	0	0	0	100	0	0
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30	60	40	0	0	0	0	0	0.248044554	0	0	0	0	0	0	20	0	80
31																	
32	100	0	0	0	0	0	0	0	0	2.09473572	0	0	0	0	0	0	100
33																	
34																	
35																	
36																	
37	33	67	0	0	0	0	0	0	0	0	0	0	1.95812198	0	41	0	59
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45																	
46																	
47	80	20	0	0	0	0	0	0	0	0	0.741558442	0.350649351	0	0	23	0	77
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50																	
51																	
52																	
53																	
54																	
55																	
56																	
57																	
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59																	
60																	
61																	
62																	
63	82	18	0	0	5.022	5.65146846	3.382298	1.104674257	3.558956998	0.477264668	0	0	0	0	4	0	96
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65																	
66																	
67																	
68																	
69																	
70																	
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73																	
74	14	86	0	0	0	0	0	2.62775304	3.7452905	0	0	0	0	13	87	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	0	100	0	0	0	0	0	0	0	0	1.016239958	0.970357846	0	0	100	0	0
77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	100	0	0	0	0	0	0	1.491955717	1.288464291	0	0	0	0	0	0	0	100
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	100	0	0	0	0	0	0	1.52162424	0.20766865	0	0	0	0	0	100	0	0
82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	100	0	0	0	0	0	0	0	0.04252332	0	0	0	100	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	0	100	0	0	0	0	0	0	0	0.392843114	0.400248206	0.388143139	0	0	100	0	0
89	93	7	0	0	0	0.443	2.08	1.567	0	0	0	0	0	0	81	0	19
90	94	6	0	0	0	0.202	0.993	0.751	0	0	0	0	0	0	91	0	9
91	99	1	0	0	0	0.141	0.004	1.091	0.449	0	0	0	0	15	80	1	4
92	100	0	0	0	0	0.167	1.062	1.119	0	0	0	0	0	0	91	9	0
93	99	1	0	0	0	0.187	0.008	1.874	0.958	0	0	0	0	0	98	0	2
94	0	100	0	0	0	0	0	0	0	0	0	0.679250493	0.67517499	0	100	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	100	0	0	0	0	0	0	0	0.077586515	0	0	0	0	100	0	0
98	0	100	0	0	0	0	0.047638	1.844197425	1.238287656	0.6517161	0.647805803	0.643918969	0	100	0	0	0
99																	
100	0	100	0	0	0	0	0	0	0	0.415989	0.413493066	0.411012108	0	0	0	100	0
101	0	100	0	0	0	0	0	0	0	0.4067448	0	0	0	0	0	100	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103																	
104																	
105																	
106	0	100	0	0	0	0	0.5526008	2.443561588	1.987353127	2.57508661	2.55963609	2.544278273	2.529012604	0	100	0	0
107																	
108																	
109																	
110																	
111																	
112																	
113																	
114																	
115																	
116																	
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118																	
119																	
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121																	
122																	
123																	
124																	
125																	
126																	
127																	
128																	
129																	
130																	
131																	
132																	
133																	
134																	
135																	
136																	
137																	
138																	
139																	
140																	
141																	
142																	
143																	
144																	
145																	
146																	
147																	
148																	
149																	
150																	
151																	
152	0	100	0	0	0	0	0	0	0	0.25510269	0	0	0	34	66	0	0
153	94	6	0	0	0	0	0	17.014	21.785	0	0	0	0	37	47	3	13
154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
156																	
157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167																	
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Current Actual or Projected Milestone Dates / Current Actual or Projected Service Cost Allocation

Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign-off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure
1	40	41	42	43	44	45	46	47	48	49	50
1	18/05/2017	18/05/2017						0	0	100	0
2	08/12/2016	08/12/2016	13/02/2017	24/02/2017			03/05/2017	0	0	100	0
3	25/07/2018	25/07/2018	14/08/2018	19/10/2018			11/01/2019	0	0	100	0
4	27/03/2018	27/03/2018		15/06/2018			21/08/2018	0	0	100	0
5								0	0	100	0
6	08/01/2009	25/02/2009						0	100	0	0
7	10/03/2008	11/03/2008	09/01/2012	31/03/2014		27/05/2013		0	0	53	47
8	07/03/2008	11/03/2008	30/11/2009	24/09/2012		11/03/2013	02/09/2014	0	0	54	46
9	04/04/2014	14/04/2014	03/11/2014	31/03/2015		28/08/2015		0	0	5	95
10	09/01/2008	14/01/2008	14/03/2008	03/09/2012		24/04/2009		0	0	4	96
11	01/08/2018	03/08/2018						0	0	70	30
12	29/01/2016	29/02/2016	07/03/2016	24/03/2016				0	0	100	0
13	26/02/2010	12/04/2010	31/05/2010	28/04/2011		10/10/2011		0	100	0	0
14	08/07/2013	13/08/2013	29/01/2014	05/12/2014		25/03/2015	14/09/2015	0	100	0	0
15	13/11/2013	19/11/2013	06/01/2014	10/06/2015		29/05/2015		0	100	0	0
16	05/08/2013	06/08/2013	18/02/2013	23/03/2017		08/12/2014		89	11	0	0
17	24/10/2013	28/10/2013	03/03/2014	28/08/2014		21/04/2014		100	0	0	0
18	27/05/2015	29/05/2015						100	0	0	0
19	05/09/2014	16/09/2014	27/10/2014	10/12/2014				100	0	0	0
20	02/03/2015	04/03/2015	16/03/2015	23/02/2016				100	0	0	0
21	06/01/2017	09/01/2017						58	0	42	0
22	30/08/2018	31/08/2018	24/09/2018			27/12/2019		100	0	0	0
23	30/06/2016	04/07/2016	21/07/2016					100	0	0	0
24	16/10/2017	31/10/2017	09/08/2017	20/03/2018				0	100	0	0
25	14/05/2018	18/05/2018	30/01/2017			27/09/2019		100	0	0	0
26								100	0	0	0
27	05/03/2018	13/03/2018	12/11/2018	29/03/2019				7	93	0	0
28								100	0	0	0
29								0	100	0	0
30	16/02/2015	18/02/2015	01/08/2016	27/02/2018		15/12/2017		0	100	0	0
31	05/08/2013	12/08/2013	01/09/2014	23/06/2015		30/03/2015	08/12/2015	0	100	0	0
32	16/03/2015	18/03/2015	15/09/2015	21/09/2016				100	0	0	0
33	13/05/2014	21/05/2014	01/04/2015	29/06/2015		30/03/2015		100	0	0	0
34	30/11/2016	05/12/2016	01/11/2017	28/02/2019		31/10/2018		0	100	0	0
35								100	0	0	0
36	30/03/2015	01/04/2015						100	0	0	0
37	28/01/2016	02/02/2016	01/10/2018			26/11/2019		2	98	0	0
38	24/09/2014	03/10/2014	27/10/2014	29/06/2015				100	0	0	0
39	30/09/2014	03/10/2014	01/12/2014	30/03/2015		17/04/2015		100	0	0	0
40								100	0	0	0
41	28/10/2016	01/11/2016	05/12/2016	01/09/2017			23/01/2018	100	0	0	0
42	17/10/2016	24/10/2016	31/10/2016	31/08/2018				100	0	0	0
43	20/09/2017	03/10/2017	22/02/2018			31/01/2020		100	0	0	0
44	14/10/2016	17/10/2016	01/07/2016			31/10/2018		100	0	0	0
45	30/08/2018	05/09/2018	05/02/2018	05/03/2019		28/06/2019		100	0	0	0
46								100	0	0	0
47	25/10/2010	19/11/2010	01/08/2016	26/06/2017		31/10/2017		0	100	0	0
48								0	100	0	0
49								50	50	0	0
50	05/08/2013	12/08/2013	29/03/2019			27/07/2015		0	100	0	0
51	22/10/2012	25/10/2012	07/05/2013	30/07/2013		28/05/2013		100	0	0	0
52	30/06/2014	09/07/2014	03/11/2014	29/06/2015				100	0	0	0
53	20/09/2017	03/10/2017	01/11/2018			31/03/2020		100	0	0	0
54	04/07/2016	04/07/2016	21/07/2016					100	0	0	0
55	17/08/2018	22/08/2018	14/05/2018			10/12/2018		100	0	0	0
56	31/05/2018	04/06/2018	18/06/2018					100	0	0	0
57								100	0	0	0
58	26/04/2006							100	0	0	0
59	04/07/2016	04/07/2016	21/07/2016					100	0	0	0
60	16/01/2019	22/01/2019						100	0	0	0
61	26/09/2018	02/10/2018	01/02/2018			31/03/2020		100	0	0	0
62								100	0	0	0
63	01/10/2009	26/10/2009		28/08/2015				82	18	0	0
64	11/12/2008	23/12/2008	03/06/2013	24/05/2011		23/07/2012		90	10	0	0
65	25/06/2018	25/06/2018		30/06/2014		26/02/2016		100	0	0	0
66	12/06/2014	24/06/2014						100	0	0	0
67								100	0	0	0
68	01/10/2015	05/10/2015	02/11/2015	07/03/2016		31/03/2016	04/04/2016	0	50	0	50
69	03/02/2016	29/02/2016						75	0	25	0
70								80	20	0	0
71	07/01/2013	14/01/2013						89	11	0	0
72	03/02/2014	10/02/2014	01/06/2015			18/12/2015		86	14	0	0
73	17/12/2013	19/12/2013	06/01/2014			26/01/2015		100	0	0	0
74								0	100	0	0
75	19/02/2010	24/02/2010	21/03/2011	01/10/2013		26/08/2013		0	100	0	0
76	23/11/2015	23/11/2015						0	100	0	0
77	16/08/2007	17/08/2007	10/12/2007	20/06/2011		23/02/2009		71	29	0	0
78	20/11/2007	17/12/2007	07/12/2009	12/10/2010		02/12/2013		0	100	0	0
79	13/12/2013	13/12/2013	01/01/2014	28/11/2014		02/12/2014	23/06/2015	100	0	0	0
80	22/02/2012	14/03/2012	26/09/2011	30/04/2012		24/09/2012		75	25	0	0
81								100	0	0	0
82	15/02/2011	25/02/2011	22/07/2013	23/10/2015		22/09/2015		100	0	0	0
83	15/02/2011	28/02/2011	10/06/2013	19/05/2015		22/04/2015		100	0	0	0
84	28/10/2015	17/11/2015	04/01/2016	01/03/2017			03/10/2017	0	100	0	0
85	30/05/2014	20/06/2014	30/04/2018			29/04/2019		0	100	0	0
86	23/02/2012	28/02/2012	30/08/2012	11/09/2013		12/09/2013		0	100	0	0
87	29/11/2010	12/01/2011						0	100	0	0
88	22/07/2014	31/07/2014	10/02/2015	28/02/2017				0	100	0	0
89	16/10/2012	24/10/2012	05/09/2011	14/02/2014		21/07/2014		94	6	0	0
90	05/12/2011	08/12/2011	07/09/2011	24/01/2014		25/09/2013		100	0	0	0
91	12/12/2012	20/12/2012	02/06/2011	18/08/2014		18/09/2014		100	0	0	0
92	15/10/2012	25/10/2012	05/05/2011	28/03/2014		26/06/2014		100	0	0	0
93	12/12/2012	20/12/2012	04/08/2011	09/02/2015		28/08/2014		100	0	0	0
94	17/02/2014	21/02/2014						0	100	0	0
95	01/10/2015	09/10/2015						0	100	0	0
96	22/01/2018	22/01/2018						100	0	0	0
97	15/05/2014	21/05/2014		04/04/2017		31/03/2016	25/05/2017	0	100	0	0
98	04/03/2014	13/03/2014	03/10/2016			05/07/2019		0	100	0	0
99	15/05/2014	30/05/2014	02/03/2015	19/06/2015			26/08/2016	0	100	0	0
100								0	100	0	0
101	04/03/2015	06/03/2015						0	100	0	0
102	03/09/2015	07/09/2015	23/12/2015	31/01/2017		28/07/2017	20/06/2017	0	100	0	0
103	27/08/2013	29/08/2013	01/02/2013	31/08/2015		26/12/2014		100	0	0	0
104	19/08/2013	29/08/2013	14/02/2013	31/12/2014		26/06/2014		100	0	0	0
105	22/05/2017	24/05/2017						80	0	20	0
106								0	100	0	0
107	05/02/2016	05/02/2016	22/08/2016	15/12/2016		15/12/2016		0	100	0	0
108	02/02/2016	02/02/2016	31/01/2017	28/03/2017		20/03/2017	23/05/2017	0	100	0	0
109	14/11/2016	14/11/2016	05/07/2017	08/09/2017		31/10/2017	26/09/2018	0	100	0	0
110	14/11/2016	14/11/2016	12/09/2017	21/03/2018		30/03/2018		0	100	0	0
111	18/01/2016	18/01/2016	20/06/2016	24/08/2016		09/02/2017		0	100	0	0
112	14/11/2016	14/11/2016	27/09/2017	19/03/2018		05/02/2018	06/06/2018	0	100	0	0
113	14/11/2016	14/11/2016	14/06/2017	27/06/2018		31/08/2018	16/08/2018	0	100	0	0
114	25/04/2014	02/05/2014	02/06/2014	02/12/2015		30/07/2015	16/12/2015	0	100	0	0
115	10/03/2015	10/03/2015	10/12/2015	15/04/2016		18/03/2016	09/09/2016	0	100	0	0
116	11/11/2016	11/11/2016	11/05/2017	27/10/2017		30/03/2018	04/05/2018	0	100	0	0
117	24/01/2013	30/01/2013						0	100	0	0
118	04/08/2014	22/09/2014	08/12/2014	15/05/2015		30/06/2015		0	100	0	0
119	04/07/2014	17/07/2014	08/12/2014	21/04/2015		21/04/2015	20/11/2015	0	100	0	0
120	02/02/2009	09/02/2009						0	100	0	0
121	04/08/2014	22/09/2014	01/12/2014	30/03/2015		31/03/2015		0	100	0	0
122	04/08/2014	22/09/2014	18/11/2014	30/03/2015		31/03/2015	20/11/2015	0	100	0	0
123	04/08/2014	22/09/2014	09/03/2015	27/05/2015		08/05/2015		0	100	0	0
124	02/09/2015	02/09/2015	01/04/2015	09/05/2016		06/05/2016	21/07/2016	0	100	0	0
125	26/11/2014	15/01/2015	18/04/2016	21/10/2016		21/10/2016	05/09/2017	0	100	0	0
126	26/11/2014	15/01/2015	07/11/2016	19/10/2017		29/09/2017	30/10/2018	0	100	0	0
127	14/11/2016	14/11/2016	04/04/2017	31/10/2017		29/09/2017	13/11/2018	0	100	0	0
128	03/02/2015	03/02/2015	06/04/2015	31/07/2015		02/10/2015		0	100	0	0
129	10/03/2015	30/04/2015	18/01/2016	29/04/2016		06/05/2016	25/11/2016	0	100	0	0
130	10/03/2015	10/03/2015	22/07/2015	18/11/2015		30/10/2015	21/11/2016	0	100	0	0
131	10/03/2015	10/03/2015						0	100	0	0
132	02/02/2016	02/02/2016	24/10/2016	16/02/2017		23/02/2017	23/05/2017	0	100	0	0
133	11/11/2016	11/11/2016	07/06/2017	30/10/2017		15/09/2017	30/10/2018	0	100	0	0
134	11/11/2016	11/11/2016	23/11/2017	02/03/2018		12/02/2018		0	100	0	0
135	09/04/2015	09/04/2015	20/07/2015	20/10/2015		30/10/2015	01/11/2016	0	100	0	0
136	18/01/2016	18/01/2016	06/02/2017	26/04/2017		29/03/2017		0	100	0	0
137	25/11/2015	10/12/2015	04/01/2016	28/10/2016		18/11/2016		0	100	0	0
138	27/04/2015	30/04/2015	12/10/2015	02/06/2016		31/05/2016	01/08/2016	0	100	0	0
139	18/01/2016	26/01/2016	13/06/2016	14/12/2016		27/01/2017	01/06/2017	0	100	0	0
140	18/01/2016	18/01/2016	06/06/2016	26/04/2017		04/05/2017	15/06/2017	0	100	0	0
141	14/11/2016	14/11/2016	04/04/2017	20/10/2017		28/08/2017	30/10/2018	0	100	0	0
142	11/11/2013	13/11/2013						0	100	0	0
143	09/04/2015	09/04/2015	02/11/2015	15/12/2015		18/04/2016	11/08/2016	0	100	0	0
144	18/01/2016	18/01/2016	10/08/2016	09/12/2016		12/01/2017		0	100	0	0
145	02/02/2016	02/02/2016	12/09/2016	13/02/2017		20/02/2017	23/05/2017	0	100	0	0
146	05/02/2016	05/02/2016	06/06/2016	08/07/2016		01/07/2016	08/08/2016	0	100	0	0
147	05/02/2016	05/02/2016	19/12/2016	09/05/2017		12/04/2017	25/05/2017	0	100	0	0
148	08/02/2016	08/02/2016	16/08/2016	23/09/2016		23/09/2016	18/01/2017	0	100	0	0
149	14/11/2016	14/11/2016	27/11/2017	15/12/2017		30/03/2018	27/11/2018	0	100	0	0
150	11/11/2016	11/11/2016	22/01/2018	14/05/2018		06/07/2018	03/08/2018	0	100	0	0
151	01/03/2013	11/03/2013						89	11	0	0
152	25/06/2018	25/06/2018						0	100	0	0
153								94	6	0	0
154	15/06/2009	23/06/2009						97	3	0	0
155	24/06/2009	07/07/2009	11/11/2009	09/05/2011		10/11/2010	30/06/2011	100	0	0	0
156	31/01/2013	05/02/2013						90	0	10	0
157	02/04/2010	22/04/2010	11/06/2010	07/08/2012		19/07/2013		100	0	0	0
158	02/04/2010	26/04/2010	20/09/2010	13/03/2012		30/06/2014		95	5	0	0
159	16/09/2011	20/09/2011	26/09/2011	28/03/2013		25/03/2013	04/11/2014	76	24	0	0
160	05/07/2011	06/07/2011	02/04/2012	06/03/2013		06/06/2014		98	2	0	0
161	16/09/2011	20/09/2011	01/04/2015	01/08/2014		18/12/2012	04/11/2014	93	7	0	0
162	17/10/2011	19/10/2011	27/05/2011	08/10/2013		12/04/2013	04/11/2014	93	7	0	0
163	26/09/2007	08/10/2007	05/01/2009	03/03/2010		26/07/2010		100	0	0	0
164	26/02/2009	20/03/2009						100	0	0	0
165	26/09/2007	08/10/2007						100	0	0	0
166	19/05/2011	01/06/2011	02/04/2012	26/03/2013		27/02/2013	04/11/2014	95	5	0	0
167	11/06/2013	24/06/2013	10/12/2012	30/09/2014		25/08/2014		100	0	0	0
168								100	0	0	0
169	04/11/2008	21/11/2008	29/12/2008	03/03/2010		15/11/2010		100	0	0	0
170	12/03/2008	21/03/2008	11/08/2008	11/01/2011		29/06/2009		100	0	0	0
171	01/04/2010	26/04/2010	24/06/2010	12/01/2012		20/09/2012	01/07/2015	100	0	0	0
172	17/10/2011	19/10/2011	02/08/2011	26/03/2013		26/03/2013		100	0	0	0
173	16/09/2011	20/09/2011	19/09/2011	15/12/2011		26/12/2011		100	0	0	0
174	02/04/2010	26/04/2010	01/03/2010	27/11/2012		06/11/2012	27/11/2012	98	2	0	0
175	07/09/2010	27/09/2010	10/11/2011	19/09/2011		19/01/2012	05/12/2011	100	0	0	0
176	03/06/2011	07/06/2011	01/02/2011	27/08/2014		24/06/2014		97	3	0	0
177	19/05/2011	01/06/2011	01/04/2013	26/07/2013		30/10/2013		93	7	0	0
178	05/07/2011	06/07/2011	02/02/2011	27/08/2014		02/02/2011		98	2	0	0
179	05/07/2011	06/07/2011	03/04/2017	14/01/2014		26/03/2014		98	2	0	0
180	22/04/2011	06/05/2011	02/04/2012	08/01/2014		28/10/2013		87	13	0	0
181	20/02/2012	27/02/2012	04/04/2012	03/07/2012		25/04/2012		100	0	0	0
182	07/10/2013	16/10/2013	01/04/2012	29/06/2015		30/03/2015		100	0	0	0
183	07/10/2013	21/10/2013	01/04/2012	01/02/2019		31/03/2015		100	0	0	0
184	08/10/2013	16/10/2013	01/06/2011	30/03/2015		25/03/2015	01/07/2015	100	0	0	0
185	21/07/2009	03/08/2009	08/06/2010	13/05/2011		26/03/2013	26/01/2012	98	2	0	0
186	21/07/2009	03/08/2009	03/04/2017	12/03/2012		19/09/2011	01/07/2015	97	3	0	0
187	21/07/2009	03/08/2009	08/06/2010	02/08/2011		26/03/2013	26/01/2012	99	1	0	0
188	17/10/2011	19/10/2011	02/08/2011	27/08/2014		23/04/2013		100	0	0	0
189	03/11/2011	08/11/2011	02/08/2011	14/03/2014		24/06/2014		93	7	0	0
190	17/11/2011	18/11/2011	23/05/2011	08/10/2013		06/05/2013		90	10	0	0
191	02/04/2010	26/04/2010	06/09/2010	27/11/2012		13/02/2012		100	0	0	0
192			24/09/2010	19/04/2011		27/05/2011		100	0	0	0
193	24/05/2011	01/06/2011	12/01/2011	06/03/2013		16/10/2013		92	8	0	0
194	03/11/2011	08/11/2011	02/08/2011	29/06/2015		24/06/2014		100	0	0	0

Current Actual or Projected Capital Expenditure Profile (£m money of the day) / Current Actual or Projected Purpose Allocation (%) / Current Actual or Projected IRE (%) / Nominated outputs (PC Period)

Sort Ref	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	51	52	53	54	55	56	57	58	59	60	66	67	68	69	70	71	72
1	0	0	0	0	0	0	0	0	0.017	0	0	0	0	100	0	0	01
2	-0.001	0	0	0	0	0	0	0.026	0.001	-0.001	0	0	0	100	0	0	01
3	0.069	0	0	0	0	0	0	0	0	0.069	0	0	0	100	0	0	
4	0.036	0	0	0	0	0	0	0	0	0.036	0	0	0	100	0	0	
5	0.092	0	0	0	0	0	0	0	0.078	0.092	0	100	0	0	0	100	01
6	0	0	0	0	0	0	0	0	-0.001	0	0	0	100	0	0	0	
7	0	2.409	0.687	3.679	-0.049	-0.057	-0.005	0	0	0	53	0	0	47	0	0	09
8	0	1.083	0.469	0.609	-0.065	0.001	-0.008	0	0	0	40	0	0	60	0	0	09
9	-0.03	0	0	0	0	0.873	0.201	0.091	0.036	-0.03	0	68	0	32	0	5	08
10	0.028	0.013	-0.004	0.013	0.012	0.012	0.03	0.026	0.014	0.028	36	39	0	25	0	1	09
11	0	0	0	0	0.035	-0.01	-0.001	0	0	0	100	0	0	0	0	0	01
12	-0.001	0	0	0	0	0.015	0.247	0	-0.002	-0.001	100	0	0	0	0	0	03
13	0	0.847	0.127	0	-0.001	0	-0.002	0	0	0	0	53	0	47	0	0	
14	0	0.061	0.003	0	0.228	1.005	0.001	0	0	0	0	100	0	0	0	0	08
15	0	0	0	0	0.011	0.062	0.058	0	0	0	0	100	0	0	0	0	01
16	-0.06	0	0	0.267	1.953	0.715	-0.003	0.156	-0.128	-0.06	10	46	0	44	45	0	01
17	0.003	0	0	0	0	0	0	0	0	0.003	0	0	0	100	0	0	
18	-0.002	0	0	0	0	0.015	0.061	0.005	-0.002	-0.002	0	94	0	6	94	0	01
19	0.001	0	0	0	0	0	0	0	0	0.001	0	0	0	100	0	0	
20	0.009	0	0	0	0	0.368	0.465	0.003	0	0.009	69	25	6	0	25	0	01
21	0.196	0	0	0	0	0	0.049	0.089	0.199	0.196	0	69	0	31	41	28	01
22	0.72	0	0	0	0	0	0	0.2	0	0.72	57	43	0	0	43	0	01
23	1.332	0	0	0	0	0	0	1.422	1.105	1.332	62	38	0	0	38	0	01
24	0.592	0	0	0	0	0	0	0.169	7.058	0.592	0	0	100	0	0	0	01
25	1.019	0	0	0	0	0	0	0.045	0.45	1.019	59	41	0	0	41	0	01
26	0	0	0	0	0	0	0	0.045	0.005	0	45	45	0	10	45	0	01
27	0.269	0	0	0	0	0	0	0	0.03	0.269	0	100	0	0	7	0	
28	0	0	0	0	0	0	0	0	0	0	18	72	0	10	72	0	
29	0	0	0	0	0	0	0	0	0.035	0	100	0	0	0	0	0	02
30	0.005	0	0	0	0.021	0	0.006	0.218	0.505	0.005	0	0	0	100	0	0	01
31	0	0	0	0.005	0.015	0.205	0.016	0.002	0	0	0	0	100	0	0	0	
32	-0.002	0	0	0	0.015	0.047	1.491	0.222	0	-0.002	0	0	0	100	0	0	02
33	0.032	0	0	0	0.08	1.237	0.081	0.03	-0.001	0.032	4	66	0	30	66	0	01
34	0.218	0	0	0	0.006	-0.002	0.015	0.02	0.264	0.218	0	100	0	0	0	0	01
35	-0.001	0	0	0	0.003	0.022	-0.004	0	0	-0.001	100	0	0	0	0	0	01
36	0	0	0	0	0.016	-0.002	0.115	0.018	0.01	0	0	94	0	6	94	0	01
37	3.104	0	0	0	0	0.038	0	0.076	0.113	3.104	0	6	0	94	0	0	02
38	-0.028	0	0	0	0	0.385	0.021	0.04	-0.06	-0.028	100	0	0	0	0	0	01
39	0	0	0	0	0	0.048	0	-0.008	0	0	100	0	0	0	0	0	01
40	0.035	0	0	0	0	0	0	0.024	0.103	0.035	0	100	0	0	100	0	01
41	-0.003	0	0	0	0	0	0	1.111	0.677	-0.003	0	100	0	0	100	0	01
42	0.368	0	0	0	0	0	0	0.963	1.217	0.368	37	62	1	0	62	0	01
43	1.027	0	0	0	0	0	0	0.18	0.199	1.027	32	68	0	0	68	0	01
44	0.841	0	0	0	0	0	0	0.575	1.09	0.841	40	60	0	0	60	0	01
45	0.716	0	0	0	0	0	0	0	0.091	0.716	0	100	0	0	100	0	01
46	0.075	0	0	0	0	0	0	0	0.012	0.075	10	0	20	70	0	0	
47	-0.008	0.007	0.004	0.018	-0.017	0	0	0.803	0.509	-0.008	0	6	0	94	0	0	04
48	0	0	0	0	0.003	0	0	-0.003	0	0	0	0	0	100	0	0	
49	0	0	0	0	0.003	0	0	-0.003	0	0	0	10	0	90	10	0	
50	0.195	0	0	0	0	0	0	0	0	0.195	20	15	0	65	0	0	01
51	0	0	0	0	0.008	0	0	0.002	0	0	0	0	0	100	0	0	01
52	-0.057	0	0	0	0	0.275	0	-0.05	0	-0.057	100	0	0	0	0	0	
53	0.835	0	0	0	0	0	0	0.207	0.061	0.835	70	30	0	0	30	0	01
54	0.258	0	0	0	0	0	0	1.515	0.82	0.258	57	37	6	0	37	0	01
55	0.894	0	0	0	0	0	0	0	0	0.894	0	21	42	37	21	0	
56	0.133	0	0	0	0	0	0	0	0	0.133	0	75	25	0	75	0	01
57	0	0	0	0	0	0	0	0	-0.001	0	0	0	0	100	0	0	
58	0	0	0.138	0.027	0	0	-0.027	0	0	0	11	89	0	0	89	0	01
59	0.284	0	0	0	0	0	0	1.554	0.47	0.284	17	83	0	0	83	0	01
60	0.003	0	0	0	0	0	0	0.006	0.079	0.003	0	100	0	0	100	0	
61	0.911	0	0	0	0	0	0	0	0.04	0.911	35	65	0	0	65	0	01
62	0.065	0	0	0	0	0	0	0	0.011	0.065	10	0	20	70	0	0	
63	-0.001	5.022	5.787	4.342	0.245	2.059	2.916	0.106	0.04	-0.001	0	4	1	95	0	0	02
64	0.049	6.349	3.025	-0.352	0.017	0.146	0.183	0	-0.063	0.049	0	33	0	67	27	0	11
65	0	0	0	0	0.005	0.015	0	-0.007	0	0	100	0	0	0	0	0	01
66	0	0	0	0	-0.009	0.009	-0.002	0	0	0	0	0	0	100	0	0	01
67	0	0	0	0	0.001	0.002	-0.003	0	0	0	0	100	0	0	100	0	01
68	0	0	0	0	0	0	0.626	0	-0.003	0	0	100	0	0	0	0	01
69	0	0	0	0	0	0	0.01	0.03	0	0	0	100	0	0	75	25	01
70	0.068	0	0	0	0	0	0	0	0.03	0.068	0	7	1	92	0	0	10
71	0	0	0	0.424	-0.084	0	0	0	0	0	26	44	3	27	38	0	
72	-0.153	0	0	0	0	0	0.884	0.143	0	-0.153	0	79	0	21	65	0	01
73	0.101	0	0	0	0.25	0.895	0.011	0	-0.22	0.101	93	0	0	7	0	0	01
74	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
75	0	0.002	2.289	1.033	-0.142	0.113	0.132	-0.001	0	0	0	100	0	0	0	0	01
76	0.061	0	0	0.006	0.027	0.014	0.036	0.368	1.983	0.061	0	100	0	0	0	0	02
77	0	0	-0.009	0	0	0	0	0	-0.015	0	0	0	0	100	0	0	
78	-0.01	0.214	0.177	0	0.002	0.059	0.044	0	0	-0.01	100	0	0	0	0	0	01
79	-0.038	0	0	0	1.628	3.398	-0.033	-0.001	-0.011	-0.038	0	0	0	100	0	0	08
80	0	0	0.11	0.013	0	0.001	0	0	-0.001	0	0	0	0	100	0	0	
81	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	
82	-0.001	0.025	0.748	0.256	0.589	0.901	0.344	0.007	-0.004	-0.001	0	100	0	0	100	0	09
83	0	0.124	1.034	0.142	0.769	0.856	0.067	0.021	-0.001	0	0	100	0	0	100	0	09
84	-0.011	0	0	0.003	0.007	0.003	0.047	0.122	0.006	-0.011	100	0	0	0	0	0	01
85	2.653	0	0	0	0.067	0.071	0.535	0.007	0.041	2.653	100	0	0	0	0	0	01
86	0.001	0	0.037	1.681	1.517	0.152	-0.001	-0.032	-0.03	0.001	100	0	0	0	0	0	
87	0	0.02	0.022	0.018	0.014	0	0	0	0	0	0	100	0	0	0	0	
88	0	0	0	0	0.03	0.053	0.432	0.064	0.007	0	0	100	0	0	0	0	01
89	-0.086	0	0.443	1.386	1.77	0.049	0.001	-0.046	-0.004	-0.086	0	66	1	33	66	0	08
90	-0.017	0	0.202	1.056	0.661	0.235	0	0.002	0.098	-0.017	0	91	0	9	91	0	08
91	0	0	0.141	0.428	1.037	0.135	0.04	0	-0.004	0	30	65	0	5	65	0	08
92	-0.21	0	0.167	0.89	0.356	0.491	-0.001	0	-0.066	-0.21	0	99	0	1	99	0	08
93	0.051	0	0.187	0.331	1.967	0.343	0.066	0	0	0.051	0	95	0	5	95	0	08
94	-0.018	0	0	0	0.05	0.082	0.688	0.094	-0.004	-0.018	0	50	0	50	0	0	01
95	0	0	0	0	0.01	0.015	0.026	0.026	0	0	0	100	0	0	0	0	01
96	0	0	0	0	0.016	0.054	-0.002	0	0	0	0	100	0	0	100	0	
97	0.002	0	0	0.006	0.025	0	0.006	0.118	-0.013	0.002	0	100	0	0	0	0	01
98	0.299	0	0	0.003	0.082	0.446	0.492	1.356	0.984	0.299	97	3	0	0	0	0	01
99	0	0	0	0.004	0.013	0.35	0.093	-0.003	0	0	0	100	0	0	0	0	01
100	0	0	0	0	0.025	0.015	0.003	-0.002	0	0	0	0	100	0	0	0	01
101	-0.01	0	0	0	0.023	0.026	0.009	0.001	0.03	-0.01	0	0	100	0	0	0	01
102	-0.002	0	0	0	0.008	0	0.003	0	0.002	-0.002	0	100	0	0	0	0	01
103	0.022	0	0	0.019	0.634	0.635	0.234	0.001	-0.007	0.022	59	25	11	5	25	0	01
104	0	0	0	0.02	0.702	0.252	-0.001	0	-0.191	0	52	48	0	0	48	0	
105	1.232	0	0	0	0.018	0.012	0.493	1.697	1.403	1.232	0	100	0	0	80	20	01
106	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
107	0	0	0	0	0	0	0	0.04	0	0	0	100	0	0	0	0	01
108	0	0	0	0	0	0	0	0.017	0	0	0	100	0	0	0	0	01
109	0	0	0	0	0	0	0	0	0.061	0	0	100	0	0	0	0	01
110	-0.002	0	0	0	0	0	0	0	0.081	-0.002	0	100	0	0	0	0	01
111	0	0	0	0	0	0	0	0.042	-0.001	0	0	100	0	0	0	0	01
112	-0.003	0	0	0	0	0	0	0	0.169	-0.003	0	100	0	0	0	0	01
113	0.062	0	0	0	0	0	0	0	0.142	0.062	0	100	0	0	0	0	01
114	0	0	0	0	0	0.639	0.33	0	0	0	0	100	0	0	0	0	01
115	0	0	0	0	0	0	0.072	-0.016	0.001	0	0	100	0	0	0	0	01
116	-0.001	0	0	0	0	0	0	0	0.092	-0.001	0	100	0	0	0	0	01
117	0.016	0	0	0.003	0.105	0.1	0.091	0.1	0.069	0.016	0	100	0	0	0	0	01
118	0	0	0	0	0	0.127	0.152	-0.027	0	0	0	100	0	0	0	0	01
119	0	0	0	0	0	0.067	0.108	-0.024	0	0	0	100	0	0	0	0	01
120	0	0.011	-0.05	0	0	0	-0.01	0	0	0	0	100	0	0	0	0	01
121	0	0	0	0	0	0.255	0.04	0	0	0	0	100	0	0	0	0	01
122	0	0	0	0	0	0.13	0.022	-0.021	0	0	0	100	0	0	0	0	01
123	0	0	0	0	0	0.044	0.043	0	0	0	0	100	0	0	0	0	01
124	0	0	0	0	0	0.009	0.137	-0.001	-0.001	0	0	100	0	0	0	0	01
125	0.001	0	0	0	0	0	0	0.259	0	0.001	0	100	0	0	0	0	01
126	0	0	0	0	0	0	0	0.21	0.113	0	0	100	0	0	0	0	01
127	0	0	0	0	0	0	0	0	0.215	0	0	100	0	0	0	0	01
128	0.001	0	0	0	0	0	0.065	0	0.001	0.001	0	100	0	0	0	0	01
129	-0.001	0	0	0	0	0	0.135	0.003	0	-0.001	0	100	0	0	0	0	01
130	0	0	0	0	0	0	0.083	0	0	0	0	100	0	0	0	0	01
131	0	0	0	0	0	0	0.045	0	0	0	0	100	0	0	0	0	01
132	-0.001	0	0	0	0	0	0	0.028	0	-0.001	0	100	0	0	0	0	01
133	0	0	0	0	0	0	0	0	0.083	0	0	100	0	0	0	0	01
134	0.008	0	0	0	0	0	0	0	0.104	0.008	0	100	0	0	0	0	01
135	0	0	0	0	0	0	0.051	0	0	0	0	100	0	0	0	0	01
136	0	0	0	0	0	0	0	0.051	-0.001	0	0	100	0	0	0	0	01
137	0	0	0	0	0	0	0.191	0.312	0	0	0	100	0	0	0	0	01
138	0	0	0	0	0	0	0.518	0.081	0	0	0	100	0	0	0	0	01
139	0	0	0	0	0	0	0	0.181	0.003	0	0	100	0	0	0	0	01
140	0	0	0	0	0	0	0	0.068	0.046	0	0	100	0	0	0	0	01
141	-0.001	0	0	0	0	0	0	0	0.278	-0.001	0	100	0	0	0	0	01
142	0	0	0	0	0	0	0	0.14	0	0	0	100	0	0	0	0	01
143	0	0	0	0	0	0	0.028	0	0	0	0	100	0	0	0	0	01
144	-0.001	0	0	0	0	0	0	0.031	0	-0.001	0	100	0	0	0	0	01
145	0	0	0	0	0	0	0	0.033	-0.001	0	0	100	0	0	0	0	01
146	0	0	0	0	0	0	0	0.021	-0.001	0	0	100	0	0	0	0	01
147	0	0	0	0	0	0	0	0.075	0.004	0	0	100	0	0	0	0	01
148	0	0	0	0	0	0	0	0.038	-0.001	0	0	100	0	0	0	0	01
149	0.006	0	0	0	0	0	0	0	0.041	0.006	0	100	0	0	0	0	01
150	0.001	0	0	0	0	0	0	0	0.039	0.001	0	100	0	0	0	0	01
151	0	0	0	0	1.742	1.872	1.811	0.038	-0.088	0	26	44	3	27	38	0	01
152	0	0	0	0	0.112	0.075	0.376	0.068	0.126	0	100	0	0	0	0	0	02
153	0	0	0	0	0	0	0	0	0	0	30	51	3	16	47	0	
154	0.014	2.081	1.117	0.55	0.351	0.009	0.019	0.005	-0.02	0.014	41	21	3	35	20	0	01
155	0.003	0	0	0	0	0	0	0	0	0.003	0	100	0	0	100	0	
156	0.008	0	0	0.006	0.121	0.137	0.014	0.064	-0.013	0.008	0	100	0	0	90	10	01
157	0	2.598	0.511	-0.023	0.122	0.02	0	0.003	-0.077	0	9	64	7	20	64	0	
158	0	1.568	2.554	0.726	0.18	0.135	0.018	-0.001	-0.064	0	18	19	60	3	17	0	01
159	0	0	0.148	0.719	-0.05	0	-0.009	-0.052	-0.001	0	12	64	4	20	58	0	01
160	-0.007	0	2.479	0.973	0.06	0.003	0.017	0	-0.001	-0.007	12	66	16	6	66	0	01
161	-0.024	0	1.653	1.945	0.131	0.072	0.004	0.004	0.051	-0.024	3	62	21	14	58	0	01
162	0.014	0	2.217	1.517	0.038	0.024	0.001	0	0.002	0.014	0	69	25	6	66	0	01
163	0	0.036	-0.031	-0.006	0.037	0	0	-0.001	0	0	67	27	6	0	27	0	01
164	0	1.303	0.062	-0.02	0.001	-0.053	-0.007	0	0	0	27	32	32	9	32	0	01
165	0	0.019	0.041	0	-0.027	0	-0.01	0	0	0	17	6	77	0	6	0	01
166	0	0.277	1.8	0.3	-0.055	-0.002	0.03	0	-0.051	0	52	31	8	9	31	0	01
167	-0.049	0	0	0.276	1.867	0.74	0.065	-0.058	-0.032	-0.049	32	22	37	9	22	0	01
168	0	0	0.01	0	0	0	0	0	-0.04	0	0	100	0	0	100	0	
169	0	0.24	0	0	0	0	-0.002	0	0	0	75	25	0	0	25	0	01
170	0	0.025	-0.027	-0.001	0	0	0	0.001	0	0	1	99	0	0	99	0	01
171	0	2.336	0.443	0.768	0.04	0.002	0	0	-0.013	0	13	60	5	22	60	0	01
172	-0.003	0	0.844	0.409	0.169	0	-0.029	0	-0.001	-0.003	25	75	0	0	75	0	01
173	0.026	0	0	0	0	0	0	0	0	0.026	0	39	58	3	39	0	
174	-0.109	2.874	0.996	0.764	0.2	0	0	-0.15	0	-0.109	25	64	7	4	64	0	
175	0	0.432	0.278	0.092	-0.052	0	-0.004	0	0	0	0	100	0	0	100	0	01
176	0.008	0.087	0.996	1.067	0.761	0.024	-0.001	0	-0.034	0.008	95	0	1	4	0	0	01
177	0.032	0.265	1.863	0.77	0.065	0.24	0.045	0.051	-0.083	0.032	38	35	6	21	35	0	01
178	0.008	0.162	1.42	1.408	1.498	0.211	-0.132	0	-0.085	0.008	92	5	1	2	5	0	01
179	0.1	0.247	2.16	2.062	1.207	-0.003	0.01	0	-0.046	0.1	44	55	0	1	54	0	
180	-0.002	0.077	1.09	0.63	0.833	0.064	-0.236	0	-0.26	-0.002	9	76	6	9	67	0	01
181	0	0	0	0.014	0.003	-0.003	0	0	0.005	0	0	0	0	100	0	0	
182	0.038	0	0.109	0.018	0.705	1.586	0.044	0	-0.027	0.038	72	22	1	5	22	0	01
183	0.005	0	0.116	0.025	0.731	1.965	0.225	0	-0.289	0.005	47	51	0	2	51	0	01
184	0.001	0	0.156	-0.014	0.807	0.992	-0.001	0.017	0.001	0.001	52	44	0	4	44	0	01
185	0	1.42	-0.026	0.061	0	0	0.002	0	0	0	16	55	4	25	55	0	01
186	0.017	2.903	0.138	0.11	0.001	0	0.021	0	0	0.017	36	58	2	4	57	0	01
187	0	1.954	0.118	0.16	-0.001	-0.089	0.002	0	-0.004	0	35	34	28	3	34	0	01
188	-0.012	0	0.318	1.814	0.367	0	-0.05	0	-0.031	-0.012	8	86	0	6	86	0	01
189	-0.005	0	0.823	1.013	0.165	0.176	-0.072	0	0	-0.005	0	61	0	39	61	0	01
190	-0.09	0.015	3.296	3.754	0.946	0.213	0.017	0	-0.03	-0.09	23	47	9	21	43	0	01
191	-0.025	1.299	4.674	0.129	0.081	0.005	0	0	-0.027	-0.025	42	51	5	2	51	0	
192	0	0.015	-0.015	0	0	0	0.02	0	0	0	0	100	0	0	0	0	01
193	-0.051	0.142	2.105	-0.213	0.52	0.098	0.016	0	0.05	-0.051	5	71	14	10	71	0	01
194	0.055	0	1.346	2.56	0.886	0.107	-0.234	0.018	-0.007	0.055	32	49	0	19	49	0	01

Project Identification

Sort Ref (1)	CIM Submission Reference (2)	Project ID Reference (3)	Project Name (4)	PC Project Period (5)	Parent Project ID (6)	Substitute Project ID (7)	Primary Asset Category (8)	PC10 Programme (9)	Regulatory Sign-Off Required (10)
195	2018_19 Q4	JI054	Water Mains New and Renewed including FTS. (Unplanned)	06			03	23	UR
196	2018_19 Q4	JA291	Ballyclare Road Glengormley Watermains Upgrade	00	JI054		03	23	DRD
197	2018_19 Q4	JB656	Magherafelt Road, Tobermore, Watermain Extension	00	JI054		03	23	
198	2018_19 Q4	JC293	Ballinrees Central Zone Watermain Improvements	00	JI054		03	23	
199	2018_19 Q4	JC314	Fairview Lane, Articlave - Watermain Ext	01	JI054		03	23	
200	2018_19 Q4	JC396	Chatham Road, Armoy, Watermain Replacement.	00	JI054		03	23	DWI
201	2018_19 Q4	JF600	Carrive Rd Quilly Rd Mullaghbawn Watermain Replacement	03	JI054		03	23	DWI
202	2018_19 Q4	JG076	Cornakinnegar Road, Lurgan Water Main Extension	00	JI054		03	23	DRD
203	2018_19 Q4	JI023	A5 Western Transport Corridor	00	JI054		03	23	DRD
204	2018_19 Q4	JN495	Creggan Road Carrickmore Watermain Extension	00	JI054		03	23	
205	2018_19 Q4	JR474	Millmount Village Dundonald Water Main Upgrades	00	JI054		03	23	DRD
206	2018_19 Q4	JS307	Drumarden Road Portaferry	03	JI054		03	23	DRD
207	2018_19 Q4	JI058	Recreational Sites Appraisals for Public Access	04			06	03	
208	2018_19 Q4	JI059	Water Tower Reports demolition of seven	03			04	07	DRD
209	2018_19 Q4	JI061	Impounding Reservoirs On-site Action Plans. (Reservoirs Bill)	03			01	03	DRD
210	2018_19 Q4	JI062	Lead Pipe Replacement Programme	03			03	23	DWI
211	2018_19 Q4	JI063	Inspection of Air Valves	03			03	23	
212	2018_19 Q4	JI065	PC13 Base Maintenance Water Treatment Works - North/ East	03			02	01	DRD
213	2018_19 Q4	JI066	PC13 Base Maintenance Water Treatment Works - South/ West	03			02	01	DRD
214	2018_19 Q4	JI067	Supply, installation and commissioning of Telemetry Scanning Digital Radio	00			03	08	DRD
215	2018_19 Q4	JI068	PC13 Base Maintenance Water Pumping Stations	03			05	01	DRD
216	2018_19 Q4	JI071	Sub Metering at Selected Clean Water Sites	06			06	01	DRD
217	2018_19 Q4	JI072	PC15 Water Mains Rehabilitation Framework	06			03	08	UR
218	2018_19 Q4	JI073	PC15 Water Mains Minor Works Framework.	06			03	23	UR
219	2018_19 Q4	JI074	Watermains Rehabilitation, New & Replacement Incorporating First Time S	06			03	08	UR
220	2018_19 Q4	JI075	WPS Pump Efficiency Capital Investment Phase 2	00			05	01	
221	2018_19 Q4	JI076	Replacement Watermains 2014/15 - Reactive, Bundle 2	03			03	08	
222	2018_19 Q4	JI078	PC15 Service Reservoir Rehabilitation (Parent Code)	00			04	07	
223	2018_19 Q4	JI079	PC15 Abstraction Monitoring	00			01	03	
224	2018_19 Q4	JI080	PC15 Service Reservoir Sample Taps	00			04	07	
225	2018_19 Q4	JI081	PC15 - PSCEMD (Water)	00			02	04	
226	2018_19 Q4	JI082	PC15 Lead Communication Pipe Replacement Programme	00			03	23	DWI
227	2018_19 Q4	JI083	PC15 Trunk Main Rehabilitation Programme (Parent)	00			03	23	
228	2018_19 Q4	JA321	Donegore SR Rehabilitation	06	JI078		04	07	
229	2018_19 Q4	JL791	Caugh Hill CWB Rehabilitation	06	JI078		04	07	
230	2018_19 Q4	JV880	Camly Command SR Refurbishment	06	JI078		04	07	
231	2018_19 Q4	JF601	Ardglena Grove Area Dungannon Watermain Realignment	06	JI083		03	23	
232	2018_19 Q4	JI084	Water Treatment Works Treatability Study	06			02	01	
233	2018_19 Q4	JI086	PC15 Public Realm & Roads (Water)	00			03	23	
234	2018_19 Q4	JI087	PC15 Watermains Rehabilitation WP1 - Foffany/North Lisburn South	00			03	08	
235	2018_19 Q4	JI088	PC15 Watermains Rehabilitation WP 2: Forked Bridge Dunmurry	00			03	08	
236	2018_19 Q4	JI089	PC15 Watermains Rehabilitation WP 3: Killylane	00			03	08	
237	2018_19 Q4	JI090	PC15 Watermains Rehabilitation WP 4: Ballymena Ph1	00			03	08	
238	2018_19 Q4	JI092	PC15 Watermains Rehabilitation WP 6: Dungonnell	00			03	08	
239	2018_19 Q4	JI093	PC15 Watermains Rehabilitation WP 7: Carrickfergus	00			03	08	
240	2018_19 Q4	JI094	PC15 Watermains Rehabilitation WP 8: Belfast South Ph1	00			03	08	
241	2018_19 Q4	JI096	PC15 Watermains Rehabilitation WP 10: Belfast North	00			03	08	
242	2018_19 Q4	JI099	WIIM Networks Workpackages Development and Verification	04			06	08	
243	2018_19 Q4	JI100	PC15 Capital Maintenance Planning	04			06	20	
244	2018_19 Q4	JI101	PC15 Service Reservoir Condition Assessments.	04			04	07	
245	2018_19 Q4	JI102	PC15 PPRA Review of EP Water Mains Rehab Work Packages.	04			03	08	
246	2018_19 Q4	JI104	PC15 Year 1 Base Maintenance - Chlorine Dosing Sites	00			04	01	
247	2018_19 Q4	JI105	WTW Condition Assessments	00			02	01	
248	2018_19 Q4	JI106	SR ByPass Schemes Phase 2	00			03	06	
249	2018_19 Q4	JI108	PC15 Year 1- Asset Peformance Miscellaneous Solutions Development	06			06	07	
250	2018_19 Q4	JI109	Castor Bay Outage Feasibility Studies	06			03	04	
251	2018_19 Q4	JI110	Impounding Reservoir Audits.	06			01	03	
252	2018_19 Q4	JI112	PC15 Watermains Rehabiliation Parent	06			03	08	
253	2018_19 Q4	JI114	PC15 FTS (Water) Parent EP	06			03	23	
254	2018_19 Q4	JI115	PC15 Appraisal of NIW infrastructure at Railways, DRD Road & Pipe Bridg	06			03	23	
255	2018_19 Q4	JI117	WTW Resilience Improvement	00			02	04	
256	2018_19 Q4	JI118	Service Reservoir Condition Assessment(PC15 Year 2)	00			04	07	
257	2018_19 Q4	JI119	Capital Maintenance Planning: Trunk Main Condition Grading (PC15 Year 2	00			03	05	
258	2018_19 Q4	JI120	WIIM Networks Work Packages & Verification(PC15 Year 2)	00			06	08	
259	2018_19 Q4	JI121	Hydraulic Model Rebuilds & Project Management(PC15 Year 2)	00			06	20	
260	2018_19 Q4	JI122	PPRA's for Rehab Work Packages 2016/17	06			03	08	
261	2018_19 Q4	JI123	NIW Historic Estate Condition Assessments	06			06	03	
262	2018_19 Q4	JI126	PC15 Year 3 WPS Base Maintenance	06			05	01	
263	2018_19 Q4	JI127	WIIM Networks Workpackages and Verification 2017-2018	06			06	08	
264	2018_19 Q4	JI128	Clean Water Network Hydraulic Model Rebuilds and Ad -Hoc Analysis 20	06			06	20	
265	2018_19 Q4	JI129	Miscellaneous Risk and Consequence Update and Clean Water Network A	06			06	23	
266	2018_19 Q4	JI130	Service Reservoir Condition Assessment PC15	06			04	07	
267	2018_19 Q4	JI131	PPRAs for Rehab Work Packages PC15	06			03	08	
268	2018_19 Q4	JI132	Trunk / Strategic Main Investigation 2017-2018	06			03	23	
269	2018_19 Q4	JI133	DG3 Management Improvements	06			06	08	
270	2018_19 Q4	JI134	Update to Standardised Engineering Drawings	06			06	20	
271	2018_19 Q4	JI135	Leakage Investigations to inform WIIM Work Package development	06			06	01	
272	2018_19 Q4	JI136	Development and Implementation of Risk-Based Condition Assessment Me	06			10	01	
273	2018_19 Q4	JI137	CMP - Deterioration and Risk & Reliability Modelling for PC21	06			14	20	
274	2018_19 Q4	JI138	PC15 Year 4 SR (M&E mainly & Chlorine Gas assets) Base Maintenance	00			04	01	
275	2018_19 Q4	JI139	PC15 Year 4 WPS Base Maintenance	00			01	01	
276	2018_19 Q4	JI141	Trunk/Strategic Water Main Investigations PC15	00			03	05	
277	2018_19 Q4	JI142	Compiling Prioritised Lead Comms Pipe Workpackages Phase 2	00			03	23	
278	2018_19 Q4	JI143	Clean Water Network Hydraulic Model Rebuilds and Ad -Hoc Analysis 2018	06			06	20	
279	2018_19 Q4	JI144	Professional Services Framework Watermains Network PC15	06			03	08	
280	2018_19 Q4	JI145	Review benefits of UV Disinfection treatment within NIW clean water.	06			06	03	
281	2018_19 Q4	JI146	Update to Drinking Water Safety plans (DWSPs) Risk Assessments	06			06	04	
282	2018_19 Q4	JI147	SR Rehabilitation	06			04	07	
283	2018_19 Q4	JI149	Feasibility Study for using Groundwater Abstraction	06			06	03	
284	2018_19 Q4	JL713	Killyhevlin to Lough Bradan Link Watermain	02			03	05	DWI
285	2018_19 Q4	JL715	Caugh Hill, Carmoney to Strabane Strategic Link Watermain	02			03	05	DWI
286	2018_19 Q4	JL750	Ballinrees to Limavady/Londonderry Supply Augmentation	01			03	05	DWI
287	2018_19 Q4	JL768	Caugh Hill WTW FAS Storage	00			02	04	DRD
288	2018_19 Q4	JL769	Glenedra Water Intake Refurbishment & Access Road Repair	00			01	03	DRD
289	2018_19 Q4	JL770	Caugh Hill WTW - Upgrade of Wash Water Treatment Facilities Feasibility (	02			02	04	DRD
290	2018_19 Q4	JL772	WTW - Treatability Appraisal of Caugh Hill WTW	00			02	04	DRD
291	2018_19 Q4	JL773	Carmoney WTW DAF process Optimisation	00			02	04	DWI
292	2018_19 Q4	JL774	Faughan PS - Bandscreen upgrade	00			05	01	
293	2018_19 Q4	JL781	A29 Killytoney Realignment, Watermain Diversions	00			03	23	
294	2018_19 Q4	JL785	A6 Dungiven Drumahoe	06			03	23	DRD
295	2018_19 Q4	JL786	Carmoney Wtw Treatability Recommended Improvements	06			02	04	
296	2018_19 Q4	JL787	Faughan RWPS Resilience Scheme	06			05	01	
297	2018_19 Q4	JL788	Creggan SR Overflow	00			04	01	
298	2018_19 Q4	JL789	Carmoney WTW Abstraction Point Review	06			01	03	
299	2018_19 Q4	JL790	Northern WRZ Resilience	06			01	05	
300	2018_19 Q4	JL792	Ballynameen Bridge Claudy	00			03	23	
301	2018_19 Q4	JL795	Ballinrees WTW, MCPA treatment investigations	06			02	04	
302	2018_19 Q4	JN226	Strule Intake For Derg WTW	01			01	03	DWI
303	2018_19 Q4	JN390	Lough Bradan WTWs Upgrade	01			02	04	DWI
304	2018_19 Q4	JN483	Glenhordial WTW expansion of existing sludge plant	06			02	04	
305	2018_19 Q4	JN509	Derg WTW - Upgrade of Filters and Chemical Dosing	06			02	04	DRD
306	2018_19 Q4	JN510	Strule River Omagh Trunk Water Main Repair	00			03	23	
307	2018_19 Q4	JN511	South / South East Zonal Study South East Phase 1 Work Packages	03			03	08	DRD
308	2018_19 Q4	JN512	Omagh Phase 2 Watermain Rehab	03			03	08	UR
309	2018_19 Q4	JN514	Castletown/Koram WPS Upgrade	06			03	23	DRD
310	2018_19 Q4	JN528	Crawfords Hill Mains Replacement	00			03	08	
311	2018_19 Q4	JN529	Colebrook Park Road Mains Replacement	00			03	23	
312	2018_19 Q4	JN530	Toura Road Mains Replacement	00			03	23	
313	2018_19 Q4	JN532	Belleek Meenacloybane Strategic Main Replacement.	06			03	23	
314	2018_19 Q4	JN534	WIIM Phase 2 Loughmacrory WP	06			03	08	
315	2018_19 Q4	JN535	WIIM Phase 2 Lough Braden Drumquin WP	06			03	08	
316	2018_19 Q4	JN538	Derg WTW MCPA PEO Undertakings	06			02	04	
317	2018_19 Q4	JN541	PC15 Year 3 WTW Capital Maintenance - West Region	06			02	01	
318	2018_19 Q4	JN544	Doochrock to Drumkeeran Watermain Upgrades	06			03	23	
319	2018_19 Q4	JN545	Alleyhill to Doochrock Watermain	06			03	23	
320	2018_19 Q4	JN546	Tyrone South WIIM 2.1 Work Package	06			03	08	
321	2018_19 Q4	JN547	Tyrone North WIIM 2.1 Work Package	06			03	08	
322	2018_19 Q4	JN548	Fermanagh South WIIM 2.1 Work Package	06			03	08	
323	2018_19 Q4	JN549	Tyrone West WIIM 2.1 Work Package	06			03	08	
324	2018_19 Q4	JN550	Lough Fea to Kinsgmills TM Replacement (Part)	06			03	23	
325	2018_19 Q4	JN551	Cornamuck Road Realignment	00			03	23	DRD
326	2018_19 Q4	JN553	Western WRZ Resilience	06			01	03	
327	2018_19 Q4	JN555	Gortin Road, Omagh - Road Widening	06			03	23	
328	2018_19 Q4	JP631	Killyhevlin Clear Water Tank	02			04	06	DWI
329	2018_19 Q4	JP650	Killyhevlin WTW Improvements to sludge settlement system	04			02	04	
330	2018_19 Q4	JP653	Enniskillen New Hospital Watermain Ext	00			03	23	
331	2018_19 Q4	JP669	Killyhevlin WTW - GAC	00			02	04	DWI
332	2018_19 Q4	JP680	South / South East Zonal Study South Phase 1 Work Packages	03			03	08	DRD
333	2018_19 Q4	JP683	Hallcraig road, Enniskillen WM Ext	00			03	23	DRD
334	2018_19 Q4	JP684	Glenchuil Area Low Pressure Alleviation	03			03	23	
335	2018_19 Q4	JP685	Killyhevlin WTW Hypo Storage Tank Replacement	03			02	01	
336	2018_19 Q4	JP688	PC15 Year 2 WTW Base Maintenance – West Region	00			02	01	
337	2018_19 Q4	JP690	Syonfin WPS to Dungoran SR 150mm DI Watermain Replacement	06			03	23	
338	2018_19 Q4	JP691	Fermanagh North WIIM 2.1 Work Package	06			03	08	
339	2018_19 Q4	JP693	Killyhevlin Wtw treatability recommended improvements.	06			02	04	
340	2018_19 Q4	JP694	Rathmore SR Belleek reroute outlet	06			03	23	
341	2018_19 Q4	JP695	Upgrade of Killyhevlin WTW's	06			02	04	
342	2018_19 Q4	JP696	PC15 Year 4 WTW Base Maintenance	06			02	01	
343	2018_19 Q4	JP697	Killyhevlin Outlet Mains Replacement	06			03	05	
344	2018_19 Q4	JP699	Enniskillen PR Watermains Replacements	06			03	08	
345	2018_19 Q4	JR096	Aquarius	01			03	05	
346	2018_19 Q4	JR342	Strategic Link - Castor Bay to Belfast	01			03	05	DWI
347	2018_19 Q4	JR348	Dunore to Hydepark Pumping Main Replacement	01			03	05	
348	2018_19 Q4	JR449	Oldpark Watermain Improvements	00			03	08	UR
349	2018_19 Q4	JR461	Ballystockard Quarry main repair	00			03	05	DRD
350	2018_19 Q4	JR463	Dorisland WTW - GAC Feasibility Study	01			02	04	DRD
351	2018_19 Q4	JR464	Carrickfergus Phase 3 Watermains Improvements	00			03	08	DRD
352	2018_19 Q4	JR465	Frenchpark Raw Water Conduit Appraisal Study	00			01	03	DWI
353	2018_19 Q4	JR466	McVeigh's Well Rationalisation of Pipework	00			03	08	UR
354	2018_19 Q4	JR469	Whiteabbey Upper Service Reservoir Outlet Pipe Replacement or Repair	00			04	07	DWI
355	2018_19 Q4	JR480	Warwicks Row Carrickfergus Watermain Extension	00			03	23	DRD
356	2018_19 Q4	JR485	Former Visteon Factory - watermain extension	00			03	23	
357	2018_19 Q4	JR488	Dunanney SR Building Improvements	00			04	07	
358	2018_19 Q4	JR490	Westland House, Reception and AD Building Upgrade	06			15	20	
359	2018_19 Q4	JR494	WIIM Phase 2 Belfast Ballygomartin North WP	06			03	08	
360	2018_19 Q4	JR499	Dorisland Aquaduct Survey	06			01	03	
361	2018_19 Q4	JR504	Lough Island Reavy Scour utilisation, Drought Management	06			01	03	
362	2018_19 Q4	JR505	Stockmans Way TM Replacement Appraisal	06			03	23	
363	2018_19 Q4	JR506	Newtownards WIIM 2.1 WP	06			03	08	
364	2018_19 Q4	JR508	PC15 Year 4 WTW Base Maintenance – East Region	06			02	01	
365	2018_19 Q4	JR511	Lisburn Road 10" watermain replacement	00			03	08	
366	2018_19 Q4	JR512	Carryduff Strategic watermain repair	00			03	23	
367	2018_19 Q4	JS179	Ballykine Gravity Distribution	01			04	06	DWI
368	2018_19 Q4	JS220	Bangor Outer Zone Watermain Improvements	00			03	08	
369	2018_19 Q4	JS274	Drumaroad WTW Clear Water Tank	01			02	06	DWI
370	2018_19 Q4	JS299	Seaside Road, Killyleagh, Watermain Extension.	00			03	23	DRD
371	2018_19 Q4	JS306	Mourne Wall Towers	03			01	03	
372	2018_19 Q4	JS309	Ardview Road Killinchy Watermain Replacement	00			03	23	
373	2018_19 Q4	JS310	Manse Road Ballygowan water main replacement	04			03	23	
374	2018_19 Q4	JS311	Sampsons Stone, SR, Scour Pipe Diversion.	06			04	07	
375	2018_19 Q4	JS312	PC15 Year 2 WTW Base Maintenance – East Region	00			02	01	
376	2018_19 Q4	JS315	Russell Quarter SR Scour/Overflow arrangement.	06			04	01	
377	2018_19 Q4	JS320	Fofanny Drought Mitigation - Lough Shannagh to Fofanny Temporary Pipeli	06			01	03	
378	2018_19 Q4	JS321	Northern Ireland Drought Mitigation	06			01	03	
379	2018_19 Q4	JT255	Lisburn Public Realm	00			03	23	DRD
380	2018_19 Q4	JT256	Lisburn South Rural Phase 1 & Dunmurry watermain improvements	00			03	08	DRD
381	2018_19 Q4	JT260	Boomers Dam-Flood Attenuation	06			01	03	
382	2018_19 Q4	JT261	PC15 Year 3 WTW Capital Maintenance - East Region	06			02	01	
383	2018_19 Q4	JT262	Lurgan Moira WIIM 2.1 Work Package	06			03	08	
384	2018_19 Q4	JT264	Leathemstown IR Scour Valve, Reservoir Scour valve Fault	06			04	07	
385	2018_19 Q4	JT265	Lisburn WIIM 2.1 WP	06			03	08	
386	2018_19 Q4	JV830	Crieve Service Reservoir	01			04	06	DWI
387	2018_19 Q4	JV853	Camlough Impounding Reservoir Dam Survey. (Condition Assessment)	00			01	03	DRD
388	2018_19 Q4	JV854	Silent Valley recreational facilities appraisal	06			01	03	
389	2018_19 Q4	JV856	Newry Public Realm Phase 2	00			03	23	DRD
390	2018_19 Q4	JV859	Watermain Improvements, Newry, Phase 3	03			03	08	DRD
391	2018_19 Q4	JV870	Silent Valley Project PH3	00			01	03	
392	2018_19 Q4	JV871	Newry Depot premises upgrade	06			15	20	
393	2018_19 Q4	JV881	WIIM 1 Phase 2 Carran Hill Crossmaglen WP	06			03	08	
394	2018_19 Q4	JV885	Lough Ross Raw Water Pumping Station	06			02	01	
395	2018_19 Q4	JV886	Banbridge South Armagh WIIM 2.1 Work Package	06			03	08	

Baseline Milestone Dates / Baseline Service Cost Allocation / Baseline Expenditure Profile (£m 2012-13 prices) / Baseline Purpose Allocation

Sort Ref (1)	Baseline A1 Date (11)	Baseline Project Approval Date (12)	Baseline Start on Site Date (13)	Baseline Beneficial Use Date (14)	Baseline Regulatory sign-off Date (15)	Baseline Completion of Construction Date (16)	Baseline End of Maintenance Period Date (17)	Baseline Service Allocation Water Infrastructure (18)	Baseline Service Allocation Water Non-Infrastructure (19)	Baseline Service Allocation Sewerage Infrastructure (20)	Baseline Service Allocation Sewerage Non-Infrastructure (21)	Baseline CAPEX 2010-11 £m (22)	Baseline CAPEX 2011-12 £m (23)	Baseline CAPEX 2012-13 £m (24)	Baseline CAPEX 2013-14 £m (25)	Baseline CAPEX 2014-15 £m (26)	Baseline CAPEX 2015-16 £m (27)	Baseline CAPEX 2016-17 £m (28)	Baseline CAPEX 2017-18 £m (29)	Baseline CAPEX 2018-19 £m (30)	Baseline Purpose Allocation Quality (36)	Baseline Purpose Allocation Base (37)	Baseline Purpose Allocation ESL (38)	Baseline Purpose Allocation Growth (39)
195								99	0	1	0	0	0	0	3.47361624	2.7332459	0	0	0	0	15	62	0	23
197	06/05/2009	18/05/2009	12/10/2009	21/04/2010		21/04/2010	21/04/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
198		22/04/2005	27/07/2009	28/01/2010		28/01/2010	28/01/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
199			02/08/2010	05/08/2011		05/08/2011	04/08/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
202	20/02/2012	27/02/2012	04/04/2012	28/09/2012		28/09/2012	28/09/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
203								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
204	04/08/2008	03/07/2009	07/12/2009	22/01/2010		22/01/2010	22/01/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
209								0	100	0	0	0	0	0	0	0	0.078568623	0.146432271	0.080539701	1.335881944	0	100	0	0
210								100	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0
216								0	100	0	0	0	0	0	0	0	0.46221	0	0	0	0	0	100	0
223								0	100	0	0	0	0	0	0	0	0.046509439	0.046230382	0.045953	0.182709128	27	10	27	36
224								0	100	0	0	0	0	0	0	0	0.480250706	0.477369202	0	0	0	100	0	0
225								0	100	0	0	0	0	0	0	0	0	0.91887348	0.913360239	0.907880078	100	0	0	0
226								100	0	0	0	0	0	0	0	0	0.92442	0.91887348	0.913360239	0.907880078	100	0	0	0
227								90	10	0	0	0	0	0	0	0	1.054301372	1.429057587	1.420483241	1.882613789	0	59	6	35
232								0	100	0	0	0	0	0	0	0	0.150676214	0.149772156	0.186091904	0	70	30	0	0
233								100	0	0	0	0	0	0	0	0	1.036123712	1.02990697	1.023727528	1.017585163	0	100	0	0
252								96	4	0	0	0	0	0	0	0	17.93664308	17.82902323	17.72204909	17.61571679	50	34	2	14
253								100	0	0	0	0	0	0	0	0	0.647094	0.413493066	0.319676084	0.272364023	0	0	0	100
254								100	0	0	0	0	0	0	0	0	0.58926467	0.292864541	0.291107354	0.28936071	0	100	0	0
284								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
285				31/01/2019				89	11	0	0	0	0	0	0	0	0	2.213566213	4.387782589	2.501209614	0	0	0	100
286	08/12/2009	05/01/2010	22/02/2010	30/09/2011		30/09/2011	29/09/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
289								0	100	0	0	0	0	0	0	0	0	1.252484021	2.886814593	0	0	100	0	0
290				31/01/2019				0	100	0	0	0	0	0	0	0	0	0	3.606788766	3.656448784	89	11	0	0
291								0	100	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0
302	03/09/2010	08/09/2010	07/02/2012	30/03/2013		30/06/2013	30/06/2014	46	54	0	0	0.31	1.5234648	3.26891956	0.147535794	0	0	0	0	0	0	2	0	98
303	31/03/2009	27/04/2009	31/08/2009	03/03/2011		03/03/2011	02/03/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
304								0	100	0	0	0	0	0	0	0	0.28382915	0.053691833	0	0	0	100	0	0
305								0	100	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0
328				30/09/2017				0	100	0	0	0	0	0.00857484	0.017519876	0	0.850574496	2.81510893	0.756451674	0	0	34	0	66
331			01/06/2013	30/09/2014		01/02/2015	01/02/2016	0	100	0	0	0	0	0.03715764	1.89030236	1.792022658	0.46221	0	0	0	100	0	0	0
346			01/06/2013	30/12/2014		28/02/2015	28/02/2016	85	15	0	0	0.147	0.27734872	0.4430334	7.981686454	9.432311258	0.058744697	0	0	0	0	40	0	60
347			17/10/2005	13/01/2012		13/01/2012	12/01/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
348								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
349	31/01/2012	07/02/2012	25/07/2011	08/02/2012		08/02/2012	29/02/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350				31/03/2015				0	100	0	0	0	0	0	0.292	3.429	0.61289046	0	0	0	100	0	0	0
352								100	0	0	0	0	0	0	0	0	0.068747545	0	0	0	0	100	0	0
367	05/05/1993	23/06/1993	05/04/2010	20/04/2011		20/04/2011	19/04/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
368			14/01/2008	22/09/2008		22/09/2008	22/09/2009	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
369				31/03/2021				0	100	0	0	0	0	0.0190552	0.055325923	0.107521359	0	0	0	0	0	0	0	100
379								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
386	16/01/2012	13/02/2012	30/06/2013	01/01/2015		30/03/2015	30/03/2016	0	100	0	0	0.001	0.0244145	0.08860668	0.464737751	0.603015624	0	0	0	0	0	35.3712579	0	64.6287421
387								100	0	0	0	0	0	0	0	0	0.613817365	0.610134461	0	0	0	100	0	0

Current Actual or Projected Milestone Dates / Service Cost Allocation / Capital Expenditure Profile (£m money of the day) / Purpose Allocation (%) / IRE (%) / Nominated outputs (PC Period)

Sort Ref (1)	Current Actual or Projected A1 Date (40)	Current Actual or Projected Project Approval Date (41)	Current Actual or Projected Start on Site Date (42)	Current Actual or Projected Beneficial Use Date (43)	Current Actual or Projected Regulatory sign-off Date (44)	Current Actual or Projected Completion of Construction Date (45)	Current Actual or Projected End of Maintenance Period Date (46)	Current Actual or Projected Service Allocation Water Infrastructure (47)	Current Actual or Projected Service Allocation Water Non-Infrastructure (48)	Current Actual or Projected Service Allocation Sewerage Infrastructure (49)	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure (50)	Current Actual or Projected CAPEX Year to date £m (51)	Current Actual or Projected CAPEX 2010-11 £m (52)	Current Actual or Projected CAPEX 2011-12 £m (53)	Current Actual or Projected CAPEX 2012-13 £m (54)	Current Actual or Projected CAPEX 2013-14 £m (55)	Current Actual or Projected CAPEX 2014-15 £m (56)	Current Actual or Projected CAPEX 2015-16 £m (57)	Current Actual or Projected CAPEX 2016-17 £m (58)	Current Actual or Projected CAPEX 2017-18 £m (59)	Current Actual or Projected CAPEX 2018-19 £m (60)	Current Actual or Projected Purpose Allocation Quality (66)	Current Actual or Projected Purpose Allocation Base (67)	Current Actual or Projected Purpose Allocation ESL (68)	Current Actual or Projected Purpose Allocation Growth (69)	Current Actual or Projected IRE Allocation Water (70)	Current Actual or Projected IRE Allocation Sewerage (71)	Nominated Output (72)
195								100	0	0	0	0	0	0	0	0	0	0	0	0	0	15	62	0	23	62	0	
196	01/07/2013	16/07/2013	01/08/2013	29/08/2014		19/12/2013	04/11/2014	100	0	0	0	0.01	0	0	0	0.294	0.01	0.003	0.03	-0.017	0.01	0	0	0	100	0	0	01
197	06/05/2009	18/05/2009	12/10/2009	25/11/2009		30/11/2009		100	0	0	0	-0.001	0	0	0	0	0	0	0	0	-0.001	0	0	0	100	0	0	
198		22/04/2005	27/07/2009	27/01/2010		15/11/2010		100	0	0	0	0	0.182	-0.001	0.003	0	0	0	-0.002	0	0	8	17	1	74	17	0	01
199			01/10/2010	16/08/2011		01/10/2010		100	0	0	0	0	0.034	-0.005	0	0	0	0	0	-0.001	0	0	0	0	100	0	0	
200	05/08/2014	12/08/2014	30/09/2014	01/07/2015			01/07/2015	100	0	0	0	0	0	0	0	0	0.08	0.001	0	-0.038	0	100	0	0	0	0	0	
201	16/07/2014	17/07/2014	04/08/2014	30/03/2015			01/07/2015	100	0	0	0	-0.004	0	0	0	0	0.356	0.007	0	0	-0.004	88	0	0	12	0	0	01
202	20/02/2012	27/02/2012						100	0	0	0	0.007	0	0	0	0	0	0	0	0	0.007	0	0	0	100	0	0	
203								90	0	10	0	-0.009	0	0.01	0	0	-0.01	0	0	0.025	-0.009	0	100	0	0	90	10	01
204	04/08/2008	03/07/2009	07/12/2009	21/01/2010		04/01/2010		100	0	0	0	0	-0.003	0	0	0	0	0	0	-0.001	0	0	0	0	100	0	0	
205	04/06/2015	04/06/2015						100	0	0	0	0	0	0	0	0.003	0.008	0.019	0	-0.02	0	0	0	0	100	0	0	01
206	24/09/2014	03/10/2014	30/10/2014	03/04/2017				100	0	0	0	0.026	0	0	0	0	0.2	0.02	0.02	-0.005	0.026	7	93	0	0	93	0	01
207	04/02/2016	05/02/2016						0	100	0	0	0.181	0	0	0	0.039	0.038	0	0.275	0.097	0.181	0	100	0	0	0	0	01
208								0	100	0	0	0	0	0	0	0.015	0.002	-0.002	0	0	0	0	100	0	0	0	0	01
209	22/01/2018	22/01/2018						0	100	0	0	0	0	0	0	0.01	0.071	0	0	0	0	0	100	0	0	0	0	01
210	13/03/2014	25/03/2014						100	0	0	0	-0.1	0	0	0	0	0.493	0.104	0	-0.146	-0.1	100	0	0	0	0	0	01
211	04/03/2014	13/03/2014						100	0	0	0	0	0	0	0	0	0.01	-0.001	0	0	0	0	100	0	0	100	0	01
212	27/06/2014	22/07/2014	02/11/2015	30/06/2017				0	100	0	0	-0.06	0	0	0	0.005	0.021	1.96	1.184	0.029	-0.06	0	100	0	0	0	0	01
213	27/06/2014	22/07/2014						0	100	0	0	-0.048	0	0	0	0.005	0.02	1.527	1.14	0.088	-0.048	0	100	0	0	0	0	01
214	19/11/2013	29/11/2013						0	100	0	0	0.019	0	0	0	0.08	-0.026	0.001	0.029	-0.029	0.019	0	100	0	0	0	0	01
215	02/11/2016	04/11/2016						0	100	0	0	0	0	0	0	0.017	0.042	0.003	0	-0.003	0	0	100	0	0	0	0	01
216	20/02/2019	20/02/2019						0	100	0	0	0	0	0	0	0.006	0.046	0.007	0	0	0	0	0	100	0	0	0	01
217								96	4	0	0	0	0	0	0	0	0	0.067	0	-0.001	0	50	34	2	14	32	0	01
218	26/06/2018	26/06/2018						94	6	0	0	0	0	0	0	0	0	0.031	0	-0.001	0	30	51	3	16	47	0	01
219	23/02/2016	29/02/2016						94	6	0	0	1.616	0	0	0	0	0	0	0.002379	2.379	1.616	30	51	3	16	47	0	01
220								10	90	0	0	0	0	0	0	0	0.019	0.037	0	0.006	0	0	100	0	0	10	0	01
221	24/11/2014	27/11/2014	05/01/2015	03/08/2015		31/03/2016		100	0	0	0	-0.051	0	0	0	0	0.216	0.108	0.011	0	-0.051	44	56	0	0	56	0	01
222								0	100	0	0	0.003	0	0	0	0	0	0	0	0	0.003	0	100	0	0	0	0	01
223								0	100	0	0	0.185	0	0	0	0	0	0.046	0.037	0.082	0.185	27	10	27	36	0	0	01
224	29/04/2016	03/05/2016	01/04/2016			05/07/2019		0	100	0	0	0.73	0	0	0	0	0	0.04	0.081	0.815	0.73	32	68	0	0	0	0	01
225	22/02/2018	22/02/2018						0	100	0	0	0	0	0	0	0	0	0	0.033	0	0	100	0	0	0	0	0	01
226	21/08/2015	24/08/2015						100	0	0	0	0.577	0	0	0	0	0	1.422	1.629	1.034	0.577	100	0	0	0	0	0	01
227								90	10	0	0	0	0	0	0	0	0	0	0	0	0	0	63	2	35	53	0	01
228	08/05/2018	08/05/2018	04/09/2018	19/10/2018		12/10/2018	05/02/2019	0	100	0	0	0.072	0	0	0	0	0	0	0	0	0.072	0	100	0	0	0	0	
229	24/08/2018	05/09/2018	14/01/2019			04/07/2019		0	100	0	0	0.243	0	0	0	0	0	0	0	0	0.243	0	100	0	0	0	0	
230	18/08/2016	18/08/2016	04/10/2016	17/01/2017		02/02/2017	15/02/2017	0	100	0	0	0	0	0	0	0	0	0	0.16	0	0	0	100	0	0	0	0	01
231	15/01/2016	15/01/2016	01/03/2016	30/03/2016		01/04/2016		100	0	0	0	-0.002	0	0	0	0	0	0.148	0.015	-0.018	-0.002	0	100	0	0	100	0	01
232								0	100	0	0	0.246	0	0	0	0	0	0	0.101	0.178	0.246	70	30	0	0	0	0	01
233								100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	01
234	04/06/2015	16/06/2015	02/02/2015	22/01/2019				100	0	0	0	0.101	0	0	0	0	0.087	1.775	0.455	-0.02	0.101	54	46	0	0	46	0	01
235	03/11/2015	05/11/2015	01/09/2015			31/03/2016		100	0	0	0	0.39	0	0	0	0	0	0.696	1	0.137	0.39	97	3	0	0	3	0	01
236	07/05/2015	12/05/2015	02/02/2015			30/04/2018		92	8	0	0	-0.088	0	0	0	0	0.045	1.929	0.52	-0.102	-0.088	78	4	5	13	3	0	01
237	19/06/2015	22/06/2015	04/02/2015	23/03/2017			25/06/2018	100	0	0	0	-0.115	0	0	0	0	0.04	1.423	0.335	-0.197	-0.115	96	4	0	0	4	0	01
238	07/05/2015	12/05/2015	02/02/2015	22/01/2019				100	0	0	0	0.053	0	0	0	0	0.08	1.685	0.176	0.005	0.053	86	14	0	0	14	0	01
239	03/11/2015	05/11/2015	01/09/2015			09/11/2018		100	0	0	0	0.182	0	0	0	0	0	0.588	1.607	0.556	0.182	66	34	0	0	34	0	01
240	03/11/2015	05/11/2015	01/09/2015	31/01/2019		31/03/2016		86	14	0	0	-0.155	0	0	0	0	0	0.623	1.651	-0.105	-0.155	73	22	5	0	13	0	01
241	03/11/2015	05/11/2015	01/09/2015	30/03/2018		30/11/2017		100	0	0	0	-0.054	0	0	0	0	0	0.702	1.202	0.563	-0.054	90	10	0	0	10	0	01
242	30/04/2015	04/06/2015						100	0	0	0	0	0	0	0	0	0	0.133	0.023	-0.006	0	0	100	0	0	100	0	01
243	01/05/2015	22/06/2015						100	0	0	0	0.009	0	0	0	0	0	0.259	0.064	0.069	0.009	0	95	5	0	95	0	01
244	25/06/2015	26/06/2015						0	100	0	0	0	0	0	0	0	0	0.028	0.024	-0.002	0	0	100	0	0	0	0	01
245	01/05/2015	03/07/2015						100	0	0	0	-0.003	0	0	0	0	0	0.065	-0.001	0.011	-0.003	30	60	7	3	60	0	01
246	11/04/2016	18/04/2016	02/01/2017					0	100	0	0	0.573	0	0	0	0	0.002	0.044	0.29	0.602	0.573	10	90	0	0	0	0	01
247								0	100	0	0	0	0	0	0	0	0.15	0.015	0.035	-0.025	0	0	100	0	0	0	0	01
248								0	100	0	0	0.081	0	0	0	0	0	0.035	0.009	0.183	0.081	0	0	100	0	0	0	01
249	10/08/2015	14/09/2015						100	0	0	0	0	0	0	0	0	0	0.071	0.008	-0.006	0	0	100	0	0	100	0	01
250								100	0	0	0	0.053	0	0	0	0	0	0	0	0.045	0.053	0	0	0	100	0	0	
251								100	0	0	0	0.225	0	0	0	0	0	0	0.01	0.103	0.225	0	100	0	0	100	0	01
252								96	4	0	0	0	0	0	0	0	0	0	0	0	0	49	35	2	14	34	0	01
253								100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
254								100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	01
255	08/09/2016	08/09/2016						0	100	0	0	0	0	0	0	0	0	0.055	0.015	0	0	15	85	0	0	0	0	01
256	09/06/2016	10/06/2016						0	100	0	0	-0.009	0	0	0	0	0	0	0.053	0.172	-0.009	0	100	0	0	0	0	01
257	09/06/2016	21/07/2016	03/10/2016	31/03/2017				100	0	0	0	0.004	0	0	0	0	0	0	0.342	-0.001	0.004	0	95	5	0	95	0	01
258	09/06/2016	21/07/2016						100	0	0	0	0	0	0	0	0	0	0	0.09	-0.001	0	0	100	0	0	100	0	01
259	04/05/2016	10/06/2016						100	0	0	0	0.002	0	0	0	0	0	0	0.512	0.013	0.002	0	60	7	33	60	0	01
260	08/06/2016	21/07/2016						100	0	0	0	-0.002	0	0	0	0	0	0	0.019	0.023	-0.002	30	60	7	3	60	0	01
261								0	100	0	0	0.045	0	0	0	0	0	0	0.081	0	0.045	100	0	0	0	0	0	01
262	19/07/2017	01/08/2017						0	100	0	0	0.969	0	0	0	0	0	0	0.005	0.759	0.969	0	100	0	0	0	0	01
263	27/03/2017	13/04/2017						100	0	0	0	0.05	0	0	0	0	0	0	0	0.072	0.05	0	100	0	0	100	0	01
264	27/03/2017	16/05/2017						100	0	0	0	0.088	0	0	0	0	0	0	0	0.468	0.088	0	100	0	0	100	0	01
265	18/12/2017	16/01/2018						100	0	0	0	0.06	0	0	0	0	0	0	0	0.03	0.06	0	100	0	0	100	0	01
266	21/03/2018	27/03/2018						0	100	0	0	0.06	0	0	0	0	0	0	0	0	0.06	0	100	0	0	0	0	01
267	02/05/2018	04/06/2018						100	0	0	0	0.017	0	0	0	0	0	0	0	0	0.017	0	100	0	0	100	0	01
268	13/10/2017	24/10/2017						100	0	0	0	0.079	0	0	0	0	0	0	0	0.24	0.079	0	100	0	0	100	0	01
269								0	100	0	0	-0.008	0	0	0	0	0	0	0.005	0.064	-0.008	0	0	100	0	0	0	01
270	15/08/2017	03/10/2017						0	100	0	0	-0.004	0	0	0	0	0	0	0	0.092	-0.004	0	100	0	0	0	0	
271								100	0	0	0	-0.133	0	0	0	0	0	0	0	0.457	-0.133	0	100	0	0	100	0	
272	30/10/2017	16/01/2018						0	54	0	46	0.05	0	0	0	0	0	0	0	0	0.05	0	100	0	0	0	0	01
273	14/06/2017	16/06/2017						50	0	50	0	0.596	0	0	0	0	0	0	0	0.12	0.596	0	0	100	0	0	0	01
274								0	100	0	0	0.07	0	0	0	0	0	0	0	0	0.07	0	100	0	0	0	0	
275	29/06/2018	03/08/2018						0	100	0	0	0.531	0	0	0	0	0	0	0	0	0.531	0	100	0	0	0	0	
276	11/02/2019	13/02/2019						100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	
277	28/08/2018	31/08/2018						100	0	0	0	0.05	0	0	0	0	0	0	0	0	0.05	100	0	0	0	0	0	
278	01/05/2018	05/05/2018						100	0	0	0	0.353	0	0	0	0	0	0	0	0	0.353	0	100	0	0	100	0	01
279	20/09/2018	28/09/2018						100	0	0	0	0.06	0	0	0	0	0	0	0	0	0.06	20	50	0	30	50	0	01
280								100	0	0	0	0.12	0	0	0	0	0	0	0	0	0.12	10	30	30	30	30	0	01
281								100	0	0	0	0.085	0	0	0	0	0	0	0	0	0.085	0	0	100	0	0	0	01
282	25/03/2019	01/04/2019						0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
283								100	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	20	0	0	01
284								99	1	0	0	0	0.006	0.064	0.032	0.014	-0.003	0.045	-0.027	-0.001	0	0	0	0	100	0	0	03
285								89	11	0	0	-0.043	0.021	-0.008	0.016	0.076	0.036	0.1	0.045	0.238	-0.043	0	0	0	100	0	0	02
286	08/12/2009	05/01/2010						100	0	0	0	0	0.345	0.15	0.016	0.008	0.002	0	0.001	0	0	0	25	0	75	25	0	
287	29/10/2013	31/10/2013	28/11/2014	01/02/2016		26/12/2014	04/04/2016	0	100	0	0	0	0	0	0.003	0.012	0.152	0.368	0.001	0	0	0	0	0	100	0	0	01
288	11/04/2014	28/04/2014	28/11/2014	31/03/2016		25/05/2015	16/01/2017	0	100	0	0	0	0	0	0.004	0.027	0.021	0.322	0.015	-0.001	0	0	100	0	0	0	0	01
289	12/02/2016	19/02/2016	03/04/2017	28/02/2019			08/04/2019	0	100	0	0	2.038	0	0	0.005	0.022	0.01	0.006	0.132	2.198	2.038	0	72	28	0	0	0	01
290								0	100	0	0	0.018	0	0	0.005	0.059	0.007	0.004	0.009	0.146	0.018	89	11	0	0	0	0	02
291								0	100	0	0	-0.018	0	0	0.003	0.024	0.049	0.067	0.005	-0.005	-0.018	0	100	0	0	0	0	01
292	14/04/2014	28/04/2014	03/11/2014	06/01/2016		29/01/2016		0	100	0	0	0	0	0	0	0.009	0.346	0.094	-0.001	0	0	0	100	0	0	0	0	01
293	05/12/2014	11/12/2014						100	0	0	0	0	0	0	0	0	0.034	-0.013	0	-0.007	0	0	100	0	0	100	0	01
294	17/08/2018	22/08/2018						87	10	3	0	0.307	0	0	0	0	0	0	0.03	0.045	0.307	0	60	0	40	47	3	01
295	21/08/2018	22/08/2018						0	100	0	0	0.007	0	0	0	0	0	0	0	0.01	0.007	0	15	85	0	0	0	01
296								0	100	0	0	0.113	0	0	0	0	0	0	0	0.215	0.113	0	100	0	0	0	0	01
297								0	100	0	0	0.037	0	0	0	0	0	0	0	0.001	0.037	0	100	0	0	0	0	
298								0	100	0	0	0.032	0	0	0	0	0	0	0	0.019	0.032	0	40	0	60	0	0	
299								100	0	0	0	0.089	0	0	0	0	0	0	0	0.04	0.089	10	0	20	70	0	0	
300	05/04/2019	05/04/2019	20/08/2018	30/11/2018				100	0	0	0	0.023	0	0	0	0	0	0	0	0	0.023	0	100	0	0	100	0	
301								50	50	0	0	0.05	0	0	0	0	0	0	0	0	0.05	0	50	50	0	25	0	01
302	03/09/2010	08/09/2010	04/07/2011	10/01/2014		20/01/2014	10/01/2014	46	54	0	0	0.005	0	0	0	0	0	0	0	0	0.005	0	2	0	98	0	0	
303	31/03/2009	27/04/2009	01/04/2014	02/03/2011		30/07/2012		0	100	0	0	-0.144	1.536	0.21	0.02	0.147	0	0.01	-0.655	-0.343	-0.144	51	49	0	0	0	0	
304								0	100	0	0	0	0	0	0.002	0.013	0.005	0.009	0.014	-0.004	0	7	93	0	0	0	0	01
305	02/11/2016	04/11/2016						0	100	0	0	0.434	0	0	0.01	0.003	0.013	0.471	0.045	0.496	0.434	38	51	0	11	0	0	01
306								100	0	0	0	-0.006	0	0	0	0	0	0.007	0	-0.001	-0.006	0	100	0	0	100	0	01
307	14/02/2014	21/02/2014	03/03/2014	20/02/2015		23/03/2015		88	12	0	0	-0.01	0	0	0	0.51	2.025	-0.023	0.01	-0.08	-0.01	32	56	0	12	56	0	01
308	04/03/2014	10/03/2014	02/09/2013	30/10/2015		30/03/2015		100	0	0	0	-0.004	0	0	0	0.42	1.895	0.618	-0.054	0.121	-0.004	19	74	0	7	74	0	01
309	10/08/2016	12/08/2016	05/12/2016	26/01/2018		01/12/2017		65	35	0	0	0	0	0	0	0	0.015	0.005	0.306	0.339	0	0	47	44	9	12	0	01
310								100	0	0	0	0	0	0	0	0	0	0.015	-0.015	0	0	0	100	0	0	100	0	01
311	16/03/2016	18/03/2016	15/02/2016	29/07/2016				100	0	0	0	0	0	0	0	0	0	0.03	0.197	-0.033	0	0	100	0	0	100	0	01
312	16/03/2016	18/03/2016		03/04/2017				100	0	0	0	0	0	0	0	0	0	0.03	0.094	-0.039	0	0	100	0	0	100	0	01
313	28/10/2016	01/11/2016	07/11/2016	18/08/2017				78	22	0	0	-0.013	0	0	0	0	0	0	0.903	0.588	-0.013	0	84	0	16	68	0	01
314	17/10/2016	17/10/2016	01/08/2016			26/10/2018		100	0	0	0	-0.035	0	0	0	0	0	0	0.692	1.311	-0.035	11	89	0	0	89	0	01
315	04/07/2016	04/07/2016	04/01/2016					100	0	0	0	0.266	0	0	0	0	0	0	1.399	1.382	0.266	14	86	0	0	86	0	01
316								0	100	0	0	0.06	0	0	0	0	0	0	0.283	0.02	0.06	95	5	0	0	0	0	03
317	04/08/2017	09/08/2017						0	100	0	0	0.284	0	0	0	0	0	0	0	0.781	0.284	0	100	0	0	0	0	01
318	29/06/2018	03/08/2018				06/09/2019		100	0	0	0	0.65	0	0	0	0	0	0	0.002	0.082	0.65	0	0	0	100	0	0	01
319	02/11/2017	08/11/2017	04/09/2017	12/10/2018				100	0	0	0	1.028	0	0	0	0	0	0	0.002	0.605	1.028	0	48	0	52	48	0	01
320	04/03/2019	06/03/2019	24/09/2018			27/12/2019		100	0	0	0	0.097	0	0	0	0	0	0	0	0	0.097	0	97	2	1	97	0	01
321	12/06/2018	18/06/2018	04/09/2017			07/06/2019		100	0	0	0	1.98	0	0	0	0	0	0	0	0.15	1.98	44	56	0	0	56	0	01
322	02/10/2018	04/10/2018	23/04/2018			29/11/2019		100	0	0	0	0.475	0	0	0	0	0	0	0	0.225	0.475	0	100	0	0	100	0	01
323	22/01/2019	04/02/2019	01/01/2018			31/03/2020		100	0	0	0	0.056	0	0	0	0	0	0	0	0.07	0.056	0	100	0	0	100	0	01
324	17/08/2018	22/08/2018	08/01/2018			28/06/2019		100	0	0	0	0.764	0	0	0	0	0	0	0	0.078	0.764	0	100	0	0	100	0	01
325								100	0	0	0	0	0	0	0	0	0	0	0	0.01	0	0	100	0	0	100	0	
326								100	0	0	0	0.037	0	0	0	0	0	0	0	0.018	0.037	10	0	20	70	0	0	
327								100	0	0	0	0.014	0	0	0	0	0	0	0	0.023	0.014	0	94	0	6	94	0	
328	08/06/2016	16/06/2016	03/09/2018			28/02/2020		0	100	0	0	3.214	0	0	0	0	0	0	0.194	0.218	3.214	0	32	0	68	0	0	02
329	18/10/2013	28/10/2013						0	100	0	0	0	0	0	0.006	0.029	0.06	-0.014	0.01	0	0	95	0	5	0	0	0	03
330	16/01/2008	25/02/2008	14/04/2008	11/06/2014		02/08/2010		100	0	0	0	0	0	0	0.003	0	0	-0.003	0	0	0	0	0	0	100	0	0	01
331	08/07/2013	19/07/2013	11/03/2014	31/03/2015		27/07/2015	16/02/2017	0	100	0	0	-0.05	0	0	0.008	0.717	3.777	0.331	0.07	-0.105	-0.05	100	0	0	0	0	0	08
332	13/05/2014	21/05/2014	16/06/2014	31/08/2015		30/09/2015		100	0	0	0	-0.047	0	0	0	0.273	1.782	0.132	-0.001	0	-0.047	48	46	0	6	46	0	01
333	15/09/2014	25/09/2014	09/11/2014	30/03/2015				100	0	0	0	0	0	0	0	0	0.011	0	-0.011	0	0	0	0	0	100	0	0	01
334	04/11/2014	13/11/2014						100	0	0	0	-0.024	0	0	0	0	0	0	0	0	-0.024	0	79	0	21	79	0	
335	04/08/2015	05/08/2015	18/01/2016	27/03/2017		29/07/2016		0	100	0	0	0	0	0	0	0	0.012	0.343	0.176	-0.015	0	0	100	0	0	0	0	01
336	05/03/2016	09/03/2016						0	100	0	0	0.074	0	0	0	0	0	0.005	1.755	1.141	0.074	0	100	0	0	0	0	01
337	28/10/2016	01/11/2016	07/11/2016	05/04/2017			07/11/2017	65	35	0	0	-0.003	0	0	0	0	0	0	0.614	0.184	-0.003	0	90	0	10	65	0	01
338								100	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1	35	65	0	0	65	0	01
339								0	100	0	0	-0.005	0	0	0	0	0	0	0	0.035	-0.005	100	0	0	0	0	0	02
340								100	0	0	0	-0.015	0	0	0	0	0	0	0	0.015	-0.015	0	100	0	0	100	0	
341								0	100	0	0	0.266	0	0	0	0	0	0	0	0.02	0.266	20	40	0	40	0	0	
342	10/07/2018	18/07/2018						0	100	0	0	1.405	0	0	0	0	0	0	0	0	1.405	0	100	0	0	0	0	01
343								100	0	0	0	0.3	0	0	0	0	0	0	0	0	0.3	0	92	0	8	92	0	01
344								100	0	0	0	0.01	0	0	0	0	0	0	0	0	0.01	0	100	0	0	100	0	01
345	05/03/1995	09/03/1995	22/01/1999			18/01/2002		0	100	0	0	-0.003	0	0	0	0	0	0	0	0	-0.003	0	0	0	100	0	0	
346	08/10/2012	15/10/2012	01/04/2013	30/09/2015		30/09/2015		85	15	0	0	0.025	0.147	0.284	0.259	5.104	12.295	2.929	-0.465	0.085	0.025	0	40	0	60	34	0	02
347			17/10/2005	12/01/2012		29/10/2007		100	0	0	0	0	0	0.241	0.011	-1.274	0.042	0.01	0	-0.397	0	0	100	0	0	0	0	
348	07/10/2013	16/10/2013	08/08/2011	01/07/2015		30/03/2015	01/07/2015	100	0	0	0	-0.075	0	0.136	-0.013	0.401	1.412	0.001	0	-0.05	-0.075	66	34	0	0	34	0	
349	31/01/2012	07/02/2012	25/07/2011	07/02/2012		01/08/2011	28/02/2012	100	0	0	0	-0.16	0	0.155	-0.001	0	0	0	0	0	-0.16	0	100	0	0	100	0	
350	20/06/2013	27/06/2013	31/01/2014	27/03/2015		31/07/2015		0	100	0	0	0	0	0	0.008	0.489	4.469	0.244	-0.049	-0.026	0	100	0	0	0	0	0	08
351	14/05/2013	22/05/2013	31/05/2013	14/01/2015		29/08/2014		99	1	0	0	0.041	0	0	0	1.789	0.455	0.076	0	-0.11	0.041	77	10	10	3	10	0	01
352	28/05/2015	29/05/2015						100	0	0	0	0	0	0	0.005	0.011	0	0.096	0.011	-0.009	0	0	100	0	0	100	0	01
353	14/02/2013	19/02/2013	27/06/2012	09/10/2014		25/08/2014		100	0	0	0	-0.003	0	0	0.07	0.256	0.499	0	0	-0.016	-0.003	0	13	0	87	13	0	
354	11/01/2018	11/01/2018	11/06/2015	19/06/2015		19/06/2015		0	100	0	0	0	0	0	0	0	0	0.001	0	0	0	0	100	0	0	0	0	01
355	14/11/2014	20/11/2014		12/12/2014			17/02/2015	100	0	0	0	0	0	0	0	0	0.014	-0.001	0	-0.007	0	0	0	0	100	0	0	01
356								100	0	0	0	0	0	0	0	0	0	0.007	0	-0.007	0	0	0	0	100	0	0	01
357	08/02/2016	08/02/2016	04/01/2017	26/04/2017		31/08/2017	05/03/2018	0	100	0	0	0	0	0	0	0	0	0.02	0.055	0.082	0	0	100	0	0	0	0	01
358	23/01/2018	23/01/2018	13/11/2017	05/01/2018		15/12/2017	09/01/2018	0	100	0	0	-0.001	0	0	0	0	0	0.017	-0.007	0.043	-0.001	0	100	0	0	0	0	01
359								100	0	0	0	-0.062	0	0	0	0	0	0	0.07	0.05	-0.062	40	60	0	0	60	0	01
360								0	100	0	0	-0.004	0	0	0	0	0	0	0.178	0	-0.004	0	100	0	0	0	0	01
361								100	0	0	0	0	0	0	0	0	0	0	0	0.028	0	100	0	0	0	0	0	01
362	20/02/2019	20/02/2019						100	0	0	0	0.006	0	0	0	0	0	0	0	0.015	0.006	0	100	0	0	100	0	01
363								100	0	0	0	0	0	0	0	0	0	0	0	0	0	20	70	0	10	70	0	
364	10/07/2018	18/07/2018						0	100	0	0	0.03	0	0	0	0	0	0	0	0	0.03	0	100	0	0	0	0	01
365								100	0	0	0	0.03	0	0	0	0	0	0	0	0	0.03	0	100	0	0	100	0	01
366	30/01/2019	13/02/2019	14/01/2019			29/03/2019		100	0	0	0	0.049	0	0	0	0	0	0	0	0	0.049	0	100	0	0	100	0	01
367	05/05/1993	23/06/1993	05/04/2010	20/04/2011		30/05/2011		0	100	0	0	0	1.094	0.133	0.005	0	0	0	0	-0.013	0	0	0	0	100	0	0	
368			14/01/2008	21/03/2012		23/02/2009		99	1	0	0	0	0	-0.01	0	0	0	-0.005	0	0	0	37	21	36	6	21	0	01
369	13/06/2017	30/06/2017						22	78	0	0	0.822	0	0	0	0.028	0	0.012	0.005	0.154	0.822	0	0	100	0	0	0	02
370	08/04/2013	16/04/2013	03/06/2013	04/11/2013		16/09/2013		100	0	0	0	0	0	0	0	0.001	0	0	0	0.001	0	0	0	0	100	0	0	
371	20/03/2014	25/03/2014	07/04/2014	31/07/2014		26/05/2014		0	100	0	0	0	0	0	0	0.008	0.058	-0.002	0	0	0	0	100	0	0	0	0	
372	16/12/2014	18/12/2014	26/01/2015	29/06/2015				100	0	0	0	0	0	0	0	0	0.11	0.01	0	-0.01	0	100	0	0	0	0	0	01
373	18/05/2015	27/05/2015		01/07/2015		27/03/2015	01/07/2015	100	0	0	0	0	0	0	0	0	0.01	0.042	0	-0.01	0	0	100	0	0	100	0	01
374	27/06/2016	28/06/2016						0	100	0	0	-0.004	0	0	0	0	0	0.017	0.075	0.004	-0.004	0	100	0	0	0	0	01
375	05/03/2016	09/03/2016						0	100	0	0	-0.003	0	0	0	0	0	0.005	1.95	0.615	-0.003	0	100	0	0	0	0	01
376								0	100	0	0	0.063	0	0	0	0	0	0	0	0	0.063	0	100	0	0	0	0	01
377	22/02/2019	22/02/2019		30/11/2018				100	0	0	0	0.04	0	0	0	0	0	0	0	0	0.04	0	0	0	100	0	0	
378	23/07/2018	24/07/2018						100	0	0	0	0.241	0	0	0	0	0	0	0	0	0.241	0	0	0	100	0	0	
379	20/09/2012	15/10/2012	03/04/2013	27/08/2014		09/04/2014	02/09/2014	60	0	40	0	0	0	0	0.029	1.077	-0.123	-0.001	0	0	0	0	97	0	3	60	37	
380	17/10/2014	21/10/2014	12/09/2013	26/02/2016		20/08/2015	29/02/2016	100	0	0	0	-0.001	0	0	0	0.298	1.322	0.436	0.073	-0.094	-0.001	14	84	0	2	84	0	01
381								100	0	0	0	0	0	0	0	0.003	0	0	0	0	0	0	100	0	0	100	0	01
382	04/08/2017	09/08/2017						0	100	0	0	0.697	0	0	0	0	0	0	0	0.507	0.697	0	100	0	0	0	0	01
383								100	0	0	0	0	0	0	0	0	0	0	0	0	0	77	23	0	0	23	0	01
384								0	100	0	0	0	0	0	0	0	0	0	0	0.021	0	0	100	0	0	0	0	01
385								100	0	0	0	0	0	0	0	0	0	0	0	0	0	20	70	0	10	70	0	
386	16/01/2012	13/02/2012	02/06/2014	27/03/2015		05/10/2015	20/09/2016	0	100	0	0	0	0.001	0.025	0.094	0.049	0.734	0.687	0	0.003	0	0	34	0	66	0	0	08
387	29/01/2015	30/01/2015	02/05/2016	16/06/2017		16/06/2017		100	0	0	0	0	0	0	0	0.044	0.352	0.45	1.865	0.307	0	0	100	0	0	100	0	01
388	31/10/2016	02/11/2016						100	0	0	0	0.693	0	0	0	0.006	0.012	0.004	0.016	0.927	0.693	0	95	5	0	95	0	01
389	06/01/2014	14/01/2014	20/01/2014	29/08/2014		26/05/2014		100	0	0	0	-0.003	0	0	0	0.211	0.068	0.002	0	-0.001	-0.003	0	100	0	0	100	0	01
390	17/01/2014	10/02/2014	24/02/2014	30/01/2015		26/05/2014	01/07/2015	100	0	0	0	0.024	0	0	0	0.1	0.288	0.001	0	-0.038	0.024	13	77	0	10	77	0	01
391								0	100	0	0	0	0	0	0	0	0	0.001	0	0	0	100	0	0	0	0	0	01
392	29/01/2016	29/01/2016	12/03/2018	05/11/2018			06/11/2018	0	50	0	50	0.592	0	0	0	0	0	0.03	0.025	0.052	0.592	0	100	0	0	0	0	01
393	14/10/2016	17/10/2016	01/04/2016			28/09/2018		100	0	0	0	0.948	0	0	0	0	0	0	0.624	1.405	0.948	26	69	5	0	69	0	01
394								0	100	0	0	-0.006	0	0	0	0	0	0	0	0.015	-0.006	0	100	0	0	0	0	01
395	01/02/2019	06/02/2019	01/05/2018			31/03/2020		100	0	0	0	0.127	0	0	0	0	0	0	0	0	0.127	36	64	0	0	64	0	01

Project Identification

Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
396	2018_19 Q4	JV887	Newry West WPS, fire damage	06			06	01	
397	2018_19 Q4	JV889	Killeavy Castle Water Distribution Improvements	06			03	23	
398	2018_19 Q4	JV892	Cambane Wps Pump Repair/replacement	06			05	01	
399	2018_19 Q4	JZ005	Water Resource and Supply Resilience Plan	06			01	03	DRD
400	2018_19 Q4	JZ006	Hydraulic Model Rebuilds and Project Managment 2015-2016	06			06	20	
401	2018_19 Q4	JZ007	Asset Performance CCTV Surveys 2015/16	06			07	12	UR
402	2018_19 Q4	KA158	Milltown, Antrim WwTW	01			09	15	NIEA
403	2018_19 Q4	KA191	Black Cave & Upper Roddens Sewage Imps, Larne	01			13	12	NIEA
404	2018_19 Q4	KA201	Ballyeaston Sewage System Upgrade	01			12	12	NIEA
405	2018_19 Q4	KA239	Mullans WWTW (Antrim) Feasibility Study	04			09	16	NIEA
406	2018_19 Q4	KA252	Glynn WWPS, Relocation of Overflow Pipe	00			12	02	DRD
407	2018_19 Q4	KA255	Antrim Road, Templepatrick, Storm Sewer Extension	00			07	24	DRD
408	2018_19 Q4	KA256	Larne WWTW's Feasibility Study	04			09	16	NIEA
409	2018_19 Q4	KA257	Victoria Road, Ballyclare, Foul Sewer Extension	00			07	24	DRD
410	2018_19 Q4	KA258	Antrim LDC Additional Fire Escape	03			15	20	
411	2018_19 Q4	KA259	Doagh WWPS Replacement	03			12	02	NIEA
412	2018_19 Q4	KA260	Muckamore WWPS Upgrade	06			12	12	NIEA
413	2018_19 Q4	KA261	Milltown Road WWPS Upgrade	06			12	12	NIEA
414	2018_19 Q4	KA262	Islandreagh WWPS Upgrade	06			12	12	NIEA
415	2018_19 Q4	KA263	Dunadry WWPS Upgrade	06			12	12	NIEA
416	2018_19 Q4	KA264	Ballyclare WWTW - Membrane Base Maintenance	03			09	02	
417	2018_19 Q4	KA270	Neillsbrook WwPS Upgrade Appraisal	06			12	12	
418	2018_19 Q4	KA279	Townparks south Wwps Antrim	06			12	12	
419	2018_19 Q4	KA280	Martinstown WwTW Inlet Wet Well Building MCC & systems relocation.	06			09	02	
420	2018_19 Q4	KA284	Randalstown TPS(S01425) Screen under capacity.	06			12	02	
421	2018_19 Q4	KA289	240,242 Lisnevenagh Road, Antrim DG5 sewer study	06			07	12	
422	2018_19 Q4	KA290	Dunadry Rd Dunadry Straidballymorris Storm Sewer	06			07	24	
423	2018_19 Q4	KA292	The Grange WWTW Catchment Sewerage investigations	06			07	02	
424	2018_19 Q4	KA293	Belmont Rd Antrim Foul Sewer	00			07	24	
425	2018_19 Q4	KA294	Devenish Drive Monkstown F&S Sewer	00			07	24	
426	2018_19 Q4	KA295	Shanes Castle SE of No. 12 Castle Rd Antrim Foul Sewer	00			07	24	
427	2018_19 Q4	KB269	Toome (Creagh) Sewerage Scheme	01			09	15	NIEA
428	2018_19 Q4	KB279	Stewartstown WwTW Improvements	01			09	15	NIEA
429	2018_19 Q4	KB287	Swatragh Wastewater Treatment Works	03			09	16	NIEA
430	2018_19 Q4	KB314	Gulladuff WwTW	01			09	16	NIEA
431	2018_19 Q4	KB316	Desertmartin WwTW	00			09	16	
432	2018_19 Q4	KB400	Mullanahoe Road Ardboe Foul Sewer	00			07	24	
433	2018_19 Q4	KB413	Dunnamore Road, Dunnamore Storm Sewer Ext	00			07	24	
434	2018_19 Q4	KB428	Draperstown DAP	01			07	11	NIEA
435	2018_19 Q4	KB436	Whitehead, Ballystruder & Ballycarry Rationalisation	01			08	15	NIEA
436	2018_19 Q4	KB459	Maghera WWTW Upgrade Phase 2	01			09	16	NIEA
437	2018_19 Q4	KB474	Ballyronan WWTW Feasibility Study	06			14	16	NIEA
438	2018_19 Q4	KB475	Derrycrin WWTW Feasibility Study	06			14	16	NIEA
439	2018_19 Q4	KB476	Killygonlan (Mullanahoe)WwTW Upgrade	06			14	16	NIEA
440	2018_19 Q4	KB481	Chambre Park WwPS	00			12	02	DRD
441	2018_19 Q4	KB482	Chapel Hill WwPS Upgrade	00			12	02	DRD
442	2018_19 Q4	KB483	Moorfield WWTW Feasibility Study.	06			14	16	NIEA
443	2018_19 Q4	KB490	Maloon WWPS, Cookstown, Access Improvements	00			12	02	DRD
444	2018_19 Q4	KB491	Portglenone WWPS Access Road Culverting and Upgrading of Site Securit	00			05	02	DRD
445	2018_19 Q4	KB492	Gortalowry Park Cookstown Sewer Network Misconnections	01			07	12	NIEA
446	2018_19 Q4	KB494	Moneymore WWTW Phase 2 Base Maintenance	00			09	02	DRD
447	2018_19 Q4	KB496	Garvagh WWTW's Phase 2 Base Maintenance	00			09	02	DRD
448	2018_19 Q4	KB499	Gortatray WWTWs Phase 2 Base Maintenance	00			09	02	DRD
449	2018_19 Q4	KB505	Toome Road Ballymena Out of Sewer Flooding	00			07	12	DRD
450	2018_19 Q4	KB507	Ballymena WWTW ABS High Speed Blowers Upgrade	00			09	02	DRD
451	2018_19 Q4	KB508	Stewartstown WWTWs Appraisal	04			09	16	NIEA
452	2018_19 Q4	KB511	Ahoghill WWPS Replacement	03			12	12	NIEA
453	2018_19 Q4	KB515	Ballymoney Road(No.285) DG5 Solutions Study	06			07	12	UR
454	2018_19 Q4	KB519	Moneyneany WWTW Base Maintenance Phase 3	05			09	02	DRD
455	2018_19 Q4	KB522	Ballymena Flooding Study - Toome Rd	00			07	12	DRD
456	2018_19 Q4	KB524	20&22 Old Antrim Road, Ballymena Flood Alleviation	06			07	12	UR
457	2018_19 Q4	KB526	Magherafelt Town Centre Stormwater Management Project	06			07	12	DRD
458	2018_19 Q4	KB532	59 Market Road, Ballymena, Storm Sewer	00			07	24	
459	2018_19 Q4	KB534	Raceview Road, Broughshane Storm Sewer	00			07	24	
460	2018_19 Q4	KB535	PC15 Year 3 WwTW Capital Maintenance – North Region	06			09	02	
461	2018_19 Q4	KB537	39 & 45-51 Castle Street, Ballymena, Storm sewer extension	06			07	24	
462	2018_19 Q4	KB540	Fisherstown Cargan-Bankrupt Development site	06			07	24	
463	2018_19 Q4	KB541	B014993 Crew Road/Station Road Maghera, Foul & Storm extension	06			07	24	
464	2018_19 Q4	KB544	Opposite 249 Orritor Road, Cookstown, Storm Sewer Extension	06			07	24	
465	2018_19 Q4	KB546	Desertmartin Rd Magherafelt Storm Sewer	00			07	24	
466	2018_19 Q4	KB547	Union Street Magherafelt, Storm Sewer Extension	06			07	24	
467	2018_19 Q4	KB548	Moneymore Rd Cookstown Storm Sewer	00			07	24	
468	2018_19 Q4	KB549	Adj 22 Westland Road Cookstown Foul Sewer	00			07	24	
469	2018_19 Q4	KC296	Ballycastle WwTW	06			09	16	NIEA
470	2018_19 Q4	KC299	Bushmills + Portballintrae WwTW	01			09	15	NIEA
471	2018_19 Q4	KC302	Ballintoy WwTW	01			09	16	NIEA
472	2018_19 Q4	KC415	Ballysally CSO Coleraine - Works Package	00			07	12	NIEA
473	2018_19 Q4	KC427	Ballyvoy WWTW Feasibility Study	06			14	16	NIEA
474	2018_19 Q4	KC431	Milltown Road, Ballymoney, Foul Sewer Extension	00			07	24	DRD
475	2018_19 Q4	KC448	North Coast WWTW Phase 2 Base Maintenance	00			09	02	DRD
476	2018_19 Q4	KC450	Macosquin WwTW PC15	00			09	16	DRD
477	2018_19 Q4	KC456	Station Cottages Dervock Storm Sewer	00			07	24	DRD
478	2018_19 Q4	KC459	Kilrea WWTWs Appraisal	04			09	16	NIEA
479	2018_19 Q4	KC460	Hopefield Road, Portrush, Storm Sewer Extension	00			07	24	DRD
480	2018_19 Q4	KC463	Ballybogy WwTWs Appraisal for Upgrade or replacement	04			09	16	NIEA
481	2018_19 Q4	KC467	Ballycairn CSO , Coleraine, Upgrade.	03			07	12	NIEA
482	2018_19 Q4	KC470	65-67 Coleraine Rd Portstewart Storm Sewer	00			07	24	
483	2018_19 Q4	KC472	PC15 Yr 2 WwTW Base Maintenance North region	06			09	02	
484	2018_19 Q4	KC473	56 Knock Road, Ballymoney Storm Sewer Ext.	00			07	24	
485	2018_19 Q4	KC474	Dunluce Road, Flood Alleviation	06			07	12	UR
486	2018_19 Q4	KC475	55 Mountsandel Road Coleraine Storm Sewer	00			07	24	
487	2018_19 Q4	KC476	Rathmoyle House, Mary Street, Ballycastle Storm Sewer	00			07	24	
488	2018_19 Q4	KC477	Ballycairn WwPs Screw pump No2	06			12	02	
489	2018_19 Q4	KC479	Main Street, Ballykelly - Replacement Storm Sewer	06			07	12	
490	2018_19 Q4	KC481	PC15 Year 4 WwTW Base Maintenance – North Region	06			09	02	
491	2018_19 Q4	KC483	Corrymeela Community, sewer Extension	06			07	24	
492	2018_19 Q4	KC486	Causeway Street Portrush Foul Sewer	00			07	24	
493	2018_19 Q4	KC488	Drumavoley Road Ballycastle Fou Sewer	00			07	24	
494	2018_19 Q4	KC489	PC15 Year 5 WwTW Base Maintenance - North Region	06			09	02	
495	2018_19 Q4	KD999	Sewer Maintenance	00			07	12	
496	2018_19 Q4	KF012	Moygashel WwTW	01			07	15	NIEA
497	2018_19 Q4	KF014	Clare Village Sewerage Scheme	00			07	12	
498	2018_19 Q4	KF027	Benburb/Milltown - RBC Installations West & South	01			09	15	NIEA
499	2018_19 Q4	KF028	Keady WwTW	01			09	16	NIEA
500	2018_19 Q4	KF052	Greenfields-Ballinahonemore,	01			07	24	
501	2018_19 Q4	KF070	Eglish (Dungannon) WwTW upgrade	06			09	16	NIEA
502	2018_19 Q4	KF319	Annaghmore WwTWs	01			09	15	NIEA
503	2018_19 Q4	KF334	Churchview, Armagh Rd, Moy WWPS Upgrade	00			12	02	UR
504	2018_19 Q4	KF346	Robinsonstown WWTW Feasibility Study.	06			14	16	NIEA
505	2018_19 Q4	KF349	Poyntzpass WWTW Feasibility Study	06			14	16	NIEA
506	2018_19 Q4	KF350	Dungannon WWTW Feasibility Study.	00			14	16	DRD
507	2018_19 Q4	KF351	Carrickaness Road, Benburb Storm Sewer Extension	00			07	24	DRD
508	2018_19 Q4	KF366	Hamiltonsbawn WWTW (Pump Installation)	00			09	02	DRD
509	2018_19 Q4	KF370	Moy WWTWs Phase 2 Base Maintenance	00			09	02	DRD
510	2018_19 Q4	KF373	Dungannon WWTW Health & Safety Issues	00			09	02	DRD
511	2018_19 Q4	KF376	Moy WWTW Appraisal Study	04			09	16	NIEA
512	2018_19 Q4	KF377	Knockmoy Park Area Coalisland WwPS Replacement	00			12	12	DRD
513	2018_19 Q4	KF378	Clonmore Road, Clonmore Sewerage Scheme	00			07	12	DRD
514	2018_19 Q4	KF379	Darkley WWTW Feasibility Study	04			09	16	NIEA
515	2018_19 Q4	KF380	Cabragh WWTW Feasibility Study	04			09	16	NIEA
516	2018_19 Q4	KF381	Aughnacloy WWTW Feasibility Study	04			09	16	NIEA
517	2018_19 Q4	KF383	Killyman Street Moy Storm Sewer Extension	00			07	24	DRD
518	2018_19 Q4	KF387	Drelincourt , Armagh, Sewer Network Upgrade.	03			07	12	
519	2018_19 Q4	KF388	Killymaddy Hill, Dungannon Storm sewer	00			07	24	DRD
520	2018_19 Q4	KF391	Drumman More / Mellifont WWPS Upgrade	06			12	12	UR
521	2018_19 Q4	KF396	Milford WWPS, Armagh, Upgrade.	06			12	12	NIEA
522	2018_19 Q4	KF397	Killylea Road WWPS, Armagh, Upgrade.	06			12	12	NIEA
523	2018_19 Q4	KF398	PC15 Year 2 WWTW Base Maintenance – South Region	06			09	02	
524	2018_19 Q4	KF403	Keenaghan wwps upgrade	06			07	02	
525	2018_19 Q4	KF404	Moy Road, Dungannon (former Oaklin Hotel Site)	00			07	24	
526	2018_19 Q4	KF405	Annagh New Wwps,Restoration of assets	06			07	02	
527	2018_19 Q4	KF406	Dungannon WwTW emergency Capital Works.	06			09	16	
528	2018_19 Q4	KF408	PC15 Year 4 WwTW Base Maintenance – South Region	06			09	02	
529	2018_19 Q4	KF409	Fintona Road, Clogher pumping main	00			07	24	
530	2018_19 Q4	KF411	Inn Road, Dollingstown Storm Sewer	06			07	24	
531	2018_19 Q4	KF412	Ivy Lane, Bush Road, Dungannon, Storm Sewer Extension	06			07	24	
532	2018_19 Q4	KF413	Roskeen Rd Moygashel Dungannon F&S Sewer	00			07	24	
533	2018_19 Q4	KF414	Killuney Gardens, Armagh Storm Sewer	00			07	24	
534	2018_19 Q4	KF415	PC15 Year 5 WwTW Base Maintenance - South Region	06			09	02	
535	2018_19 Q4	KF416	Ballymacormick Rd Dromore Storm Sewer	00			07	24	
536	2018_19 Q4	KG041	Maghaberry WwTW	06			09	16	
537	2018_19 Q4	KG068	Kiln Road SPS Upgrade [Lurgan]	00			12	02	UR
538	2018_19 Q4	KG121	Upper Edward Street Newry	00			07	12	NIEA
539	2018_19 Q4	KG153	Gilford Road Portadown Sewerage Upgrades	01			07	12	NIEA
540	2018_19 Q4	KG157	Maghaberry Flood Alleviation Projects	01			07	11	NIEA
541	2018_19 Q4	KG183	Portadown Drainage Area Network Improvements - Meadow Lane and Ban	00			07	12	NIEA
542	2018_19 Q4	KG184	Portadown Drainage Area Network Improvements - Obins Street and Park I	00			07	12	NIEA
543	2018_19 Q4	KG191	Dobbin WWPS - Feasibility Study	01			12	02	DRD
544	2018_19 Q4	KG192	Donaghcloney WWPS - Feasibility Study	00			12	12	NIEA
545	2018_19 Q4	KG194	Garland Avenue, Lurgan Sewer Extension	00			07	24	DRD
546	2018_19 Q4	KG197	Waringstown WWTWs Phase 2 Base Maintenance	00			09	02	DRD
547	2018_19 Q4	KG198	Hunters Mill, Annesborough Road, Lurgan, Storm Sewer Extension	00			07	24	DRD
548	2018_19 Q4	KG200	Waringstown WWTW's Feasibility Study	04			09	16	NIEA
549	2018_19 Q4	KG202	Aghagallon WWTW - MBBR Trial	03			09	16	NIEA
550	2018_19 Q4	KG203	Portadown DAP (Storage at Seagoe WWPS)	06			07	12	NIEA
551	2018_19 Q4	KG205	Seagoe Depot Generator Store	00			15	20	DRD
552	2018_19 Q4	KG210	Garvaghy Road, Portadown, Trunk Sewer and Syphons Base Maintenace a	00			07	12	
553	2018_19 Q4	KG215	Mahon Ave / Ripley Terrace Storm Sewer, Portadown	06			07	12	
554	2018_19 Q4	KG217	PC15 Year 3 WwTW Capital Maintenance - South Region	06			09	02	
555	2018_19 Q4	KG222	Lurgan Road, Moira Storm Sewer Extension	06			07	24	
556	2018_19 Q4	KG225	Drumcree Road, SPS	06			07	24	
557	2018_19 Q4	KG226	Union Street Lurgan STORM, Storm Sewer Extension	06			07	24	
558	2018_19 Q4	KG227	Millenium Way Lurgan Storm Sewer	00			07	24	
559	2018_19 Q4	KG228	76 Glenavon Lane Lurgan, Foul & Storm Sewer Extension	06			07	24	
560	2018_19 Q4	KG230	Tarry Lane North Circular Road Lurgan, Foul Sewer Extension	06			07	24	
561	2018_19 Q4	KG231	Carrickvale Manor Lurgan F&S Sewer	00			07	24	
562	2018_19 Q4	KI464	Sewerage Rehab. New and Replacement incl. FTS	00			07	12	NIEA
563	2018_19 Q4	JR484	Gravity 1 / Antrim Rd Trunk Main valve replacements	06	JI083		03	23	
564	2018_19 Q4	JR487	Greater Belfast Trunkmain Valve Replacement	06	JI083		03	23	
565	2018_19 Q4	JV867	Mourne Conduit Survey	00	JI083		06	03	
566	2018_19 Q4	JN556	Ramaley Road/Clabby Road Watermains Replacement	00	JI112		03	08	
567	2018_19 Q4	JN557	Swanlinbar Road Watermain Rehab	00	JI112		03	08	
568	2018_19 Q4	JN558	Old Coach Road/Sessiagh Lane watermain replacement	00	JI112		03	08	
569	2018_19 Q4	JS318	Station Road Saintfield Mains Replacement.	06	JI112		03	23	
570	2018_19 Q4	KA254	Nutts Corner Road, Crumlin, Storm Sewer Extension	00	KI464		07	24	DRD
571	2018_19 Q4	KB506	Hillmount Crescent Tobermore Storm Sewer	00	KI464		07	24	DRD
572	2018_19 Q4	KC455	Ashley Drive Ballymoney Storm Sewer	00	KI464		07	24	DRD
573	2018_19 Q4	KC457	Ballymacrea Road Portrush Foul Sewer Extension	00	KI464		07	24	DRD
574	2018_19 Q4	KF374	Woodlawn Park, Dungannon Storm & Foul sewer	00	KI464		07	24	DRD
575	2018_19 Q4	KG199	Breagh Rd, Portadown - Storm Sewer	00	KI464		07	24	DRD
576	2018_19 Q4	KL514	Clooney Park West, LDerry Storm Sewer Ext	00	KI464		07	24	DRD
577	2018_19 Q4	KI469	Base Maintenance (Sewerage)	00			09	02	UR
578	2018_19 Q4	KN651	Bridge Street WWPS, Strabane - Feasibility Study	00	KI464		13	12	DRD
579	2018_19 Q4	KN652	Lismourne Place Strabane Foul Sewer Extension for Invest NI	00	KI464		07	24	DRD
580	2018_19 Q4	KP685	Main street Belcoo Storm sewer ext	00	KI464		07	24	DRD
581	2018_19 Q4	KR551	Andersonstown Road Belfast Storm Sewer Extension.	00	KI464		07	24	DRD
582	2018_19 Q4	KR553	The Cairn/Goldenview/Downview - Greenisland Foul & storm sewer extensi	00	KI464		07	24	DRD
583	2018_19 Q4	KR567	Brokerstown Road, Lisburn Storm Sewer	00	KI464		07	24	DRD
584	2018_19 Q4	KS375	Downpatrick	00	KI464		12	12	NIEA
585	2018_19 Q4	KA196	Glenarm Sewage Pumping Station	00	KI469		13	02	
586	2018_19 Q4	KA216	Carnlough WWPS Septicity Dosing	00	KI469		12	02	UR
587	2018_19 Q4	KA231	Tully Road, Glenarm, Screen House Refurbishment.	00	KI469		09	02	UR
588	2018_19 Q4	KA242	Ballyclare WWTW Upgrade	00	KI469		09	02	DRD
589	2018_19 Q4	KA245	Neilsbrook WWPS Upgrade	00	KI469		12	02	DRD
590	2018_19 Q4	KA247	Crumlin Town WWPS Upgrade - Feasibility Study	00	KI469		12	12	DRD
591	2018_19 Q4	KB460	M&E Capital Maintenance Tullygarley WWTW	01	KI469		09	02	
592	2018_19 Q4	KB461	M&E Capital Maintenance - Larne WWTW	01	KI469		09	02	UR
593	2018_19 Q4	KB478	Devenagh Burn WWPS - Feasibility Study	00	KI469		07	02	DRD
594	2018_19 Q4	KB485	Knockloughrim WWTW Feasibility Study	02	KI469		09	16	NIEA
595	2018_19 Q4	KC429	Rasharkin WWTW Upgrade	00	KI469		09	02	DRD
596	2018_19 Q4	KC430	Dunloy WWTW Upgrade	00	KI469		09	02	DRD

Baseline Milestone Dates / Baseline Service Cost Allocation

Sort Ref	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign-off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure
1	11	12	13	14	15	16	17	18	19	20	21
396											
397											
398											
399				31/03/2017				50	50	0	0
400											
401											
402			30/07/2007	12/02/2010		12/02/2010	02/12/2011	0	0	0	0
403			10/02/2011	15/03/2012		15/03/2012	15/03/2013	0	0	0	0
404	22/10/2010	19/11/2010	07/02/2011	02/10/2012		02/10/2012	02/10/2013	0	0	0	0
405				31/03/2021				0	0	0	100
406								0	0	0	0
407											
408								0	0	0	100
409											
410											
411											
412								0	0	100	0
413								0	0	100	0
414								100	0	100	0
415								0	0	100	0
416											
417											
418											
419											
420											
421											
422											
423											
424											
425											
426											
427			07/09/2009	24/01/2011		24/01/2011	24/01/2012	0	0	0	0
428			01/06/2009	17/05/2010		17/05/2010	17/05/2011	0	0	0	0
429			27/02/2012	29/03/2013		29/03/2013	29/03/2014	0	0	0	100
430			01/01/2013	01/11/2014		19/04/2014	19/04/2014	0	0	19	81
431								0	0	0	0
432	19/06/2008	09/07/2008	06/10/2008	29/12/2008		29/12/2008	29/12/2009	0	0	0	0
433											
434	02/06/2009	23/06/2009	23/11/2009	03/07/2010		03/07/2010	30/03/2011	0	0	0	0
435			07/04/2008	15/12/2011		15/12/2011	14/12/2012	0	0	0	0
436			14/01/2013	28/01/2015		28/06/2013	28/06/2014	0	0	0	100
437								0	0	0	0
438								0	0	0	0
439								0	0	0	0
440								0	0	0	0
441								0	0	0	0
442								0	0	0	0
443								0	0	0	0
444											
445								0	0	0	0
446								0	0	0	0
447								0	0	0	0
448								0	0	0	0
449											
450											
451											
452											
453											
454											
455											
456											
457											
458											
459											
460											
461											
462											
463											
464											
465											
466											
467											
468											
469				01/01/2017				0	0	10	90
470			18/02/2009	06/12/2010		06/12/2010	05/09/2012	0	0	0	0
471				31/01/2017				0	0	0	100
472								0	0	100	0
473								0	0	0	0
474								0	0	0	0
475								0	0	0	0
476								0	0	0	0
477											
478											
479											
480				31/01/2021				0	0	0	100
481											
482											
483											
484											
485											
486											
487											
488											
489											
490											
491											
492											
493											
494											
495											
496			12/01/2009	02/04/2010		02/04/2010	02/04/2011	0	0	0	0
497		07/08/2006	23/07/2007	26/04/2010		26/04/2010	26/04/2011	0	0	0	0
498			24/03/2008	07/01/2010		07/01/2010	07/01/2011	0	0	0	0
499			13/09/2010	12/03/2012		12/03/2012	12/03/2013	0	0	0	0
500											
501								0	0	0	100
502			21/09/2009	27/09/2010		27/09/2010	27/09/2011	0	0	0	0
503								0	0	0	0
504			14/01/2014	01/01/2020		31/03/2015	31/03/2016	0	0	0	100
505								0	0	0	0
506				01/01/2021				0	0	0	100
507								0	0	0	0
508	23/05/2012	29/05/2012	20/08/2012	20/02/2013		20/02/2013	20/02/2014	0	0	0	0
509								0	0	0	0
510											
511											
512								0	0	0	100
513											
514											
515											
516											
517											
518											
519											
520											
521											
522											
523											
524											
525											
526											
527											
528											
529											
530											
531											
532											
533											
534											
535											
536								0	0	57	43
537	11/06/2009	02/07/2009	05/10/2009	25/02/2010		25/02/2010	25/02/2011	0	0	0	0
538	02/02/2009	09/02/2009	04/05/2009	25/02/2010		25/02/2010	25/02/2011	0	0	0	0
539	07/02/2008	11/02/2008	29/09/2008	14/06/2011		14/06/2011	13/06/2012	0	0	0	0
540	26/02/2009	23/04/2009	22/06/2009	27/05/2010		27/05/2010	27/07/2010	0	0	0	0
541			30/09/2014	01/01/2015		01/03/2015	01/03/2016	0	0	93	7
542	15/12/2010	12/01/2011	01/04/2011	11/09/2012		11/09/2012	11/09/2013	0	0	0	0
543								0	0	0	0
544								0	0	0	0
545								0	0	0	0
546								0	0	0	0
547											
548											
549								0	0	0	100
550											
551											
552											
553											
554											
555											
556											
557											
558											
559											
560											
561											
562								0	0	71	29
563											
564											
565											
566											
567											
568											
569											
570											
571											
572											
573											
574											
575											
576											
577								0	0	11	89
578								0	0	0	0
579								0	0	0	0
580											
581											
582											
583											
584								0	0	0	0
585	11/02/2009	20/02/2009	23/03/2009	31/03/2010		31/03/2010	31/03/2011	0	0	0	0
586	02/03/2010	19/03/2010	29/07/2011	15/03/2012		15/03/2012	15/03/2013	0	0	0	0
587	17/01/2011	31/01/2011	29/07/2011	04/09/2012		04/09/2012	04/09/2013	0	0	0	0
588	10/06/2011	21/06/2011	09/01/2012	28/09/2012		28/09/2012	28/09/2013	0	0	0	0
589								0	0	0	0
590								0	0	100	0
591	19/11/2010	23/11/2010	14/09/2011	14/09/2012		14/09/2012	14/09/2013	0	0	0	0
592	19/11/2010	23/11/2010	15/02/2011	09/05/2012		09/05/2012	09/05/2013	0	0	0	0
593								0	0	0	0
594								0	0	0	0
595	07/06/2011	10/06/2011	28/11/2011	31/07/2012		31/07/2012	31/07/2013	0	0	0	0
596	07/06/2011	10/06/2011	17/10/2011	31/07/2012		31/07/2012	31/07/2013	0	0	0	0

Baseline Expenditure Profile (£m 2012-13 prices) / Baseline Purpose Allocation

Sort Ref	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	22	23	24	25	26	27	28	29	30	36	37	38	39
396													
397													
398													
399	0	0	0	0	0	0.323547	0.321605718	0	0	0	0	0	100
400													
401													
402	0	0	0	0	0	0	0	0	0	0	0	0	0
403	0	0	0	0	0	0	0	0	0	0	0	0	0
404	0	0	0	0	0	0	0	0	0	0	0	0	0
405	0	0	0	0	0	0	0	0	0	25	42	0	33
406	0	0	0	0	0	0	0	0	0	0	0	0	0
407													
408	0	0	0	0	0	0	0	0	0	43.29749305	27.18148895	0	29.52101799
409													
410													
411													
412	0	0	0	0	0	0.001	0.4	0.021	0	73	16	0	11
413	0	0	0	0	0	0	0.173	0	0	55	20	0	25
414	0	0	0	0	0	0	0	0.086	0.254	40	48	0	12
415	0	0	0	0	0	0.004	0.017	0.196	0.299	52	35	0	13
416													
417													
418													
419													
420													
421													
422													
423													
424													
425													
426													
427	0	0	0	0	0	0	0	0	0	0	0	0	0
428	0	0	0	0	0	0	0	0	0	0	0	0	0
429	0.013	0.4980558	1.04994152	0.046104936	0	0	0	0	0	36	35	0	29
430	0.006	0.04003978	0.03239384	1.120349935	0.443525608	0	0	0	0	39	40	0	21
431	0	0	0	0	0	0	0	0	0	0	0	0	0
432	0	0	0	0	0	0	0	0	0	0	0	0	0
433													
434	0	0	0	0	0	0	0	0	0	0	0	0	0
435	0	0	0	0	0	0	0	0	0	0	0	0	0
436	0	0.03808662	0.0333466	0.516375279	1.590420109	0	0	0	0	57	28	0	15
437	0	0	0	0	0	0	0	0	0	0	0	0	0
438	0	0	0	0	0	0	0	0	0	0	0	0	0
439	0	0	0	0	0	0	0	0	0	0	0	0	0
440	0	0	0	0	0	0	0	0	0	0	0	0	0
441	0	0	0	0	0	0	0	0	0	0	0	0	0
442	0	0	0	0	0	0	0	0	0	0	0	0	0
443	0	0	0	0	0	0	0	0	0	0	0	0	0
444													
445	0	0	0	0	0	0	0	0	0	0	0	0	0
446	0	0	0	0	0	0	0	0	0	0	0	0	0
447	0	0	0	0	0	0	0	0	0	0	0	0	0
448	0	0	0	0	0	0	0	0	0	0	0	0	0
449													
450													
451													
452													
453													
454													
455													
456													
457													
458													
459													
460													
461													
462													
463													
464													
465													
466													
467													
468													
469	0.01	0.00585948	0.07431528	0	0.268803399	3.605238	5.51324088	0	0	94	0	0	6
470	0	0	0	0	0	0	0	0	0	0	0	0	0
471	0	0	0	0	0	0.739429807	0.371677991	0	0	57	18	0	25
472	0	0	0	0	0	0	0	0	0	100	0	0	0
473	0	0	0	0	0	0	0	0	0	0	0	0	0
474	0	0	0	0	0	0	0	0	0	0	0	0	0
475	0	0	0	0	0	0	0	0	0	0	0	0	0
476	0	0	0	0	0	0	0	0	0	0	0	0	0
477													
478													
479													
480	0	0	0	0	0	0	0	0	0	56	36	0	8
481													
482													
483													
484													
485													
486													
487													
488													
489													
490													
491													
492													
493													
494													
495													
496	0	0	0	0	0	0	0	0	0	0	0	0	0
497	0	0	0	0	0	0	0	0	0	0	0	0	0
498	0	0	0	0	0	0	0	0	0	0	0	0	0
499	0	0	0	0	0	0	0	0	0	0	0	0	0
500													
501	0	0	0	0.032273455	0.079745008	0	0	0	0	45	0	0	55
502	0	0	0	0	0	0	0	0	0	0	0	0	0
503	0	0	0	0	0	0	0	0	0	0	0	0	0
504	0	0.00390632	0	0.212082704	0.994572575	0	0	0	0	44	26	0	30
505	0	0	0	0	0	0	0	0	0	0	0	0	0
506	0	0	0	0	0	0	0	1.401674031	6.037477275	17	37	0	46
507	0	0	0	0	0	0	0	0	0	0	0	0	0
508	0	0	0	0	0	0	0	0	0	0	0	0	0
509	0	0	0	0	0	0	0	0	0	0	0	0	0
510													
511													
512	0	0	0	0	0	0	0	0	0	0	0	0	100
513													
514													
515													
516													
517													
518													
519													
520													
521													
522													
523													
524													
525													
526													
527													
528													
529													
530													
531													
532													
533													
534													
535													
536	0	0	0	0	0	0	0.426666667	3.268333333	1.434166667	0	88	0	12
537	0	0	0	0	0	0	0	0	0	0	0	0	0
538	0	0	0	0	0	0	0	0	0	0	0	0	0
539	0	0	0	0	0	0	0	0	0	0	0	0	0
540	0	0	0	0	0	0	0	0	0	0	0	0	0
541	0	0	0	0.62333873	1.903128062	0.115832339	1.404113966	0.930459521	0	63	30	0	7
542	0	0	0	0	0	0	0	0	0	0	0	0	0
543	0	0	0	0	0	0	0	0	0	0	0	0	0
544	0	0	0	0	0	0	0	0	0	0	0	0	0
545	0	0	0	0	0	0	0	0	0	0	0	0	0
546	0	0	0	0	0	0	0	0	0	0	0	0	0
547													
548													
549	0	0	0	0	0	0	0	0	0	14.24442369	85.75557631	0	0
550													
551													
552													
553													
554													
555													
556													
557													
558													
559													
560													
561													
562	0	0	0	0	0	0	0	0	0	44.09199506	34.35191847	6.858754786	14.69733169
563													
564													
565													
566													
567													
568													
569													
570													
571													
572													
573													
574													
575													
576													
577	0	0	0	8.31548592	4.17060315	0	0	0	0	0	85	0	15
578	0	0	0	0	0	0	0	0	0	0	0	0	0
579	0	0	0	0	0	0	0	0	0	0	0	0	0
580													
581													
582													
583													
584	0	0	0	0	0	0	0	0	0	0	0	0	0
585	0	0	0	0	0	0	0	0	0	0	0	0	0
586	0	0	0	0	0	0	0	0	0	0	0	0	0
587	0	0	0	0	0	0	0	0	0	0	0	0	0
588	0	0	0	0	0	0	0	0	0	0	0	0	0
589	0	0	0	0	0	0	0	0	0	0	0	0	0
590	0	0	0	0	0	0.008	0.015	0.267	0.615	54	17	0	29
591	0	0	0	0	0	0	0	0	0	0	0	0	0
592	0	0	0	0	0	0	0	0	0	0	0	0	0
593	0	0	0	0	0	0	0	0	0	0	0	0	0
594	0	0	0	0	0	0	0	0	0	0	0	0	0
595	0	0	0	0	0	0	0	0	0	0	0	0	0
596	0	0	0	0	0	0	0	0	0	0	0	0	0

Current Actual or Projected Milestone Dates / Current Actual or Projected Service Cost Allocation

Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign-off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure
1	40	41	42	43	44	45	46	47	48	49	50
396	21/08/2017	25/08/2017	02/10/2017					0	100	0	0
397	02/07/2018	05/07/2018	01/08/2018	15/11/2018				100	0	0	0
398								0	100	0	0
399	20/10/2014	22/10/2014						100	0	0	0
400	30/04/2015	04/06/2015						100	0	0	0
401	30/06/2015	03/08/2015						0	0	100	0
402	27/02/2007	05/03/2007	30/07/2007	11/02/2010		28/02/2011	02/12/2011	0	0	15	85
403			01/05/2006	15/03/2012		31/01/2011		0	0	14	86
404	22/10/2010	19/11/2010	07/02/2011	24/02/2012		23/04/2012		0	0	30	70
405	02/12/2015	03/12/2015	18/09/2017	29/03/2018		29/09/2017		0	0	0	100
406	05/02/2014	10/02/2014	04/08/2014	19/02/2015		27/02/2015	01/07/2015	0	0	0	100
407								0	0	100	0
408								0	0	0	100
409	31/03/2014	14/04/2014	09/06/2014	07/07/2014		30/06/2014	20/11/2014	0	0	100	0
410	12/10/2015	15/10/2015	25/01/2016	28/03/2016			04/04/2016	0	0	0	100
411	12/02/2016	19/02/2016						0	0	0	100
412	11/12/2015	14/12/2015	31/10/2016	24/03/2017		28/04/2017		0	0	0	100
413	04/12/2015	10/12/2015	04/07/2016	19/05/2017		31/03/2017	02/08/2017	0	0	0	100
414	19/09/2016	22/09/2016						0	0	0	100
415	20/10/2016	24/10/2016						0	0	0	100
416	09/10/2014	15/10/2014	15/08/2014	30/01/2015			30/03/2015	0	0	0	100
417	29/07/2016	01/08/2016						0	0	0	100
418	20/02/2019	20/02/2019						0	0	0	100
419								0	0	0	100
420								0	0	0	100
421								0	0	100	0
422								0	0	100	0
423								0	0	100	0
424								0	0	100	0
425								0	0	100	0
426								0	0	100	0
427	17/06/2009	03/08/2009						0	0	10	90
428	08/01/2009	04/02/2009						0	0	22	78
429	26/10/2011	28/10/2011	28/02/2012	21/03/2013		26/03/2013		0	0	0	100
430	19/12/2011	04/01/2012	11/02/2013	16/12/2013		30/06/2014		0	0	19	81
431								0	0	0	100
432	19/06/2008	09/07/2008						0	0	100	0
433	21/05/2008	05/08/2008						0	0	100	0
434	02/06/2009	23/06/2009	23/11/2009	02/07/2010		16/08/2010	29/03/2011	0	0	100	0
435	30/04/2009	18/05/2009						0	0	80	20
436	05/01/2012	10/01/2012		04/02/2014				0	0	0	100
437	19/10/2016	08/11/2016						0	0	0	100
438	28/06/2016	04/07/2016						0	0	0	100
439								0	0	0	100
440	07/06/2013	17/06/2013	01/04/2014	24/10/2014		31/03/2017	18/10/2017	0	0	0	100
441	07/06/2013	17/06/2013	01/04/2014	20/02/2015		31/03/2017	18/10/2017	0	0	0	100
442								0	0	0	100
443								0	0	0	100
444								0	0	85	15
445	06/03/2014	13/03/2014						0	0	100	0
446	19/11/2012	22/11/2012	30/11/2012	31/03/2014		30/05/2014	12/01/2015	0	0	0	100
447	19/11/2012	22/11/2012	30/11/2012	18/12/2014		26/09/2014	12/01/2015	0	0	0	100
448	19/11/2012	22/11/2012	30/11/2012	09/10/2013		28/03/2014	13/03/2014	0	0	0	100
449	28/11/2013	17/12/2013	28/04/2014	20/02/2015		18/02/2015	24/08/2015	0	0	100	0
450	15/05/2014	19/05/2014	31/01/2014	05/01/2016		25/06/2015	05/01/2016	0	0	0	100
451	02/08/2016	02/08/2016						0	0	0	100
452	01/06/2016	01/06/2016	10/10/2016	18/01/2017		31/03/2017		0	0	0	100
453	11/08/2015	19/08/2015	28/03/2016	31/08/2016		31/01/2017		0	0	100	0
454	23/09/2014	24/09/2014	03/10/2014	12/03/2015			07/09/2015	0	0	0	100
455	18/02/2019	20/02/2019						0	0	100	0
456	14/10/2016	25/10/2016	01/01/2018	07/08/2017				0	0	100	0
457								0	0	100	0
458	03/02/2017	01/03/2017						0	0	100	0
459								0	0	100	0
460	27/01/2017	02/02/2017						0	0	0	100
461								0	0	100	0
462								0	0	0	100
463								0	0	100	0
464								0	0	100	0
465								0	0	100	0
466	11/01/2019	17/01/2019						0	0	100	0
467								0	0	100	0
468								0	0	100	0
469	09/06/2014	03/07/2014						0	0	10	90
470	27/11/2007	17/12/2007	18/02/2009	06/12/2010		23/02/2011	04/09/2012	0	0	4	96
471	07/12/2015	10/12/2015	31/07/2017			26/06/2018		0	0	0	100
472	21/11/2014	25/11/2014						0	0	100	0
473	15/09/2016	15/09/2016						0	0	0	100
474	03/10/2012	16/10/2012	07/10/2015	30/10/2015		19/10/2015	21/11/2016	0	0	100	0
475	19/11/2012	22/11/2012	30/11/2012	01/12/2014		25/07/2014	12/01/2015	0	0	0	100
476								0	0	0	100
477	08/07/2013	19/07/2013	03/02/2014	31/03/2014		03/02/2014	03/11/2014	0	0	100	0
478								0	0	0	100
479	22/05/2015	02/06/2015		18/05/2018		31/03/2016	09/01/2019	0	0	100	0
480								0	0	0	100
481	15/03/2016	22/03/2016						0	0	100	0
482								0	0	100	0
483	23/02/2016	29/02/2016						0	0	0	100
484								0	0	100	0
485	14/01/2019	17/01/2019						0	0	100	0
486								0	0	100	0
487								0	0	100	0
488	08/12/2016	19/12/2016	11/10/2016	20/09/2017			16/02/2018	0	0	0	100
489								0	0	100	0
490	05/01/2018	16/01/2018	01/05/2018			29/04/2019		0	0	0	100
491								0	0	50	50
492								0	0	100	0
493								0	0	100	0
494	19/02/2019	20/02/2019						0	0	0	100
495								0	0	100	0
496	14/11/2008	19/11/2008	12/01/2009	02/04/2010		29/03/2010		0	0	80	20
497		07/08/2006	23/07/2007	23/11/2009		02/03/2009		0	0	73	27
498			24/03/2008	06/01/2010		29/03/2010		0	0	10	90
499	21/04/2010	07/05/2010	02/04/2012	29/11/2012		09/09/2013		0	0	2	98
500			04/09/2006			01/09/2008		0	0	100	0
501	13/09/2016	20/09/2016						0	0	0	100
502	21/07/2009	06/08/2009	21/09/2009	10/12/2009		15/11/2010		0	0	20	80
503	04/12/2012	11/12/2012	09/01/2017	28/12/2017		31/03/2017	27/06/2018	0	0	0	100
504								0	0	0	100
505								0	0	0	100
506								0	0	0	100
507	08/05/2014	12/05/2014						0	0	100	0
508	23/05/2012	29/05/2012	07/01/2013	02/06/2014		23/12/2013	01/07/2015	0	0	0	100
509	19/11/2012	22/11/2012	30/11/2012	14/01/2015		28/03/2014	14/01/2015	0	0	0	100
510	09/02/2015	16/02/2015	22/06/2015	28/03/2016		30/11/2017		0	0	0	100
511								0	0	0	100
512	15/12/2014	17/12/2014	28/09/2015	23/03/2017		31/03/2015		0	0	0	100
513	16/06/2016	17/06/2016						0	0	0	100
514								0	0	0	100
515								0	0	0	100
516								0	0	0	100
517	22/05/2015	02/06/2015	02/11/2015	30/11/2015		30/11/2015	12/02/2016	0	0	100	0
518								0	0	100	0
519								0	0	100	0
520								0	0	35	65
521	19/01/2017	20/01/2017	30/01/2017	04/08/2017		31/10/2017	03/08/2018	0	0	0	100
522	17/12/2018	18/12/2018	01/03/2019					0	0	45	55
523	02/03/2016	03/03/2016						0	0	0	100
524								0	0	0	100
525								0	0	100	0
526								0	0	0	100
527	05/07/2017	10/07/2017	29/01/2018					0	0	0	100
528	05/01/2018	16/01/2018						0	0	0	100
529								0	0	100	0
530								0	0	100	0
531								0	0	100	0
532								0	0	100	0
533								0	0	100	0
534	19/02/2019	20/02/2019						0	0	0	100
535								0	0	100	0
536	13/09/2016	15/09/2016	01/06/2017	01/11/2018		15/10/2014		0	0	0	100
537	11/06/2009	02/07/2009	05/10/2009	24/02/2010		25/10/2010		0	0	0	100
538	02/02/2009	09/02/2009	04/05/2009			03/08/2009		0	0	100	0
539	07/02/2008	11/02/2008	29/09/2008	10/08/2010		26/03/2012		0	0	85	15
540	26/02/2009	23/04/2009	22/06/2009	27/05/2010		24/05/2010	26/07/2010	0	0	100	0
541				30/05/2016				0	0	93	7
542	15/12/2010	12/01/2011	01/04/2011	03/05/2013		01/10/2012		20	0	80	0
543	03/06/2016	06/06/2016						0	0	0	100
544	12/05/2014	16/05/2014	29/06/2015	14/12/2016			03/02/2017	0	0	0	100
545	15/10/2012	25/10/2012						0	0	100	0
546	16/11/2012	22/11/2012	30/11/2012	31/10/2014		29/11/2013	03/11/2014	0	0	0	100
547								0	0	100	0
548								0	0	0	100
549	10/03/2014	13/03/2014	04/05/2015	31/03/2015		29/06/2015		0	0	0	100
550								0	0	100	0
551	27/05/2015	29/05/2015						0	50	0	50
552								0	0	100	0
553	03/02/2017	01/03/2017						0	0	100	0
554	07/02/2017	10/02/2017						0	0	0	100
555								0	0	100	0
556								0	0	50	50
557								0	0	100	0
558								0	0	100	0
559								0	0	100	0
560								0	0	100	0
561								0	0	100	0
562	19/12/2012	08/01/2013						0	0	71	29
563	11/08/2015	14/09/2015	05/10/2015	24/11/2017		31/03/2017		100	0	0	0
564	07/06/2016	09/06/2016	05/09/2016	10/03/2017		31/03/2017		100	0	0	0
565								100	0	0	0
566	19/02/2019	12/03/2019	31/05/2019					100	0	0	0
567	19/02/2019	20/03/2019	22/04/2019					100	0	0	0
568	19/02/2019	20/03/2019	01/05/2019					100	0	0	0
569	10/10/2018	23/10/2018	25/02/2019					100	0	0	0
570	08/09/2014	17/09/2014	22/02/2016	30/03/2016			17/05/2016	0	0	100	0
571	25/07/2013	06/08/2013	13/04/2015	01/06/2015		17/04/2015	23/06/2015	0	0	100	0
572	17/10/2013	28/10/2013	06/01/2014	28/02/2014		10/02/2014	28/02/2014	0	0	100	0
573	21/10/2013	28/10/2013	19/05/2014	28/11/2014		09/06/2014	18/11/2015	0	0	100	0
574	21/10/2013	28/10/2013	10/02/2014	29/08/2014		30/06/2014	03/11/2014	0	0	100	0
575	25/09/2013	04/10/2013						0	0	100	0
576	28/04/2014	12/05/2014	20/05/2014	28/11/2014		14/07/2014		0	0	100	0
577								0	0	0	100
578	01/02/2016	02/02/2016	28/11/2016	31/05/2018		30/04/2018	27/02/2019	0	0	0	100
579	21/10/2013	28/10/2013	03/03/2014	04/04/2017		24/02/2014	18/10/2017	0	0	100	0
580	11/10/2013	21/10/2013	24/04/2014	30/09/2014		24/02/2014	02/11/2014	0	0	100	0
581	10/07/2013	19/07/2013		30/01/2014		16/12/2013	17/11/2014	0	0	100	0
582	05/12/2014	05/12/2014						0	0	100	0
583	15/11/2016	15/11/2016						0	0	100	0
584								0	0	0	100
585	11/02/2009	20/02/2009	23/03/2009	30/03/2010		08/03/2010		0	0	0	100
586	02/03/2010	19/03/2010	01/04/2011	15/03/2012		30/03/2012		0	0	0	100
587	17/01/2011	31/01/2011	02/04/2012	30/03/2012		30/03/2012		0	0	0	100
588	10/06/2011	21/06/2011	01/04/2013	25/03/2013		29/09/2014	12/10/2016	0	0	0	100
589	26/10/2012	07/11/2012	03/06/2013	27/02/2015		25/08/2014	01/07/2015	0	0	0	100
590	15/12/2017	29/12/2017	04/06/2018			24/07/2019		0	0	0	100
591	19/11/2010	23/11/2010						0	0	0	100
592	19/11/2010	23/11/2010	01/04/2011	15/03/2012		15/09/2014	28/10/2014	0	0	0	100
593	06/09/2016	07/09/2016						0	0	0	100
594	27/06/2018	27/06/2018						0	0	0	100
595	07/06/2011	10/06/2011	11/11/2011	18/12/2012		20/09/2013		0	0	0	100
596	07/06/2011	10/06/2011	17/10/2011	18/12/2012		24/12/2012	08/07/2013	0	0	0	100

Current Actual or Projected Capital Expenditure Profile (£m money of the day) / Current Actual or Projected Purpose Allocation (%) / Current Actual or Projected IRE (%) / Nominated outputs (PC Period)

Sort Ref	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	51	52	53	54	55	56	57	58	59	60	66	67	68	69	70	71	72
396	0.214	0	0	0	0	0	0	0.003	0.049	0.214	0	100	0	0	0	0	01
397	0.257	0	0	0	0	0	0	0	0	0.257	0	0	0	100	0	0	01
398	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
399	0.068	0	0	0	0	0.002	0.182	0.305	0.105	0.068	10	60	10	20	60	0	02
400	0	0	0	0	0	0	0.312	0.036	-0.011	0	0	100	0	0	100	0	01
401	0	0	0	0	0	0	0.028	0	0	0	0	100	0	0	0	100	01
402	0	1.033	0.371	-0.001	-0.001	-0.016	0.02	0	0	0	48	32	0	20	0	5	09
403	0	0.015	0.309	0.014	0	0.025	-0.003	0	-0.004	0	72	15	0	13	0	0	09
404	0	0.078	0.086	0.087	0.006	-0.001	0	-0.003	0	0	30	45	0	25	0	28	
405	0.359	0	0.006	0.007	0.007	0.004	0.031	0.065	1.114	0.359	25	42	0	33	0	0	02
406	0	0	0	0.003	0.006	0.046	-0.001	0	0	0	44	56	0	0	0	0	01
407	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
408	0	0	0	0	0.043	0.034	0.018	0	-0.039	0	44	26	0	30	0	0	03
409	0	0	0	0	0	0.023	-0.001	0	0	0	0	0	0	100	0	0	01
410	0	0	0	0	0.003	-0.003	0.215	0.001	-0.003	0	0	100	0	0	0	0	01
411	0.044	0	0	0	0.002	0.013	0	0.349	0.064	0.044	70	18	0	12	0	0	01
412	-0.005	0	0	0	0.003	0.017	0.001	0.433	0.004	-0.005	73	16	0	11	0	0	06
413	0	0	0	0	0.002	0.022	0	0.187	0.029	0	55	20	0	25	0	0	06
414	0	0	0	0	0.001	0.013	0	0	0.031	0	40	48	0	12	0	0	06
415	0	0	0	0	0.004	0.011	0.004	0.019	0.017	0	52	35	0	13	0	0	06
416	0	0	0	0	0	1.325	-0.005	0	0	0	0	100	0	0	0	0	01
417	0.003	0	0	0	0	0	0.028	0.01	0	0.003	54	36	0	10	0	0	03
418	0.01	0	0	0	0	0	0	0	0.01	0.01	0	53	0	47	0	0	03
419	-0.001	0	0	0	0	0	0	0	0.027	-0.001	0	100	0	0	0	0	
420	0.011	0	0	0	0	0	0	0	0.009	0.011	0	40	0	60	0	0	05
421	0.008	0	0	0	0	0	0	0	0	0.008	0	50	50	0	0	50	01
422	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
423	0.034	0	0	0	0	0	0	0	0	0.034	0	100	0	0	0	100	
424	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
425	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
426	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
427	-0.006	3.138	0.225	-0.001	-0.001	0	0	0	-0.007	-0.006	23	21	0	56	0	4	
428	-0.009	0	0	0	0	0	0	0	0	-0.009	43	25	0	32	0	0	
429	-0.003	0.013	0.51	1.339	0.08	-0.031	0.001	0	0	-0.003	36	35	0	29	0	0	
430	-0.001	0.006	0.041	0.502	1.094	0.134	-0.01	0.003	0	-0.001	39	40	0	21	0	7	08
431	-0.001	0	0.002	0.015	0.01	0.003	0	0	0	-0.001	16	26	0	58	0	0	03
432	0	0	0.022	0	-0.035	0	-0.013	0	0	0	0	0	0	100	0	0	01
433	0	0	0	0.014	-0.013	0.001	-0.002	0	0	0	0	0	0	100	0	0	01
434	-0.004	0	0	0	0	0	0	0	0	-0.004	25	17	50	8	0	17	
435	-0.001	0.531	6.576	0.078	0.023	0.114	0.019	0	-0.005	-0.001	90	0	0	10	0	0	09
436	0.033	0	0.039	0.424	0.941	0.2	-0.01	-0.007	0	0.033	57	28	0	15	0	0	08
437	-0.004	0	0.006	0.008	0.011	0.001	0	0.015	0.062	-0.004	5	33	0	62	0	0	03
438	-0.021	0	0.006	0.005	0.012	0	0.02	0.057	0.01	-0.021	32	53	0	15	0	0	03
439	0.001	0	0.005	0.008	0.011	0.005	0.006	0.012	0.027	0.001	45	15	0	40	0	0	03
440	-0.002	0	0.003	0.002	0.026	0.028	0.001	0.016	0	-0.002	0	100	0	0	0	0	01
441	-0.002	0	0.003	0.002	0.027	0.028	0.001	0.014	0	-0.002	0	100	0	0	0	0	01
442	0.005	0	0.003	0.007	0.005	0	0	0.003	0	0.005	5	52	0	43	0	0	03
443	0	0	0	0.005	-0.001	0.001	0.001	0	0	0	0	100	0	0	0	0	01
444	-0.007	0	0	0	0	0.008	0.002	0	0	-0.007	0	100	0	0	0	85	01
445	0	0	0	0.033	0	0.023	-0.001	0.002	-0.001	0	0	100	0	0	0	100	01
446	0	0	0	0.033	0.172	0.006	-0.001	0	0	0	0	100	0	0	0	0	
447	0	0	0	0.063	0.278	0.071	-0.002	0	0	0	0	100	0	0	0	0	
448	0	0	0	0.016	0.043	0	-0.001	0	0	0	0	100	0	0	0	0	01
449	0	0	0	0	0	0.233	-0.009	0	0	0	0	100	0	0	0	100	01
450	0	0	0	0	0.01	0.288	0.211	0	0	0	0	100	0	0	0	0	01
451	0	0	0	0	0.025	0	-0.007	0	0	0	44	26	0	30	0	0	03
452	-0.002	0	0	0	0	0.013	-0.001	0.212	0.006	-0.002	20	51	0	29	0	0	03
453	-0.015	0	0	0	0	0.014	0.044	0.144	0.005	-0.015	0	0	100	0	0	0	01
454	0	0	0	0	0	0.488	0.01	0	0	0	0	63	0	37	0	0	01
455	0.01	0	0	0	0	0	0.058	0.055	0.073	0.01	0	4	96	0	0	4	01
456	-0.001	0	0	0	0	0	0.012	0.011	0.123	-0.001	0	0	100	0	0	0	01
457	0	0	0	0	0	0	0.012	0.016	0	0	0	75	15	10	0	75	01
458	-0.001	0	0	0	0	0	0	0.002	0.044	-0.001	0	0	0	100	0	0	01
459	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
460	0.38	0	0	0	0	0	0	0.049	6.97	0.38	15	85	0	0	0	0	01
461	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
462	0	0	0	0	0	0	0	0	0.001	0	0	0	0	100	0	0	
463	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
464	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
465	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
466	0.05	0	0	0	0	0	0	0	0	0.05	0	0	0	100	0	0	01
467	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
468	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
469	1.225	0.01	0.006	0.04	0.121	0.278	1.287	3.625	0.952	1.225	85	9	0	6	0	0	02
470	-0.007	0.85	0.033	-0.01	0.003	0	0	0	-0.008	-0.007	38	21	7	34	0	0	
471	1.214	0.019	-0.025	0.065	-0.004	0.023	0.062	0.052	1.017	1.214	74	1	0	25	0	0	02
472	-0.001	0.053	0.038	0.046	0.04	0.349	0.041	0.375	0.606	-0.001	100	0	0	0	0	0	02
473	0.009	0	0.005	0.008	0.013	0	0	0.008	0.027	0.009	24	26	0	50	0	0	04
474	0	0	0.001	0.008	0	0.001	0.037	-0.004	0	0	0	0	0	100	0	0	01
475	0	0	0	0.048	0.158	0.073	-0.001	0	0	0	0	100	0	0	0	0	
476	0	0	0	0.002	0	-0.002	0.089	-0.008	-0.065	0	30	70	0	0	0	0	03
477	0	0	0	0	0.026	0	-0.002	0	-0.003	0	0	0	0	100	0	0	01
478	-0.001	0	0	0	0.025	0	0	0.008	-0.005	-0.001	44	26	0	30	0	0	03
479	0.025	0	0	0	0	0	0	0	0	0.025	0	0	0	100	0	0	01
480	0	0	0	0	0.02	0.01	0.008	0.016	0.011	0	44	26	0	30	0	0	02
481	0	0	0	0	0	0	0.002	0	0	0	100	0	0	0	0	0	03
482	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
483	-0.079	0	0	0	0	0	0.189	4.278	0.119	-0.079	0	100	0	0	0	0	01
484	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
485	0.045	0	0	0	0	0	0	0	0.002	0.045	0	40	60	0	0	40	01
486	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
487	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
488	0.005	0	0	0	0	0	0	0.1	0.064	0.005	0	100	0	0	0	0	01
489	0.051	0	0	0	0	0	0	0.009	0.017	0.051	0	100	0	0	0	100	01
490	3.137	0	0	0	0	0	0	0	0.04	3.137	0	100	0	0	0	0	
491	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
492	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
493	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
494	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
495	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	
496	0	0.215	0.158	-0.247	0	0	-0.001	0	0	0	100	0	0	0	0	0	09
497	0	0.001	0.012	0	0	0	-0.026	0	0	0	36	0	0	64	0	0	01
498	0	0.24	0.006	0	0	0	0	0	-0.006	0	64	11	0	25	0	0	
499	-0.003	2.733	2.251	0.601	0.019	0.015	-0.001	0	0	-0.003	21	46	0	33	0	1	
500	0	0	0	0.007	0	0.01	-0.007	0	0	0	0	100	0	0	0	100	01
501	-0.007	0	0	0	0	0	0.03	0.073	0	-0.007	5	51	0	44	0	0	03
502	0	0.347	0.009	0.009	-0.001	0	0	0	-0.015	0	43	17	0	40	0	3	
503	0.002	0	0.011	0.002	-0.001	0	0.007	0.095	0.016	0.002	4	86	0	10	0	0	01
504	0	0	0.004	0.02	-0.008	0	0.014	0.02	0.016	0	44	26	0	30	0	0	02
505	0.004	0	0.01	0.034	0.011	0.015	0	0.01	-0.006	0.004	44	26	0	30	0	0	03
506	-0.328	0	0.043	0.005	0	0	0	0	1.589	-0.328	44	26	0	30	0	0	02
507	0	0	0.003	0	-0.001	0.001	0.001	0	0	0	0	0	0	100	0	0	01
508	0	0	0	0.014	0.044	-0.008	0.005	0.001	0	0	0	100	0	0	0	0	01
509	0	0	0	0.224	0.567	0.283	-0.001	0	0	0	2	74	24	0	0	0	01
510	-0.016	0	0	0	0	0.03	0.304	0.001	-0.004	-0.016	51	49	0	0	0	0	01
511	0.005	0	0	0	0.015	0	0	0.008	0.003	0.005	44	26	0	30	0	0	03
512	-0.002	0	0	0	0.005	0.033	0.268	0.238	0	-0.002	0	0	0	100	0	0	03
513	0.003	0	0	0	0.004	0.003	0.002	-0.001	0.013	0.003	54	0	0	46	0	0	01
514	0	0	0	0	0.025	-0.02	0.017	0.009	-0.01	0	44	26	0	30	0	0	03
515	-0.001	0	0	0	0.025	-0.013	-0.006	0.011	0	-0.001	44	28	0	28	0	0	03
516	-0.001	0	0	0	0.025	-0.013	-0.002	0.007	0	-0.001	44	26	0	30	0	0	03
517	0	0	0	0	0	0	0.013	0	0	0	0	0	0	100	0	0	01
518	0.061	0	0	0	0	0	0.005	0.02	0.166	0.061	0	100	0	0	0	100	01
519	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
520	-0.001	0	0	0	0	0.002	0.012	0.006	0.002	-0.001	30	30	40	0	0	0	01
521	0.008	0	0	0	0	0	0.018	0.287	0.208	0.008	63	33	0	4	0	0	06
522	0.059	0	0	0	0	0	0.016	0.033	0.001	0.059	60	40	0	0	0	24	06
523	0.168	0	0	0	0	0	0.02	5.079	0	0.168	0	100	0	0	0	0	01
524	0.242	0	0	0	0	0	0	0.002	0.026	0.242	0	100	0	0	0	0	01
525	0.001	0	0	0	0	0	0	0	0	0.001	0	0	0	100	0	0	01
526	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
527	5.131	0	0	0	0	0	0	0	3.818	5.131	60	0	0	40	0	0	01
528	5.966	0	0	0	0	0	0	0	0	5.966	0	100	0	0	0	0	
529	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
530	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
531	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
532	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
533	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
534	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
535	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
536	1.279	0	0.022	0.019	0.02	0.035	0.029	0.076	2.074	1.279	0	88	0	12	0	0	04
537	0	0.015	0	0.001	0	0	0	0	-0.001	0	0	100	0	0	0	0	
538	0	-0.003	-0.003	0.001	0	0	-0.001	0	0	0	0	100	0	0	0	100	01
539	0	-0.091	0.235	0.053	0	0	0	0	-0.015	0	72	27	0	1	0	24	
540	0	0.288	-0.002	0.016	0	0	0	0	-0.014	0	0	28	65	7	0	28	
541	0.096	0	0	0	0	0	0	0	0.053	0.096	63	30	0	7	0	28	02
542	0	0	0.964	0.376	-0.026	-0.012	-0.006	0	0	0	65	29	5	1	10	19	01
543	-0.003	0	0	0.005	-0.001	0	0	0.003	0	-0.003	0	100	0	0	0	0	01
544	-0.003	0	0	0.003	0.008	0.005	0.168	0.083	0	-0.003	0	0	0	100	0	0	03
545	0	0	0	0.005	0.008	0.001	-0.001	0	0	0	0	0	0	100	0	0	
546	0	0	0	0.12	0.479	0.026	-0.001	0	0	0	7	77	16	0	0	0	
547	0	0	0	0.002	0.007	0	0	0.001	0	0	0	0	0	100	0	0	01
548	0	0	0	0	0.023	0	-0.018	0.013	-0.013	0	44	26	0	30	0	0	03
549	0.122	0	0	0	0.01	1.057	0.2	0.1	0.077	0.122	15	85	0	0	0	0	01
550	0	0	0	0	0.002	0.033	0.009	0.005	-0.007	0	70	30	0	0	0	30	01
551	0	0	0	0	0.001	0.004	0.143	0.007	-0.003	0	0	100	0	0	0	0	01
552	0	0	0	0	0	0.004	0.001	0.016	-0.006	0	0	100	0	0	0	100	01
553	0.001	0	0	0	0	0	0	0.009	0.024	0.001	0	0	100	0	0	0	01
554	0.041	0	0	0	0	0	0	0.02	1.779	0.041	0	100	0	0	0	0	01
555	0	0	0	0	0	0	0	0	0.001	0	0	0	0	100	0	0	
556	0.001	0	0	0	0	0	0	0	0	0.001	0	0	0	100	0	0	
557	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
558	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
559	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
560	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
561	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
562	-0.004	0	0	0.105	0.185	0.125	0.084	0.002	-0.034	-0.004	45	33	7	15	0	23	01
563	-0.016	0	0	0	0	0	0.175	0.032	0.076	-0.016	0	100	0	0	100	0	01
564	0	0	0	0	0	0	0.103	0.608	-0.013	0	0	100	0	0	100	0	01
565	0	0	0	0	0	0	0.049	0	-0.011	0	0	100	0	0	100	0	01
566	0	0	0	0	0	0	0	0	0	0	0	75	25	0	75	0	01
567	0	0	0	0	0	0	0	0	0	0	0	40	20	40	40	0	01
568	0	0	0	0	0	0	0	0	0	0	0	40	20	40	40	0	01
569	0.015	0	0	0	0	0	0	0	0	0.015	0	40	60	0	40	0	01
570	0	0	0	0	0	0	0.055	-0.013	0	0	60	40	0	0	0	40	01
571	0	0	0	0	0	0	0.011	0	0	0	0	0	0	100	0	0	01
572	0	0	0	0	0.042	0.001	0.006	0	-0.001	0	0	0	0	100	0	0	01
573	0	0	0	0	0	0.086	-0.005	0	0	0	0	0	0	100	0	0	01
574	0	0	0	0	-0.032	0.066	0.002	0	-0.005	0	0	0	0	100	0	0	01
575	0	0	0	0	0	0	0.012	0	0	0	0	0	0	100	0	0	01
576	0	0	0	0	-0.002	0.16	0.001	-0.016	0	0	0	0	0	100	0	0	01
577	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
578	0.042	0	0	0	0.015	0.005	0.014	0.872	0.973	0.042	37	24	30	9	0	0	03
579	-0.004	0	0	0.001	0.035	0.034	0.003	-0.005	-0.001	-0.004	0	0	0	100	0	0	01
580	0	0	0	0	0	0.023	0.001	0	-0.002	0	0	0	0	100	0	0	01
581	0	0	0	0	0.034	0	-0.007	-0.001	0	0	0	1	0	99	0	1	01
582	0	0	0	0	0	0	0.038	0	-0.001	0	0	0	0	100	0	0	01
583	0	0	0	0	0	0	0	0	0.05	0	0	0	0	100	0	0	01
584	-0.001	0	0	0	0.004	-0.001	0.003	0.043	0	-0.001	0	100	0	0	0	0	01
585	0	0	0.001	0.056	0	-0.017	0	0.014	0	0	66	18	8	8	0	0	01
586	0	-0.001	0.305	0.023	-0.001	0.043	-0.003	0	-0.004	0	0	100	0	0	0	0	01
587	0	0	0.28	0.013	-0.001	0.044	0.02	0	0	0	0	100	0	0	0	0	01
588	0	0	0.859	0.874	0.258	0.2	0.073	-0.005	-0.023	0	0	100	0	0	0	0	01
589	0	0	0.006	0.002	0.055	0.135	0.004	0	0	0	0	100	0	0	0	0	01
590	0.735	0	0.001	0.003	0	0	0.008	0.016	0.079	0.735	54	17	0	29	0	0	06
591	-0.007	0.275	2.977	1.06	-0.004	0.001	-0.005	0	0	-0.007	0	100	0	0	0	0	01
592	0	0.164	1.105	0.031	0.044	0.053	-0.003	0	0	0	0	100	0	0	0	0	01
593	0.377	0	0.007	0.003	0	0.029	-0.003	0.202	1.077	0.377	66	27	0	7	0	0	01
594	-0.004	0	0.01	0.012	0	0	0	0.003	0	-0.004	44	26	0	30	0	0	03
595	0	0	0.223	0.507	0.038	-0.004	-0.001	0	0	0	0	100	0	0	0	0	01
596	-0.005	0	0	0	0	0	0	0	0	-0.005	0	100	0	0	0	0	

Project Identification										Baseline Milestone Dates							Baseline Service Cost Allocation			
Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign-off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
597	2018_19 Q4	KC434	Dervock WWTW Feasibility Study	06	KI469		14	16	NIEA								0	0	0	0
598	2018_19 Q4	KC435	Liscolman WWTW Upgrade	00	KI469		09	02	DRD	05/09/2011	07/09/2011	12/09/2011	30/03/2012		30/03/2012	30/03/2013	0	0	0	0
599	2018_19 Q4	KC436	Armoy WWTW Feasibility Study	06	KI469		14	16	NIEA								0	0	0	0
600	2018_19 Q4	KC438	Moss-side WWTW Feasibility Study	02	KI469		09	16	NIEA								0	0	0	0
601	2018_19 Q4	KC440	Strand Road WWPS and Network Appraisal Study	00	KI469		12	12	DRD								0	0	0	0
602	2018_19 Q4	KC441	Eastburn Crescent, Ballymoney, Foul Sewer	00	KI469		07	12	DRD			08/12/2011	27/01/2012		27/01/2012	26/01/2013	0	0	0	0
603	2018_19 Q4	KF025	Tamnamore/Mullenakill/Clontyclay - RBC Installations West & South	01	KI469		09	02	UR			01/09/2004	31/03/2008		31/03/2008	31/03/2009	0	0	0	0
604	2018_19 Q4	KF320	Bush WwTWs	01	KI469		07	16	NIEA			07/09/2009	04/06/2010		04/06/2010	04/06/2011	0	0	0	0
605	2018_19 Q4	KF329	Ardress WWPS Proposed Replacement.	03	KI469		12	16	NIEA			21/03/2011	16/09/2011		16/09/2011	15/09/2012	0	0	0	0
606	2018_19 Q4	KF331	Grange Park, Dungannon WWPS Upgrade	00	KI469		12	02	UR	31/05/2011	10/06/2011	01/04/2011	31/03/2015		31/03/2015	30/03/2016	0	0	0	0
607	2018_19 Q4	KF354	Dernagh WWPS Upgrade	00	KI469		07	02	DRD								0	0	0	0
608	2018_19 Q4	KF355	Markethill WWTW feasibility	06	KI469		14	16	NIEA								0	0	0	0
609	2018_19 Q4	KF359	Brompton Park WWPS and Derryhale WWPS Feasibility Study	02	KI469		12	12	DRD								0	0	0	0
610	2018_19 Q4	KF362	Annvale SPS Upgrade - Feasibility Study	00	KI469		07	12	DRD								0	0	0	0
611	2018_19 Q4	KG140	Waringfield SPS Upgrade	01	KI469		12	12	UR								0	0	0	0
612	2018_19 Q4	KG180	Knockshane WWPS, Lurgan Upgrade.	01	KI469		12	02	UR	14/02/2012							0	0	0	0
613	2018_19 Q4	KI494	Base Maintenance WWTW North IWWWP	00	KI469		09	02	DRD	20/05/2011	25/05/2011	05/09/2011	31/10/2012		31/10/2012	31/10/2013	0	0	0	0
614	2018_19 Q4	KI501	Pumping Station Maintenance - R McCrea	00	KI469		12	02	DRD								0	0	0	0
615	2018_19 Q4	KI502	Pumping Station Maintenance - A Reilly	00	KI469		12	02	DRD								0	0	0	0
616	2018_19 Q4	KI503	Pumping Station Maintenance - B McNeill	00	KI469		12	02	DRD								0	0	0	0
617	2018_19 Q4	KI504	Sewers Structural Rehabilitation PC15 Years 5 & 6	00	KI469		07	12	DRD								0	0	0	0
618	2018_19 Q4	KI505	SewerStructural Rehabilitation Package 3	00	KI469		07	12	DRD								0	0	0	0
619	2018_19 Q4	KL424	Magheramason WwTWs	06	KI469		14	16				30/06/2013	31/10/2014		31/01/2015	31/01/2016	0	0	0	100
620	2018_19 Q4	KL468	Strathfoyle, Londonderry Siphon Inlet Screen	00	KI469		07	12	UR	23/02/2012	06/03/2012	26/03/2012	31/08/2012		31/08/2012	31/08/2013	0	0	0	0
621	2018_19 Q4	KL485	Tobermore WWTW Upgrade	00	KI469		09	02	DRD	07/06/2011	10/06/2011	17/10/2011	31/07/2012		31/07/2012	31/07/2013	0	0	0	0
622	2018_19 Q4	KL486	Bonnanaboigh WWTW Upgrade	00	KI469		09	16	DRD	07/06/2011	10/06/2011	30/09/2011	30/03/2012		30/03/2012	30/03/2013	0	0	0	0
623	2018_19 Q4	KL487	Nixons Corner, Londonderry WWTW	06	KI469		14	16	NIEA			30/06/2013	30/09/2014		28/12/2014	28/12/2015	0	0	0	100
624	2018_19 Q4	KL488	Aghanloo WWTW Feasibility Study.	06	KI469		14	16	NIEA								0	0	0	0
625	2018_19 Q4	KL489	Ballykelly WWTW Feasibility	06	KI469		14	16	NIEA				31/03/2017				0	0	0	100
626	2018_19 Q4	KL493	Artigarvan WWTW	06	KI469		14	16	NIEA			01/05/2013	19/01/2015		30/03/2015	30/03/2016	0	0	21	79
627	2018_19 Q4	KL494	Strathfoyle Sewerage Syphons Upgrade.	00	KI469		07	12	DRD								0	0	0	0
628	2018_19 Q4	KL495	Bovally WWPS Upgrade	00	KI469		12	12	DRD								0	0	0	0
629	2018_19 Q4	KN636	Erganagh WWPS Replacement	00	KI469		12	12	DRD								0	0	0	0
630	2018_19 Q4	KN639	Castle Archdale WWPS Upgrade	00	KI469		12	02	DRD								0	0	0	0
631	2018_19 Q4	KN640	Dromore, Tyrone, WWTW Feasibility Study.	06	KI469		14	16	NIEA			30/09/2014	19/01/2015		23/03/2015	23/03/2015	0	0	0	100
632	2018_19 Q4	KP585	Garrison WwTWs	06	KI469		09	16									0	0	0	0
633	2018_19 Q4	KP669	Clabby Road WWPS Feasibility Study	00	KI469		12	12	DRD								0	0	0	0
634	2018_19 Q4	KP671	Drumgallon WWPS Upgrade.	00	KI469		07	12	DRD								0	0	0	0
635	2018_19 Q4	KP672	Tempo WWTW Feasibility Study	06	KI469		14	16	NIEA			01/04/2013	01/09/2013		01/12/2013	01/12/2014	0	0	0	100
636	2018_19 Q4	KP673	Belleek WWTW Feasibility	06	KI469		14	16	NIEA								0	0	0	0
637	2018_19 Q4	KP675	Tamlaght WWTW Upgrade	06	KI469		09	16	DRD											
638	2018_19 Q4	KP676	Fivemiletown WWTW Feasibility Study	06	KI469		14	16	NIEA								0	0	0	0
639	2018_19 Q4	KR390	Cloughy WwTW Interim Solution	01	KI469		09	02	UR	09/01/2008	14/01/2008	18/03/2008	26/05/2009		26/05/2009	26/05/2010	0	0	0	100
640	2018_19 Q4	KR438	Glenmachan Street WWPS refurbishment	06	KI469		13	02	UR								0	0	0	0
641	2018_19 Q4	KR443	Sydenham WWPS Remedial Works	01	KI469		13	02	UR	25/08/2011	26/08/2011	19/09/2011	21/12/2012		21/12/2012	21/12/2013	0	0	0	0
642	2018_19 Q4	KR444	Sydenham WWPS Strategic Investigations	06	KI469		07	12	UR								0	0	0	0
643	2018_19 Q4	KR454	DG5 - South Parade, Belfast	01	KI469		07	12									0	0	0	0
644	2018_19 Q4	KR469	Meadowbank Park / Reaville, Dundonald Flood Alleviation	00	KI469		07	12	NIEA								0	0	0	0
645	2018_19 Q4	KR486	M&E Capital Maintenance Whitehouse WWTW	01	KI469		09	02	UR	17/01/2011	21/01/2011	31/10/2011	30/11/2012		30/11/2012	30/11/2013	0	0	0	0
646	2018_19 Q4	KR487	Donegall Road Sewer Replacement - Emergency Work	00	KI469		07	12	NIEA			15/11/2010	29/04/2011		29/04/2011	28/04/2012	0	0	0	0
647	2018_19 Q4	KR501	Carrickfergus WWTW Upgrade	00	KI469		09	02	DRD			01/01/2013	15/09/2013		15/12/2013	15/12/2014	0	0	0	100
648	2018_19 Q4	KR502	Greenisland WWTW's Refurbishment	00	KI469		09	02	DRD	07/06/2011	10/06/2011	02/09/2011	30/03/2012		30/03/2012	30/03/2013	0	0	0	0
649	2018_19 Q4	KR504	Portaferry Road, N.Ards WWPS Upgrade	00	KI469		12	12	DRD								0	0	0	100
650	2018_19 Q4	KR510	Tullynakill Road WWTW Feasibility	06	KI469		14	16	NIEA								0	0	0	100
651	2018_19 Q4	KS273	Comber Rd/Portaferry Rd Newtownards SPS	01	KI469		12	02	UR	22/10/2008	04/11/2008	08/12/2008	03/03/2010		03/03/2010	20/07/2011	0	0	0	0
652	2018_19 Q4	KS301	Dundrum WwTW	00	KI469		09	02				01/04/2008	22/01/2010		22/01/2010	22/01/2011	0	0	0	0
653	2018_19 Q4	KS382	Crossgar Sewage Pumping Station Improvements	00	KI469		12	02	UR	07/09/2011	14/09/2011	13/08/2012	30/05/2013		30/05/2013	30/05/2014	0	0	0	0
654	2018_19 Q4	KI471	SEMD Surveys PC10 Wastewater	01			09	16	UR								0	0	0	0
655	2018_19 Q4	KI482	MBR Plants - Long Term Solutions	01			09	02	UR								0	0	0	0
656	2018_19 Q4	KI486	Small WWTW Year 2 Programme PC10 - 2011/12	00			09	17	NIEA			10/06/2011	20/08/2012		20/08/2012	24/08/2012	0	0	0	0
657	2018_19 Q4	KI487	Backsyphonage Risks at NIW Sites.	01			09	16	UR								0	30	0	70
658	2018_19 Q4	KI488	Removal of Inlet Screens and Installation of Solid Handling Pumps at 27 W	00			12	02	UR	20/05/2011	07/06/2011	31/10/2011	28/03/2014		28/03/2014	28/03/2015	0	0	0	0
659	2018_19 Q4	KI507	WWTW - Assessment of requirements at WWTWs for Freeze Thaw	00			09	02	DRD								0	0	0	100
660	2018_19 Q4	KI508	UWWTW MCERT compliance	05			09	16	DRD			28/06/2013	01/12/2014		28/03/2015	28/03/2016	0	0	0	100
661	2018_19 Q4	KI509	Appraisal of DG5 at risk register locations Phase 2	00			07	12	UR								0	0	0	0
662	2018_19 Q4	KI512	Western Area Telemetry Needs	00			12	20	DRD								0	0	0	0
663	2018_19 Q4	KI513	Telemetry Installation at WwPS	00			12	20	DRD								0	0	0	0
664	2018_19 Q4	KI515	DG5 Feasibility Report- Minor Works	00			07	12	NIEA								0	0	0	0
665	2018_19 Q4	KI516	Small WWTW Year 3 Programme PC10 - 2012/13	00			09	17	NIEA			01/06/2012	29/03/2013		29/03/2013	29/03/2014	0	0	0	0
666	2018_19 Q4	KI517	Appraisal of Energy Efficiency at Waste Water Pumping Stations	00			12	02	DRD								0	0	0	100
667	2018_19 Q4	KI519	Wastewater Pumping Stations Overflow Monitoring Programme	00			12	12	UR								0	0	0	0
668	2018_19 Q4	KI526	Compliance with the Quality of Bathing Water Regulations (NI) 2008 - Feas	00			09	16	DRD								0	0	0	0
669	2018_19 Q4	KI527	Site Drainage & or Chemical Storage Diagrams for WwTWs & WwPS	00			09	02	DRD											
670	2018_19 Q4	KI528	Phase 2 - Aeration Optimisation Efficiency Programme	00			07	02	DRD											
671	2018_19 Q4	KI529	Appraisal of DG5 at-Risk Register Locations (Mitigation Phase 3)	00			07	12	DRD											
672	2018_19 Q4	KI530	Compliance with Surface Waters (Shellfish)(Classification)(Amendment) Re	02			09	12	NIEA											
673	2018_19 Q4	KI531	Appraisal of DG5 At-Risk Register Locations (Mitigation Phase 4)	00			07	12	DRD											
674	2018_19 Q4	KI532	Bangor & Holywood Public Realm CCTV Survey	00			07	24	DRD											
675	2018_19 Q4	KI533	Integrated Pollution Prevention Control at Wastewater Treatment Works IPI	03			02	16												
676	2018_19 Q4	KI534	Telemetry Audit Actions.	00			07	02	DRD											
677	2018_19 Q4	KI536	PC15 Sewer Rehabilitation Unplanned	00			07	12												
678	2018_19 Q4	KI537	Sewerage Rehabilitation (Planned)	03			07	12	UR								0	0	100	0
679	2018_19 Q4	KS890	Coney Island DAS	00	KI469		07	12	DRD								0	0	0	0
680	2018_19 Q4	KS892	Killyleagh WWTW Upgrade	00	KI469		09	02	DRD	07/06/2011	10/06/2011	16/09/2011	30/03/2012		30/03/2012	30/03/2013	0	0	0	0
681	2018_19 Q4	KS899	Strangford Sewer Network Salinity Reduction	00	KI469		07	12									0	0	0	0
682	2018_19 Q4	KV014	Castlewellan WwTW	01	KI469		09	02	UR	06/06/2005		01/01/2006	19/08/2010		19/08/2010	19/08/2010	0	0	0	0
683	2018_19 Q4	KV089	Dunbar Road Banbridge SPS Upgrade	01	KI469		12	02	UR	16/08/2009	03/09/2009	01/04/2011	31/03/2015		31/03/2015	30/03/2016	0	0	0	0
684	2018_19 Q4	KV154	Newry Road Sewage Pumping Station, Warrenpoint Upgrade	00	KI469		13	12	NIEA			05/09/2008	14/01/2014		14/01/2014	14/01/2015	0	0	38	62
685	2018_19 Q4	KW830	Tandragee WwTW	01	KI469		09	02	UR			26/09/2005	27/05/2010		27/05/2010	27/05/2011	0	0	0	0
686	2018_19 Q4	JI032	Water Treatment Sites - Water Regulation Compliance & Energy Efficiency	01	KI487		02	01	DRD								0	100	0	0
687	2018_19 Q4	KI514	WwTWs-Water Regulation Compliance & Energy Efficiency Programme	01	KI487		09	02	DRD								0	0	0	100
688	2018_19 Q4	KA143	Aldergrove Sewerage Scheme	00	KI537		07	12	NIEA	11/09/2008	01/10/2008	20/10/2008	15/06/2009		15/06/2009	15/06/2010	0	0	0	0
689	2018_19 Q4	KA213	Sewers Structural Rehabilitation Package 1 (Milltown, Killyneese & Portgler	00	KI537		07	12	NIEA											
690	2018_19 Q4	KA222	Granger's Mill, Muckamore, Wastewater Pumping Main Relocation	00	KI537		07	12	NIEA	19/11/2010	12/01/2011	07/03/2011	11/07/2011		11/07/2011	10/07/2012	0	0	0	0
691	2018_19 Q4	KA224	Drumsough Road,Randalstown,Sewarage Scheme.	00	KI537		09	12	NIEA								0	0	0	0
692	2018_19 Q4	KA233	Blackcave Catchment, Larne - Networks Repairs	00	KI537		07	12	UR	30/09/2011	05/10/2011	28/11/2011	06/03/2012		06/03/2012	06/03/2013	0	0	0	0
693	2018_19 Q4	KA234	Glenavy Road Crumlim WWPS Site Investigation	06	KI537		07	12	NIEA								0	0	0	0
694	2018_19 Q4	KA248	Ballygally Sewer Rehabilitation	00	KI537		07	12	DRD								0	0	0	0
695	2018_19 Q4	KB353	Maghera Area Sewers	00	KI537		07	24	NIEA	19/07/2004		17/03/2008	06/01/2012		06/01/2012	05/01/2013	0	0	0	0
696	2018_19 Q4	KB387	Church Street, Cookstown	00	KI537		07	12	NIEA			02/02/2009	31/03/2009		31/03/2009	31/03/2010	0	0	0	0
697	2018_19 Q4	KB409	Lissan Road Cookstown Replacement Storm Sewer	00	KI537		07	12	NIEA	06/01/2009	28/01/2009	05/01/2009	18/03/2010		18/03/2010	18/03/2011	0	0	0	0
698	2018_19 Q4	KB423	Westland Rd, Cookstown - SPS Upgrade	00	KI537		07	12	NIEA								0	0	0	0
699	2018_19 Q4	KB472	26 Ballyscullion Road Bellaghy DG5 at Risk Register	00	KI537		07	12	DRD								0	0	0	0
700	2018_19 Q4	KB486	Galgorm WWPS Upgrade - Feasibility Study	06	KI537		12	12	DRD								0	0	0	100
701	2018_19 Q4	KC425	Donaghbrook, Ballymoney - Flooding Alleviation	00	KI537		07	12	NIEA								0	0	100	0
702	2018_19 Q4	KF037	Annagher Sewage Pumping Station and Rising Main	00	KI537		13	12	NIEA	05/04/2012	01/05/2012	01/02/2013	30/04/2014		31/10/2014	31/10/2015	0	0	32	68
703	2018_19 Q4	KF076	Gorestown Road Sewerage Scheme	00	KI537		12	12	NIEA	29/08/2007	06/09/2007	10/03/2008	21/08/2012		21/08/2012	21/08/2013	0	0	0	0
704	2018_19 Q4	KF330	Armagh DAP Stage 1	00	KI537		07	12	NIEA	24/11/2011	29/11/2011	01/07/2011	14/10/2013		14/10/2013	14/10/2014	0	0	80	20
705	2018_19 Q4	KG173	Portadown DAP Stage 1	00	KI537		07	12									0	0	0	0
706	2018_19 Q4	KG177	Portadown DAP Stage 2	00	KI537		07	12	NIEA								0	0	100	0
707	2018_19 Q4	KG182	Martins Yard Gilford Pipe Bridge Condition Survey	00	KI537		07	24	NIEA	02/03/2011	10/03/2011	20/06/2011	19/09/2012		19/09/2012	19/09/2013	0	0	0	0
708	2018_19 Q4	KG185	Oak Grange, Waringstown Flood Alleviation	01	KI537		14	12	DRD								0	0	0	0
709	2018_19 Q4	KL443	Londonderry DAP: Duke Street Work package	00	KI537		07	12	NIEA	09/11/2009	16/11/2009	06/04/2009	10/02/2012		10/02/2012	09/02/2013	0	0	0	0
710	2018_19 Q4	KL447	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	00	KI537		07	12	NIEA	15/11/2010	19/11/2010	26/09/2011	01/10/2012		01/10/2012	01/10/2013	0	0	0	0
711	2018_19 Q4	KL451	Londonderry DAP: Strathfoyle & Drumahoe Work package: CSO Abandonn	00	KI537		07	12	NIEA	07/07/2011	11/07/2011	09/01/2012	25/09/2012		25/09/2012	25/09/2013	0	0	0	0
712	2018_19 Q4	KL457	Londonderry DAP: Storm Screening	01	KI537		07	12	NIEA	19/03/2009	20/03/2009	30/03/2009	27/10/2009		27/10/2009	27/10/2010	0	0	0	0
713	2018_19 Q4	KL460	Foyle Springs, Derry Flood Alleviation	00	KI537		07	12	NIEA								0	0	100	0
714	2018_19 Q4	KL469	Maydown WWPS Replacement.	00	KI537		12	12	UR	06/07/2011	15/07/2011	09/01/2012	26/10/2012		26/10/2012	26/10/2013	0	0	0	0
715	2018_19 Q4	KN143	Castlederg	00	KI537		07	12	NIEA								0	0	0	0
716	2018_19 Q4	KN595	Brookmount Road - Hunters Cresent Sewer Replacement	00	KI537		07	12	NIEA	04/02/2010	15/02/2010	01/06/2010	27/07/2012		27/07/2012	27/07/2013	0	0	0	0
717	2018_19 Q4	KO128	Ballyroney Road, Rathfriland, Storm Sewer	00	KI537		07	12		27/10/2011	27/10/2011	05/01/2004					0	0	0	0
718	2018_19 Q4	KR203	Kensington Gardens Flood Relief	00	KI537		07	12	NIEA	29/09/2008	27/11/2008	09/03/2009	08/01/2010		08/01/2010	08/01/2011	0	0	0	0
719	2018_19 Q4	KR255	Belfast Sewers Project	00	KI537		07	12	NIEA	15/11/2004	15/11/2005	11/06/2009	18/02/2010		18/02/2010	27/01/2012	0	0	0	0
720	2018_19 Q4	KR402	Joymount Carrick DAP Phase 1	00	KI537		07	12	NIEA	13/03/2009	26/03/2009	07/04/2009	14/04/2010		14/04/2010	14/04/2011	0	0	0	0
721	2018_19 Q4	KR417	Ormeau Avenue Sewerage upgrade for pollution resolution	00	KI537		14	12	NIEA			30/06/2013	01/01/2015		01/01/2015	01/01/2016	0	0	100	0
722	2018_19 Q4	KR432	Beechmount Avenue Gortfin Street Hydraulic Upgrade	00	KI537		07	12	NIEA	03/12/2010	12/01/2011	31/03/2011	11/01/2012		11/01/2012	10/01/2013	0	0	0	0
723	2018_19 Q4	KR439	Millisle DAP Stage 2	00	KI537		07	12	NIEA	22/02/2011	02/03/2011	30/09/2013	01/01/2015		01/03/2015	01/03/2016	0	0	92	8
724	2018_19 Q4	KR440	Ballywalter DAP Stage 1	00	KI537		07	12	NIEA	02/02/2010	09/02/2010	15/03/2010	01/10/2010		01/10/2010	01/10/2010	0	0	0	0
725	2018_19 Q4	KR452	Baroda Street / Ormeau Park, Belfast CSO	00	KI537		07	12	NIEA	07/08/2009	14/08/2009	07/09/2009	07/09/2011		07/09/2011	06/09/2012	0	0	0	0
726	2018_19 Q4	KR456	Drumglass Park, Lisburn Road, Belfast. Storm Seperation.	00	KI537		07	12	NIEA	17/02/2011	01/03/2011	08/08/2011	20/01/2012		20/01/2012	19/01/2013	0	0	0	0
727	2018_19 Q4	KR457	Ladybrook, Belfast Sewer Investigation (Structural)	00	KI537		07	12	NIEA	03/12/2010	12/01/2011	05/03/2012	21/12/2012		21/12/2012	21/12/2013	0	0	0	0
728	2018_19 Q4	KR473	Hamel Drive Flood Alleviation East Belfast	00	KI537		07	12	NIEA	08/10/2010	04/11/2010	17/01/2011	23/06/2011		23/06/2011	23/06/2011	0	0	0	0
729	2018_19 Q4	KR480	Holywood Sewer Network Improvements	00	KI537		07	12	NIEA	19/01/2012	23/01/2012	15/01/2013	01/01/2015		01/01/2015	01/01/2016	0	0	54	46
730	2018_19 Q4	KR489	Glenmachan Strategic Project Phase 1a Sicily & Marguerite Park Flood Alle	00	KI537		07	12	UR								0	0	100	0
731	2018_19 Q4	KR524	Roddens Crescent Sewer Upgrades (DG5)	00	KI537		07	12	NIEA								0	0	0	0
732	2018_19 Q4	KS337	Carnesure Park, Comber Foul Sewer Replacement	00	KI537		07	12	NIEA			04/06/2007	30/06/2009		30/06/2009	30/06/2010	0	0	0	0
733	2018_19 Q4	KS362	Station Road, Crossgar Replacement Sewer	00	KI537		07	12	NIEA	22/01/2007	13/02/2007	18/02/2008	25/02/2010		25/02/2010	08/06/2010	0	0	0	0
734	2018_19 Q4	KS372	Market Street SPS Upgrade, Downpatrick	00	KI537		07	12	NIEA	16/01/2007	05/02/2007	03/09/2012	28/02/2014		28/02/2014	28/02/2015	0	0	57	43
735	2018_19 Q4	KS373	Church Street SPS Upgrade, Downpatrick	00	KI537		07	12	NIEA	01/05/2009	16/06/2009	16/01/2012	22/04/2013		22/04/2013	22/04/2014	0	0	0	0
736	2018_19 Q4	KS374	Hunter's Mill Storm Attenuation and Network Improvements, Downpatrick	00	KI537		07	12	NIEA								0	0	0	0
737	2018_19 Q4	KS377	Downs Road/Castle Park Sewer Upgrade/ Attenuation	00	KI537		07	12	NIEA	17/09/2007	20/09/2007	30/09/2010	03/02/2012		03/02/2012	02/02/2013	0	0	0	0
738	2018_19 Q4	KS378	Burren River SPS Upgrades & Networks Improvements	01	KI537		07	12	NIEA	21/07/2008	23/07/2008	29/09/2008	20/04/2010		20/04/2010	12/11/2010	0	0	0	0
739	2018_19 Q4	KS379	Murlough SPS Upgrade & Network Improvements	00	KI537		07	12	NIEA	11/12/2009	21/12/2009	26/04/2010	03/11/2011		03/11/2011	03/11/2011	0	0	0	0
740	2018_19 Q4	KS807	Kilkeel Harbour SPS and Sewerage Improvements	00	KI537		07	12	NIEA	12/06/2009	09/07/2009	11/10/2010	26/03/2012		26/03/2012	26/03/2013	0	0	0	0
741	2018_19 Q4	KS809	Carrowdore Sewer Replacement	00	KI537		07	12	NIEA	20/11/2007	03/12/2007	27/10/2008	18/10/2011		18/10/2011	17/10/2012	0	0	0	0
742	2018_19 Q4	KS812	Greyabbey DAP Phase 1	01	KI537		07	12	NIEA	18/07/2011	01/08/2011	10/10/2011	24/09/2012		24/09/2012	24/09/2013	0	0	0	0
743	2018_19 Q4	KS834	Sewers Structural Rehabilitation Package 2	00	KI537		07	12	NIEA								0	0	0	0
744	2018_19 Q4	KS835	South Street, Newtownards WWPS Refurbishment	00	KI537		12	12	NIEA	03/12/2010	12/01/2011	08/11/2010	16/11/2012		16/11/2012	16/11/2013	0	0	0	0
745	2018_19 Q4	KS839	Gransha Road, Bangor, Trunk Sewer replacement.	00	KI537		07	12	NIEA	20/06/2011	15/07/2011	19/09/2011	25/11/2011		25/11/2011	24/11/2012	0	0	0	0
746	2018_19 Q4	KS840	Craigdarragh Rd To Seahill Rd Sewer Replacement	00	KI537		07	12	NIEA	21/06/2010	28/06/2010	30/07/2012	24/02/2012		24/02/2012	23/02/2013	0	0	0	0
747	2018_19 Q4	KS842	Kilkeel DAP Phase 1	00	KI537		07	12	NIEA								0	0	0	0
748	2018_19 Q4	KS846	High Street, Ardglass Sewer Realignment	00	KI537		07	12	NIEA								0	0	0	0
749	2018_19 Q4	KS867	Copeland Road, Comber, Tank Sewer	01	KI537		07	12	NIEA								0	0	0	0
750	2018_19 Q4	KS872	Bangor DAP Work Package 1: Carnalea Stream UID	01	KI537		07	12	NIEA								0	0	30	70
751	2018_19 Q4	KT403	Drumbeg Drive, Lisburn WWPS Enhancement	01	KI537		07	12	NIEA	21/09/2012	27/09/2012	01/12/2012	30/09/2014	30/09/2014	30/09/2014	30/04/2015	0	0	85	15
752	2018_19 Q4	KT411	Edgewater WWPS H&S Upgrade - Feasibility Study	00	KI537		12	12	DRD								0	0	0	0
753	2018_19 Q4	KI538	Sewerage New and Renewed including FTS. (Unplanned)	03			07	24	UR								0	0	99	1
754	2018_19 Q4	KV063	Newry Sewerage Networks Improvements	00	KI537		07	12	NIEA			19/03/2007	08/07/2008		08/07/2008	08/07/2009	0	0	0	0
755	2018_19 Q4	KV074	Cambrook SPS to Green Road	00	KI537		07	12	NIEA	15/09/2008	17/11/2008	19/01/2009	04/02/2010		04/02/2010	04/02/2010	0	0	0	0
756	2018_19 Q4	KV121	Camlough Road Newry Storm and Foul Sewer	00	KI537		07	12	NIEA	15/04/2011	06/05/2011	13/11/2010	26/01/2012		26/01/2012	18/07/2012	0	0	0	0
757	2018_19 Q4	KV145	Charlotte Street/Newry Road Warrenpoint Proposed Sewer Improvements	00	KI537		07	12	NIEA	10/09/2008	15/09/2008	24/11/2008	25/01/2012		25/01/2012	25/01/2012	0	0	0	0
758	2018_19 Q4	KV147	Main Street/Dromore Street, Rathfriland Sewer Replacement	01	KI537		07	12	UR	19/10/2010	19/11/2010	20/06/2011	02/11/2011		02/11/2011	25/01/2012	0	0	0	0
759	2018_19 Q4	KV161	Castlewellan DAP Stage 1	00	KI537		07	12	NIEA			01/06/2013	31/03/2014		31/03/2014	31/03/2015	0	0	100	0
760	2018_19 Q4	KV171	Railway Drain, Newry – Desilting, condition survey & associated civil work.	01	KI537		07	24	NIEA								0	0	0	0
761	2018_19 Q4	KV172	St Judes Gardens, Rostrevor Flood Alleviation	00	KI537		07	12	NIEA	03/05/2012	10/05/2012	03/05/2011	21/01/2013		21/01/2013	21/01/2014	0	0	0	0
762	2018_19 Q4	KV199	Dublin Road Newry Out of Sewer Flooding	00	KI537		07	12	NIEA								0	0	100	0
763	2018_19 Q4	JR400	A2 Shore Road Re-alignment - Greenisland	00	KI538		07	24	NIEA	20/05/2008	28/05/2008	03/11/2008	20/04/2011		20/04/2011	19/04/2012	0	0	0	0
764	2018_19 Q4	KA197	The Plains, Burnside Road, Doagh, Foul Sewer Extension	00	KI538		07	24	NIEA	10/08/2010	20/08/2010	21/09/2010	16/11/2010		16/11/2010	18/02/2011	0	0	0	0
765	2018_19 Q4	KA228	Birch Hill Road Antrim Foul & Storm Sewer Extensions	00	KI538		07	24	NIEA								0	0	0	0
766	2018_19 Q4	KA235	Rashee Drive Ballyclare Storm Sewer Extension & Upgrade	00	KI538		07	24	NIEA	10/08/2011	12/08/2011	05/09/2011	27/04/2012		27/04/2012	27/04/2013	0	0	0	0
767	2018_19 Q4	KA237	4 Steeple Road, Antrim, Foul and Storm Sewer Extensions	00	KI538		07	24	NIEA	20/05/2011	27/05/2011	17/07/2011	24/05/2012		24/05/2012	24/05/2013	0	0	0	0
768	2018_19 Q4	KA238	131 Doagh Road Ballyclare Storm Sewer Extension	00	KI538		07	24	DRD	08/02/2012	14/02/2012	28/07/2011	31/05/2012		31/05/2012	31/05/2013	0	0	0	0
769	2018_19 Q4	KA243	Shore Road, Glynn, Larne, Storm Sewer and Foul Pumping Main Extension	00	KI538		07	24	DRD								0	0	0	0
770	2018_19 Q4	KA265	Station road, Antrim Storm & Foul Sewer Ext	00	KI538		07	24	DRD											
771	2018_19 Q4	KB452	Cushendall Road, (172-178),Ballymena,Storm Sewer Extension	00	KI538		07	24	NIEA								0	0	0	0
772	2018_19 Q4	KB454	Kilmascally Road, Ardboe, Foul and Storm Sewer Extension.	00	KI538		07	24	NIEA	15/11/2010	19/11/2010	18/04/2011	30/06/2011		30/06/2011	29/06/2012	0	0	0	0
773	2018_19 Q4	KB455	75-85 Cushendall Road, Ballymena, Storm and Foul Sewer Ext.	00	KI538		07	24	NIEA								0	0	0	0
774	2018_19 Q4	KB457	Longfield Road , Desertmartin, Storm Sewer Extension	00	KI538		07	24	NIEA	13/10/2010	10/11/2010	16/05/2011	20/10/2011		20/10/2011	20/10/2011	0	0	0	0
775	2018_19 Q4	KB465	Magherafelt Primary School, Storm Sewer Extension	00	KI538		07	24	NIEA	20/02/2012	21/02/2012	26/04/2012	19/07/2012		19/07/2012	28/08/2012	0	0	0	0
776	2018_19 Q4	KB470	Sevensprings, Ballyhampton Rd, Larne Storm Sewer	00	KI538		07	24	NIEA	28/09/2011	03/10/2011	01/03/2011	29/02/2012		29/02/2012	28/02/2013	0	0	0	0
777	2018_19 Q4	KB501	Fernisky Road, Kells - Storm Sewer	00	KI538		07	24	DRD											
778	2018_19 Q4	KB504	Cloneen, Crew Rd Maghera Storm Culvert Repl	00	KI538		07	24	DRD											
779	2018_19 Q4	KB509	Station Road Annaghmore Road Castledawson Storm Sewer extension	00	KI538		07	24	DRD											
780	2018_19 Q4	KB510	Agharan Road Newmills Storm sewer Extension	00	KI538		07	24	DRD											
781	2018_19 Q4	KB513	Desertmartin Road, Tullynagee Road, Moneymore, Storm and Foul PM Ext	00	KI538		07	24	DRD											
782	2018_19 Q4	KB516	Ballyronan Road Magherafelt Storm Sewer Extension	00	KI538		07	24	DRD											
783	2018_19 Q4	KB517	ONeill Park Ballymaguigan Foul & Storm Sewer Extension	00	KI538		07	24	DRD											
784	2018_19 Q4	KB518	Mullaghboy Crescent Magherafelt Foul Sewer Extension	00	KI538		07	24	DRD											
785	2018_19 Q4	KB523	157 Larne Road, Ballymena Foul Sewer Ext.	00	KI538		07	24												
786	2018_19 Q4	KC413	Glebe Road, Rasharkin - Sewage Scheme	00	KI538		07	24	NIEA	18/08/2009	20/08/2009	20/10/2009	04/10/2012		04/10/2012	04/10/2013	0	0	0	0
787	2018_19 Q4	KC465	Lisnablagh Road, Harpur's Hill, Coleraine Foul Sewer	00	KI538		07	24	DRD											
788	2018_19 Q4	KC468	Hazelbank Rd, Coleraine Foul Sewer Extension	00	KI538		07	24												
789	2018_19 Q4	KC469	Society Street Coleraine Storm Sewer Extension	00	KI538		07	24												
790	2018_19 Q4	KF324	Crossdened Row, Keady Storm Sewer Extension	00	KI538		07	24	NIEA	24/08/2011	26/08/2011	02/01/2012	27/01/2012		27/01/2012	26/01/2013	0	0	0	0
791	2018_19 Q4	KF332	Stewarts Hill, Armagh, Foul & Storm Sewer Extension	00	KI538		07	24	NIEA								0	0	0	0
792	2018_19 Q4	KF343	Annaghmakeown Road Castlecaufield Storm Sewer Extension	00	KI538		07	24	NIEA	20/02/2012	21/02/2012	16/04/2012	29/06/2012		29/06/2012	05/09/2012	0	0	0	0
793	2018_19 Q4	KF345	Killuney Road, Armagh, Foul and Storm Sewer Extensions	00	KI538		07	24	NIEA								0	0	0	0
794	2018_19 Q4	KF382	Rock Rd, Armagh Storm Sewer Extension	00	KI538		07	24	DRD											
795	2018_19 Q4	KF384	Old Caulfield Rd Storm Sewer Extension, Castlecaulfield, Dungannon	00	KI538		07	24	DRD											
796	2018_19 Q4	KF385	Coalisland Road Dungannon Storm Sewer Extension	00	KI538		07	24												
797	2018_19 Q4	KF386	Old Omagh Road Phase 1, Ballygawley Storm Sewer	00	KI538		07	24	DRD											

Sort Ref	Baseline Expenditure Profile (£m 2012-13 prices)									Baseline Purpose Allocation				Current Actual or Projected Milestone Dates						
	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign-off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date
	22	23	24	25	26	27	28	29	30	36	37	38	39	40	41	42	43	44	45	46
597	0	0	0	0	0	0	0	0	0	0	0	0	0							
598	0	0	0	0	0	0	0	0	0	0	0	0	0	05/09/2011	07/09/2011	30/11/2012	18/03/2014		25/07/2014	
599	0	0	0	0	0	0	0	0	0	0	0	0	0							
600	0	0	0	0	0	0	0	0	0	0	0	0	0							
601	0	0	0	0	0	0	0	0	0	0	0	0	0							
602	0	0	0	0	0	0	0	0	0	0	0	0	0	21/11/2011	29/11/2011	08/12/2011	28/11/2012		26/01/2012	
603	0	0	0	0	0	0	0	0	0	0	0	0	0			01/09/2004	04/05/2011		26/03/2008	
604	0	0	0	0	0	0	0	0	0	0	0	0	0	24/07/2009	30/07/2009	07/09/2009	03/06/2010		23/07/2012	
605	0	0	0	0	0	0	0	0	0	0	0	0	0	15/12/2010	12/01/2011	07/03/2011	27/08/2014		23/09/2013	
606	0	0	0	0	0	0	0	0	0	0	0	0	0	31/05/2011	10/06/2011	01/04/2011	13/06/2013		07/07/2014	13/06/2013
607	0	0	0	0	0	0	0	0	0	0	0	0	0	12/11/2012	14/11/2012	31/01/2014	15/08/2014		25/07/2014	14/01/2015
608	0	0	0	0	0	0	0	0	0	0	0	0	0							
609	0	0	0	0	0	0	0	0	0	0	0	0	0	22/07/2015	22/07/2015					
610	0	0	0	0	0	0	0	0	0	0	0	0	0	21/03/2016	24/03/2016					
611	0	0	0	0	0	0	0	0	0	0	0	0	0	26/04/2017	28/04/2017					
612	0	0	0	0	0	0	0	0	0	0	0	0	0	14/02/2012	23/02/2012	25/03/2013	07/02/2014		18/11/2013	03/11/2014
613	0	0	0	0	0	0	0	0	0	0	0	0	0	20/05/2011	25/05/2011	05/09/2011	18/12/2012		17/12/2012	23/01/2014
614	0	0	0	0	0	0	0	0	0	0	0	0	0	19/11/2012	21/11/2012	30/11/2012	29/11/2013		07/03/2014	13/03/2014
615	0	0	0	0	0	0	0	0	0	0	0	0	0	19/11/2012	22/11/2012	30/11/2012	30/03/2015		31/10/2014	
616	0	0	0	0	0	0	0	0	0	0	0	0	0	21/11/2012	28/11/2012	30/11/2012	30/03/2015		25/07/2014	
617	0	0	0	0	0	0	0	0	0	0	0	0	0	27/03/2019	01/04/2019					
618	0	0	0	0	0	0	0	0	0	0	0	0	0	20/02/2019	20/02/2019					
619	0	0.00390632	0.01238588	0.433386395	1.048333255	0.373865355	0	0	0	0	30	0	70	26/07/2013	05/08/2013		01/12/2014			
620	0	0	0	0	0	0	0	0	0	0	0	0	0	23/02/2012	06/03/2012	01/04/2014	27/03/2013		31/03/2017	16/01/2018
621	0	0	0	0	0	0	0	0	0	0	0	0	0	07/06/2011	10/06/2011	17/10/2011	28/01/2013		31/03/2014	14/05/2014
622	0	0	0	0	0	0	0	0	0	0	0	0	0	07/06/2011	10/06/2011					
623	0	0.0292974	0.0095276	1.244833262	0.277763512	0	0	0	0	40	40	0	20	26/07/2013	05/08/2013	01/09/2014	30/01/2015		30/03/2015	
624	0	0	0	0	0	0	0	0	0	0	0	0	0							
625	0	0	0	0	0	1.473161676	1.992455095	0	0	0	100	0	0	27/05/2015	29/05/2015					
626	0	0.01562528	0.00857484	1.171065365	0.448005664	0	0	0	0	31.54720333	24.08954199	0	44.36325468	09/08/2013	19/08/2013	07/04/2014	30/03/2016		23/05/2016	
627	0	0	0	0	0	0	0	0	0	0	0	0	0							
628	0	0	0	0	0	0	0	0	0	0	0	0	0							
629	0	0	0	0	0	0	0	0	0	0	0	0	0	03/06/2014	20/06/2014	05/10/2015	30/03/2017		21/03/2016	30/03/2017
630	0	0	0	0	0	0	0	0	0	0	0	0	0	19/11/2012	21/11/2012	30/11/2012	11/10/2013		25/10/2013	19/03/2014
631	0	0.00585948	0.02667728	0.848330815	2.266908662	0	0	0	0	40	40	0	20	26/07/2013	05/08/2013		01/12/2014			
632	0	0	0	0	0	0	0	0	0	0	0	0	0							
633	0	0	0	0	0	0	0	0	0	0	0	0	0	21/07/2014	31/07/2014	05/10/2015	30/06/2016		30/06/2016	20/10/2016
634	0	0	0	0	0	0	0	0	0	0	0	0	0	06/09/2016	07/09/2016					
635	0	0.00585948	0.01619692	0.304292575	0.044800566	0	0	0	0	40	40	0	20	09/08/2013	10/09/2013	30/06/2014	06/01/2015		26/01/2015	
636	0	0	0	0	0	0	0	0	0	0	0	0	0							
637																				
638	0	0	0	0	0	0	0	0	0	0	0	0	0							
639	0	0	0	0	0	0.006474978	0	0	0	34	1	0	65	09/01/2008	14/01/2008	18/03/2008	03/09/2012		09/06/2009	
640	0	0	0	0	0	0	0	0	0	0	0	0	0	24/06/2016	27/06/2016					
641	0	0	0	0	0	0	0	0	0	0	0	0	0	25/08/2011	26/08/2011	19/09/2011	30/10/2015		26/06/2015	
642	0	0	0	0	0	0	0	0	0	0	0	0	0							
643	0	0	0	0	0	0	0	0	0	0	0	0	0	02/07/2013	24/07/2013	01/04/2013	12/06/2014		28/04/2014	
644	0	0	0	0	0	0	0	0	0	0	0	0	0	20/01/2014	12/02/2014	01/04/2011	27/02/2015			02/07/2015
645	0	0	0	0	0	0	0	0	0	0	0	0	0	17/01/2011	21/01/2011	31/10/2011	13/12/2012		10/12/2012	
646	0	0	0	0	0	0	0	0	0	0	0	0	0	02/11/2010	02/11/2010	15/11/2010	20/05/2011		16/05/2011	20/05/2011
647	0	0.03711004	0.14863056	0.79484909	0	0	0	0	0	0	100	0	0	07/06/2011	10/06/2011	01/04/2013	31/03/2014		28/05/2014	
648	0	0	0	0	0	0	0	0	0	0	0	0	0	07/06/2011	10/06/2011	02/09/2012	30/03/2015		28/05/2014	04/07/2016
649	0	0	0	0	0	0	0	0.939009162	0.933375107	55	45	0	0	16/04/2018	17/04/2018	16/10/2018			15/10/2019	
650	0	0.0048829	0.00666932	0.170588262	0	0	0	0	0	60	25	0	15							
651	0	0	0	0	0	0	0	0	0	0	0	0	0	22/10/2008	04/11/2008	08/12/2008	02/03/2010		22/02/2010	19/07/2011
652	0	0	0	0	0	0	0	0	0	0	0	0	0			19/07/2010	22/01/2010		30/09/2013	
653	0	0	0	0	0	0	0	0	0	0	0	0	0	07/09/2011	14/09/2011	01/04/2013	11/06/2015		26/06/2014	
654	0	0	0	0	0	0	0	0	0	0	0	0	0	15/01/2018	15/01/2018					
655	0	0	0	0	0	0	0	0	0	0	0	0	0							
656	0	0	0	0	0	0	0	0	0	0	0	0	0	04/02/2011	08/02/2011	10/06/2011	20/08/2012		27/07/2012	23/08/2012
657	0	0	0	0	0	0.554652	0.367549392	0.365344096	0.363152031	100	0	0	0	14/11/2016	14/11/2016					
658	0	0	0	0	0	0	0	0	0	0	0	0	0	20/05/2011	07/06/2011	30/10/2011	09/10/2014		28/09/2014	16/01/2015
659	0	0	0	0	0	0.071693868	0	0	0	0	100	0	0							
660	0	0.02832082	0.00095276	0.092209871	0.807306207	0	0	0	0	100	0	0	0	28/05/2012	31/05/2012	04/09/2014	25/03/2016		31/03/2016	
661	0	0	0	0	0	0	0	0	0	0	0	0	0	03/07/2018	03/07/2018					
662	0	0	0	0	0	0	0	0	0	0	0	0	0	21/07/2014	31/07/2014					
663	0	0	0	0	0	0	0	0	0	0	0	0	0	21/07/2014	31/07/2014	30/11/2015	31/03/2016		31/03/2017	
664	0	0	0	0	0	0	0	0	0	0	0	0	0	28/11/2017	05/12/2017					
665	0	0	0	0	0	0	0	0	0	0	0	0	0	12/12/2011	16/12/2011	07/10/2012	24/01/2014		30/03/2014	19/03/2014
666	0	0	0	0	0	0.228831114	0	0	0	0	100	0	0	15/05/2014	19/05/2014					
667	0	0	0	0	0	0	0	0	0	0	0	0	0	03/08/2016	04/08/2016	24/09/2018				
668	0	0	0	0	0	0	0	0	0	0	0	0	0	15/08/2016	15/08/2016					
669														14/12/2016	15/12/2016					
670														05/06/2013	17/06/2013	25/10/2013	30/03/2015		27/03/2015	02/02/2017
671														20/02/2019	20/02/2019					
672														15/08/2016	15/08/2016					
673																				
674														19/03/2014	25/03/2014	07/04/2014	24/10/2014		22/09/2014	
675														22/02/2019	22/02/2019					
676														26/03/2013	03/04/2013					
677														10/12/2014	15/12/2014					
678	0	0	0	5.20438248	3.5621068	1.905547224	3.190876837	3.205709227	4.732100067	0	100	0	0							
679	0	0	0	0	0	0	0	0	0	0	0	0	0							
680	0	0	0	0	0	0	0	0	0	0	0	0	0	07/06/2011	10/06/2011	16/09/2011	03/11/2014		30/03/2012	
681	0	0	0	0	0	0	0	0	0	0	0	0	0							
682	0	0	0	0	0	0	0	0	0	0	0	0	0	06/06/2005		02/04/2012	19/08/2010		16/12/2013	19/08/2010
683	0	0	0	0	0	0	0	0	0	0	0	0	0	16/08/2009	03/09/2009	02/07/2012	18/06/2013		10/02/2014	23/10/2014
684	0	0.08007956	1.29289532	1.413577326	0	0	0	0	0	41	43	16	0	05/08/2011	12/08/2011	09/11/2012	26/05/2014		27/06/2014	23/11/2015
685	0	0	0	0	0	0	0	0	0	0	0	0	0			26/09/2005	27/05/2010		21/09/2009	
686	0	0	0	0	0	0.851188032	0.846080904	0	0	63	37	0	0	24/06/2014	17/07/2014					
687	0	0	0	0	0	0.744449221	0	0	0	71	29	0	0							
688	0	0	0	0	0	0	0	0	0	0	0	0	0	11/09/2008	01/10/2008	20/10/2008	23/06/2010		16/08/2010	
689														16/12/2013	19/12/2013					
690	0	0	0	0	0	0	0	0	0	0	0	0	0	19/11/2010	12/01/2011					
691	0	0	0	0	0	0	0	0	0	0	0	0	0	30/06/2015	20/07/2015					
692	0	0	0	0	0	0	0	0	0	0	0	0	0	30/09/2011	05/10/2011	04/05/2015	30/09/2015		28/10/2013	
693	0	0	0	0	0	0	0	0	0	0	0	0	0	20/04/2016	21/04/2016					
694	0	0	0	0	0	0	0	0	0	0	0	0	0	28/05/2014	09/06/2014	24/06/2014	01/03/2016		23/03/2015	08/03/2016
695	0	0	0	0	0	0	0	0	0	0	0	0	0	19/07/2004		17/03/2008	06/01/2012		25/08/2008	
696	0	0	0	0	0	0	0	0	0	0	0	0	0			02/02/2009	29/04/2010		14/06/2010	
697	0	0	0	0	0	0	0	0	0	0	0	0	0	06/01/2009	28/01/2009	05/01/2009	18/03/2010		19/04/2010	
698	0	0	0	0	0	0	0	0	0	0	0	0	0							
699	0	0	0	0	0	0	0	0	0	0	0	0	0	16/12/2013	19/12/2013					
700	0	0	0	0	0	1.690491964	0.561989636	0	0	48	31	0	21	08/09/2016	12/09/2016					
701	0	0	0	0	0	0	0	0	0	0	100	0	0							
702	0	0.08691562	0.11814224	2.336598137	0.179202266	0	0	0	0	44	25	0	31	05/04/2012	01/05/2012	28/02/2013	19/02/2015		28/08/2015	
703	0	0	0	0	0	0	0	0	0	0	0	0	0	29/08/2007	06/09/2007	10/03/2008	15/12/2009		29/09/2008	
704	0.13	0.12304908	0.06383492	1.644102004	1.433618126	1.092636868	0	0	0	26	36	0	38	24/11/2011	29/11/2011	06/10/2014	19/04/2017		28/07/2017	
705	0	0	0	0	0	0	0	0	0	0	0	0	0							
706	0	0	0	0	0	0	0	0	0	29.44868266	31.28640712	29.44868266	9.816227554							
707	0	0	0	0	0	0	0	0	0	0	0	0	0	02/03/2011	10/03/2011	27/07/2015	06/11/2015		25/09/2015	11/12/2015
708	0	0	0	0	0	0	0	0	0	0	0	0	0							
709	0	0	0	0	0	0	0	0	0	0	0	0	0	09/11/2009	16/11/2009	06/04/2009	02/12/2011		17/09/2012	
710	0	0	0	0	0	0	0	0	0	0	0	0	0	15/11/2010	19/11/2010					
711	0	0	0	0	0	0	0	0	0	0	0	0	0	07/07/2011	11/07/2011	09/01/2012	24/09/2012		01/10/2012	03/11/2014
712	0	0	0	0	0	0	0	0	0	0	0	0	0	19/03/2009	20/03/2009	30/03/2009	03/12/2009		31/10/2011	
713	0	0	0	0	0	0	0	0	0	8	0	92	0	16/12/2013	19/12/2013					
714	0	0	0	0	0	0	0	0	0	0	0	0	0	06/07/2011	15/07/2011					
715	0	0	0	0	0	0	0	0	0	0	0	0	0							
716	0	0	0	0	0	0	0	0	0	0	0	0	0	04/02/2010	15/02/2010					
717	0	0	0	0	0	0	0	0	0	0	0	0	0	27/10/2011	27/10/2011	05/09/2005				
718	0	0	0	0	0	0	0	0	0	0	0	0	0	29/09/2008	27/11/2008	09/03/2009	07/01/2010		07/12/2009	
719	0	0	0	0	0	0	0	0	0	0	0	0	0	15/11/2004	15/11/2005	11/06/2009	18/02/2010		19/06/2014	26/01/2012
720	0	0	0	0	0	0	0	0	0	0	0	0	0	13/03/2009	26/03/2009	07/04/2009	30/09/2011		26/04/2011	
721	0.002	0.05664164	0.03144108	0.762575635	0.920203635	0.847553702	0.842468379	0	0	70	30	0	0	20/09/2017	03/10/2017	01/04/2017	21/03/2017		26/06/2020	
722	0	0	0	0	0	0	0	0	0	0	0	0	0	03/12/2010	12/01/2011	18/11/2010	02/12/2011		18/11/2010	
723	0.164	0.29102084	0.05526008	0.553259227	0.896011329	0	0	0	0	50	27	23	0	22/02/2011	02/03/2011		29/11/2012			
724	0	0	0	0	0	0	0	0	0	0	0	0	0	02/02/2010	09/02/2010	15/03/2010	30/09/2010		27/09/2010	30/09/2010
725	0	0	0	0	0	0	0	0	0	0	0	0	0	07/08/2009	14/08/2009	07/09/2009	07/09/2011		05/09/2011	
726	0	0	0	0	0	0	0	0	0	0	0	0	0	17/02/2011	01/03/2011	08/08/2011	29/10/2012		16/01/2012	
727	0	0	0	0	0	0	0	0	0	0	0	0	0	03/12/2010	12/01/2011	05/03/2012	28/03/2013		26/05/2014	12/03/2014
728	0	0	0	0	0	0	0	0	0	0	0	0	0	08/10/2010	04/11/2010					
729	0.133	0.06543086	0.1000398	1.271574124	1.675541185	1.327695147	0	0	0	93	7	0	0	19/01/2012	23/01/2012	10/04/2017	16/12/2016		29/06/2016	09/03/2017
730	0	0	0	0	0	4.806984	4.5943674	0.913360239	0	0	0	100	0	04/05/2016	10/05/2016					
731	0	0	0	0	0	0	0	0	0	0	0	0	0	21/07/2014	31/07/2014	03/10/2014	30/03/2015		27/02/2015	
732	0	0	0	0	0	0	0	0	0	0	0	0	0			04/06/2007	19/04/2011		30/07/2007	
733	0	0	0	0	0	0	0	0	0	0	0	0	0	22/01/2007	13/02/2007	18/02/2008	25/02/2010		07/01/2008	08/06/2010
734	0.804	0.03808662	0.5526008	1.214404004	0.04032051	0	0	0	0	64.040858	25.12145833	0	10.83768366	16/01/2007	05/02/2007	01/04/2014	18/02/2016		26/02/2016	08/04/2016
735	0	0	0	0	0	0	0	0	0	0	0	0	0	01/05/2009	16/06/2009	16/01/2012	06/05/2013		29/07/2013	23/10/2014
736	0	0	0	0	0	0	0	0	0	0	0	0	0	30/10/2012	01/11/2012	01/10/2013	19/02/2015		23/03/2015	02/10/2017
737	0	0	0	0	0	0	0	0	0	0	0	0	0	17/09/2007	20/09/2007	30/09/2010	23/01/2012		26/01/2012	01/05/2013
738	0	0	0	0	0	0	0	0	0	0	0	0	0	21/07/2008	23/07/2008	29/09/2008			05/04/2010	11/11/2010
739	0	0	0	0	0	0	0	0	0	0	0	0	0	11/12/2009	21/12/2009	26/04/2010	29/04/2011		11/04/2011	03/11/2011
740	0	0	0	0	0	0	0	0	0	0	0	0	0	12/06/2009	09/07/2009					
741	0	0	0	0	0	0	0	0	0	0	0	0	0	20/11/2007	03/12/2007	27/10/2008	13/01/2011		30/03/2009	
742	0	0	0	0	0	0	0	0	0	0	0	0	0	18/07/2011	01/08/2011	10/10/2011	24/09/2012		27/05/2013	25/04/2013
743	0	0	0	0	0	0	0	0	0	0	0	0	0	16/12/2013	19/12/2013					
744	0	0	0	0	0	0	0	0	0	0	0	0	0	03/12/2010	12/01/2011	08/12/2010	28/01/2013		15/05/2013	02/08/2013
745	0	0	0	0	0	0	0	0	0	0	0	0	0	20/06/2011	15/07/2011	19/09/2011	28/08/2014		27/08/2014	
746	0	0	0	0	0	0	0	0	0	0	0	0	0	21/06/2010	28/06/2010	09/01/2012	22/02/2013		02/12/2013	
747	0	0	0	0	0	0	0	0	0	0	0	0	0							
748	0	0	0	0	0	0	0	0	0	0	0	0	0	12/12/2012	21/12/2012	05/08/2013	15/11/2013		16/09/2013	13/01/2014
749	0	0	0	0	0	0	0	0	0	0	0	0	0	06/12/2012	11/12/2012	01/09/2014	30/10/2014		29/12/2014	
750	0	0	0	0	0	0	0	0	0.453940039	100	0	0	0	15/11/2016	21/11/2016					
751	0	0.02343792	0.23819	1.29647079	1.433618126	0	0	0	0	76	24	0	0	21/09/2012	27/09/2012	01/04/2014	18/08/2014		25/08/2014	25/11/2014
752	0	0	0	0	0	0	0	0	0	0	0	0	0	13/11/2012	14/11/2012	30/11/2012	26/09/2013		29/11/2013	13/03/2014
753	0	0	0	3.55913208	3.4496574	0	0	0	0	3	19	0	78	05/07/2013	16/07/2013					
754	0	0	0	0	0	0	0	0	0	0	0	0	0							
755	0	0	0	0	0	0	0	0	0	0	0	0	0	15/09/2008	17/11/2008	19/01/2009	23/11/2009		23/11/2009	03/02/2010
756	0	0	0	0	0	0	0	0	0	0	0	0	0	15/04/2011	06/05/2011		25/11/2011		12/09/2011	17/07/2012
757	0	0	0	0	0	0	0	0	0	0	0	0	0	10/09/2008	15/09/2008	24/11/2008	01/12/2009		02/11/2009	25/01/2012
758	0	0	0	0	0	0	0	0	0	0	0	0	0	19/10/2010	19/11/2010	20/06/2011	30/09/2011		03/10/2011	25/01/2012
759	0	0.0048829	0.02286624	0.221303691	0	0	0	0	0	90	0	0	10	16/11/2012	21/11/2012	11/11/2013	28/03/2014		30/04/2014	22/05/2015
760	0	0	0	0	0	0	0	0	0	0	0	0	0							
761	0	0	0	0	0	0	0	0	0	0	0	0	0	19/09/2013	19/09/2013	28/10/2013	09/10/2014		27/03/2015	30/06/2015
762	0	0	0	0	0	0	0	0	0	0	100	0	0	13/10/2015	26/10/2015					
763	0	0	0	0	0	0	0	0	0	0	0	0	0	20/05/2008	28/05/2008					
764	0	0	0	0	0	0	0	0	0	0	0	0	0	10/08/2010	20/08/2010	21/09/2010	15/11/2010		21/09/2010	17/02/2011
765	0	0	0	0	0	0	0	0	0	0	0	0	0	30/11/2016	15/12/2016	06/05/2019			21/07/2017	
766	0	0	0	0	0	0	0	0	0	0	0	0	0	10/08/2011	12/08/2011					
767	0	0	0	0	0	0	0	0	0	0	0	0	0	20/05/2011	27/05/2011	17/07/2011	23/05/2012		25/03/2012	
768	0	0	0	0	0	0	0	0	0	0	0	0	0	08/02/2012	14/02/2012	18/05/2015	06/10/2015		06/10/2015	22/04/2016
769	0	0	0	0	0	0	0	0	0	0	0	0	0							
770														21/05/2016	06/06/2016	22/06/2016	26/08/2016			02/12/2016
771	0	0	0	0	0	0	0	0	0	0	0	0	0	10/01/2013	16/01/2013	01/07/2013	16/08/2013		26/08/2013	03/11/2014
772	0	0	0	0	0	0	0	0	0	0	0	0	0	15/11/2010	19/11/2010	18/04/2011	06/07/2011		30/05/2011	06/07/2011
773	0	0	0	0	0	0	0	0	0	0	0	0	0	22/08/2014	17/09/2014	31/08/2015	22/10/2015		25/09/2015	19/11/2015
774	0	0	0	0	0	0	0	0	0	0	0	0	0	13/10/2010	10/11/2010	16/05/2011	20/10/2011		11/07/2011	20/10/2011
775	0	0	0	0	0	0	0	0	0	0	0	0	0	20/02/2012	21/02/2012	26/04/2012	18/07/2012		26/04/2012	28/08/2012
776	0	0	0	0	0	0	0	0	0	0	0	0	0	28/09/2011	03/10/2011	09/02/2015	24/04/2015		24/04/2015	08/07/2015
777														11/06/2013	16/07/2013	07/01/2014	27/08/2014		24/03/2014	03/11/2014
778														22/08/2014	17/09/2014					
779														11/09/2015	11/09/2015	18/03/2014	29/01/2016		15/01/2016	18/05/2016
780														11/06/2015	11/06/2015		30/11/2015		31/03/2016	
781														04/08/2015	04/08/2015	01/09/2015	18/12/2015		24/12/2015	18/05/2016
782														27/11/2014	27/11/2014	20/07/2015	21/08/2015		28/08/2015	18/11/2015
783														03/02/2015	03/02/2015					
784														05/08/2014	12/08/2014	17/11/2014	03/12/2014		20/04/2015	16/12/2014
785														06/06/2016	06/06/2016					
786	0	0	0	0	0	0	0	0	0	0	0	0	0	18/08/2009	20/08/2009	20/10/2009	26/02/2010		13/04/2010	
787														23/09/2014	03/10/2014	10/03/2015	20/04/2015		17/04/2015	
788														12/11/2015	12/11/2015					
789														04/08/2015	04/08/2015	13/06/2016			22/07/2016	
790	0	0	0	0	0	0	0	0	0	0	0	0	0	24/08/2011	26/08/2011					
791	0	0	0	0	0	0	0	0	0	0	0	0	0							
792	0	0	0	0	0	0	0	0	0	0	0	0	0	20/02/2012	21/02/2012	02/07/2012	28/06/2012		02/07/2012	04/09/2012
793	0	0	0	0	0	0	0	0	0	0	0	0	0	15/09/2014	21/10/2014	04/07/2016	25/10/2016		19/10/2016	28/03/2017
794														29/08/2014	17/09/2014	27/02/2014	18/12/2015			28/04/2016
795														14/01/2015	14/01/2015	02/02/2015	13/05/2015		15/09/2014	18/05/2015
796														21/11/2014	21/11/2014	04/01/2016	22/04/2016		13/10/2014	07/07/2016
797														28/10/2014	05/11/2014					

Sort Ref	Current Actual or Projected Service Cost Allocation				Current Actual or Projected Capital Expenditure Profile (£m money of the day)										Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
	47	48	49	50	51	52	53	54	55	56	57	58	59	60	66	67	68	69	70	71	72
597	0	0	0	100	0	0	0.005	0.008	0.015	0.001	0	0.003	-0.003	0	7	41	0	52	0	0	03
598	0	0	0	100	0	0	0.01	0.051	0.365	0.011	-0.001	0	-0.001	0	9	91	0	0	0	0	01
599	0	0	0	100	0	0	0.003	0	0.001	0	0	0.003	-0.003	0	11	50	0	39	0	0	03
600	0	0	0	100	0	0	0.003	0.002	0	0	0	0.003	-0.003	0	12	39	0	49	0	0	03
601	0	0	0	100	-0.003	0	0	0.013	0.025	0.072	0.033	0.071	0.016	-0.003	40	36	12	12	0	0	03
602	0	0	100	0	0	0	0.096	-0.014	-0.02	0.002	-0.001	0	0	0	0	100	0	0	0	100	01
603	0	0	17	83	0	0.045	-0.018	0	-0.001	-0.012	0	0.009	0.001	0	0	35	26	39	0	10	01
604	0	0	62	38	0	0.056	0.017	0.025	0	0	0	0	-0.006	0	100	0	0	0	0	0	
605	0	0	36	64	0	0.055	0.368	0.205	0.101	0.019	-0.036	0	0	0	17	37	0	46	0	13	
606	0	0	18	82	0	0.009	0.03	0.117	0.016	0.023	0.001	0	0	0	4	65	0	31	0	11	01
607	0	0	0	100	0	0	0.003	0.034	0.503	0.181	0.005	0	0	0	6	85	3	6	0	0	01
608	0	0	0	100	-0.02	0	0.016	-0.004	0.009	0	0	0.012	0.018	-0.02	44	26	0	30	0	0	03
609	0	0	0	100	-0.002	0	0.012	0.007	0.006	-0.001	0.061	0	-0.006	-0.002	21	61	0	18	0	0	03
610	0	0	0	100	-0.016	0	0.023	0.011	0.035	0.01	0.005	0.033	0.022	-0.016	10	51	0	39	0	0	03
611	0	0	17	83	0.002	-0.001	0.008	0.007	-0.005	0.001	0.007	0.003	0.074	0.002	58	20	0	22	0	11	03
612	0	0	50	50	0	0.008	0.008	0.063	0.191	0.001	-0.001	0	0	0	4	51	0	45	0	27	01
613	0	0	0	100	-0.006	0	0.652	0.823	0.008	0.01	-0.002	0	0	-0.006	0	100	0	0	0	0	01
614	0	0	0	100	0	0	0	0.14	0.646	0.001	0.003	0	0	0	10	80	10	0	0	0	01
615	0	0	0	100	-0.012	0	0	0.208	1.723	0.155	0.027	0	0.006	-0.012	9	86	5	0	0	0	01
616	0	0	0	100	-0.003	0	0	0.279	1.028	0.175	0.006	0	0.002	-0.003	11	79	10	0	0	0	01
617	0	0	100	0	0.12	0	0	0	0	0	0	0	0	0.12	0	100	0	0	0	100	01
618	0	0	100	0	0.014	0	0	0	0	0.021	0.03	0.085	0.117	0.014	0	100	0	0	0	100	01
619	0	0	0	100	0.02	0	0.004	0.014	0.082	1.282	0.204	-0.083	-0.007	0.02	0	30	0	70	0	0	08
620	0	0	44	56	-0.004	0.072	0.106	1.293	0.092	0.182	0.198	0.05	0.002	-0.004	8	92	0	0	0	44	02
621	0	0	0	100	0	0	0.105	0.279	0.011	-0.006	0.001	0	0	0	0	100	0	0	0	0	01
622	0	0	0	100	0	0	0.001	0.001	0.002	0.016	-0.001	0	0	0	0	100	0	0	0	0	
623	0	0	6	94	-0.001	0	0.03	0.01	0.09	1.115	0.596	0.027	-0.028	-0.001	23	32	0	45	0	2	08
624	0	0	0	100	0	0	0.004	0.013	0.007	0	0	0.003	-0.003	0	11	50	0	39	0	0	03
625	0	0	0	100	1.104	0	0.005	0.014	0.03	0.066	0.269	0.221	1.028	1.104	32	68	0	0	0	0	02
626	0	0	21	79	0.014	0	0.016	0.009	0.017	0.422	0.157	0.226	-0.039	0.014	32	23	0	45	0	5	02
627	0	0	100	0	0	0	0	0.052	0.094	0.052	0.05	0.038	0	0	0	100	0	0	0	100	01
628	0	0	0	100	0	0	0.007	0	0	0	0.013	0.013	0	0	0	56	0	44	0	0	03
629	0	0	0	100	0	0	0.007	0.028	0.007	0.004	0.302	0.127	-0.003	0	0	32	0	68	0	0	03
630	0	0	0	100	0	0	0.001	0.41	0.114	-0.001	0.001	0	0	0	5	80	4	11	0	0	
631	0	0	0	100	-0.001	0	0.006	0.022	0.059	0.894	0.226	0	-0.01	-0.001	70	10	0	20	0	0	08
632	0	0	0	100	-0.011	0	0	0	0.023	0.014	-0.008	0.015	0	-0.011	0	0	0	100	0	0	03
633	0	0	0	100	0	0	0.001	0.009	0.004	0.008	0.559	0.078	-0.005	0	41	45	4	10	0	0	03
634	0	0	0	100	-0.004	0	0	0.01	0.004	0	0	0.041	0.027	-0.004	57	23	0	20	0	0	03
635	0	0	0	100	-0.009	0	0.006	0.017	0.067	0.821	0.01	0.015	0	-0.009	27	33	0	40	0	0	08
636	0	0	0	100	0.007	0	0.012	0.004	0.008	0	0	0	0	0.007	44	26	0	30	0	0	03
637	0	0	0	100	0	0	0	0	0	0	0	0.017	-0.017	0	44	26	0	30	0	0	03
638	0	0	0	100	-0.012	0	0.008	0.01	0.01	0	0	0.012	0.02	-0.012	44	26	0	30	0	0	03
639	0	0	0	100	0	0.006	0.01	0.011	0.007	0.01	0.007	-0.007	0	0	34	1	0	65	0	0	01
640	0	0	0	100	0.735	0.01	0.001	0.171	0	0	0	0.238	1.322	0.735	0	100	0	0	0	0	01
641	0	0	0	100	0	0.001	0.365	1.564	0.785	0.883	0.311	0.005	-0.018	0	0	80	20	0	0	0	01
642	0	0	56	44	0.022	0.008	0.157	0.583	0.331	0.026	-0.005	0	0.115	0.022	42	58	0	0	0	14	10
643	0	0	100	0	0	0	0	0.018	0.196	0.045	0	0.001	-0.001	0	0	34	66	0	0	34	
644	0	0	100	0	0.001	0.004	0.005	0.002	0	0.241	0	-0.003	-0.001	0.001	0	100	0	0	0	100	01
645	0	0	0	100	0	0.012	1.671	1.172	0	-0.009	0	0	-0.01	0	0	100	0	0	0	0	
646	0	0	100	0	-0.003	0	0	0	0	0	0	0	0	-0.003	0	100	0	0	0	100	
647	0	0	0	100	0	0	0.038	0.175	0.734	0.391	0.037	0.033	-0.009	0	20	80	0	0	0	0	08
648	0	0	0	100	0	0	0.031	0.071	0.551	0.159	0.071	0.003	-0.03	0	0	100	0	0	0	0	01
649	0	0	0	100	0.912	0	0	0.03	0.082	0.001	0.066	0.002	0.013	0.912	28	58	0	14	0	0	02
650	0	0	100	0	0	0	0.005	0.002	0	0	0.001	0	0	0	60	25	0	15	0	25	03
651	0	0	0	100	0	0.01	-0.03	0.001	0	0	-0.001	0	0	0	0	100	0	0	0	0	01
652	0	0	0	100	0	0	-0.01	0.007	0.158	0	0	0	-0.002	0	31	69	0	0	0	0	
653	0	0	0	100	0	0.01	0.061	0.714	0.455	0.091	0	0.003	-0.001	0	0	100	0	0	0	0	01
654	0	0	0	100	0	0	0	0	0.1	-0.001	-0.01	0	0	0	100	0	0	0	0	0	01
655	0	0	0	100	0	0	0.13	0.115	-0.001	0.07	-0.001	0	0.037	0	0	65	0	35	0	0	01
656	0	0	0	100	-0.007	0	0	0	0	0	0	0	0	-0.007	10	40	0	50	0	0	
657	0	30	0	70	-0.027	0	0	0.006	0.039	0	-0.023	1.071	-0.264	-0.027	0	0	100	0	0	0	01
658	0	0	0	100	0	0	0.05	1.411	2.021	0.301	0.008	0.002	0	0	13	81	6	0	0	0	01
659	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
660	0	0	0	100	-0.006	0	0.029	-0.003	0.069	1.131	1.729	0	0	-0.006	100	0	0	0	0	0	02
661	0	0	100	0	0	0	0.015	0.027	0	0.008	-0.003	0.007	-0.002	0	0	0	100	0	0	0	01
662	0	0	0	100	0	0	0	0.014	0.015	0.015	0.507	0.048	0.014	0	0	0	0	100	0	0	01
663	0	0	0	100	-0.003	0	0	0.005	0.01	0.007	0.371	0.158	0.002	-0.003	0	0	0	100	0	0	01
664	0	0	100	0	0.129	0	0	0.012	0	0.082	0.021	0.02	0.167	0.129	0	40	60	0	0	40	01
665	0	0	0	100	0	0	0	3.331	1.241	-0.005	0.004	0	0	0	10	40	0	50	0	0	
666	0	0	0	100	0	0	0	0.01	0.029	0	0.003	0	0	0	0	100	0	0	0	0	01
667	0	0	0	100	0.424	0	0	0.012	0.004	0.014	0.001	0.208	0.013	0.424	0	0	100	0	0	0	01
668	0	0	0	100	0	0	0	0.002	0.066	0.104	0.061	0.058	-0.012	0	44	26	0	30	0	0	09
669	0	0	0	100	0.091	0	0	0	0	0	0	0.05	0.319	0.091	0	100	0	0	0	0	01
670	0	0	0	100	0	0	0	0	0.04	0.503	0.032	0.009	0.001	0	0	100	0	0	0	0	01
671	0	0	100	0	-0.002	0	0	0	0.03	-0.009	0.046	0.034	-0.009	-0.002	0	0	100	0	0	0	01
672	0	0	6	94	0	0	0	0	0.023	0.037	0.08	0.01	0	0	100	0	0	0	0	0	01
673	0	0	100	0	0	0	0	0	0.022	-0.015	0	0	0	0	0	0	100	0	0	0	01
674	0	0	100	0	0	0	0	0	0.103	0.305	0.003	0.002	-0.005	0	0	100	0	0	0	100	01
675	0	0	0	100	-0.037	0	0	0	0	0.019	-0.019	0.042	0	-0.037	0	100	0	0	0	0	
676	0	0	0	100	0	0	0	0.005	0.336	0.165	-0.001	0	-0.012	0	0	100	0	0	0	0	01
677	0	0	100	0	0.723	0	0	0	0	0	0.265	1.529	2.076	0.723	0	100	0	0	0	100	01
678	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	01
679	0	0	100	0	0	0	0.017	0.001	-0.002	0	0.001	0.002	0.002	0	0	100	0	0	0	100	01
680	0	0	0	100	0	0	0.597	0.014	0.075	0.181	0.024	0.001	0	0	0	100	0	0	0	0	01
681	0	0	100	0	0.002	0	0.026	0.006	0	-0.007	0	0.001	0.003	0.002	0	100	0	0	0	100	01
682	0	0	7	93	0	0.019	0.004	-0.001	0.08	0	0	0	-0.007	0	58	13	0	29	0	0	
683	0	0	0	100	0	0.007	0.003	0.078	0.024	0	0	0.001	0	0	0	100	0	0	0	0	
684	0	0	38	62	-0.009	0	0.082	1.01	2.704	0.505	-0.001	0	-0.001	-0.009	41	43	16	0	0	7	08
685	0	0	0	100	0	-0.409	-0.001	0	0	0	-0.005	0	0	0	50	0	0	50	0	0	01
686	0	100	0	0	0.037	0	0	0.004	0.028	0	0.022	0.028	0.143	0.037	89	11	0	0	0	0	01
687	0	0	0	100	0.034	0	0	0.005	0.01	0.008	0.023	0.061	0.001	0.034	71	29	0	0	0	0	01
688	0	0	100	0	0	0.076	-0.004	0.003	0.032	0.013	-0.013	0	0	0	0	33	33	34	0	33	01
689	0	0	100	0	0.997	0	0	0	0.012	0.164	0.328	1.153	0.984	0.997	0	100	0	0	0	100	01
690	0	0	100	0	0	0.011	0.105	0.001	-0.003	-0.005	0	0	-0.004	0	0	100	0	0	0	100	
691	0	0	53	47	0.001	0.009	-0.003	0.005	0.016	0.002	0.009	0.01	0.003	0.001	81	19	0	0	0	10	01
692	0	0	100	0	0.015	0.002	0.071	0.124	0.293	0.033	0.028	0.061	-0.014	0.015	0	100	0	0	0	100	01
693	0	0	13	87	-0.003	0	0.019	0.002	-0.003	0.003	0.009	0.036	0.064	-0.003	60	19	0	21	0	4	03
694	0	0	48	52	-0.005	0	0.003	0.003	0.014	0.503	0.114	0.007	-0.025	-0.005	62	26	12	0	0	21	01
695	0	0	7	93	0	-0.036	-0.003	0.051	-0.051	0	0.005	0	0	0	0	26	0	74	0	4	01
696	0	0	100	0	0	0.005	-0.001	0.001	0	0	0	0	-0.001	0	20	30	10	40	0	30	
697	0	0	100	0	0	-0.023	0.004	0.011	0	0	-0.005	0	0	0	0	40	0	60	0	40	01
698	0	0	48	52	0.001	0	-0.002	0	0	-0.002	0	0.001	0.001	0.001	68	14	0	18	0	9	03
699	0	0	93	7	0	0	0.033	0.016	0.004	0.014	-0.001	0	0	0	0	20	80	0	0	20	01
700	0	0	0	100	0.228	0	0	0.02	0	0.026	0.046	0.419	1.052	0.228	48	32	0	20	0	0	02
701	0	0	100	0	0.059	0	0	0.003	0.059	0.006	0.028	0.01	0.061	0.059	0	0	100	0	0	0	01
702	0	0	35	65	0.05	0	0.089	0.3	1.579	0.853	-0.095	0	0	0.05	41	38	0	21	0	17	08
703	0	0	18	82	0	0.012	-0.035	0.004	0	-0.004	0.003	0	0	0	0	8	0	92	0	0	01
704	0	0	80	20	0	0.13	0.126	0.041	0.017	0.726	0.915	1.598	0.1	0	26	36	0	38	0	30	02
705	0	0	93	7	0	0.04	0.087	0.008	0.042	0.002	0.005	0.022	0.005	0	0	100	0	0	0	93	01
706	0	0	100	0	0	0.004	0.019	0.054	-0.001	0.003	0.011	0	-0.005	0	30	30	30	10	0	30	07
707	0	0	100	0	0	0.002	0.019	0.008	0.001	0.004	0.074	0	0	0	0	100	0	0	0	100	01
708	0	0	0	100	0	0	0.012	0.023	-0.001	0.004	-0.001	0	0	0	40	36	12	12	0	0	01
709	6	0	43	51	0	3.282	0.987	0.023	0.052	0.03	0	0	-0.007	0	68	17	13	2	4	3	
710	0	0	52	48	0	0.307	1.073	0.837	-0.171	-0.001	0	0	-0.016	0	62	25	13	0	0	14	
711	0	0	99	1	0	0.017	0.646	0.466	-0.02	0.006	0	0	-0.003	0	61	17	18	4	0	17	
712	0	0	64	36	0	0.019	0.002	0.003	0	0	0	0	-0.006	0	100	0	0	0	0	0	
713	0	0	100	0	0.002	0.002	0	0.003	0.002	0.082	0.119	0.263	0.001	0.002	8	0	92	0	0	0	01
714	0	0	21	79	0	0.023	0.102	0.124	0.005	0.01	-0.013	0	0	0	0	32	0	68	0	6	01
715	0	0	100	0	0	0.047	0.087	-0.016	-0.003	0.005	0.016	0.001	0.001	0	0	0	100	0	0	0	01
716	0	0	100	0	0.002	1.142	0.133	0.236	-0.011	-0.007	0.002	0	-0.008	0.002	15	9	68	8	0	9	01
717	0	0	100	0	0	0	0.002	0	0	0	0	0	0.004	0	0	100	0	0	0	0	
718	0	0	100	0	0	0.01	0.006	0.001	0	0	0	0	-0.001	0	0	0	100	0	0	0	
719	0	0	91	9	2.399	0	0	0	0	0	0	0	0	2.399	64	10	15	11	0	0	
720	0	0	64	36	0	0.184	0.043	-0.021	0.001	0	-0.001	0	0	0	0	35	52	13	0	30	01
721	0	0	89	11	5.128	0.002	0.058	0.03	0.024	0.055	0	0.254	1.055	5.128	60	12	25	3	0	12	02
722	0	0	90	10	0	0.048	0.917	0.032	0	-0.001	0	0	-0.002	0	45	55	0	0	0	55	
723	0	0	92	8	0.002	0.164	0.298	0.117	0.079	0.038	0.001	0	-0.011	0.002	50	27	23	0	0	19	08
724	0	0	100	0	0	0.215	0.003	0.002	0	0	0	0	-0.002	0	80	20	0	0	0	20	
725	0	0	79	21	0	0.243	0.506	0	0	0	0	0	-0.001	0	58	22	0	20	0	15	
726	0	0	100	0	0	0.007	0.187	0.01	0.006	0.06	-0.005	0	-0.003	0	0	100	0	0	0	100	01
727	0	0	100	0	0	0.018	0.18	0.686	0.038	0.005	0.003	0	0	0	0	100	0	0	0	100	01
728	0	0	100	0	0	0.109	0.038	-0.001	0	0	0	-0.003	0	0	0	0	100	0	0	0	
729	0	0	65	35	0.022	0.133	0.067	0.126	0.222	1.436	3.416	0.833	-0.019	0.022	100	0	0	0	0	0	02
730	0	0	100	0	0.185	0	0.002	-0.001	0	0.054	0.2	0.012	-0.002	0.185	2	0	98	0	0	0	02
731	0	0	100	0	0	0	0	0.003	-0.003	0.344	0.052	0.031	0.013	0	0	40	60	0	0	40	01
732	0	0	100	0	0	0	0.003	0.008	-0.005	0	0	0	-0.005	0	0	48	26	26	0	26	01
733	0	0	100	0	0	0.005	-0.001	0	0	0	0	0	-0.002	0	0	100	0	0	0	100	
734	0	0	53	47	0	0.804	0.039	0.016	0.736	1.63	0.121	0.003	0.025	0	85	8	0	7	0	3	02
735	0	0	80	20	0	0.045	0.761	1.248	0.021	0	0.002	0	0	0	66	27	0	7	0	11	01
736	0	0	88	12	0	0.016	0.028	0.045	0.716	0.88	0.124	0.031	-0.02	0	84	12	1	3	0	12	08
737	0	0	82	18	0	1.574	0.812	-0.017	0.029	0	0	0	-0.001	0	72	16	0	12	0	9	
738	0	0	83	17	0	0.02	0.002	0	0	0	-0.003	0	0	0	63	22	9	6	0	18	01
739	0	0	88	12	0	0.93	0.073	-0.003	0	0	0	0	-0.006	0	63	20	0	17	0	18	
740	0	0	96	4	0	0.205	0.261	0.029	0.008	0	0	0	-0.017	0	60	40	0	0	0	38	
741	0	0	100	0	0	0.003	-0.002	0.012	0	0	0	0	-0.012	0	0	77	0	23	0	77	
742	0	0	66	34	0	0.021	0.601	0.618	0.014	0	0.005	0	0	0	38	15	40	7	0	15	01
743	0	0	100	0	0.296	0	0.034	0.02	0.052	0.039	0.4	1.419	1.013	0.296	0	100	0	0	0	100	01
744	0	0	13	87	0	0.066	0.562	0.902	-0.002	-0.001	0	0	-0.019	0	52	48	0	0	0	13	
745	0	0	100	0	0	0	0.001	0	0	0.172	-0.013	0	0	0	20	80	0	0	0	80	01
746	0	0	100	0	0	0	0.006	0.191	0	0.001	0	0	-0.008	0	0	100	0	0	0	100	
747	0	0	100	0	0.112	0.005	0.051	0.015	-0.014	0	0	0.016	0.073	0.112	40	40	15	5	0	40	03
748	0	0	100	0	0	0	0	0.002	0.032	0	-0.001	0	0	0	0	100	0	0	0	100	01
749	0	0	100	0	0.044	0.001	0.002	0.002	0	0.184	0.023	-0.006	0.011	0.044	11	0	89	0	0	0	01
750	0	0	30	70	-0.046	0	0	0.065	-0.022	0.008	0.06	0.139	0.709	-0.046	100	0	0	0	0	0	02
751	0	0	0	100	0	0	0.024	0.131	1.756	1.024	0.01	0	0	0	76	24	0	0	0	0	08
752	0	0	0	100	0	0	0	0.013	0.077	0	0.001	0	0	0	2	82	16	0	0	0	09
753	0	0	100	0	0.02	0	0	0	0.174	0.615	0.653	0.118	0.07	0.02	3	19	0	78	0	19	01
754	0	0	100	0	0	0.114	0.238	-0.002	0	0	-0.013	0	-0.003	0	21	64	0	15	0	15	11
755	12	0	88	0	0	-0.026	-0.001	0.011	0	0	0	0	-0.006	0	0	100	0	0	12	88	
756	0	0	100	0	0	0	0.1	0.001	0	0	0	0	-0.011	0	0	100	0	0	0	100	
757	0	0	100	0	0	0.002	-0.003	0	0.003	0.004	-0.001	0	0	0	0	0	100	0	0	0	01
758	0	0	100	0	0	0.006	0.15	-0.003	0	0	0	0	-0.001	0	0	100	0	0	0	100	
759	0	0	77	23	0	0	0.005	0.011	0.11	0.048	-0.001	0	-0.002	0	100	0	0	0	0	0	08
760	0	0	100	0	-0.004	0.004	0.011	0.001	0	0	0	0.08	-0.007	-0.004	0	100	0	0	0	100	01
761	0	0	100	0	-0.002	0	0.019	0.009	0.562	0.145	-0.06	0	0.002	-0.002	0	0	100	0	0	0	01
762	0	0	100	0	0	0	0	0	0.015	0.017	0.006	0	0	0	0	100	0	0	0	100	01
763	0	0	100	0	-0.002	0.013	0	0.02	0.198	0.173	0.068	0.003	0.001	-0.002	0	100	0	0	0	100	01
764	0	0	100	0	0	0.055	-0.001	0	0	0	0	-0.002	0	0	0	0	0	100	0	0	01
765	0	0	100	0	0	0.001	-0.001	0	0.002	0.002	0.015	0	0	0	0	0	0	100	0	0	01
766	0	0	100	0	-0.005	0	0	0	0	0	0	0	0	-0.005	0	0	0	100	0	0	
767	0	0	100	0	0	0.001	0.167	0.055	-0.02	0	0.015	-0.001	0	0	0	0	0	100	0	0	01
768	0	0	100	0	0	0	0.003	0	0	0.001	0.092	0.005	-0.001	0	0	0	0	100	0	0	01
769	0	0	100	0	0	0	0	0.015	0.001	0.002	0	0.001	0	0	0	0	0	100	0	0	01
770	0	0	100	0	0	0	0	0	0	0	0	0.146	-0.002	0	0	0	0	100	0	0	01
771	0	0	100	0	0	0.001	0	0	0.109	0	-0.008	0	0	0	0	70	0	30	0	70	01
772	0	0	100	0	-0.002	0	0	0	0	0	0	0	0	-0.002	0	0	0	100	0	0	
773	0	0	100	0	-0.001	0.003	-0.001	0	0	0.002	0.045	0	0	-0.001	0	0	0	100	0	0	01
774	0	0	100	0	0	0.004	0.031	-0.007	0	0	0	-0.001	0	0	0	0	0	100	0	0	01
775	0	0	100	0	0.007	0	0	0	0	0	0	0	0	0.007	0	0	0	100	0	0	
776	0	0	100	0	-0.001	0	0.005	0	-0.001	0.068	0.093	0	0	-0.001	0	0	0	100	0	0	01
777	0	0	100	0	0	0	0	0	-0.056	0.082	-0.012	0	0	0	0	0	0	100	0	0	01
778	0	0	100	0	-0.002	0	0	0	0	0	0.072	0	0	-0.002	0	0	0	100	0	0	01
779	0	0	100	0	0	0	0	0	0	0	0.13	0	-0.003	0	0	88	0	12	0	88	01
780	0	0	100	0	0.001	0	0	0	0	0	0.097	0	-0.001	0.001	0	0	0	100	0	0	01
781	0	0	100	0	-0.003	0	0	0	-0.002	0	0.071	0	0.001	-0.003	0	0	0	100	0	0	01
782	0	0	100	0	0	0	0	0	0	0	0.048	0	0	0	0	0	0	100	0	0	01
783	0	0	100	0	0	0	0	0	0	0	0.026	0.001	-0.003	0	0	0	0	100	0	0	01
784	0	0	100	0	0	0	0	0	0	0.048	-0.009	0	0	0	0	0	0	100	0	0	01
785	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.029	-0.001	0	0	0	100	0	0	01
786	0	0	100	0	0	0.013	-0.007	0.004	0	0	0	0	-0.003	0	0	0	0	100	0	0	
787	0	0	100	0	0	0	0	0	0	0.046	0.001	0	0	0	0	0	0	100	0	0	01
788	0	0	100	0	-0.003	0	0	0	0	0	0	0.015	0	-0.003	0	0	0	100	0	0	01
789	0	0	100	0	-0.001	0	0	0	0	0	0	0.022	0.001	-0.001	0	0	0	100	0	0	01
790	0	0	100	0	0	0.009	0	0	0	0.001	0.024	-0.001	0	0	0	0	0	100	0	0	01
791	0	0	100	0	0	0.005	-0.002	0.004	0	0.001	0	0	0	0	0	0	0	100	0	0	01
792	0	0	100	0	0	0.001	0.006	0.043	0.001	0	0	0	-0.003	0	0	0	0	100	0	0	
793	0	0	100	0	-0.001	0	0.003	0.007	0	0.03	0.012	0.075	-0.002	-0.001	0	25	0	75	0	25	01
794	0	0	100	0	0	0	0	0	0	0	0.19	-0.019	0	0	0	0	0	100	0	0	01
795	0	0	100	0	0	0	0	0	0	0	0.032	0	0	0	0	0	0	100	0	0	01
796	0	0	100	0	0	0	0	0	0	0	0.021	0.005	0	0	0	0	0	100	0	0	01
797	0	0	100	0	0	0	0	0	0	0.02	-0.001	-0.001	0	0	0	0	0	100	0	0	01

Project Identification									
Sort Ref (1)	CIM Submission Reference (2)	Project ID Reference (3)	Project Name (4)	PC Project Period (5)	Parent Project ID (6)	Substitute Project ID (7)	Primary Asset Category (8)	PC10 Programme (9)	Regulatory Sign-Off Required (10)
798	2018_19 Q4	KF392	8-20 Sloans Street Dungannon Storm Sewer Extension	00	KI538		07	24	
799	2018_19 Q4	KG118	Crumlin Road Storm Sewer Extension	00	KI538		07	24	NIEA
800	2018_19 Q4	KG168	Lyndale Manor Portadown Foul Sewer Extension	00	KI538		07	24	NIEA
801	2018_19 Q4	KG174	4 Lake Street Lurgan, Foul & Storm Sewer Extensions	00	KI538		07	24	NIEA
802	2018_19 Q4	KG189	Cornakinnegar Road, Lurgan Foul & Storm Sewer Extension	00	KI538		07	24	DRD
803	2018_19 Q4	KG201	Derrytrasna Road, Lurgan, Foul Pumping Main Extension	00	KI538		07	24	DRD
804	2018_19 Q4	KG204	Princess Way, Portadown, Storm Sewer Extension	00	KI538		07	24	DRD
805	2018_19 Q4	KG206	Drumnagroon, Kernan Hill Rd, Craigavon Foul & Storm Sewer	00	KI538		07	24	
806	2018_19 Q4	KG207	Obins Street Portadown Storm Sewer Extension	00	KI538		07	24	DRD
807	2018_19 Q4	KG209	Lisnisky Lane, Portadown Foul Sewer Extension	00	KI538		07	24	
808	2018_19 Q4	KL376	Glengalliagh Pumping Station and Pumping Main	00	KI538		07	24	NIEA
809	2018_19 Q4	KL472	Chapel Road, Dungiven, Foul Sewer Extension	00	KI538		07	24	NIEA
810	2018_19 Q4	KL474	Gracefield Road Magherafelt Storm Sewer Extension	00	KI538		07	24	DRD
811	2018_19 Q4	KL477	Steelstown Road, Londonderry, Foul and Storm Sewer Extensions	00	KI538		07	24	NIEA
812	2018_19 Q4	KL479	Circular Road, Derry Storm sewer extension	00	KI538		07	24	DRD
813	2018_19 Q4	KL519	Culdaff Gardens, Derry Storm Sewer Extension	00	KI538		07	24	DRD
814	2018_19 Q4	KL520	37 Limavady Road, Derry Storm Sewer Ext	00	KI538		07	24	DRD
815	2018_19 Q4	KL529	St Peter"s High School Re-Development F&S Sewer	00	KI538		07	24	
816	2018_19 Q4	KN610	Drumlegagh Storm Sewer Extension	00	KI538		07	24	NIEA
817	2018_19 Q4	KN627	Meadowvale, Dublin Rd, N'townstewart, Foul Sewer Extension.	00	KI538		07	24	DRD
818	2018_19 Q4	KN645	Derry Road, Strabane.	00	KI538		07	24	DRD
819	2018_19 Q4	KN660	Lisnaragh Road Donemana Foul sewer Extension	00	KI538		07	24	DRD
820	2018_19 Q4	KP604	Empire Meats Ltd, Dernawilt Road Rosslea Sewage Pumping Main Extensi	00	KI538		07	24	NIEA
821	2018_19 Q4	KP667	Aghadrumsee New Primary School Foul & Storm Sewer Extension	00	KI538		07	24	DRD
822	2018_19 Q4	KP678	Coa Road, Enniskillen Storm Sewer Ext.	00	KI538		07	24	DRD
823	2018_19 Q4	KR361	Carrowreagh Road Dundonald Storm Sewer	00	KI538		07	24	NIEA
824	2018_19 Q4	KR397	Brooke Hall, Cairnshill Belfast Foul Sewer Extension	00	KI538		07	24	NIEA
825	2018_19 Q4	KR422	Mersey Street, Belfast Storm Sewer	00	KI538		07	24	NIEA
826	2018_19 Q4	KR429	York Street, Belfast Interchange	00	KI538		07	24	NIEA
827	2018_19 Q4	KR458	287 Ballygomartin Road, Belfast Foul Sewer Extension.	00	KI538		07	24	NIEA
828	2018_19 Q4	KR468	Roden Street, Belfast, Foul & Storm Sewer Extension	00	KI538		07	24	NIEA
829	2018_19 Q4	KR470	Glenavna Manor, Newtownabbey, Storm Sewer Upgrade	00	KI538		07	24	NIEA
830	2018_19 Q4	KR475	Glendale,The Manor, Blacks Road, Belfast. Foul&Storm Sewers.	00	KI538		07	24	NIEA
831	2018_19 Q4	KR477	Cairnshill, Carryduff, Storm Sewer Extension	00	KI538		07	24	NIEA
832	2018_19 Q4	KR482	North Howard Street, Belfast ,Storm Sewer Extension	00	KI538		07	24	NIEA
833	2018_19 Q4	KR490	Donegal Avenue Whitehead Foul Sewer Extension	00	KI538		07	24	NIEA
834	2018_19 Q4	KR493	Ballyrobert Road Ballyclare Storm Sewer Extension	00	KI538		07	24	NIEA
835	2018_19 Q4	KR509	Carrickfergus Public Realm Sewers	00	KI538		07	24	DRD
836	2018_19 Q4	KR533	Springfield Crescent, Belfast, Storm Sewer Extension	00	KI538		07	24	DRD
837	2018_19 Q4	KR571	Drumbeg Road Storm Sewer Extension	03	KI538		07	24	DRD
838	2018_19 Q4	KR573	Mill Road. Newtownabbey, Storm Sewer Extension	00	KI538		07	24	DRD
839	2018_19 Q4	KR574	Antrim Road, Glengormley, Storm & Foul Sewer Extension	00	KI538		07	24	DRD
840	2018_19 Q4	KR577	165 Groomsport Rd, Bangor - Storm Sewer Upgrade	00	KI538		07	24	DRD
841	2018_19 Q4	KR578	Ferry Quarter, Shore Road, Strangford foul and storm sewer	00	KI538		07	24	DRD
842	2018_19 Q4	KR582	Torrens Park Belfast Storm Sewer	00	KI538		07	24	DRD
843	2018_19 Q4	KR583	Victoria Road, Belfast - Foul Sewer Extension and Storm Separation Investi	00	KI538		07	24	DRD
844	2018_19 Q4	KR584	Glenville Rd, Newtownabbey - Storm Sewer	00	KI538		07	24	DRD
845	2018_19 Q4	KR587	Glenwell Rd, Newtownabbey Storm Sewer	00	KI538		07	24	DRD
846	2018_19 Q4	KR590	Ballygowan Road Belfast Storm Sewer Extension	00	KI538		07	24	DRD
847	2018_19 Q4	KR591	137-141 Ormeau Road Belfast Storm Sewer Extension	00	KI538		07	24	DRD
848	2018_19 Q4	KR592	QUB Medical Centre University Terrace Storm Sewer Extension	00	KI538		07	24	DRD
849	2018_19 Q4	KR593	Glenmachan Street Belfast Storm Sewer for McDonalds	00	KI538		07	24	DRD
850	2018_19 Q4	KR597	Ballynure Road, Ballyclare Storm Sewer Extension	00	KI538		07	24	DRD
851	2018_19 Q4	KR607	Galway Park & Galway Drive, Dundonald Storm Sewer	00	KI538		07	24	
852	2018_19 Q4	KR609	Former Visteon Site Belfast Foul & Storm Sewer Extension	00	KI538		07	24	DRD
853	2018_19 Q4	KR615	530 Shore Road, Belfast	00	KI538		07	24	
854	2018_19 Q4	KR616	172 North Road, Carrickfergus Storm Sewer Ext.	00	KI538		07	24	
855	2018_19 Q4	KS347	Crossgar Road, Ballynahinch Storm Sewer	00	KI538		07	24	NIEA
856	2018_19 Q4	KS387	Manse Road, Seaforde Storm Sewer Extension	00	KI538		07	24	NIEA
857	2018_19 Q4	KS824	Sprinfield Road, Portavogie Storm Sewer Extension	00	KI538		07	24	NIEA
858	2018_19 Q4	KS838	Downpatrick Street Crossgar, Storm sewer.	00	KI538		07	24	NIEA
859	2018_19 Q4	KS850	Quarry Heights, Newtownards, Foul and Storm Sewer Extension	00	KI538		07	24	NIEA
860	2018_19 Q4	KS851	Main Street, Cloughey, Pumping main, Foul and Storm Sewer Extensions	01	KI538		07	24	NIEA
861	2018_19 Q4	KS854	Green Road, Conlig. Storm Sewer Extension.	00	KI538		07	24	NIEA
862	2018_19 Q4	KS855	Donaghadee Road Groomsport - Storm Sewer Extension	00	KI538		07	24	NIEA
863	2018_19 Q4	KS862	Crewhill, Ardglass, Storm Sewer Extension	00	KI538		07	24	NIEA
864	2018_19 Q4	KS864	Donaghadee Road, Newtownards, Storm Sewer Extension	00	KI538		07	24	NIEA
865	2018_19 Q4	KS866	Ballydrumman Road, Leitrim, Foul Sewer Extension	01	KI538		07	24	NIEA
866	2018_19 Q4	KS876	Old Belfast Road, Bangor - Storm Sewer Extension	00	KI538		07	24	NIEA
867	2018_19 Q4	KS893	Magheraknock Road Ballynahinch Storm Sewer Extension	00	KI538		07	24	DRD
868	2018_19 Q4	KS895	Ardnavalley Comber Sewer Pumping Main Extension	00	KI538		07	24	DRD
869	2018_19 Q4	KS934	Moss Road, Ballygowan, Pumping Station Rationalisation	00	KI538		07	24	DRD
870	2018_19 Q4	KS935	College Ave/ Shandon Drive, Bangor - Storm Sewer Requisition	00	KI538		07	24	DRD
871	2018_19 Q4	KS947	Little Enler, Comber - Foul Sewer Extension	00	KI538		07	24	
872	2018_19 Q4	KS951	Chester Avenue Bangor Storm Sewer Extension	00	KI538		07	24	
873	2018_19 Q4	KS952	Quoile Crescent, Downpatrick, Foul and Storm Sewer Replacement	00	KI538		07	12	
874	2018_19 Q4	KS956	Millbrook, Ballynahinch, Storm Sewer Extension	00	KI538		07	24	
875	2018_19 Q4	KS960	Adj 189 Donaghadee Rd, Bangor - Foul Sewer	00	KI538		07	24	
876	2018_19 Q4	KT382	McKeown Street Lisburn Environmental Improvements	00	KI538		07	12	NIEA
877	2018_19 Q4	KT389	Magheralave Road Lisburn, Foul Sewer Extension	00	KI538		07	24	NIEA
878	2018_19 Q4	KT392	2A Seymour St, Lisburn, Storm Sewer Extension.	00	KI538		07	24	NIEA
879	2018_19 Q4	KT394	Mount Eagles, Stewartstown Road, Lisburn.	00	KI538		07	24	NIEA
880	2018_19 Q4	KT396	Blaris Road Lisburn Storm Sewer Extension	00	KI538		07	24	NIEA
881	2018_19 Q4	KT400	Willow Gardens Dunmurry Sewer Extension	00	KI538		07	24	NIEA
882	2018_19 Q4	KT407	Creevy Road, Lisburn Storm Sewer Extension	00	KI538		07	24	DRD
883	2018_19 Q4	KT417	Mount Eagles, Lisburn, Foul Sewer	00	KI538		07	24	DRD
884	2018_19 Q4	KT418	Dromore Road, Hillsborough Pumping Station	00	KI538		12	24	DRD
885	2018_19 Q4	KT420	Knockbracken Road Newtownards Foul Sewer Ext	00	KI538		07	24	
886	2018_19 Q4	KV129	Old Newry Road, Banbridge Foul Sewer Ext	00	KI538		07	24	NIEA
887	2018_19 Q4	KV142	Chancellors Road, Newry Foul Sewage Pumping Main Extension	00	KI538		07	24	NIEA
888	2018_19 Q4	KV151	Carrickdesland, Burren Foul Sewer Extension	00	KI538		07	24	NIEA
889	2018_19 Q4	KV152	Abbey Grammar School Storm Sewer Extension	00	KI538		07	24	NIEA
890	2018_19 Q4	KV156	Crieve Road, Newry Foul & Storm Sewer Extensions	00	KI538		07	24	NIEA
891	2018_19 Q4	KV166	Upper Dromore Road, Warrenpoint - Upgrade of Storm Sewer.	00	KI538		07	24	NIEA
892	2018_19 Q4	KV167	Main Street Scarva, Storm Sewer Extension	00	KI538		07	24	NIEA
893	2018_19 Q4	KV170	Glassdrumman Road, Annalong, Foul Sewer Extension	00	KI538		07	24	NIEA
894	2018_19 Q4	KV174	Carnagat Road, Newry, Foul Sewer Extension	00	KI538		07	24	NIEA
895	2018_19 Q4	KV203	Scarva Street Loughbrickland Pumping Main	00	KI538		07	24	DRD
896	2018_19 Q4	KI539	PC15 Projects - Cluster of Septic Tanks causing Pollution	04			09	16	NIEA
897	2018_19 Q4	KI540	Wastewater treatment works belonging to bankrupt developers which NI Wa	04			07	17	NIEA
898	2018_19 Q4	KI541	Sewerage Infrastructure Appraisal(s) for adoption from bankrupt developers	04			07	24	NIEA
899	2018_19 Q4	KI542	Small Rural WWTW Programme PC13	00			09	17	NIEA
900	2018_19 Q4	KI543	Pump Away Scheme Removal Appraisal	00			05	02	DRD
901	2018_19 Q4	KI544	Non UWWTW MCert Compliance	04			09	16	NIEA
902	2018_19 Q4	KI545	Sub Metering at selected WwTW	00			07	02	DRD
903	2018_19 Q4	KI547	CSO Monitoring PC15	04			07	12	UR
904	2018_19 Q4	KI549	Non-Infrastructure Major Works	04			09	16	
905	2018_19 Q4	KI551	FTS and Minor Sewerage - Professional Services (PC15)	00			07	24	
906	2018_19 Q4	KV205	Courtney Hill, Newry, Storm Sewer Extension	00	KI538		07	24	DRD
907	2018_19 Q4	KV208	Laurel Grove Newry Foul Sewer Extension	00	KI538		07	24	DRD
908	2018_19 Q4	KV212	Percy Lodge, Dromore Storm Sewer	00	KI538		07	24	DRD
909	2018_19 Q4	KV213	Calmor View, Lislea - Storm Sewer Extension.	00	KI538		07	24	
910	2018_19 Q4	KV214	Tollymore Rd, Newcastle Foul & Storm Sewer	00	KI538		07	24	
911	2018_19 Q4	KV215	26 Crossgar Road, Saintfield foul and storm sewer	00	KI538		07	24	
912	2018_19 Q4	KV216	St Josephs Primary, Newry, Storm Sewer.	00	KI538		07	24	
913	2018_19 Q4	KV218	Old Road Mayobridge Foul & Storm Sewer	00	KI538		07	24	DRD
914	2018_19 Q4	KV222	Caiseal Court, Ballyholland, Newry, Storm Sewer Extension.	00	KI538		07	24	
915	2018_19 Q4	KA271	Lylehill Road, Templepatrick, Foul Sewer Extension.	00	KI551		07	24	
916	2018_19 Q4	KA272	Hillhead Road, Ballyclare Foul & Storm Sewer	00	KI551		07	24	
917	2018_19 Q4	KA274	Clare Park, Clare Road, Ballycastle Foul Sewer Ext	00	KI551		07	24	
918	2018_19 Q4	KA275	Abbots Road Whiteabbey	06	KI551		07	24	
919	2018_19 Q4	KA276	Gortgole Road, Portglenone	06	KI551		07	24	
920	2018_19 Q4	KA277	The Old Station Dunadry Storm sewer	00	KI551		07	24	
921	2018_19 Q4	KA278	The Square, Ballyclare	06	KI551		07	24	
922	2018_19 Q4	KA281	2 Gloverstown Road Toomebridge, Storm sewer .	06	KI551		07	24	
923	2018_19 Q4	KA282	Killimorrie Bellaghy Rd Dunloy, Foul sewer extension.	06	KI551		07	24	
924	2018_19 Q4	KA283	Birch Hill Road, Antrim, Foul & Storm Sewer Extension.	06	KI551		07	24	
925	2018_19 Q4	KA285	B031428 Lands Opp 142 Upper Road Greenisland, Foul sewer extension	06	KI551		07	24	
926	2018_19 Q4	KA286	Ferrard Meadow Antrim Foul Sewer	00	KI551		07	24	
927	2018_19 Q4	KA288	Clements Hall Ballyclare, foul sewer	06	KI551		07	24	
928	2018_19 Q4	KB527	Tobermore Rd, Magherafelt Storm Sewer	00	KI551		07	24	
929	2018_19 Q4	KB528	Trostan Avenue, Ballymena, Foul Sewer Extension.	00	KI551		07	24	
930	2018_19 Q4	KB529	Castle Tower Special School, Trostan Avenue, Ballymena	00	KI551		07	24	
931	2018_19 Q4	KB530	Ballymena Showgrounds S.C. F&S sewer extension	00	KI551		07	24	
932	2018_19 Q4	KB531	Glenravel Rd Cargan Ballymena F&S sewer ext.	00	KI551		07	24	
933	2018_19 Q4	KB536	Sourhill Road Ballymena Storm Sewer	00	KI551		07	24	
934	2018_19 Q4	KB538	297-303 Ballymoney Rd Ballymena, Storm sewer extension	06	KI551		07	24	
935	2018_19 Q4	KB542	1 Parkmore Drive Ballymena, Storm Sewer Extension	06	KI551		07	24	
936	2018_19 Q4	KB543	Ballee Drive Ballymena, Foul & Storm Sewer Extension Requisition	06	KI551		07	24	
937	2018_19 Q4	KC471	Laurel Hill, Coleraine, Storm Sewer Extension	00	KI551		07	24	
938	2018_19 Q4	KC478	The Cloisters, Bushmills	06	KI551		07	24	
939	2018_19 Q4	KC480	B022604 Coleraine Enterprise zone project, Sewer pumping main	06	KI551		07	24	
940	2018_19 Q4	KC482	Ballymena Rd Ballymoney, Storm Sewer Extension Requisition	06	KI551		07	24	
941	2018_19 Q4	KC484	Strand Road, Portrush Storm Sewer	00	KI551		07	24	
942	2018_19 Q4	KC485	12-13 The Crescent, Portstewart Storm Sewer	00	KI551		07	24	
943	2018_19 Q4	KC487	Portrush Train Station Eglinton St, Storm Sewer Extension	06	KI551		07	24	
944	2018_19 Q4	KF393	The Hollows, Lurgan - Storm Sewer Requistion	00	KI551		07	24	
945	2018_19 Q4	KF394	Colebrooke Rd Fivemiletown Storm Sewer	00	KI551		07	24	
946	2018_19 Q4	KF395	Favour Royal Road, Augher Foul Sewer	00	KI551		07	24	
947	2018_19 Q4	KF399	3A The Square, Moy Foul Sewer Ext.	00	KI551		07	24	
948	2018_19 Q4	KF401	Southern Regional College, Banbridge Storm Sewer	00	KI551		07	24	
949	2018_19 Q4	KF402	Rear of 11-13 Lurgan Rd, Banbridge Foul Sewer	00	KI551		07	24	
950	2018_19 Q4	KF407	Salter Grange Rd, Armagh - Storm Sewer Extension	06	KI551		07	24	
951	2018_19 Q4	KG129	Loughgall Road Portadown Storm and Foul Sewer Extensions	00	KI551		07	24	NIEA
952	2018_19 Q4	KG211	Edward St, Portadown Foul & Storm Sewer.	00	KI551		07	24	
953	2018_19 Q4	KG212	Armagh Rd, Portadown, Foul Sewer Requisition	00	KI551		07	24	
954	2018_19 Q4	KG214	Tandragee Road, Lurgan - Foul Sewer	00	KI551		07	24	
955	2018_19 Q4	KG216	Mounthall Grange, Clonmakate Rd, Storm Sewer	00	KI551		07	24	
956	2018_19 Q4	KG218	8-10 Lurgan Road, Crumlin	06	KI551		07	24	
957	2018_19 Q4	KG224	Solitude Demense, Lurgan, Storm & Foul Sewer	06	KI551		07	24	
958	2018_19 Q4	KL534	Sion Mills Stable Block Foul Sewer	00	KI551		07	24	
959	2018_19 Q4	KL535	Northland Road, Londonderry, Storm and Foul Sewer Extensions.	00	KI551		07	24	
960	2018_19 Q4	KL540	Foyle College, Limavady Road, Derry Storm Sewer	00	KI551		07	24	
961	2018_19 Q4	KL544	Carmoney Court, Eglinton Storm Sewer	00	KI551		07	24	
962	2018_19 Q4	KL546	Dalys Brae, Drumahoe	06	KI551		07	24	
963	2018_19 Q4	KL547	Belt Road, Altnagelvin, Foul Sewer replacement	06	KI551		07	24	
964	2018_19 Q4	KL548	B010499 Nixons Corner Braehead Londonderry, Foul sewer	06	KI551		07	24	
965	2018_19 Q4	KL550	Coneyville Coney Rd Culmore L'Derry, Foul & Storm Sewer Extension	06	KI551		07	24	
966	2018_19 Q4	KN669	Omagh IPS Foul & Storm	00	KI551		07	24	
967	2018_19 Q4	KN670	B024994 Gaelscoil na gCrann(school) Omagh	06	KI551		07	24	
968	2018_19 Q4	KN671	Drumnakilly Road Omagh Foul & Storm Sewer	00	KI551		07	24	
969	2018_19 Q4	KN672	Greenan Road Trillick, Foul pumping main.	06	KI551		07	24	
970	2018_19 Q4	KN675	Academy 61 Derry Rd, Storm Sewer Extension	06	KI551		07	24	
971	2018_19 Q4	KN678	Leambreslin Enniskillen Rd Lisbellaw	00	KI551		07	24	
972	2018_19 Q4	KR511	Ravenhill Road Belfast - Storm Sewer Extension	00	KI551		07	24	DRD
973	2018_19 Q4	KR555	Lapwing, Newtownards - Article 11 Enforcement Site	00	KI551		07	24	DRD
974	2018_19 Q4	KR612	Olympia Leisure Centre Windsor Park Storm Sewer Requisition	00	KI551		07	24	
975	2018_19 Q4	KR617	Glen Road, Belfast - Storm Sewer Extension	00	KI551		07	24	
976	2018_19 Q4	KR621	College Avenue, Belfast, Storm Sewer Extension.	00	KI551		07	24	
977	2018_19 Q4	KR626	Ballyduff Road, Newtownabbey Storm Sewer Ext	00	KI551		07	24	
978	2018_19 Q4	KR638	Ravara Gardens, Bangor Foul Sewer	00	KI551		07	24	
979	2018_19 Q4	KR639	Prince Andrew Way, Carrickfergus Foul Sewer	00	KI551		07	24	
980	2018_19 Q4	KR641	336-344 Oldpark Road, Belfast F&S sewer req.	00	KI551		07	24	
981	2018_19 Q4	KR643	Fashoda St, Belfast Storm Sewer Requisition.	00	KI551		07	24	
982	2018_19 Q4	KR644	2-24 Shore Road Greenisland Storm Sewer	00	KI551		07	24	
983	2018_19 Q4	KR649	Durham Street, Belfast Storm Sewer Extension.	00	KI551		07	24	
984	2018_19 Q4	KR650	Brookhall Foul Sewer Extension	00	KI551		07	24	
985	2018_19 Q4	KR651	Castle St, Comber - foul and storm sewer requisition	00	KI551		07	24	
986	2018_19 Q4	KR652	Templepatrick Road, Ballyclare Foul Sewer	00	KI551		07	24	
987	2018_19 Q4	KR654	Brookmount Street, Belfast - Storm Sewer Extension	00	KI551		07	24	
988	2018_19 Q4	KR655	2-4 Cheston Street, Carrickfergus storm sewer	00	KI551		07	24	
989	2018_19 Q4	KR657	Glenbryn Park, Belfast - Storm Sewer	00	KI551		07	24	
990	2018_19 Q4	KR658	Fitzroy Ave, Belfast Storm Sewer Extension	00	KI551		07	24	
991	2018_19 Q4	KR659	Glenview Rd, Holywood - Foul Sewer Extension	06	KI551		07	24	
992	2018_19 Q4	KR660	113 Bangor Rd, Newtownards Storm Sewer Requisition	00	KI551		07	24	
993	2018_19 Q4	KR661	Woodburn Primary School Carrickfergus	06	KI551		07	24	
994	2018_19 Q4	KR666	St Bernadette P/School Belfast Storm Sewer	00	KI551		07	24	
995	2018_19 Q4	KR679	Abbey View Gr, Newtownards Rd, Bangor Storm Sewer	00	KI551		07	24	
996	2018_19 Q4	KR680	Castle Park, Bangor - Storm Sewer.	00	KI551		07	24	
997	2018_19 Q4	KR684	Shore Road Newtownabbey F&S Extension	00	KI551		07	24	
998	2018_19 Q4	KR687	4A Newforge Lane, Belfast, Foul Sewer Extension	06	KI551		07	24	

Sort Ref	Baseline Milestone Dates							Baseline Service Cost Allocation				Baseline Expenditure Profile (£m 2012-13 prices)									Baseline Purpose Allocation			
(1)	Baseline A1 Date (11)	Baseline Project Approval Date (12)	Baseline Start on Site Date (13)	Baseline Beneficial Use Date (14)	Baseline Regulatory sign-off Date (15)	Baseline Completion of Construction Date (16)	Baseline End of Maintenance Period Date (17)	Baseline Service Allocation Water Infrastructure (18)	Baseline Service Allocation Water Non-Infrastructure (19)	Baseline Service Allocation Sewerage Infrastructure (20)	Baseline Service Allocation Sewerage Non-Infrastructure (21)	Baseline CAPEX 2010-11 £m (22)	Baseline CAPEX 2011-12 £m (23)	Baseline CAPEX 2012-13 £m (24)	Baseline CAPEX 2013-14 £m (25)	Baseline CAPEX 2014-15 £m (26)	Baseline CAPEX 2015-16 £m (27)	Baseline CAPEX 2016-17 £m (28)	Baseline CAPEX 2017-18 £m (29)	Baseline CAPEX 2018-19 £m (30)	Baseline Purpose Allocation Quality (36)	Baseline Purpose Allocation Base (37)	Baseline Purpose Allocation ESL (38)	Baseline Purpose Allocation Growth (39)
799	10/09/2008	15/09/2008	01/12/2008	16/11/2010		16/11/2010	16/11/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
800	20/08/2009	03/09/2009	03/11/2009	20/01/2010		20/01/2010	16/03/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
802								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
808			16/04/2007	15/04/2006		15/04/2006	15/04/2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
809	26/09/2011	03/10/2011	23/01/2012	22/02/2012		22/02/2012	21/02/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
810	28/06/2011	04/07/2011	04/04/2011	09/09/2011		09/09/2011	08/09/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
811	19/04/2012	01/05/2012	11/06/2012	05/09/2012		05/09/2012	05/09/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
812								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
816	13/11/2008	25/11/2008	20/07/2009	25/09/2009		25/09/2009	25/09/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
817								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
818								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
820	18/04/2011	04/05/2011	06/06/2011	24/08/2011		24/08/2011	24/08/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
821	21/11/2011	25/11/2011	09/01/2012	23/09/2011		23/09/2011	22/09/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
822								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
823	12/03/2009	24/03/2009	21/05/2012	24/09/2012		24/09/2012	24/09/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
824								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825	05/08/2011	25/08/2011	05/05/2008	05/04/2012		05/04/2012	05/04/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
826								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
827	04/05/2010	07/05/2010	14/06/2010	12/11/2010		12/11/2010	19/05/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
828	07/04/2010	07/05/2010	07/06/2010	26/02/2011		26/02/2011	12/08/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
829	07/07/2010	28/07/2010	29/11/2010	15/03/2011		15/03/2011	14/03/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
830	13/08/2010	31/08/2010	25/10/2010	31/12/2010		31/12/2010	31/12/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
831	15/12/2010	12/01/2011	08/03/2011	11/05/2011		11/05/2011	10/05/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
832	15/12/2010	12/01/2011	28/02/2011	22/06/2011		22/06/2011	21/06/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
833	07/07/2011	11/07/2011	04/04/2011	01/09/2011		01/09/2011	31/08/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
834								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
835	02/04/2012	06/04/2012	09/09/2011	31/05/2012		31/05/2012	31/05/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
836								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
855	23/07/2009	02/09/2009	05/09/2011	11/06/2012		11/06/2012	11/06/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
856	09/04/2009	27/04/2009	01/02/2011	25/02/2011		25/02/2011	25/02/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
857	20/07/2009	03/08/2009	21/07/2009	09/10/2009		09/10/2009	09/10/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
858	02/03/2011	15/03/2011	08/04/2011	09/02/2012		09/02/2012	08/02/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
859								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
860	11/09/2012	21/09/2012	06/09/2010	28/12/2012		28/12/2012	28/12/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
861								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
862	07/01/2011	21/01/2011	27/06/2011	20/08/2011		20/08/2011	19/08/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
863	10/02/2011	17/02/2011	16/05/2011	01/06/2011		01/06/2011	31/05/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
864	22/07/2011	29/07/2011	10/10/2011	23/11/2011		23/11/2011	22/11/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
865	14/06/2011	24/06/2011	10/04/2012	28/09/2012		28/09/2012	28/09/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
866								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
867	04/01/2012	12/01/2012	07/05/2012	27/07/2012		27/07/2012	27/07/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
868	20/07/2012	17/08/2012	15/10/2012	22/03/2013		22/03/2013	22/03/2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
877	16/07/2009	03/08/2009	24/08/2009	09/10/2009		09/10/2009	09/10/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
878	23/06/2010	28/06/2010	01/11/2010	26/03/2011		26/03/2011	06/09/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
879	15/11/2010	12/01/2011	01/04/2011	06/06/2011		06/06/2011	05/06/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
880								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
881								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
882								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
886								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
887	16/09/2010	19/11/2010	14/03/2011	02/11/2011		02/11/2011	02/11/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
888	02/07/2009	07/07/2009	31/08/2009	22/02/2010		22/02/2010	12/11/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
889	21/04/2009	05/05/2009	06/07/2009	15/11/2010		15/11/2010	15/11/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
890	16/08/2010	08/09/2010	31/10/2011	17/02/2012		17/02/2012	16/02/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
891	13/06/2011	30/06/2011	22/08/2011	26/01/2012		26/01/2012	25/01/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
892	27/05/2011	03/06/2011	01/04/2011	31/03/2014		31/03/2014	31/03/2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
893	02/12/2011	08/12/2011	01/04/2013	10/06/2013		10/06/2013	10/06/2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
894	01/08/2011	12/08/2011	16/01/2012	06/04/2012		06/04/2012	06/04/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
899								0	0	0	100	0	0	0	4.94225784	1.836823224	0	0	0	0	10	40	0	50
901								0	0	0	100	0	0	0	0	0	0.277326	0.367549392	0.365344096	0	100	0	0	0
902								0	0	0	100	0	0	0	0	0	0.231105	0.22971837	0.22834006	0	0	0	100	0
903								0	0	0	100	0	0	0	0	0	0.87265248	0.867416565	0.862212066	0.857038793	100	0	0	0
972								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sort Ref	Current Actual or Projected Milestone Dates						
(1)	Current Actual or Projected A1 Date (40)	Current Actual or Projected Project Approval Date (41)	Current Actual or Projected Start on Site Date (42)	Current Actual or Projected Beneficial Use Date (43)	Current Actual or Projected Regulatory sign-off Date (44)	Current Actual or Projected Completion of Construction Date (45)	Current Actual or Projected End of Maintenance Period Date (46)
798	24/05/2016	24/05/2016	09/01/2017	22/02/2017		31/03/2017	05/05/2017
799	10/09/2008	15/09/2008	01/12/2008	15/11/2010		16/02/2009	
800	20/08/2009	03/09/2009	03/11/2009	19/01/2010		19/01/2010	16/03/2010
801	27/11/2014	27/11/2014	09/02/2015	30/03/2015		06/03/2015	21/04/2016
802	09/01/2013	16/01/2013	23/09/2015	30/03/2016		20/05/2016	13/10/2016
803	08/09/2014	17/09/2014		29/04/2016			30/06/2016
804	17/08/2015	17/08/2015					
805	11/06/2015	16/06/2015					
806	04/04/2017	04/04/2017					
807	07/03/2017	13/04/2017	19/06/2017	19/10/2017		31/03/2016	08/01/2018
809	26/09/2011	03/10/2011	23/01/2012	03/02/2012		06/02/2012	
810	28/06/2011	04/07/2011					
811	19/04/2012	01/05/2012	11/06/2012	31/08/2012		27/08/2012	
812	21/11/2012	11/12/2012	04/03/2013	31/01/2014		28/10/2013	03/11/2014
813	05/06/2014	20/06/2014	18/03/2014	12/12/2014		28/11/2014	05/01/2016
814	18/02/2016	18/02/2016	04/04/2016	17/06/2016		31/03/2016	26/08/2016
815	04/08/2015	04/08/2015					
816	13/11/2008	25/11/2008	20/07/2009	16/11/2010		28/09/2009	
817	03/07/2015	03/07/2015					
818	22/02/2013	01/03/2013	02/04/2012	18/11/2013		21/10/2013	06/01/2014
819	15/04/2014	12/05/2014	09/06/2014	20/02/2015		21/07/2014	18/11/2015
820	18/04/2011	04/05/2011	06/06/2011	24/08/2011		18/07/2011	24/08/2011
821	21/11/2011	25/11/2011					
822	07/09/2018	07/09/2018					
823	12/03/2009	24/03/2009	04/01/2011	24/09/2012		26/11/2013	
824	16/12/2013	19/12/2013	02/06/2014	12/12/2014		28/11/2014	04/02/2015
825	23/05/2014	03/06/2014	28/07/2014	11/12/2015		30/01/2015	04/05/2016
827	04/05/2010	07/05/2010	14/06/2010			17/01/2011	19/05/2011
828	07/04/2010	07/05/2010	07/06/2010	25/02/2011		11/04/2011	12/08/2011
829	07/07/2010	28/07/2010	29/11/2010	14/03/2011		07/03/2011	
830	13/08/2010	31/08/2010	25/10/2010	31/12/2010		06/12/2010	
831	15/12/2010	12/01/2011	08/03/2011	10/05/2011		17/05/2011	
832	15/12/2010	12/01/2011	28/02/2011	21/06/2011		06/06/2011	
833	07/07/2011	11/07/2011					
834	08/09/2014	17/09/2014	01/06/2015	11/12/2015		27/11/2015	25/01/2016
835	02/04/2012	06/04/2012					
836	08/05/2013	22/05/2013	10/02/2014	29/04/2014		18/04/2014	20/08/2015
837	19/06/2015	19/06/2015	05/10/2015	18/11/2015		30/10/2015	15/12/2015
838	21/11/2014	21/11/2014	13/04/2015	12/06/2015			18/11/2015
839	06/03/2014	13/03/2014	28/04/2014	27/08/2014		19/06/2014	20/11/2014
840	04/04/2017	04/04/2017					
841	01/09/2014	17/09/2014	01/12/2014	12/06/2015		31/03/2015	22/12/2015
842	11/08/2014	05/09/2014					
843	06/10/2014	08/10/2014	21/11/2016	16/05/2017		20/01/2017	31/08/2017
844	09/09/2014	17/09/2014					
845	12/01/2017	12/01/2017					
846	19/04/2016	19/04/2016	04/07/2016	19/09/2016		26/08/2016	06/02/2017
847	04/08/2015	04/08/2015	04/07/2016	31/08/2016		26/08/2016	15/12/2017
848	05/02/2015	16/02/2015	06/06/2016	23/06/2016		04/07/2016	12/12/2016
849	10/09/2014	17/09/2014	01/12/2014	12/12/2014		01/09/2014	20/04/2015
850	04/08/2015	04/08/2015	20/06/2016	11/01/2017		11/11/2016	10/01/2019
851	23/09/2015	23/09/2015	07/03/2016	19/04/2016		22/04/2016	26/10/2017
852	09/02/2017	01/03/2017					
853	02/10/2018	02/10/2018					
854	04/08/2015	04/08/2015	18/07/2016	13/10/2016		26/08/2016	
855	23/07/2009	02/09/2009	11/07/2011	11/06/2012		03/06/2013	
856	29/06/2018	19/07/2018	22/10/2018	14/12/2018		31/10/2018	
857	20/07/2009	03/08/2009					
858	02/03/2011	15/03/2011	08/04/2011	08/02/2012		27/01/2012	
859	31/10/2013	04/11/2013	22/01/2014	18/03/2014		09/04/2014	
860	11/09/2012	21/09/2012	06/05/2013	30/07/2013		27/05/2013	
861	06/07/2015	07/07/2015	17/10/2015	09/03/2017		31/03/2016	
862	07/01/2011	21/01/2011	27/06/2011	19/08/2011		15/08/2011	
863	10/02/2011	17/02/2011	16/05/2011	01/06/2011		13/06/2011	
864	22/07/2011	29/07/2011	10/10/2011	22/11/2011		21/11/2011	20/05/2013
865	14/06/2011	24/06/2011	10/04/2012	23/11/2012		25/09/2012	06/12/2012
866	18/12/2012	21/12/2012	13/04/2015	28/07/2015		29/06/2015	28/07/2015
867	04/01/2012	12/01/2012	07/05/2012			23/07/2012	
868	20/07/2012	17/08/2012	01/04/2013	27/08/2014		27/08/2014	20/07/2015
869	18/08/2014	24/09/2014	01/12/2014	27/02/2015			09/08/2016
870	27/08/2014	17/09/2014	04/06/2018	21/12/2018		05/10/2018	
871	04/08/2015	04/08/2015					
872	27/10/2015	27/10/2015		29/01/2016			17/03/2016
873	06/06/2017	16/06/2017	04/09/2017	13/04/2018		23/02/2018	07/11/2018
874	22/12/2015	22/12/2015					
875	29/04/2016	29/04/2016					
877	16/07/2009	03/08/2009	07/03/2016	09/03/2017		31/03/2016	
878	23/06/2010	28/06/2010	01/11/2010	25/03/2011		27/08/2012	05/09/2012
879	15/11/2010	12/01/2011	01/04/2011	19/05/2011		03/06/2011	
881	01/07/2016	01/07/2016					
882	28/04/2014	02/05/2014					
883	25/07/2013	05/08/2013	09/12/2013	29/01/2014		09/12/2013	23/10/2014
884	01/07/2015	10/07/2015					
885	24/07/2015	24/07/2015		23/03/2017		16/01/2017	
886	08/01/2016	08/01/2016	30/08/2016	16/09/2016		26/09/2016	05/12/2016
887	16/09/2010	19/11/2010	14/03/2011	30/03/2011		28/03/2011	02/11/2011
888	02/07/2009	07/07/2009	31/08/2009			04/07/2011	11/11/2010
889	21/04/2009	05/05/2009	06/07/2009	15/11/2010		31/08/2009	
890	16/08/2010	08/09/2010	31/10/2011	03/08/2012		06/08/2012	21/12/2012
891	13/06/2011	30/06/2011	22/08/2011	14/10/2011		28/11/2011	
892	27/05/2011	03/06/2011	01/04/2011	27/03/2013		28/03/2014	21/05/2013
893	02/12/2011	08/12/2011					
894	01/08/2011	12/08/2011	16/01/2012	06/04/2012		02/04/2012	
895	24/07/2015	24/07/2015		08/02/2018		16/01/2015	09/01/2019
899	08/07/2013	19/07/2013	03/01/2014	31/03/2015		27/03/2015	07/09/2015
900	15/01/2018	15/01/2018					
901	27/02/2019	27/02/2019					
902	22/02/2019	22/02/2019					
903	03/08/2016	04/08/2016	03/09/2018				
904	29/05/2018	29/05/2018					
905	10/07/2014	17/07/2014					
906	27/11/2014	27/11/2014	30/06/2015	16/10/2015			21/12/2015
907	17/09/2014	25/09/2014					
908	27/07/2015	27/07/2015					
909	29/11/2014	29/11/2014					
910	07/07/2015	07/07/2015	30/05/2016	24/06/2016		01/07/2016	08/12/2016
911	16/06/2015	16/06/2015	24/08/2015	12/01/2016		25/09/2015	25/01/2016
912	10/11/2015	10/11/2015					
913	06/07/2015	06/07/2015					
914	04/08/2015	04/08/2015					
915	13/10/2017	13/10/2017	02/07/2018	10/08/2018			26/10/2018
916	26/02/2016	26/02/2016					
917	23/08/2017	23/08/2017	04/09/2017	24/11/2017			22/01/2019
918	06/06/2018	06/06/2018	20/08/2018	13/12/2018		19/10/2018	10/01/2019
919	04/03/2019	12/03/2019	22/04/2019				
920	04/10/2017	04/10/2017	21/11/2017	19/01/2018		19/01/2018	18/09/2018
921	09/01/2018	09/01/2018	01/03/2018	20/04/2018			01/06/2018
922	23/01/2019	23/01/2019					
923	18/09/2017	18/09/2017		05/12/2017			23/01/2018
924	21/02/2018	21/02/2018					
925	30/08/2018	30/08/2018				20/05/2019	
926	10/09/2018	02/10/2018	29/10/2018	20/02/2019		11/02/2019	
927	11/06/2018	11/06/2018					
928	20/01/2016	20/01/2016					
929	12/01/2017	12/01/2017	03/04/2017	07/04/2017			26/09/2017
930	01/10/2016	01/10/2016	06/03/2017	07/04/2017		14/04/2017	05/09/2017
931	17/11/2016	17/11/2016					
932	28/11/2016	28/11/2016					
933	19/12/2017	19/12/2017	27/08/2018	11/09/2018		24/09/2018	04/12/2018
934	28/09/2017	28/09/2017					
935	29/10/2018	29/10/2018					
936	11/12/2018	11/12/2018	15/03/2019	10/04/2019		16/04/2019	
937	01/07/2016	01/07/2016					
938	16/08/2017	16/08/2017	26/02/2018	28/03/2018		30/03/2018	14/03/2019
939	19/12/2017	19/12/2017	05/02/2018	28/03/2018			25/05/2018
940	15/05/2018	15/05/2018	18/06/2018	06/07/2018			05/11/2018
943	29/11/2018	29/11/2018	21/01/2019	05/04/2019			11/04/2019
944	10/12/2015	10/12/2015					
945	01/07/2016	01/07/2016					
946	09/12/2015	09/12/2015					
947	20/07/2016	03/08/2016					
948	30/08/2017	30/08/2017	30/04/2018	12/06/2018		11/06/2018	
949	29/05/2018	29/05/2018					
952	14/10/2016	14/10/2016					
953	24/06/2017	24/06/2017	27/10/2017	09/02/2018		26/01/2018	05/12/2018
954	09/05/2018	09/05/2018	02/07/2018	06/07/2018			25/01/2019
955	19/02/2018	19/02/2018	03/09/2018	23/10/2018		28/09/2018	
956	27/10/2017	27/10/2017		26/04/2018			09/01/2019
957	20/07/2018	20/07/2018					
958	26/11/2015	26/11/2015					
959	01/07/2016	03/08/2016					
960	15/11/2016	15/11/2016	23/01/2017	07/04/2017			05/05/2017
961	06/11/2017	06/11/2017	20/11/2017	11/01/2018			23/04/2018
962	06/09/2017	06/09/2017	13/12/2017	16/02/2018		16/02/2018	11/09/2018
963	24/01/2018	24/01/2018	12/02/2018	28/03/2018			21/08/2018
964	13/04/2018	13/04/2018					
965	11/12/2018	11/12/2018	11/02/2019	12/03/2019		11/03/2019	
966	23/08/2017	23/08/2017		27/01/2018			25/05/2018
967	23/08/2018	23/08/2018	07/03/2019			18/04/2019	
968	28/08/2018	05/09/2018					
971	14/01/2019	14/01/2019					
973	05/08/2014	17/09/2014	21/11/2016	27/01/2017		10/02/2017	05/10/2018
974	23/06/2016	27/06/2016	19/09/2016	12/05/2017			19/05/2017
975	26/02/2016	02/03/2016					
977	16/08/2016	16/08/2016					
978	22/11/2016	22/11/2016					
979	23/11/2016	23/11/2016					
980	29/06/2017	29/06/2017	21/08/2017	08/09/2017			02/03/2018
981	14/02/2017	14/02/2017					
982	10/10/2017	10/10/2017	06/11/2017	31/10/2017			28/11/2017
983	04/07/2017	04/07/2017	24/07/2018	22/08/2018		31/08/2018	11/04/2019
984	28/06/2017	28/06/2017	31/07/2017	14/09/2017			01/11/2017
985	03/05/2017	03/05/2017					
986	05/09/2018	05/09/2018		13/12/2018			
987	18/09/2017	18/09/2017		31/01/2018			30/03/2018
988	17/05/2018	17/05/2018					
989	10/10/2017	10/10/2017	27/11/2017	17/01/2018			23/04/2018
990	05/09/2017	05/09/2017					
991	29/05/2018	29/05/2018	27/07/2018	26/09/2018		17/08/2018	
992	15/11/2017	15/11/2017	02/01/2018	29/03/2018			15/06/2018
993	31/08/2017	31/08/2017	16/04/2018	24/08/2018		24/08/2018	04/12/2018
994	27/10/2017	27/10/2017					
995	14/09/2018	14/09/2018	28/01/2019				
996	19/12/2018	10/01/2019					
997	18/10/2018	08/11/2018	26/11/2018	29/03/2019			08/04/2019
998	11/10/2018	11/10/2018					

Sort Ref	Current Actual or Projected Service Cost Allocation				Current Actual or Projected Capital Expenditure Profile (£m money of the day)									
(1)	Water Infrastructure (47)	Water Non-Infrastructure (48)	Sewerage Infrastructure (49)	Sewerage Non-Infrastructure (50)	CAPEX Year to date £m (51)	CAPEX 2010-11 £m (52)	CAPEX 2011-12 £m (53)	CAPEX 2012-13 £m (54)	CAPEX 2013-14 £m (55)	CAPEX 2014-15 £m (56)	CAPEX 2015-16 £m (57)	CAPEX 2016-17 £m (58)	CAPEX 2017-18 £m (59)	CAPEX 2018-19 £m (60)
798	0	0	100	0	0	0	0	0	0	0	0	0.131	0	0
799	0	0	100	0	0	0.005	-0.001	0.005	0	0	-0.005	0	0	0
800	0	0	100	0	0	0.003	0.002	-0.004	0	0	0	0	-0.003	0
801	0	0	100	0	0	0	0	0	0	0.066	0	-0.015	0	0
802	0	0	100	0	0	0	0.002	0.01	-0.015	0.001	0.243	0	-0.003	0
803	0	0	100	0	0	0	0	0	0	0	0	0.037	0	0
804	0	0	100	0	0	0	0	0	-0.01	0	0.037	0	0	0
805	0	0	100	0	-0.007	0	0	0	0	0	0.089	0	-0.014	-0.007
806	0	0	100	0	-0.003	0	0	0	0	0	0	0	0.02	-0.003
807	0	0	100	0	0	0	0	0	0	0	0	0	0.184	0
808	0	0	78	22	0	0.043	0.015	0.004	-0.006	0	0	0.016	-0.004	0
809	0	0	100	0	0	0.001	0.009	0	-0.002	0	0	0	-0.001	0
810	0	0	100	0	0	0.001	0.001	0	-0.001	0.001	0.014	0	0	0
811	0	0	100	0	0	0.001	0.002	0.048	0	0	0.001	0	0.008	0
812	0	0	100	0	0	0	0.015	0.05	0.485	-0.016	0	0.001	-0.007	0
813	0	0	100	0	0	0	0	0	0	0.033	0.018	0	0	0
814	0	0	100	0	0	0	0	0	0	0	0	0.087	0	0
815	0	0	100	0	0	0	0	0	0	0	0.07	0	-0.004	0
816	0	0	100	0	0	0.012	-0.006	0	0	0	0	0	-0.003	0
817	0	0	100	0	0	0	0.003	0	-0.001	0.003	0.036	0.005	0	0
818	0	0	100	0	0	0	0	0.007	0.006	-0.002	0	0	0.001	0
819	0	0	100	0	0	0	0	0	-0.002	0.068	-0.006	0	0	0
820	0	0	100	0	0	0.004	0.028	0.001	0	0	0	0	-0.001	0
821	0	0	100	0	0.004	0	0.024	0.003	0	0	0	0	-0.001	0.004
822	0	0	100	0	0.028	0	0.004	0.004	0	0.005	0	-0.001	0.001	0.028
823	0	0	100	0	0	0.003	0.014	0.61	0.071	0.007	0.002	0	-0.005	0
824	0	0	100	0	0	0.001	-0.001	0	0	0.08	0.002	0	0	0
825	0	0	100	0	0	0.001	0	0	0.003	0.272	0.937	0.059	0	0
826	0	0	100	0	0.005	0	0.009	0	0.012	0.068	-0.004	0.009	0.007	0.005
827	0	0	100	0	0	0.123	0	0.001	0	0	0	0	-0.001	0
828	0	0	100	0	-0.006	0	0	0	0	0	0	0	0	-0.006
829	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
830	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
831	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
832	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
833	0	0	100	0	-0.001	0	0.001	0	0	0	0	0.002	0.015	-0.001
834	0	0	100	0	0	0	0.002	0	0	0	0.064	0	-0.008	0
835	0	0	100	0	0	0	0.099	0.109	-0.001	0.002	0.015	0	0	0
836	0	0	100	0	0	0	0	0.003	0.01	0.017	0.003	0	-0.003	0
837	0	0	100	0	0	0	0	0	0	0	0.021	0	0	0
838	0	0	100	0	0	0	0	0	0	0	0.078	0	0	0
839	0	0	100	0	0	0	0	0	-0.005	0.06	0	0	-0.004	0
840	0	0	100	0	0	0	0	0	0	0	0	0	0.014	0
841	0	0	100	0	0	0	0	0	0	0.02	0.004	0	0	0
842	0	0	100	0	0	0	0	0	-0.005	0.099	-0.005	0	0	0
843	0	0	100	0	-0.012	0	0	0	-0.007	0.046	0.11	0.105	-0.005	-0.012
844	0	0	100	0	0	0	0	0	0	0.033	0.002	0	-0.004	0
845	0	0	100	0	0	0	0	0	0	0	0	0.022	0	0
846	0	0	100	0	-0.001	0	0	0	0	0	0	0.125	0.001	-0.001
847	0	0	100	0	0	0	0	0	0	0	0	0.043	-0.001	0
848	0	0	100	0	-0.001	0	0	0	0	0	0	0.047	-0.001	-0.001
849	0	0	100	0	0	0	0	0	0	0.03	0.004	0	0	0
850	0	0	100	0	0	0	0	0	0	0	0	0.157	-0.001	0
851	0	0	100	0	0	0	0	0	0	0	0.043	0.014	-0.002	0
852	0	0	100	0	-0.004	0	0	0	0	0	0	0	0.004	-0.004
853	0	0	100	0	0	0	0	0	0	0	0	0	0	0
854	60	0	40	0	0	0	0	0	0	0	0	0.117	-0.013	0
855	0	0	100	0	0	0.009	0.249	0.055	-0.009	0	0	0	-0.01	0
856	0	0	100	0	0.124	0.004	0	0	0	0	0	0	0.003	0.124
857	0	0	100	0	0	0	0.002	0	-0.003	0	0	0	0.001	0
858	0	0	100	0	0	0.003	0.213	-0.013	-0.008	-0.001	0	0	-0.001	0
859	0	0	100	0	0	0.003	0	0	0.164	-0.029	0	0	-0.014	0
860	0	0	100	0	0	0.003	0.002	0.001	0.078	0.017	0.003	0	0	0
861	0	0	99	1	0.002	0.006	0	0	0.014	0	0.72	0.534	-0.283	0.002
862	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
863	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
864	0	0	100	0	-0.002	0	0	0	0	0	0	0	0	-0.002
865	0	0	100	0	-0.001	0	0	0	0	0	0	0	0	-0.001
866	0	0	100	0	0	0.001	0.001	0.002	-0.003	0.002	0.099	0	0	0
867	0	0	100	0	0	0	0.003	-0.002	0	0	0.001	0	0	0
868	0	0	94	6	0	0	0.005	0.008	0.239	0.077	-0.005	0.006	-0.004	0
869	0	0	100	0	0	0	0	0	0	0.058	0	0	-0.001	0
870	0	0	100	0	0.295	0	0	0	0	0	0	0	0	0.295
871	0	0	100	0	0.057	0	0	0	0	0	0	0	0	0.057
872	0	0	100	0	0	0	0	0	0	0	0.019	0	-0.005	0
873	0	0	100	0	-0.014	0	0	0	0	0	0	0	0.523	-0.014
874	0	0	100	0	-0.001	0	0	0	0	0	0	0.02	0.002	-0.001
875	0	0	100	0	0	0	0	0	0	0	0	0.028	-0.001	0
876	0	0	100	0	0	0	0	0	0	0	0	0	0	0
877	0	0	100	0	0	0	-0.001	0	0	0	0.077	0.05	-0.002	0
878	0	0	100	0	-0.006	0	0	0	0	0	0	0	0	-0.006
879	0	0	100	0	-0.001	0.011	0.056	-0.001	0	0	0	0	-0.005	-0.001
880	0	0	100	0	0	0.004	0.004	-0.004	0.002	0	0.001	0	0	0
881	0	0	100	0	-0.004	0.002	0	0.005	-0.002	0	0	0.012	0.041	-0.004
882	0	0	100	0	0	0	0.004	0	0	0.012	0.004	-0.001	0	0
883	0	0	100	0	0	0	0	0	0.047	0.003	0	0	-0.002	0
884	0	0	0	100	0.002	0	0	0	0	0	0.001	0	0.108	0.002
885	0	0	100	0	0	0	0	0	0	0	0	0.062	-0.001	0
886	0	0	100	0	0	0.001	0	0	0	0	0	0.027	-0.001	0
887	0	0	100	0	0	0.015	0.002	-0.001	0	0	0	0	-0.001	0
888	0	0	100	0	0	0.006	0.002	0.001	0	0	-0.001	0	0	0
889	0	0	100	0	0	0.002	-0.002	0.007	0	0	-0.007	0	0	0
890	0	0	100	0	0	0.001	0.092	0.027	-0.001	0	-0.004	0	0	0
891	0	0	100	0	0	0.006	0.147	-0.001	0	0	-0.002	0	0	0
892	0	0	100	0	-0.003	0	0	0	0	0	0	0	0	-0.003
893	0	0	100	0	0	0.003	0.001	0	0.037	0.002	0	0	0.001	0
894	0	0	100	0	-0.007	0	0	0	0	0	0	0	0	-0.007
895	0	0	100	0	0	0	0	0	0	0	0	0	0.016	0
896	0	0	100	0	0	0	0	0	0.008	0	-0.004	0	0	0
897	0	0	0	100	0	0	0	0	0.016	0.006	0.015	0.002	0	0
898	0	0	0	100	0	0	0	0	0.006	0.021	0.011	0.002	0	0
899	0	0	0	100	-0.008	0	0	0	0.673	3.752	0.974	0.435	-0.079	-0.008
900	0	0	0	100	0	0	0	0	0.03	0.018	0	-0.022	0	0
901	0	0	0	100	0	0	0	0	0	0.06	0.065	0	-0.022	0
902	0	0	0	100	0	0	0	0	0.009	0.066	0.012	0	-0.001	0
903	0	0	39	61	0.515	0	0	0	0.003	0.034	0.015	0.194	0.115	0.515
904	0	30	0	70	-0.01	0	0	0	0	0.019	0.015	0.042	0.036	-0.01
905	0	0	87	13	0.891	0	0	0	0	0	0.432	0.661	0.961	0.891
906	0	0	100	0	0	0	0	0	-0.011	0	0.094	0	0	0
907	0	0	100	0	-0.005	0	0	0	0	0	0.031	0.001	0.001	-0.005
908	0	0	100	0	0	0	0	0	0	0	0.009	-0.002	0.001	0
909	0	0	100	0	0	0	0	0	0	0.038	-0.005	0	0	0
910	0	0	100	0	0	0	0	0	0	0	0	0.057	0	0
911	0	0	100	0	0	0	0	0	0	0	0.039	0	0	0
912	0	0	100	0	0	0	0	0	0	0	0	0	0	0
913	0	0	100	0	-0.004	0	0	0	0	0	0.03	0	0	-0.004
914	0	0	100	0	0	0	0	0	0	0	0.026	0	0	0
915	0	0	100	0	0.067	0	0	0	0	0	0	0	0	0.067
916	0	0	100	0	-0.051	0	0	0	0	0	0	0.082	0.026	-0.051
917	0	0	100	0	-0.016	0	0	0	0	0	0	0	0.138	-0.016
918	0	0	100	0	0.125	0	0	0	0	0	0	0	0	0.125
919	0	0	100	0	0	0	0	0	0	0	0	0	0	0
920	0	0	100	0	-0.002	0	0	0	0	0	0	0	0.02	-0.002
921	0	0	100	0	0.039	0	0	0	0	0	0	0	0	0.039
922	0	0	100	0	0	0	0	0	0	0	0	0	0	0
923	0	0	100	0	0	0	0	0	0	0	0	0	0.035	0
924	0	0	100	0	0.028	0	0	0	0	0	0	0	0	0.028
925	0	0	100	0	0	0	0	0	0	0	0	0	0.001	0
926	0	0	100	0	0.197	0	0	0	0	0	0	0	0.002	0.197
927	0	0	100	0	0.014	0	0	0	0	0	0	0	0.001	0.014
928	0	0	100	0	0	0	0	0	0	0	0	0.015	-0.001	0
929	0	0	100	0	0	0	0	0	0	0	0	0	0.005	0
930	0	0	100	0	-0.001	0	0	0	0	0	0	0.065	-0.007	-0.001
931	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.027	-0.001
932	0	0	100	0	0	0	0	0	0	0	0	0	0.02	0
933	0	0	100	0	0.04	0	0	0	0	0	0	0	0	0.04
934	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.014	-0.001
935	0	0	100	0	0.026	0	0	0	0	0	0	0	0	0.026
936	0	0	100	0	0.001	0	0	0	0	0	0	0	0	0.001
937	0	0	100	0	-0.002	0	0	0	0	0	0	0.041	0	-0.002
938	0	0	100	0	-0.003	0	0	0	0	0	0	0	0.054	-0.003
939	0	0	100	0	0	0	0	0	0	0	0	0	0.074	0
940	0	0	100	0	0.043	0	0	0	0	0	0	0	0	0.043
941	0	0	100	0	0	0	0	0	0	0	0	0	0	0
942	0	0	100	0	0	0	0	0	0	0	0	0	0	0
943	0	0	100	0	0.045	0	0	0	0	0	0	0	0	0.045
944	0	0	100	0	0	0	0	0	0	0	0	0.018	0	0
945	0	0	100	0	-0.002	0	0	0	0	0	0	0	0.02	-0.002
946	0	0	100	0	0	0	0	0	0	0	0.022	0.003	0	0
947	0	0	100	0	0	0	0	0	0	0	0	0.024	0	0
948	0	0	100	0	0.067	0	0	0	0	0	0	0	0	0.067
949	0	0	100	0	0.025	0	0	0	0	0	0	0.002	0	0.025
950	0	0	100	0	0	0	0	0	0	0	0	0	0	0
951	0	0	100	0	0	0	0	0	0	0	0	0	0	0
952	0	0	100	0	0.03	0	0	0	0	0	0	0	0	0.03
953	0	0	100	0	0	0	0	0	0	0	0	0	0.17	0
954	0	0	100	0	0.063	0	0	0	0	0	0	0	0	0.063
955	0	0	100	0	0.044	0	0	0	0	0	0	0.001	0.001	0.044
956	0	0	100	0	0	0	0	0	0	0	0	0	0.03	0
957	0	0	100	0	0.023	0	0	0	0	0	0	0	0	0.023
958	0	0	100	0	0	0	0	0	0	0	0.021	-0.003	-0.001	0
959	0	0	100	0	0.001	0	0	0	0	0	0	0.065	0.036	0.001
960	0	0	100	0	0	0	0	0	0	0	0	0.12	0.019	0
961	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.054	-0.001
962	0	0	100	0	0	0	0	0	0	0	0	0	0.065	0
963	0	0	100	0	-0.008	0	0	0	0	0	0	0	0.105	-0.008
964	0	0	100	0	0.026	0	0	0	0	0	0	0	0	0.026
965	0	0	100	0	0.055	0	0	0	0	0	0	0	0	0.055
966	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.043	-0.001
967	0	0	100	0	0.028	0	0	0	0	0	0	0	0.002	0.028
968	0	0	100	0	0.063	0	0	0	0	0	0	0	0	0.063
969	0	0	100	0	0	0	0	0	0	0	0	0	0	0
970	0	0	100	0	0	0	0	0	0	0	0	0	0	0
971	0	0	100	0	0.02	0	0	0	0	0	0	0	0	0.02
972	0	0	100	0	0.094	0	0.005	0.012	-0.001	0	-0.001	0	0.002	0.094
973	0	0	100	0	0	0	0	0	0.005	0	0	0.104	-0.008	0
974	0	0	100	0	0.001	0	0	0	0	0	0	0.544	0.226	0.001
975	0	0	100	0	0.072	0	0	0	0	0	0	0	0	0.072
976	0	0	100	0	0	0	0	0	0	0	0	0	0	0
977	0	0	100	0	0	0	0	0	0	0	0	0.015	0	0
978	0	0	100	0	0	0	0	0	0	0	0	0	0.014	0
979	0	0	100	0	-0.002	0	0	0	0	0	0	0.022	-0.001	-0.002
980	0	0	100	0	0.001	0	0	0	0	0	0	0	0.03	0.001
981	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.001	-0.001
982	0	0	100	0	0.008	0	0	0	0	0	0	0	0.027	0.008
983	0	0	100	0	0.082	0	0	0	0	0	0	0	0	0.082
984	0	0	100	0	-0.008	0	0	0	0	0	0	0	0.102	-0.008
985	0	0	100	0	0	0	0	0	0	0	0	0.001	0.026	0
986	40	0	60	0	0.131	0	0	0	0	0	0	0	0	0.131
987	0	0	100	0	0	0	0	0	0	0	0	0	0.024	0
988	0	0	100	0	0	0	0	0	0	0	0	0	0	0
989	0	0	100	0	0.001	0	0	0	0	0	0	0	0.061	0.001
990	0	0	100	0	0	0	0	0	0	0	0	0	0.052	0
991	0	0	100	0	0.05	0	0	0	0	0	0	0	0.001	0.05
992	0	0	100	0	0.004	0	0	0	0	0	0	0	0.047	0.004
993	0	0	100	0	0.047	0	0	0	0	0	0	0	0	0.047
994	0	0	100	0	0.001	0	0	0	0	0	0	0	0.054	0.001
995	0	0	100	0	0.049	0	0	0	0	0	0	0	0	0.049
996	0	0	100	0	0.078	0	0	0	0	0	0	0	0.001	0.078
997	0	0	100	0	0.17	0	0	0	0	0	0	0	0	0.17
998	0	0	100	0	0.016	0	0	0	0	0	0	0	0	0.016

Sort Ref	Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
(1)	Current Actual or Projected Purpose Allocation Quality (66)	Current Actual or Projected Purpose Allocation Base (67)	Current Actual or Projected Purpose Allocation ESL (68)	Current Actual or Projected Purpose Allocation Growth (69)	Current Actual or Projected IRE Allocation Water (70)	Current Actual or Projected IRE Allocation Sewerage (71)	Nominated Output (72)
798	0	0	0	100	0	0	01
799	0	0	0	100	0	0	01
800	0	0	0	100	0	0	
801	0	0	0	100	0	0	01
802	0	0	0	100	0	0	01
803	0	0	0	100	0	0	01
804	63	37	0	0	0	37	01
805	0	0	0	100	0	0	01
806	0	0	0	100	0	0	01
807	0	0	0	100	0	0	01
808	0	0	0	100	0	0	01
809	0	0	0	100	0	0	01
810	0	0	0	100	0	0	01
811	0	0	0	100	0	0	01
812	0	22	0	78	0	22	
813	0	0	0	100	0	0	01
814	0	0	0	100	0	0	01
815	0	0	0	100	0	0	01
816	0	0	0	100	0	0	
817	0	0	0	100	0	0	01
818	0	0	0	100	0	0	
819	0	0	0	100	0	0	01
820	0	0	0	100	0	0	
821	0	0	0	100	0	0	
822	0	0	0	100	0	0	01
823	0	0	0	100	0	0	01
824	0	0	0	100	0	0	01
825	0	28	38	34	0	28	01
826	0	100	0	0	0	100	01
827	0	0	0	100	0	0	
828	0	0	0	100	0	0	
829	0	0	0	100	0	0	
830	0	0	0	100	0	0	
831	0	0	0	100	0	0	
832	0	0	0	100	0	0	
833	0	0	0	100	0	0	01
834	0	0	0	100	0	0	01
835	0	100	0	0	0	100	01
836	0	0	0	100	0	0	01
837	0	0	0	100	0	0	01
838	0	0	0	100	0	0	01
839	0	0	0	100	0	0	
840	0	0	0	100	0	0	01
841	0	0	0	100	0	0	01
842	0	0	0	100	0	0	01
843	0	0	0	100	0	0	01
844	0	0	0	100	0	0	01
845	0	0	0	100	0	0	01
846	0	0	0	100	0	0	01
847	0	0	0	100	0	0	01
848	0	0	0	100	0	0	01
849	0	0	0	100	0	0	01
850	0	0	0	100	0	0	01
851	0	0	0	100	0	0	01
852	0	0	0	100	0	0	01
853	0	0	0	100	0	0	01
854	40	20	0	40	20	0	01
855	0	0	0	100	0	0	
856	0	0	0	100	0	0	
857	0	0	0	100	0	0	01
858	0	8	76	16	0	8	
859	0	0	0	100	0	0	
860	0	0	0	100	0	0	01
861	0	0	0	100	0	0	01
862	0	0	0	100	0	0	
863	0	0	0	100	0	0	
864	0	0	0	100	0	0	
865	0	0	0	100	0	0	
866	0	10	0	90	0	10	01
867	0	0	0	100	0	0	01
868	76	24	0	0	0	18	01
869	0	0	0	100	0	0	
870	0	0	40	60	0	0	01
871	0	0	0	100	0	0	01
872	0	0	0	100	0	0	01
873	0	100	0	0	0	100	01
874	0	0	0	100	0	0	01
875	0	0	0	100	0	0	01
876	0	100	0	0	0	100	01
877	0	0	0	100	0	0	01
878	0	0	0	100	0	0	
879	0	0	0	100	0	0	
880	0	0	0	100	0	0	01
881	0	0	0	100	0	0	01
882	0	0	0	100	0	0	01
883	0	0	0	100	0	0	
884	0	0	0	100	0	0	01
885	0	0	0	100	0	0	01
886	0	0	0	100	0	0	01
887	0	0	0	100	0	0	
888	0	0	0	100	0	0	01
889	0	0	0	100	0	0	01
890	0	0	0	100	0	0	01
891	0	0	0	100	0	0	01
892	0	0	0	100	0	0	
893	0	0	0	100	0	0	
894	0	0	0	100	0	0	
895	0	0	0	100	0	0	01
896	100	0	0	0	0	0	01
897	0	0	0	100	0	0	01
898	0	0	0	100	0	0	01
899	10	40	0	50	0	0	08
900	0	100	0	0	0	0	01
901	100	0	0	0	0	0	01
902	0	0	100	0	0	0	01
903	0	0	100	0	0	0	01
904	43	26	0	31	0	0	01
905	0	17	0	83	0	15	01
906	72	28	0	0	0	28	01
907	0	0	0	100	0	0	01
908	0	0	0	100	0	0	01
909	0	0	0	100	0	0	01
910	0	0	0	100	0	0	01
911	0	0	0	100	0	0	01
912	0	0	0	100	0	0	01
913	0	0	0	100	0	0	01
914	0	0	0	100	0	0	01
915	0	0	0	100	0	0	01
916	0	0	0	100	0	0	01
917	0	0	0	100	0	0	01
918	0	0	0	100	0	0	01
919	0	0	0	100	0	0	01
920	0	0	0	100	0	0	01
921	0	0	0	100	0	0	01
922	0	0	0	100	0	0	01
923	0	0	0	100	0	0	
924	0	0	0	100	0	0	
925	0	0	0	100	0	0	
926	0	0	0	100	0	0	
927	0	0	0	100	0	0	
928	0	0	0	100	0	0	01
929	0	0	0	100	0	0	01
930	0	0	0	100	0	0	01
931	0	0	0	100	0	0	01
932	0	0	0	100	0	0	01
933	0	0	0	100	0	0	
934	0	0	0	100	0	0	
935	0	0	0	100	0	0	
936	0	0	0	100	0	0	
937	0	0	0	100	0	0	01
938	0	0	0	100	0	0	01
939	0	0	0	100	0	0	
940	0	0	0	100	0	0	
941	0	0	0	100	0	0	01
942	0	0	0	100	0	0	
943	0	0	0	100	0	0	
944	0	0	0	100	0	0	01
945	0	0	0	100	0	0	01
946	0	0	0	100	0	0	01
947	0	0	0	100	0	0	01
948	0	0	0	100	0	0	01
949	0	0	0	100	0	0	01
950	0	0	0	100	0	0	
951	0	0	0	100	0	0	01
952	0	0	0	100	0	0	01
953	0	0	0	100	0	0	01
954	0	0	0	100	0	0	01
955	0	0	0	100	0	0	01
956	0	0	0	100	0	0	01
957	0	0	0	100	0	0	
958	0	0	0	100	0	0	01
959	0	0	0	100	0	0	01
960	0	0	0	100	0	0	01
961	0	0	0	100	0	0	01
962	0	0	0	100	0	0	01
963	0	0	0	100	0	0	01
964	0	0	0	100	0	0	
965	0	0	0	100	0	0	
966	0	0	0	100	0	0	01
967	0	0	0	100	0	0	
968	0	0	0	100	0	0	
969	0	0	0	100	0	0	
970	0	0	0	100	0	0	
971	0	0	0	100	0	0	01
972	0	0	0	100	0	0	01
973	0	0	0	100	0	0	01
974	0	39	0	61	0	39	01
975	0	0	0	100	0	0	01
976	0	0	0	100	0	0	01
977	0	0	0	100	0	0	01
978	0	0	0	100	0	0	01
979	0	0	0	100	0	0	01
980	0	0	0	100	0	0	01
981	0	0	0	100	0	0	01
982	0	0	0	100	0	0	01
983	0	0	0	100	0	0	01
984	0	0	0	100	0	0	01
985	0	0	0	100	0	0	01
986	0	0	0	100	0	0	01
987	0	0	0	100	0	0	01
988	0	0	0	100	0	0	01
989	0	0	0	100	0	0	01
990	0	0	0	100	0	0	01
991	0	0	0	100	0	0	01
992	0	0	0	100	0	0	01
993	0	0	0	100	0	0	01
994	0	0	0	100	0	0	01
995	0	0	0	100	0	0	
996	0	0	0	100	0	0	
997	0	0	0	100	0	0	
998	0	0	0	100	0	0	01

Project Identification										Baseline Milestone Dates						
Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign-off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
999	2018_19 Q4	KR698	Lands Adj to McKinney House Musgrave Pk F&S Sewer	00	KI551		07	24								
1000	2018_19 Q4	KR705	Castlehill Farm Ballygowan Rd Castlereagh Foul Sewer	00	KI551		07	24								
1001	2018_19 Q4	KS916	Flying Horse Rd, Downpatrick Sewer Extension	00	KI551		07	24	DRD							
1002	2018_19 Q4	KS961	Cronstown Road, Newtownards, Storm Sewer Upgrade	00	KI551		07	24								
1003	2018_19 Q4	KS963	Skipperstone Road, Bangor, Foul & Storm Sewer Requisition	00	KI551		07	24								
1004	2018_19 Q4	KS967	41 High Bangor Rd, Donaghadee - Foul Sewer Requisition.	00	KI551		07	24								
1005	2018_19 Q4	KS969	Glenford Grove, Newtownards - Foul & Storm Sewer Extension	00	KI551		07	24								
1006	2018_19 Q4	KS970	SEC-1833 Hunters Mill, Downpatrick Art11	00	KI551		07	24								
1007	2018_19 Q4	KS973	North Rd, Newtownards Storm Sewer Extension	06	KI551		07	24								
1008	2018_19 Q4	KS980	37-45 Downpatrick Street Crossgar storm sewer	00	KI551		07	24								
1009	2018_19 Q4	KS985	Royal Hotel 26-28 Quay Street Bangor, Storm Sewer Extension.	06	KI551		07	24								
1010	2018_19 Q4	KT424	Hillsborough Rd, Dromara Storm Sewer	00	KI551		07	24								
1011	2018_19 Q4	KT426	Derriaghy Rd, Lisburn - Storm Sewer Extension	00	KI551		07	24								
1012	2018_19 Q4	KT427	Lurgan Road, Moira - Storm Sewer Extension	00	KI551		07	24								
1013	2018_19 Q4	KT429	Windmill Lane, Ballynahinch Storm Sewer Requisition	00	KI551		07	24								
1014	2018_19 Q4	KT430	Hulls Lane Lisburn storm sewer extension	00	KI551		07	24								
1015	2018_19 Q4	KT431	Strawberry Hill Ballynahinch Road Lisburn	00	KI551		07	24								
1016	2018_19 Q4	KT432	52-58 Main Street Glenavy, storm sewer extension.	06	KI551		07	24	DRD							
1017	2018_19 Q4	KI554	Energy Efficiency at WwTW's Screw Pumps	00			09	02								
1018	2018_19 Q4	KI555	Stormwater Seperation Programme for PC15	04			07	12	DRD							
1019	2018_19 Q4	KI556	Small Rural WWTW Programme - PC15(2015-2021)	04			09	17	NIEA							
1020	2018_19 Q4	KI557	PC15 Year 1 WWTW Base Maintenance – West Region	06			09	02								
1021	2018_19 Q4	KI558	Engineering Specifications Standards.	04			15	20								
1022	2018_19 Q4	KI559	PC15 Year 1 WWTW Base Maintenance - East Region	06			09	02								
1023	2018_19 Q4	KI560	PC15 Year 1 WWTW Base Maintenance – South Region	06			09	02								
1024	2018_19 Q4	KI561	PC15 Year 1 WWTW Base Maintenance – North Region	06			09	02								
1025	2018_19 Q4	KI562	PC15 Year 1 WwPS Base Maintenance	06			12	02								
1026	2018_19 Q4	KI563	Base Maintenance Associated to DG5 Investigations	00			07	12								
1027	2018_19 Q4	KI564	Appraisal of DG5 At-Risk Register Locations (Mitigation Phase 5)	04			07	12	DRD							
1028	2018_19 Q4	KI565	PC15 PSCEMD (Sewerage)	00			09	16								
1029	2018_19 Q4	KI568	Polluted Stormwater Outfall Solutions - Phase 2	00			07	12								
1030	2018_19 Q4	KI571	Asset Resilience Phase 3-Coastal Wastewater Treatment Works	06			09	02								
1031	2018_19 Q4	KI573	DG5 Programme - Parent Code	06			07	12	UR							
1032	2018_19 Q4	KI575	PC15 (Sub Programme 12) Bathing Water and Shellfish Water compliance	06			07	12								
1033	2018_19 Q4	KI576	PC15 (Sub Programme 16) Bathing Water and Shellfish Water compliance	06			09	16								
1034	2018_19 Q4	KI577	PC15 UID Programme Parent	06			07	12								
1035	2018_19 Q4	KI578	PC15 Appraisal of NIW infrastructure at Railways, DRD Road & Pipe Bridge	06			07	24								
1036	2018_19 Q4	KI581	PC15 FTS (Sewerage) Parent EP	06			07	24								
1037	2018_19 Q4	KI582	PC15 Public Realm (Sewerage) Parent EP	06			07	24								
1038	2018_19 Q4	KI583	PC15 Implementation of PC13 Odour & IPPC Strategy	06			10	16	UR							
1039	2018_19 Q4	KI584	PC15 Review of Sludge, IPPC and Odour Strategies	06			10	02	UR							
1040	2018_19 Q4	KI585	Wastewater Marine Investment Scoping Study	06			09	16								
1041	2018_19 Q4	KI586	PC15 Year 2 WwPS Base Maintenance	06			12	02								
1042	2018_19 Q4	KI589	CMP Project : Improving Capability in Capital Maintenance Planning during	06			15	20	UR							
1043	2018_19 Q4	KI591	Pitch Fibre Sewer Replacement	06			07	12								
1044	2018_19 Q4	KI592	Sampling and Analysis for WwTW PC15	00			14	02								
1045	2018_19 Q4	KI593	Independent Review of Annsborough WwTW Pollution Incident	06			14	02								
1046	2018_19 Q4	KI594	PC15 Year 3 WwPS Base Maintenance	06			12	02								
1047	2018_19 Q4	KI595	Fire Safety Regulation Compliance	06			15	20								
1048	2018_19 Q4	KI596	CSO Monitoring Within Shellfish and Bathing Water Areas	06			07	12								
1049	2018_19 Q4	KI597	Marine Modelling, Bathing Waters (WwTW and Sewerage System)	06			09	16								
1050	2018_19 Q4	KI598	Marine Modelling, Shellfish Waters Excluding Belfast Lough (WwTW and S	06			09	16								
1051	2018_19 Q4	KI599	Marine Modelling, Shellfish Waters Including Belfast Lough (WwTW and Se	06			09	16								
1052	2018_19 Q4	KI601	Strategic Sewerage Network Modelling, Bathing Waters Excluding Belfast L	06			07	12								
1053	2018_19 Q4	KI603	Strategic Sewerage Network Modelling, Shellfish Waters Excluding Belfast	06			07	12								
1054	2018_19 Q4	KI604	Strategic Sewerage Network Modelling, Shellfish and Bathing Waters, Belfa	06			07	12								
1055	2018_19 Q4	KI607	NI Long Term Sludge Strategy	06			11	02								
1056	2018_19 Q4	KI608	Programme and Cost Management	06			15	01								
1057	2018_19 Q4	KI609	Integrated Delivery Services.	06			15	09								
1058	2018_19 Q4	KI610	Asset Performance Service	06			14	02								
1059	2018_19 Q4	KI611	Missing Data From CAR	06			15	20								
1060	2018_19 Q4	KI613	PC21 Preparedness and Assistance in Cost Setting	06			07	20								
1061	2018_19 Q4	KI614	PC15 Year 4 WWPS Base Maintenance	06			12	02								
1062	2018_19 Q4	KI616	GRP Feasibility study	06			15	02								
1063	2018_19 Q4	KI621	Investment Planning and Costing Services	00			15	02								
1064	2018_19 Q4	KI626	PC21 Energy Efficiency Programme	06			07	02	UR							
1065	2018_19 Q4	KI627	Provision of professional services for Strategic Client	00			14	20								
1066	2018_19 Q4	KI628	NIAMP5 Project Support	06			15	20								
1067	2018_19 Q4	KI629	First Time Services Programme	06			07	24								
1068	2018_19 Q4	KI630	Wastewater modelling for new development	06			07	24								
1069	2018_19 Q4	KI631	Appointment of Technical Specialist for CNI Alarm Systems Review	00			06	02								
1070	2018_19 Q4	KI633	Asbestos Surveys of NIW Sites	06			15	20								
1071	2018_19 Q4	KL325	Drumahoe Sewerage Scheme PM & Gravity Sewers	00			07	12	NIEA			23/01/2006	30/11/2006		30/11/2006	30/11/2007
1072	2018_19 Q4	KL345	Donnybrewer WwTW	01			09	15	NIEA			31/03/2009	15/12/2009		15/12/2009	15/12/2010
1073	2018_19 Q4	KL350	Benone Area Sewerage	01			09	16	NIEA			12/12/2011	31/10/2013		31/12/2013	31/12/2014
1074	2018_19 Q4	KL351	Caw Development	06			07	24								
1075	2018_19 Q4	KL386	Gortnahey WwTW	05			09	16				01/04/2011	30/03/2014		30/06/2014	30/06/2016
1076	2018_19 Q4	KL394	Drumsurn WwTW	06			09	16				01/07/2011	28/02/2015		31/03/2015	30/03/2016
1077	2018_19 Q4	KL428	Londonderry Sewer Imps Stage 2 - Duke St PS Group Schemes	01			07	11	NIEA	11/01/2010	25/01/2010	03/05/2010	28/03/2011		28/03/2011	27/03/2012
1078	2018_19 Q4	KL449	Londonderry DAP: Strathfoyle & Drumahoe Work package: Drumahoe Old	01			07	11	NIEA	17/09/2009	25/09/2009	01/06/2009	02/09/2010		02/09/2010	31/03/2011
1079	2018_19 Q4	KL450	Londonderry DAP: Strathfoyle & Drumahoe Work package: Caw PS	01			07	11	NIEA	06/11/2009	16/11/2009	14/12/2009	01/07/2010		01/07/2010	31/03/2011
1080	2018_19 Q4	KL455	Londonderry DAP: Sewers Rehab Phase1	01			07	12	NIEA	13/01/2010	27/01/2010	08/02/2010	03/10/2011		03/10/2011	02/10/2012
1081	2018_19 Q4	KL456	Londonderry DAP: Sewers Rehab Phase2	01			07	11	NIEA	09/11/2009	16/11/2009	01/03/2010	28/03/2011		28/03/2011	27/03/2012
1082	2018_19 Q4	KL473	M&E Capital Maintenance - Culmore WWTW	01			09	02	UR	21/06/2011	04/07/2011	03/10/2011	25/09/2012		25/09/2012	25/09/2013
1083	2018_19 Q4	KL480	Faughan Crescent WWPS, Londonderry. Pumping station and Pumping ma	01			12	12	NIEA							
1084	2018_19 Q4	KL481	Dungiven WWTW Inlet Sewer Hydraulic Assessment/Upgrade.	00			07	16								
1085	2018_19 Q4	KL482	Tamnaherin WWTW Feasibility Study	04			09	16	NIEA			30/01/2012	28/02/2013		28/02/2013	28/02/2014
1086	2018_19 Q4	KL496	Feeny WwTW Replacement of Secondary Treatment	05			09	16	DRD			03/12/2012	01/12/2013		31/03/2014	30/03/2015
1087	2018_19 Q4	KL503	Benone Upgrade of Vacuum Sewerage Network & Foul Vacuum Station	00			07	12	DRD							
1088	2018_19 Q4	KL504	Londonderry DAP : Buncrana Road Work Package, Stage 2	02			07	12	NIEA							
1089	2018_19 Q4	KL505	Ard Na Smoll, Dungiven, Storm Sewer Extension	00			07	24	DRD							
1090	2018_19 Q4	KL506	Donnybrewer WWTW's Phase 2 Base Maintenance	00			09	02	DRD							
1091	2018_19 Q4	KL511	Foyle Street, Londonderry Feasibility Study	00			07	12	DRD							
1092	2018_19 Q4	KL512	Benone WWTW Modelling of Outfall Discharge	02			08	16								
1093	2018_19 Q4	KL515	Dernaflaw WWTWs Feasibility Study	04			09	16	NIEA							
1094	2018_19 Q4	KL516	Queens Quay CSO Extension	00			07	12	DRD							
1095	2018_19 Q4	KL518	Ballynagard, Derry, Culmore Trunk Sewer Stabilization	00			07	12	DRD							
1096	2018_19 Q4	KL521	Clooney WwPS Upgrade Magilligan	06			12	12	DRD							
1097	2018_19 Q4	KL524	Bleachgreen WWPS, Londonderry, Upgrade/Replacement	04			12	12	NIEA							
1098	2018_19 Q4	KL525	Dunfield Terrace, Londonderry, Drop Shaft Rehabiliation.	00			07	02								
1099	2018_19 Q4	KL527	Manorwood WWPS Replacement	06			07	12								
1100	2018_19 Q4	KL533	Cottage Row , Eglinton, WWPS, Upgrade/Replace.	06			12	12								
1101	2018_19 Q4	KL537	Glencaw Park, Derry, Flood Alleviation Feasibility Study	06			07	12	UR							
1102	2018_19 Q4	KL538	Sheelin Park Flood Alleviation	06			07	12	UR							
1103	2018_19 Q4	KL539	Craigavon Bridge PM Enhancement	06			07	02								
1104	2018_19 Q4	KL541	Lisnafin wwps	06			12	02								
1105	2018_19 Q4	KL542	Ballymagorry Wwps	06			12	02								
1106	2018_19 Q4	KL543	Limavady Catchment Upgrade To Address New Development And External	06			07	12								
1107	2018_19 Q4	KL549	Gelvin Grange NIE upgrade	06			15	20								
1108	2018_19 Q4	KL551	115-123 Main Street Dungiven, Storm Sewer Extension Requisition	06			07	24								
1109	2018_19 Q4	KL552	Top of the Hill Trench Rd Londonderry Foul Sewer	00			07	24								
1110	2018_19 Q4	KL553	TIDAL INGRESS --Foyle estuary	00			07	02								
1111	2018_19 Q4	KL554	Skeoge Lands - Glengalliagh PS	06			07	24								
1112	2018_19 Q4	KL555	29-35 Strand Rd L'Derry Storm Sewer	00			07	24								
1113	2018_19 Q4	KL556	Glenshane Rd Braidwater Foul Storm	06			07	24								
1114	2018_19 Q4	KL557	Rossbay & Caw Park Londonderry, Storm Sewer Extension	06			07	24								
1115	2018_19 Q4	KL558	Nazareth House, L'derry Storm Sewer	00			07	24								
1116	2018_19 Q4	KN155	Bready	01			09	24								
1117	2018_19 Q4	KN574	Ballybrack Road Foul Sewer Extension	00			07	24				02/11/2009	12/02/2010		12/02/2010	12/02/2010
1118	2018_19 Q4	KN596	BALLYMAGORRY WwTWs	06			14	16				01/04/2013	19/01/2015		28/03/2015	28/03/2016
1119	2018_19 Q4	KN599	Donaghmore WwTW Upgrade	06			14	16	NIEA			01/04/2012	30/09/2014		31/12/2014	31/12/2015
1120	2018_19 Q4	KN622	Omagh WWTW - Nutrient Reduction	01			09	16	NIEA			25/07/2011	30/03/2012		30/03/2012	30/03/2013
1121	2018_19 Q4	KN628	Carrickmore WWPS Upgrade Including Replacement of Pumping Main	00			12	02								
1122	2018_19 Q4	KN630	Drumquin WWTW Feasibility Study	02			09	16	NIEA							
1123	2018_19 Q4	KN647	Lough Macrory WWTW- Feasibility Study	06			14	16	NIEA							
1124	2018_19 Q4	KN655	Mountfield WWTW's Appraisal Study	04			09	16	NIEA							
1125	2018_19 Q4	KN656	Castle Archdale WWTW	04			09	16	NIEA							
1126	2018_19 Q4	KN657	Victoria Bridge WWTWs Feasibility Study	04			09	16	NIEA							
1127	2018_19 Q4	KN658	Ardstraw WWTW Feasibility Study	04			09	16	NIEA							
1128	2018_19 Q4	KN661	Beragh Storm Pumping Station Design	03			12	12	DRD							
1129	2018_19 Q4	KN666	Berryhill Rd, Artigarvan, Sewer Remediation	06			07	12								
1130	2018_19 Q4	KN667	Strathroy Link Road, Omagh	00			03	23								
1131	2018_19 Q4	KN668	Killynure Wood, Enniskillen Storm sewer	00			07	24								
1132	2018_19 Q4	KN673	B016820 Mountainview Drive Lisnaskea	00			07	24								
1133	2018_19 Q4	KN674	Crevanagh Rd Omagh, Storm sewer extension requisition.	06			07	24								
1134	2018_19 Q4	KN676	Woodside Avenue Omagh Storm Sewer	00			07	24								
1135	2018_19 Q4	KN677	Ballagh Rd Fivemiletown, Storm Sewer Extension Requisition	06			07	24								
1136	2018_19 Q4	KN679	Moyle Road, Newtownstewart Storm Sewer	00			07	24								
1137	2018_19 Q4	KO170	Lough Road, Lurgan	01			07	24								
1138	2018_19 Q4	KP299	Enniskillen WwTW	01			09	15	NIEA			05/11/2007	11/02/2010		11/02/2010	11/02/2011
1139	2018_19 Q4	KP350	Ballinaleck - RBC Installations West & South	01			07	24	UR			05/02/2007	14/07/2008		14/07/2008	14/07/2009
1140	2018_19 Q4	KP586	Clabby WwTWs	06			14	16				30/06/2013	30/09/2015		31/12/2014	31/12/2015
1141	2018_19 Q4	KP668	Lisnarrick WWTW Feasibility Study	06			09	16	NIEA			14/03/2014	28/02/2015		30/04/2015	30/04/2016
1142	2018_19 Q4	KP677	Tamlaght Road WWPS, Omagh, Feasibility Study	00			12	12	DRD							
1143	2018_19 Q4	KP680	Rossory WWPS Upgrade Feasibility Study	00			07	12	DRD							
1144	2018_19 Q4	KP684	Dannys Mill Road Enniskillen Sewer Rehabilitation	00			07	12	DRD							
1145	2018_19 Q4	KP687	Monea WWTWs Appraisal	04			09	16	NIEA							
1146	2018_19 Q4	KP689	Ballygawley WWTWs Feasibility Study	04			09	16	NIEA							
1147	2018_19 Q4	KP693	Tullynagarn WWPS Feasibility Study	00			12	12	DRD							
1148	2018_19 Q4	KP695	Rossory WWPS, Pumping Main Extension and Replacement.	06			07	12								
1149	2018_19 Q4	KP696	Enniskillen DAP Stage 4	06			07	12	UR							
1150	2018_19 Q4	KP697	PC15 Year 2 WWTW Base Maintenance – West Region	06			09	02								
1151	2018_19 Q4	KP698	PC15 Year 3 WwTW Capital Maintenance - West Region	06			09	02								
1152	2018_19 Q4	KP699	South West College(Old Erne Hospital Site), Foul & Storm sewer extension	06			07	24								
1153	2018_19 Q4	KP700	PC15 Year 4 WwTW Base Maintenance – West Region	06			09	02								
1154	2018_19 Q4	KP701	PC15 Year 5 WwTW Base Maintenance - West Region	06			09	02								
1155	2018_19 Q4	KR235	Knock Valley Relief Sewer	00			07	24								
1156	2018_19 Q4	KR310	Newtownbreda WwTW	01			09	15	NIEA			30/10/2009	04/08/2010		04/08/2010	04/08/2011
1157	2018_19 Q4	KR313	Lisbarnet WwTW	01			09	15	NIEA			14/03/2008	26/02/2010		26/02/2010	31/08/2012
1158	2018_19 Q4	KR323	Ligoniel Sewerage Scheme	00			07	12				29/06/2007	01/02/2008		01/02/2008	31/01/2009
1159	2018_19 Q4	KR409	Moneyreagh WwTW	05			07	16	NIEA			24/09/2012	05/07/2013		05/07/2013	05/07/2014
1160	2018_19 Q4	KR441	Montgomery Rd, Flood Alleviation	01			07	12	NIEA	15/11/2010	19/11/2010	17/01/2011	31/07/2012		31/07/2012	31/07/2013
1161	2018_19 Q4	KR442	Glenmachan Street WWPS Strategic Investigations	00			14	02	UR							
1162	2018_19 Q4	KR484	Safety improvements on out of service pumping stations in Belfast	00			12	02	UR							
1163	2018_19 Q4	KR500	KR500 Greystown Avenue & Upper Malone Road Flood Alleviation - Glenm	00			07	12	DRD							
1164	2018_19 Q4	KR507	Commercial Way, Newtownabbey DG5 At-Risk-Register	00			07	12	UR							
1165	2018_19 Q4	KR512	Bank Square, Belfast, Environmental Improvements Scheme	00			07	12	DRD	16/07/2012	09/08/2012	01/10/2012	16/11/2012		16/11/2012	16/11/2013
1166	2018_19 Q4	KR519	Millbay WWPS Flow Survey	00			07	12	NIEA							
1167	2018_19 Q4	KR523	24-30 Redfort Drive, Carrickfergus, DG5 Study.	00			07	12	UR							
1168	2018_19 Q4	KR527	Greenisland WWTW Effluent Discharge Pipe - Feasibility Study	00			09	02	DRD							
1169	2018_19 Q4	KR529	Park Parade, Ormeau Embankment, Belfast, Storm Sewer Extension	00			07	24	DRD							
1170	2018_19 Q4	KR530	Belfast WWTW Base Maintenance - Phase 2	00			09	02	DRD	11/05/2012	24/05/2012	08/03/2013	19/12/2014		19/12/2014	19/12/2015
1171	2018_19 Q4	KR531	Park Road, Belfast Sewer Replacement	00			07	12	DRD							
1172	2018_19 Q4	KR534	Carrowdore WWTW - Phase 2 Base Maintenance	00			09	02	DRD							
1173	2018_19 Q4	KR535	New Holland WWTW's Phase 2 Base Maintenance	00			09	02	DRD							
1174	2018_19 Q4	KR536	Newtownbreda WWTW's Phase 2 Base Maintenance	00			09	02	DRD							
1175	2018_19 Q4	KR538	Dunmurry WWTW's Phase 2 Base Maintenance	00			09	02	DRD							
1176	2018_19 Q4	KR539	Moneyreagh WWTWs Phase 2 Base Maintenance	00			09	02	DRD							
1177	2018_19 Q4	KR540	Mill Rd, Newtownabbey Foul and Storm Sewer	00			07	24	DRD							
1178	2018_19 Q4	KR542	Cyprus Avenue, Belfast Sewer Rehabilitation	00			07	12	DRD							
1179	2018_19 Q4	KR543	Ebor Street, Storm Sewer	00			07	24	DRD							
1180	2018_19 Q4	KR549	Nettlehill Road, Lisburn - Storm Sewer	00			07	24	DRD							
1181	2018_19 Q4	KR556	Compliance with The Surface Waters (Shellfish)(Classification)(Amendmen	02			09	16	NIEA							
1182	2018_19 Q4	KR557	Brians Well Road, Poleglass Foul Sewer Extension	00			07	24	DRD							
1183	2018_19 Q4	KR560	Orchardville and Finaghy Road North, Belafst Sewer Rehabilitation	00			07	12	DRD							
1184	2018_19 Q4	KR561	Orchardville WWPS Appraisal of Pumped Overflow and Inlet Sewer Upgrad	00			07	12	DRD							
1185	2018_19 Q4	KR562	Sicily Park Belfast Sewer Diversions from Storm Culvert	00			07	12	DRD							
1186	2018_19 Q4	KR568	Loughries WWTWs Appraisal	04			09	16	NIEA							
1187	2018_19 Q4	KR570	Sydenham WWPS Appraisal	03			13	02	DRD							
1188	2018_19 Q4	KR576	Belfast WWTW PLC Upgrade	03			09	02	DRD							
1189	2018_19 Q4	KR579	22 Upper Lisburn Rd, Belfast Storm Sewer	00			07	24								
1190	2018_19 Q4	KR586	Maryville Avenue, Belfast, DG5 Appraisal	06			07	12	UR							
1191	2018_19 Q4	KR588	Ravenhill Avenue, Belfast, Sewer Upgrades	06			07	12	UR							
1192	2018_19 Q4	KR594	Springwell Park, Groomsport	00			07	12								
1193	2018_19 Q4	KR599	Belfast WwTW Appraisal Study	06			09	16	NIEA							
1194	2018_19 Q4	KR605	Upper Newtownards Road, Belfast, Sewer Upgrade to Address DG5 Proper	04			07	12	UR							
1195	2018_19 Q4	KR606	Eastleigh Dale/Pasadena Gardens, Belfast, Sewer Upgrade for DG5 remov	06			07	12	UR							
1196	2018_19 Q4	KR608	Ravenhill Road, Belfast, Trunk Sewer Investigations and Emergency Repai	05			07	12								
1197	2018_19 Q4	KR610	432 Crumlin Rd, Belfast - Storm Sewer Ext	00			07	24								
1198	2018_19 Q4	KR614	Greencastle WwPS - Pumping Main Breach	03			07	24								
1199	2018_19 Q4	KR618	152 - 154 Larne Rd, Carrickfergus	00			07	24								

	Baseline Service Cost Allocation				Baseline Expenditure Profile (£m 2012-13 prices)									Baseline Purpose Allocation			
Sort Ref	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	18	19	20	21	22	23	24	25	26	27	28	29	30	36	37	38	39
1001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1019	0	0	0	100	0	0	0	0	0	1.894990227	1.883620286	1.872318564	1.861084653	50	40	0	10
1028	0	0	0	100	0	0	0	0	0	0.2	0.2	0	0	100	0	0	0
1031	0	0	100	0	0	0	0	0	0	0	0	1.805826212	1.794991255	0	14	72	14
1032	0	0	100	0	0	0	0	0	0	1.18880412	1.181671295	1.502477593	1.089456093	100	0	0	0
1033	0	0	0	100	0	0	0	0	0	0.41968668	0.41716856	0.414665549	0.412177555	100	0	0	0
1034	0	0	52	48	0	0	0	0	0	0	0	0	0	60	30	0	10
1035	0	0	100	0	0	0	0	0	0	0.294632335	0.292864541	0.291107354	0.28936071	0	100	0	0
1036	0	0	100	0	0	0	0	0	0	2.5144224	2.499335866	2.575675874	2.469433811	0	0	0	100
1037	0	0	100	0	0	0	0	0	0	0.535248742	0.53203725	0.528845026	0.525671956	0	100	0	0
1038	0	0	0	100	0	0	0	0	0	0.92442	0.735098784	0.730688191	0.726304062	20	0	80	0
1039	0	0	0	100	0	0	0	0	0	0	0	0	0	0	100	0	0
1071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1072	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1073	0	0	18	82	0.254	1.30568746	4.04351344	0.94515118	0	0	0	0	0	46	18	0	36
1075	0	0	0	100	0	0.0097658	0.04954352	1.277106717	0.025088317	0	0	0	0	45	39	0	16
1076	0	0	0	100	0	0.00390632	0.03620488	0.092209871	1.214991362	0	0	0	0	15	67	0	18
1077	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1078	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1079	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1080	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1081	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1082	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1083	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1084	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1085	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1086	0	0	0	100	0	0	0.0381104	1.384992266	0.025984329	0	0	0	0	30	37	0	33
1087	0	0	78	22	0	0	0	0	0	0	0	0	0	27	16	0	57
1088	0	0	46	54	0	0	0	0	0	0	0	0	0	67.69050462	32.30949538	0	0
1089	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1090	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1092	0	0	0	100	0	0	0	0	0	0	0	0	0	0	100	0	0
1097	0	0	100	0	0	0	0	0	0	0.003	0.138	0.091	0	38	62	0	0
1099	0	0	100	0	0	0	0	0	0	0.017	0.235	0.004	0	40	20	0	40
1117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1118	0	0	0	100	0	0.01855502	0.00571656	1.097297468	0.725769176	0.354446136	0	0	0	32	23	0	45
1119	0	0	0	100	0	0.01562528	0.01333864	1.789793601	1.327888789	0.16197693	0	0	0	15	30	0	55
1120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1125	0	0	0	100	0	0	0	0	0	0	0	0.60610129	0	44	26	0	30
1138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1140	0	0	0	100	0	0.01171896	0.02286624	0.746899957	0.761609629	0.882114276	0	0	0	44	26	0	30
1141	0	0	0	100	0	0.01171896	0.0190552	0.055325923	1.039373141	0	0	0	0	40	40	0	20
1142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1149	0	0	78	22	0	0	0	0	0	0	0	0	0	27	16	0	57
1156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1159	0	0	60	40	0	0	0.3048832	0.76626403	0	0	0	0	0	67	0	0	33
1160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1170	0	0	0	100	0	0	0.08003184	1.014308584	2.956837385	0	0	0	0	0	100	0	0
1171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1184	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0
1190	0	0	100	0	0	0	0	0	0	0	0	0	0	0	51.51290174	48.48709826	0
1192	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0

	Current Actual or Projected Milestone Dates							Current Actual or Projected Service Cost Allocation			
Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign-off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure
1	40	41	42	43	44	45	46	47	48	49	50
999								0	0	100	0
1000								0	0	100	0
1001	27/01/2014	10/02/2014	20/02/2017	24/02/2017		03/03/2017	02/05/2017	0	0	100	0
1002	07/04/2016	07/04/2016						0	0	100	0
1003	08/03/2017	08/03/2017		12/06/2017		07/07/2017		0	0	100	0
1004	20/12/2016	23/12/2016	13/02/2017	08/08/2017				0	0	100	0
1005	07/12/2016	07/12/2016						0	0	100	0
1006								0	0	100	0
1007	16/04/2018	16/04/2018		30/11/2018		30/11/2018		0	0	100	0
1008								0	0	100	0
1009								0	0	100	0
1010	07/07/2017	07/07/2017						0	0	100	0
1011	24/04/2017	24/04/2017	12/03/2018	12/04/2018		16/04/2018	14/09/2018	0	0	100	0
1012	18/05/2017	18/05/2017						0	0	100	0
1013	11/08/2017	11/08/2017						0	0	100	0
1014	10/08/2017	10/08/2017	12/03/2018	30/03/2018		16/04/2018	05/12/2018	0	0	100	0
1015	24/10/2017	24/10/2017	15/10/2018	09/11/2018		12/11/2018	10/04/2019	0	0	100	0
1016	20/11/2017	20/11/2017						0	0	100	0
1017								0	0	0	100
1018								0	0	100	0
1019	04/02/2016	05/02/2016	03/04/2017			31/03/2021		0	0	0	100
1020	06/01/2015	08/01/2015						0	0	0	100
1021	29/07/2015	29/07/2015						10	25	25	40
1022	06/01/2015	08/01/2015	06/04/2015			26/05/2017		0	0	0	100
1023	06/01/2015	08/01/2015						0	0	0	100
1024	06/01/2015	08/01/2015						0	0	0	100
1025	09/03/2015	10/03/2015						0	0	0	100
1026	27/11/2014	01/12/2014	02/11/2015	30/03/2016		30/09/2016		0	0	100	0
1027	10/12/2018	10/12/2018						0	0	100	0
1028								0	0	0	100
1029	17/08/2018	22/08/2018						0	0	100	0
1030								0	0	0	100
1031	09/06/2016	10/06/2016						0	0	100	0
1032								0	0	100	0
1033								0	0	0	100
1034								0	0	52	48
1035								0	0	100	0
1036								0	0	100	0
1037								0	0	100	0
1038	14/06/2016	16/06/2016						0	0	0	100
1039								0	0	0	100
1040								0	0	50	50
1041	29/01/2016	02/02/2016						0	0	0	100
1042	14/12/2017	16/01/2018						25	25	25	25
1043								0	0	100	0
1044								0	0	0	100
1045								0	30	0	70
1046	20/02/2017	21/02/2017						0	0	0	100
1047	17/07/2017	01/08/2017	27/11/2017	13/04/2018		13/04/2018	23/04/2018	0	50	0	50
1048	30/08/2018	05/09/2018	24/09/2018					0	0	0	100
1049								0	0	50	50
1050								0	0	50	50
1051	27/02/2018	08/03/2018						0	0	50	50
1052	02/06/2017	16/06/2017						0	0	100	0
1053	02/06/2017	16/06/2017						0	0	100	0
1054	02/06/2017	16/06/2017						0	0	100	0
1055	13/04/2018	17/04/2018						0	0	0	100
1056								50	0	50	0
1057								0	50	50	0
1058	15/08/2017	17/10/2017						30	0	22	48
1059								10	25	15	50
1060								50	0	50	0
1061	25/01/2018	30/01/2018	01/10/2018			30/03/2019		0	0	0	100
1062	26/02/2019	26/02/2019						0	30	0	70
1063								0	50	0	50
1064								0	50	0	50
1065								25	25	25	25
1066								25	25	25	25
1067	17/10/2018	19/10/2018						0	0	100	0
1068								0	0	100	0
1069								0	50	0	50
1070								0	40	0	60
1071	12/01/2006	13/01/2006	23/01/2006			27/11/2006		0	0	100	0
1072	20/02/2009	27/02/2009	31/03/2009	06/01/2010		21/08/2012		0	0	0	100
1073	05/06/2009	11/06/2009	01/04/2014	16/09/2013		26/09/2014		0	0	18	82
1074								0	0	100	0
1075	30/07/2012	21/08/2012	12/08/2013	24/07/2014		27/11/2014	26/03/2015	0	0	0	100
1076	30/07/2012	21/08/2012	03/02/2014	16/12/2014		16/02/2015		0	0	0	100
1077	11/01/2010	25/01/2010	03/05/2010	28/03/2011		26/09/2011		0	0	100	0
1078	17/09/2009	25/09/2009	01/06/2009	02/09/2010		20/06/2011	31/03/2011	0	0	63	37
1079	06/11/2009	16/11/2009	14/12/2009	01/07/2010		28/06/2010	31/03/2011	0	0	83	17
1080	13/01/2010	27/01/2010	08/02/2010			28/05/2012		0	0	100	0
1081	09/11/2009	16/11/2009	01/03/2010	28/03/2011		28/03/2011		0	0	100	0
1082	21/06/2011	04/07/2011	03/10/2011	24/09/2012		15/10/2012		0	0	0	100
1083								0	0	20	80
1084								0	0	40	60
1085	30/11/2011	09/12/2011	30/01/2012	28/01/2013		21/10/2013	04/11/2014	0	0	0	100
1086	30/07/2012	21/08/2012	03/12/2012	29/07/2014		12/03/2015	26/03/2015	0	0	0	100
1087	18/04/2018	30/04/2018	03/09/2018					0	0	41	59
1088	06/12/2013	17/12/2013	04/09/2013	09/03/2017		31/08/2015	12/10/2017	0	0	46	54
1089	14/12/2012	21/12/2012						0	0	100	0
1090	19/11/2012	21/11/2012	29/03/2013	28/03/2014		27/06/2014	03/11/2014	0	0	0	100
1091								0	0	100	0
1092								0	0	0	100
1093								0	0	0	100
1094								0	0	100	0
1095								0	0	100	0
1096	16/06/2016	17/06/2016	21/11/2016	30/04/2018		30/11/2017	27/06/2018	0	0	0	100
1097	11/12/2015	14/12/2015						0	0	0	100
1098								0	0	100	0
1099	12/02/2016	19/02/2016						0	0	0	100
1100	02/10/2017	03/10/2017						0	0	35	65
1101	26/06/2018	26/06/2018						0	0	100	0
1102	01/09/2016	02/09/2016	03/10/2016	23/03/2017		07/04/2017		0	0	100	0
1103								0	0	100	0
1104								0	0	0	100
1105								0	0	0	100
1106								0	0	100	0
1107								0	0	0	100
1108	01/02/2019	06/02/2019						0	0	100	0
1109								0	0	100	0
1110								0	0	100	0
1111								0	0	100	0
1112								0	0	100	0
1113								0	0	100	0
1114								0	0	100	0
1115								0	0	100	0
1116			03/09/2013	21/09/2015				0	0	25	75
1117			02/11/2009	12/02/2010		25/01/2010	12/02/2010	0	0	100	0
1118	09/08/2013	19/08/2013		30/03/2015				0	0	0	100
1119	25/07/2013	05/08/2013		01/10/2014				0	0	0	100
1120	16/05/2011	18/05/2011	25/07/2011	25/02/2013		26/03/2012		0	0	0	100
1121	12/03/2013	03/04/2013	02/09/2013	27/08/2014		16/12/2013		0	0	38	62
1122								0	0	0	100
1123								0	0	0	100
1124	11/03/2016	15/03/2016						0	0	0	100
1125	18/03/2014	25/03/2014	24/11/2014	21/03/2016		28/02/2018	19/11/2018	0	0	0	100
1126	02/08/2016	02/08/2016						0	0	0	100
1127	02/08/2016	02/08/2016						0	0	0	100
1128	09/10/2014	15/10/2014	03/11/2014	01/12/2015		17/04/2015	08/03/2016	0	0	0	100
1129	26/01/2016	28/01/2016	04/07/2016	30/11/2016		30/11/2016		0	0	100	0
1130	03/07/2017	01/08/2017						99	0	1	0
1131	28/11/2016	15/12/2016	06/02/2017	26/05/2017		31/03/2017	10/01/2019	0	0	100	0
1132								0	0	100	0
1133								0	0	100	0
1134								0	0	100	0
1135								0	0	100	0
1136								0	0	100	0
1137			25/07/2006	05/09/2012		25/11/2008		0	0	100	0
1138		25/10/2005	05/11/2007	06/05/2009		15/06/2009		0	0	0	100
1139			05/02/2007	02/11/2012		16/03/2009		0	0	67	33
1140	07/02/2017	14/02/2017	03/04/2017	28/03/2018		30/03/2018		0	0	21	79
1141	18/01/2013	24/01/2013		01/12/2014				0	0	0	100
1142								0	0	0	100
1143								0	0	0	100
1144	30/10/2012	05/11/2012	01/10/2012	30/01/2013		11/08/2014	02/11/2014	0	0	100	0
1145								0	0	0	100
1146								0	0	0	100
1147	03/08/2016	04/08/2016	28/11/2016	30/03/2018		15/12/2017		0	0	0	100
1148	07/05/2015	12/05/2015	29/06/2015	30/06/2016			15/08/2016	0	0	100	0
1149								0	0	85	15
1150	11/02/2016	19/02/2016						0	0	0	100
1151	21/12/2016	23/12/2016						0	0	0	100
1152								0	0	100	0
1153	05/01/2018	16/01/2018	16/04/2018					0	0	0	100
1154	19/02/2019	20/02/2019						0	0	0	100
1155		27/10/2011	09/12/2002	25/03/2013		14/02/2005		0	0	70	30
1156	13/03/2009	09/04/2009	01/04/2010	09/01/2012		12/06/2014	17/07/2012	0	0	0	100
1157	08/08/2007	17/08/2007	14/03/2008	25/02/2010		18/02/2011	31/08/2012	0	0	22	78
1158			29/06/2007			28/03/2008		0	0	100	0
1159	06/07/2012	10/07/2012	11/04/2016	20/12/2013		03/07/2015	02/09/2014	0	0	60	40
1160	15/11/2010	19/11/2010	17/01/2011	27/04/2012		26/03/2012		0	0	100	0
1161								0	0	0	100
1162	17/08/2015	19/08/2015	02/11/2015	03/11/2017		25/03/2016		0	0	0	100
1163	27/10/2015	29/10/2015	31/01/2018			31/01/2020		0	0	100	0
1164								0	0	100	0
1165	16/07/2012	09/08/2012	01/10/2012	30/11/2012		12/11/2012	13/02/2013	66	0	34	0
1166	16/05/2016	19/05/2016	03/04/2017	21/09/2017		30/03/2018	22/05/2018	0	0	60	40
1167	21/07/2014	31/07/2014	27/10/2014	05/12/2014		27/02/2015	18/09/2015	0	0	100	0
1168	26/06/2018	26/06/2018						0	0	100	0
1169	12/11/2014	18/11/2014	05/01/2015	09/06/2015		08/05/2015	27/07/2015	0	0	100	0
1170	11/05/2012	24/05/2012		17/04/2014				0	0	0	100
1171	18/02/2014	28/02/2014	02/06/2014	14/01/2015		29/09/2014	02/07/2015	0	0	100	0
1172	13/11/2012	14/11/2012	30/11/2012	19/09/2013		31/10/2014	19/03/2014	0	0	0	100
1173	13/11/2012	14/11/2012	30/11/2012	16/01/2015		28/07/2014	16/01/2015	0	0	0	100
1174	16/11/2012	22/11/2012	30/11/2012	28/03/2014		28/03/2014	03/11/2014	0	0	0	100
1175	16/11/2012	22/11/2012	30/11/2012	11/11/2014		29/11/2013	11/11/2014	0	0	0	100
1176	26/06/2018	26/06/2018						0	0	0	100
1177	04/08/2014	17/09/2014	26/01/2015	30/03/2015		02/02/2015	03/05/2016	0	0	100	0
1178	16/11/2012	22/11/2012	19/03/2013	24/02/2014		22/10/2013	14/03/2014	0	0	100	0
1179	12/12/2012	21/12/2012	04/02/2013	14/03/2013		25/03/2013	14/03/2013	0	0	100	0
1180	12/05/2014	16/05/2014	30/06/2014	29/08/2014		28/07/2014	20/11/2014	0	0	100	0
1181	15/08/2016	15/08/2016						0	0	0	100
1182	07/10/2013	16/10/2013	06/01/2014	05/06/2014		03/02/2014	01/09/2014	0	0	100	0
1183	06/03/2014	18/03/2014	01/07/2014	31/10/2014		26/06/2014		0	0	100	0
1184								0	0	100	0
1185	21/02/2019	21/02/2019	16/07/2013	20/11/2013		24/09/2013		0	0	100	0
1186								0	0	0	100
1187	16/01/2018	16/01/2018						0	0	0	100
1188	30/05/2017	02/06/2017	22/01/2018					0	0	0	100
1189								0	0	100	0
1190	06/02/2018	09/02/2018						0	0	100	0
1191								0	0	100	0
1192	12/02/2016	19/02/2016	06/11/2017				15/02/2019	0	0	100	0
1193								0	0	0	100
1194	25/01/2017	30/01/2017	05/06/2017			25/05/2018		0	0	100	0
1195								0	0	100	0
1196	07/05/2015	08/05/2015	01/04/2015	31/07/2016		30/09/2016		0	0	100	0
1197								0	0	100	0
1198	16/01/2015	16/01/2015						0	0	100	0
1199								0	0	100	0

	Current Actual or Projected Capital Expenditure Profile (£m money of the day)										Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
Sort Ref	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	51	52	53	54	55	56	57	58	59	60	66	67	68	69	70	71	72
999	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1001	0	0	0	0.002	0.002	-0.001	0	0.013	0	0	0	0	0	100	0	0	01
1002	0	0	0	0	0	0	0	0.012	-0.001	0	0	0	0	100	0	0	01
1003	-0.024	0	0	0	0	0	0	0.009	0.065	-0.024	0	0	0	100	0	0	01
1004	0	0	0	0	0	0	0	0.028	0.037	0	0	0	0	100	0	0	01
1005	0.019	0	0	0	0	0	0	0	0	0.019	0	0	0	100	0	0	01
1006	-0.001	0	0	0	0	0	0	0	0.001	-0.001	0	0	0	100	0	0	01
1007	0.065	0	0	0	0	0	0	0	0	0.065	0	0	0	100	0	0	01
1008	0.002	0	0	0	0	0	0	0	0	0.002	0	0	0	100	0	0	01
1009	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1010	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1011	0.002	0	0	0	0	0	0	0	0.038	0.002	0	0	0	100	0	0	01
1012	0	0	0	0	0	0	0	0	0.025	0	0	0	0	100	0	0	01
1013	-0.003	0	0	0	0	0	0	0	0.016	-0.003	0	0	0	100	0	0	01
1014	0.003	0	0	0	0	0	0	0	0.037	0.003	0	0	0	100	0	0	01
1015	0.044	0	0	0	0	0	0	0	0	0.044	0	0	0	100	0	0	01
1016	0	0	0	0	0	0	0	0	0.054	0	0	0	0	100	0	0	01
1017	0	0	0	0	0	0.02	0.01	0.02	0.003	0	0	100	0	0	0	0	01
1018	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	01
1019	3.018	0	0	0	0	0.03	0.126	2.025	1.44	3.018	10	40	0	50	0	0	02
1020	-0.005	0	0	0	0	0	3.703	0.163	0.03	-0.005	0	100	0	0	0	0	01
1021	0	0	0	0	0	0.025	0.16	0.206	-0.019	0	0	100	0	0	10	25	01
1022	0.121	0	0	0	0	0.04	4.991	2.673	0.441	0.121	0	100	0	0	0	0	01
1023	-0.006	0	0	0	0	0.04	4.864	0.091	-0.006	-0.006	0	100	0	0	0	0	01
1024	-0.004	0	0	0	0	0.249	4.819	0.219	-0.088	-0.004	0	100	0	0	0	0	01
1025	-0.003	0	0	0	0	0.033	3.988	1.108	0.005	-0.003	0	100	0	0	0	0	01
1026	-0.036	0	0	0	0	0.069	0.772	0.114	0.036	-0.036	0	30	70	0	0	30	01
1027	-0.015	0	0	0	0	0	0	0.015	0.024	-0.015	0	0	100	0	0	0	01
1028	0	0	0	0	0	0	0	0	0.004	0	100	0	0	0	0	0	01
1029	0.401	0	0	0	0	0	0	0	0	0.401	0	100	0	0	0	100	01
1030	0.02	0	0	0	0	0	0.002	0.012	0.05	0.02	100	0	0	0	0	0	01
1031	0.113	0	0	0	0	0	0	0.18	0.106	0.113	0	0	100	0	0	0	01
1032	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	01
1033	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	01
1034	0	0	0	0	0	0	0	0	0	0	59	31	0	10	0	16	01
1035	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	01
1036	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	01
1037	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	01
1038	1.385	0	0	0	0	0	0.044	0.425	1.153	1.385	20	0	80	0	0	0	01
1039	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
1040	0.006	0	0	0	0	0	0.055	0.091	0.021	0.006	100	0	0	0	0	0	01
1041	0.064	0	0	0	0	0	0.07	0.000689	0.689	0.064	0	100	0	0	0	0	01
1042	0	0	0	0	0	0	0	0.099	0.034	0	0	0	100	0	0	0	01
1043	0.15	0	0	0	0	0	0	0.179	0.118	0.15	0	100	0	0	0	100	01
1044	0.31	0	0	0	0	0	0	0.14	0.42	0.31	80	0	20	0	0	0	
1045	0.016	0	0	0	0	0	0	0.015	0.013	0.016	0	100	0	0	0	0	01
1046	1.309	0	0	0	0	0	0	0.03	2.847	1.309	0	100	0	0	0	0	01
1047	-0.027	0	0	0	0	0	0	0.033	0.158	-0.027	0	100	0	0	0	0	01
1048	0.562	0	0	0	0	0	0	0	0.04	0.562	100	0	0	0	0	0	01
1049	0.118	0	0	0	0	0	0	0	0	0.118	100	0	0	0	0	0	01
1050	0.305	0	0	0	0	0	0	0	0.13	0.305	100	0	0	0	0	0	01
1051	0.396	0	0	0	0	0	0	0	0.008	0.396	100	0	0	0	0	0	01
1052	0.226	0	0	0	0	0	0	0	0.18	0.226	0	100	0	0	0	100	01
1053	0.332	0	0	0	0	0	0	0	0.612	0.332	0	100	0	0	0	100	01
1054	0.599	0	0	0	0	0	0	0	0.697	0.599	0	100	0	0	0	100	01
1055	0.501	0	0	0	0	0	0	0	0.048	0.501	0	100	0	0	0	0	01
1056	0.533	0	0	0	0	0	0	0	0.263	0.533	0	0	100	0	0	0	01
1057	0.026	0	0	0	0	0	0	0	0.552	0.026	0	0	100	0	0	0	
1058	0.094	0	0	0	0	0	0	0	0.035	0.094	0	100	0	0	30	22	01
1059	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
1060	0.008	0	0	0	0	0	0	0	0.03	0.008	0	100	0	0	50	50	01
1061	1.335	0	0	0	0	0	0	0	0.03	1.335	0	100	0	0	0	0	
1062	0.037	0	0	0	0	0	0	0	0.021	0.037	0	100	0	0	0	0	
1063	0.259	0	0	0	0	0	0	0	0	0.259	0	100	0	0	0	0	01
1064	0.301	0	0	0	0	0	0	0	0	0.301	0	0	100	0	0	0	10
1065	0.099	0	0	0	0	0	0	0	0	0.099	0	100	0	0	25	25	
1066	0.788	0	0	0	0	0	0	0	0	0.788	0	100	0	0	25	25	
1067	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1068	0.015	0	0	0	0	0	0	0	0	0.015	0	0	0	100	0	0	01
1069	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
1070	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
1071	0.002	0	0	0	0	0	0	0	0	0.002	0	20	0	80	0	0	
1072	0	0.11	0.1	0.016	-0.001	0	0	0	-0.002	0	67	20	0	13	0	0	
1073	0	0.254	1.337	4.558	1.356	0.027	0.124	0	-0.22	0	46	18	0	36	0	3	08
1074	0.003	0	0	0	0	0	0	0	0	0.003	0	0	0	100	0	0	
1075	-0.001	0	0.01	0.433	0.933	0.216	-0.013	-0.005	0	-0.001	45	39	0	16	0	0	08
1076	0.003	0	0.004	0.047	0.411	0.97	-0.028	0	-0.004	0.003	15	67	0	18	0	0	08
1077	0	0.77	0.328	-0.037	0	0	0	0	-0.001	0	53	5	37	5	0	5	
1078	0.001	0.453	0.043	-0.011	0	0	0	0	-0.001	0.001	12	43	20	25	0	31	
1079	0	0.249	0.006	0.002	0	0	0	0	-0.002	0	25	11	52	12	0	9	
1080	0	0.799	1.872	0.119	-0.008	0	0	0	-0.002	0	5	57	33	5	0	57	
1081	0	0.992	0.05	-0.044	0	0	0	0	-0.001	0	5	68	22	5	0	68	
1082	0	0.015	1.164	0.137	-0.001	0.001	-0.008	0	0	0	0	100	0	0	0	0	01
1083	0	0	0.006	0.009	0.007	-0.002	0.003	0.004	-0.008	0	0	12	0	88	0	1	03
1084	0	0	0.026	0.019	-0.005	0	0	0	-0.005	0	0	100	0	0	0	40	01
1085	0	0	0.376	1.025	-0.001	0	-0.043	0.007	-0.001	0	31	32	0	37	0	0	
1086	0.08	0	0	0.581	0.499	0.403	-0.054	-0.059	-0.006	0.08	30	36	0	34	0	0	08
1087	0.857	0	0	0	0	0	0.016	0.106	0.064	0.857	0	38	17	45	0	15	01
1088	0.003	0	0	0.029	0.078	0.23	0.669	0.778	0.011	0.003	69	31	0	0	0	26	02
1089	0	0	0	0.008	0.019	0	0	0	-0.002	0	0	0	0	100	0	0	
1090	0	0	0	0.134	0.536	0.148	0.022	0	0	0	0	100	0	0	0	0	01
1091	0.069	0	0	0	0	0	0	0	0.074	0.069	0	100	0	0	0	100	01
1092	0	0	0	0	0	0.03	0.015	0	-0.037	0	0	100	0	0	0	0	01
1093	0	0	0	0	0.025	0.012	0.009	0.012	-0.028	0	0	69	0	31	0	0	03
1094	0.02	0	0	0	0	0	0	0	0.01	0.02	0	100	0	0	0	100	
1095	0.072	0	0	0	0	0	0	0	0.018	0.072	0	100	0	0	0	100	
1096	-0.007	0	0	0	0	0.01	0	0.261	0.11	-0.007	8	71	0	21	0	0	03
1097	-0.017	0	0	0	0	0.01	0.003	0.151	0.152	-0.017	38	62	0	0	0	0	06
1098	0.079	0	0	0	0	0	0	0	0.014	0.079	0	100	0	0	0	100	
1099	-0.007	0	0	0	0	0.007	0.018	0.255	0.019	-0.007	40	20	0	40	0	0	06
1100	0	0	0	0	0	0	0.012	0	0	0	0	56	0	44	0	19	03
1101	0	0	0	0	0	0	0	0.013	0.011	0	0	30	70	0	0	30	01
1102	0	0	0	0	0	0	0	0.072	-0.007	0	0	40	60	0	0	40	01
1103	0.061	0	0	0	0	0	0	0	0.008	0.061	0	100	0	0	0	100	
1104	0	0	0	0	0	0	0	0.017	0.024	0	31	65	0	4	0	0	01
1105	0.004	0	0	0	0	0	0	0.014	0.01	0.004	0	100	0	0	0	0	01
1106	0.01	0	0	0	0	0	0	0	0.045	0.01	0	50	0	50	0	50	03
1107	0.007	0	0	0	0	0	0	0	0	0.007	0	100	0	0	0	0	01
1108	0.01	0	0	0	0	0	0	0	0	0.01	0	0	0	100	0	0	01
1109	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1110	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	01
1111	0.025	0	0	0	0	0	0	0	0	0.025	0	0	0	100	0	0	01
1112	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1113	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1114	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1115	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1116	-0.037	0	0	0	0	0	0.197	-0.114	0.037	-0.037	100	0	0	0	0	0	01
1117	0	0.001	-0.005	0.007	0	0	0	0	-0.007	0	0	0	0	100	0	0	
1118	-0.029	0	0.019	0.005	0.092	2.023	0.246	0.117	0.01	-0.029	32	23	0	45	0	0	08
1119	-0.003	0	0.016	0.014	0.089	1.714	0.651	0.029	-0.042	-0.003	15	30	0	55	0	0	08
1120	0	0	0.19	0.016	0.06	0.001	0.004	0	0	0	100	0	0	0	0	0	
1121	0	0	0.012	0.01	0.223	0	0.002	0.004	-0.003	0	43	14	0	43	0	8	01
1122	-0.016	0	0.02	0.005	0	0	0	0.02	0	-0.016	23	57	0	20	0	0	03
1123	0	0	0	0.012	0.016	-0.001	0	0.02	0	0	24	52	0	24	0	0	03
1124	0.003	0	0	0	0.025	0	0.015	0.045	-0.022	0.003	37	46	0	17	0	0	03
1125	0.348	0	0	0	0.027	0.133	0.456	0.172	-0.063	0.348	0	83	0	17	0	0	02
1126	0	0	0	0	0.023	0	0.002	-0.003	0	0	44	26	0	30	0	0	03
1127	0	0	0	0	0.025	0	0	0	-0.003	0	44	26	0	30	0	0	03
1128	-0.003	0	0	0	0.012	0.322	0.167	0	-0.003	-0.003	0	0	100	0	0	0	01
1129	-0.004	0	0	0	0	0.006	0.012	0.228	-0.045	-0.004	0	8	86	6	0	8	01
1130	0.276	0	0	0	0	0	0.016	0	0.119	0.276	0	100	0	0	99	1	01
1131	0	0	0	0	0	0	0	0.063	0.004	0	0	0	0	100	0	0	01
1132	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1133	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1134	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1135	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1136	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1137	0	0	0	0.002	0	0	-0.002	0	0	0	90	0	0	10	0	0	01
1138	0	0.317	0.077	-0.003	0	0	0	0	-0.063	0	40	34	0	26	0	0	
1139	0	0.009	0.036	0	0	0	-0.038	0	0	0	3	20	0	77	0	15	01
1140	0.5	0	0.012	0.024	0	0	0.05	0.106	1.845	0.5	45	15	0	40	0	0	02
1141	0	0	0.012	0.02	0.058	0.665	-0.012	0	-0.015	0	30	30	0	40	0	0	08
1142	0.002	0	0.005	0.009	-0.003	0.008	0.003	0.003	0.046	0.002	40	36	12	12	0	0	03
1143	0	0	0	0.025	0.016	0.119	-0.001	0	0	0	40	36	12	12	0	0	03
1144	0	0	0	0.05	0.02	0.271	-0.003	0	-0.002	0	0	100	0	0	0	100	01
1145	0.02	0	0	0	0.035	0	0.005	0.01	0.087	0.02	0	35	0	65	0	0	03
1146	0	0	0	0	0.014	0.011	0	0.011	-0.009	0	44	26	0	30	0	0	03
1147	0.036	0	0	0	0.003	0.017	0	0.437	0.096	0.036	38	17	0	45	0	0	03
1148	-0.004	0	0	0	0	0	0.49	0.133	-0.003	-0.004	0	100	0	0	0	100	01
1149	0	0	0	0	0	0	0	0	0	0	0	35	51	14	0	30	01
1150	0.02	0	0	0	0	0	0.05	3.598	0.206	0.02	0	100	0	0	0	0	01
1151	0.147	0	0	0	0	0	0	0.04	2.877	0.147	0	100	0	0	0	0	01
1152	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1153	3.473	0	0	0	0	0	0	0	0	3.473	0	97	0	3	0	0	
1154	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
1155	0.007	0	0	0	0	0	0	0	0	0.007	0	14	84	2	0	0	
1156	0	3.056	2.047	0.137	0.314	0.008	0	-0.002	0	0	73	12	0	15	0	0	09
1157	0	0.238	-0.002	-0.006	0	0	0	-0.002	0	0	32	15	0	53	0	7	09
1158	0	0	0.004	-0.001	0	0	-0.015	0	0	0	0	56	0	44	0	56	01
1159	-0.004	0	0	0.36	1.605	-0.019	0.001	0.042	0.025	-0.004	67	0	0	33	0	0	08
1160	0	0.183	1.518	-0.071	-0.016	0	0	0	0.007	0	61	8	31	0	0	8	
1161	0.003	0.002	0.005	0.27	0.47	0.166	0.006	0	0.03	0.003	40	36	12	12	0	0	01
1162	0	0	0	0	0.037	0.004	0.647	0.133	0.014	0	0	100	0	0	0	0	01
1163	2.501	0	0	0	0	0	0.108	0.056	0.839	2.501	0	9	91	0	0	9	01
1164	0	0	0.007	0.007	0	0.002	0.015	0.004	0	0	0	0	100	0	0	0	01
1165	0	0	0.013	0.089	-0.002	0	0	0.007	0	0	0	100	0	0	66	34	01
1166	0.003	0	0.033	0.01	0.12	0.042	0.05	0.082	0.669	0.003	0	60	40	0	0	40	03
1167	0.017	0	0	0.002	0.003	0.201	0	0	-0.037	0.017	0	0	100	0	0	0	
1168	-0.009	0	0	0	0	0	0	0.025	0	-0.009	0	100	0	0	0	100	01
1169	0	0	0.001	0.006	-0.001	0.105	0.069	-0.002	-0.004	0	90	10	0	0	0	10	01
1170	0	0	0	0.449	1.694	0.141	-0.003	0	0	0	0	100	0	0	0	0	08
1171	0	0	0	0.025	0.056	0.924	-0.002	0	0	0	0	100	0	0	0	100	01
1172	0	0	0	0.037	0.204	0.028	0.004	0	0	0	2	70	28	0	0	0	01
1173	0	0	0	0.039	0.422	0.342	0.008	-0.001	0	0	50	37	13	0	0	0	01
1174	0	0	0	0.124	0.952	0.141	0.005	0	0	0	0	98	2	0	0	0	01
1175	0	0	0	0.15	0.954	0.315	0.01	0	0	0	0	88	12	0	0	0	01
1176	0	0	0	0.002	0.008	0	-0.006	0.006	-0.001	0	0	100	0	0	0	0	01
1177	0	0	0	0.003	0.001	0.035	0.005	0	0	0	0	0	0	100	0	0	01
1178	0	0	0	0.054	0.034	0	-0.001	0	0	0	0	100	0	0	0	100	01
1179	0	0	0	0.067	-0.014	-0.001	-0.001	0	0	0	0	0	0	100	0	0	01
1180	0	0	0	0.003	0.005	0.035	-0.003	0	0	0	0	0	0	100	0	0	01
1181	0	0	0	0	0.025	0.017	0.058	0	0	0	100	0	0	0	0	0	01
1182	0	0	0	0	0.043	-0.002	0	0	-0.001	0	0	0	0	100	0	0	
1183	0	0	0	0	0.012	0.057	0.026	0	-0.006	0	0	100	0	0	0	100	01
1184	0.005	0	0	0	0	0.008	0.001	0	0	0.005	0	100	0	0	0	100	01
1185	0.003	0	0	0	0.105	-0.002	0.001	0	0.006	0.003	0	100	0	0	0	100	01
1186	0	0	0	0	0.025	0	-0.005	0.005	-0.004	0	45	35	0	20	0	0	03
1187	0	0	0	0	0.129	0.113	0.121	0.094	0	0	40	36	12	12	0	0	01
1188	3.061	0	0	0	0.035	0.02	0.041	0.059	0.43	3.061	0	90	10	0	0	0	01
1189	0	0	0	0	-0.005	0	0	0	0	0	0	0	0	100	0	0	01
1190	0.195	0	0	0	0	0.008	-0.004	0.018	0.02	0.195	0	0	100	0	0	0	01
1191	0.084	0	0	0	0	0.024	0.023	0	0.027	0.084	0	10	90	0	0	10	01
1192	0.105	0	0	0	0	0.016	0.001	0.014	0.17	0.105	0	23	0	77	0	23	01
1193	1.015	0	0	0	0	0	0.07	0.265	0.239	1.015	44	26	0	30	0	0	01
1194	1.143	0	0	0	0	0.011	0.059	0.178	2.424	1.143	13	5	82	0	0	5	01
1195	0.002	0	0	0	0	0	0.013	0.031	0.049	0.002	0	9	91	0	0	9	01
1196	0	0	0	0	0	0.027	0.77	0.17	-0.001	0	0	100	0	0	0	100	01
1197	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1198	0	0	0	0	0	0.205	-0.023	0	-0.001	0	0	100	0	0	0	100	01
1199	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01

Table A

Project Identification									
Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
1200	2018_19 Q4	KR619	Sydenham WWPS Screen appraisal	06			13	02	
1201	2018_19 Q4	KR622	McClintock Street, Belfast, Storm Sewer Extension	00			07	24	
1202	2018_19 Q4	KR623	Queens Bridge, Belfast, Siphons Upgrade.	06			07	12	
1203	2018_19 Q4	KR624	East Befast, Back Drainage Study.	06			07	12	
1204	2018_19 Q4	KR625	Wastewater Heritage and Education Centre	06			14	20	
1205	2018_19 Q4	KR627	PC15 Year 2 WWTW Base Maintenance – East Region	06			09	02	
1206	2018_19 Q4	KR628	642 Saintfield Rd, Carryduff Storm Sewer Extension	00			07	24	
1207	2018_19 Q4	KR629	Milebush Park, Carrickfergus Flood Alleviation	06			07	12	UR
1208	2018_19 Q4	KR631	Crawfordsburn Way, Newtownards - Storm Sewer Extension	00			07	24	
1209	2018_19 Q4	KR632	Sydenham WwPS Replacement	06			13	12	NIEA
1210	2018_19 Q4	KR633	East Belfast Integrated Catchment Modelling	06			14	12	
1211	2018_19 Q4	KR634	Harberton Park / Kings Hall Storm Sewer Extension	00			07	24	
1212	2018_19 Q4	KR635	Upper Hightown Road Newtownabbey Storm Sewer	00			07	24	
1213	2018_19 Q4	KR640	Holywood Sewer Network Improvements- Phase 2	06			07	12	
1214	2018_19 Q4	KR642	Laganbank Sewer Investigation, Belfast	00			07	12	
1215	2018_19 Q4	KR645	Sludge Disposal Strategy: Market Appraisal	06			11	12	
1216	2018_19 Q4	KR647	Ballyrobert Bangor Wwps Upgrade	06			12	02	
1217	2018_19 Q4	KR648	Greencastle Wwps storm screens	06			07	02	
1218	2018_19 Q4	KR656	Holywood A and B wwps	06			12	02	
1219	2018_19 Q4	KR662	34 and 41 Belfast Road, Antrim Storm sewer	00			07	24	
1220	2018_19 Q4	KR663	Holywood Road, Newtownards, Flood Alleviation	06			07	12	
1221	2018_19 Q4	KR665	Gilnahirk Road Flood Alleviation	06			07	12	
1222	2018_19 Q4	KR667	Cooks Cove Wwps	06			12	12	
1223	2018_19 Q4	KR668	Structural survey of Belfast Stormwater Tunnel	06			07	12	
1224	2018_19 Q4	KR671	Henderson Avenue Flood Alleviation	06			14	12	
1225	2018_19 Q4	KR672	Fortwilliam Oakmount storm pumping station, Investigation	06			14	02	
1226	2018_19 Q4	KR673	Belfast Streets Ahead (Royal Avenue)	06			07	24	
1227	2018_19 Q4	KR675	263-285 Beersbridge Rd, Foul and Storm Sewer new	06			07	24	
1228	2018_19 Q4	KR676	The Ards House, Belfast Rd, Newtownards Sewage Scheme. Foul&Storm	06			07	24	
1229	2018_19 Q4	KR677	Moyard Park, Belfast - Storm Sewer Extension	06			07	24	
1230	2018_19 Q4	KR682	PC15 Year 4 WwTW Base Maintenance – East Region	06			09	02	
1231	2018_19 Q4	KR683	Sydenham WwPM Repair at Airport Road, Holywood Exchange	06			07	12	
1232	2018_19 Q4	KR685	288 Beersbridge Road Belfast, Storm Sewer Extension	06			07	24	
1233	2018_19 Q4	KR686	Avondale Drive Ballyclare, Foul & Storm Sewer Extension	06			07	24	
1234	2018_19 Q4	KR688	My Lady's Mile Flood Alleviation	06			07	12	UR
1235	2018_19 Q4	KR689	Holywood A to Kinnegar PM	00			07	12	
1236	2018_19 Q4	KR690	Adj Glenmachen Rd Belfast, Storm Sewer Extension	06			07	24	
1237	2018_19 Q4	KR691	114 Upper Lisburn Rd Belfast, Storm sewer Extension	06			07	24	
1238	2018_19 Q4	KR692	6 EdenvalePark DG5 sewer study	06			07	12	
1239	2018_19 Q4	KR693	St Ninians Whitewell Road Newtownabbey, Storm Sewer Extension	06			07	24	
1240	2018_19 Q4	KR694	39-41 Falls Road Belfast, Storm Sewer Extension	06			07	24	
1241	2018_19 Q4	KR695	606a Ballysillan Rd Belfast, Storm Sewer Extension	06			07	24	
1242	2018_19 Q4	KR696	Hogarth Street, Belfast, Storm Sewer Extension	06			07	24	
1243	2018_19 Q4	KR697	Gardenmore Rd Twinbrook F&S Sewer	00			07	24	
1244	2018_19 Q4	KR699	112-120 Hightown Road Newtownabbey Storm Sewer	00			07	24	
1245	2018_19 Q4	KR700	Jamaica Street Belfast F&S Sewer	00			07	24	
1246	2018_19 Q4	KR701	Camberwell Terrace Flood Alleviation	06			07	12	
1247	2018_19 Q4	KR703	PC15 Year 5 WwTW Base Maintenance - East Region	06			09	02	
1248	2018_19 Q4	KR706	18 Denoroton Park Belfast Storm & Foul Sewer	00			07	24	
1249	2018_19 Q4	KS111	Ards South, Portavogie, Ballyhalbert, Cloughey,Kirkistown	05			07	16	NIEA
1250	2018_19 Q4	KT433	125 Old Dundonald Road Dundonald , Foul & Storm sewer extension	06	KI551		07	24	
1251	2018_19 Q4	KT434	Drumnakelly Wwps, Storm sewer extension	06	KI551		07	24	
1252	2018_19 Q4	KT436	Chestnut Lodge, Drumbo Foul Sewer Extension.	06	KI551		07	24	
1253	2018_19 Q4	KS113	Ards North, Carrowdore, Ballywalter, Ballyhaskin	06			09	16	NIEA
1254	2018_19 Q4	KV197	Monteith Road Annaclone Foul & Storm Sewer Extensions	00	KI551		07	24	DRD
1255	2018_19 Q4	KV223	Carnagat Road Newry Foul & Storm Sewer Requisition	00	KI551		07	24	
1256	2018_19 Q4	KS213	Greyabbey/Kircubbin	06			09	15	
1257	2018_19 Q4	KS216	Dunmore Sewerage - EC Compliance	03			07	16	NIEA
1258	2018_19 Q4	KS224	Downpatrick WwTW	01			09	15	NIEA
1259	2018_19 Q4	KS225	Ardglass WwTW	01			09	15	NIEA
1260	2018_19 Q4	KS235	Ballygowan WwTW	03			09	16	NIEA
1261	2018_19 Q4	KS326	Commons Road, Ballykinlar Storm Sewer	00			07	24	
1262	2018_19 Q4	KS328	Delinvilla Lane Dundrum Storm Sewer	00			07	24	NIEA
1263	2018_19 Q4	KS389	Ballymartin & Blackrock WwTWs	05			09	16	NIEA
1264	2018_19 Q4	KS844	Ballyhornan Outfall Screen .	05			09	16	NIEA
1265	2018_19 Q4	KS848	Newcastle Waste Water Treatment Works	01			09	16	NIEA
1266	2018_19 Q4	KS873	Bangor DAP Work Package 2: Rathmore Stream UIDs	01			07	12	NIEA
1267	2018_19 Q4	KS874	Bangor DAP Works Package 3 - Belfast Lough UIDs	01			07	12	NIEA
1268	2018_19 Q4	KS875	Bangor DAP Works Package 6: Lukes Point WWPS UID	01			07	12	NIEA
1269	2018_19 Q4	KS877	Bangor DAP Works Package 5 - Clandeboye Stream UIDs	01			07	12	NIEA
1270	2018_19 Q4	KS879	Bangor DAP Work Package 4: Bangor Marina UIDs	01			07	12	NIEA
1271	2018_19 Q4	KS880	Kirkistown North WwPS Refurbishment	01			12	12	DRD
1272	2018_19 Q4	KS881	Cloughey South WwPS Refurbishment	01			12	02	DRD
1273	2018_19 Q4	KS900	WwPS Upgrades at Groomsport, Killinchy & Craigavad	00			12	12	DRD
1274	2018_19 Q4	KS902	Dundrum DAP, UIDs Upgrades.	02			07	12	NIEA
1275	2018_19 Q4	KS903	Annalong DAP UIDs, Upgrades.	02			07	12	NIEA
1276	2018_19 Q4	KS905	Kilmore & Annacloy WwTW	06			14	16	NIEA
1277	2018_19 Q4	KS908	Killinchy WWTW - Feasibility Study	06			14	16	NIEA
1278	2018_19 Q4	KS909	DG5 157a & 155 Groomsport Road Bangor Additional Studies	00			07	12	NIEA
1279	2018_19 Q4	KS912	Greyabbey WWPS Catchment Flow and Loading Survey.	01			07	12	DRD
1280	2018_19 Q4	KS913	Upper Crescent WWPS Upgrade	00			13	12	DRD
1281	2018_19 Q4	KS914	Scrabo Road, Newtownards, WWPS Upgrade	02			12	12	NIEA
1282	2018_19 Q4	KS918	Greyabbey WWTW	00			09	16	DRD
1283	2018_19 Q4	KS921	Kircubbin WWTW Phase 2 Base Maintenance	00			09	02	DRD
1284	2018_19 Q4	KS930	Millisle DAP Stage 2, Phase 2	02			07	12	NIEA
1285	2018_19 Q4	KS933	Kircubbin DAP CSO Upgrade	04			07	12	NIEA
1286	2018_19 Q4	KS937	Annsborough WWPS Upgrade	06			07	12	NIEA
1287	2018_19 Q4	KS938	Grange Road Kilkeel Out of Sewer Flooding Feasibility Study	03			07	12	DRD
1288	2018_19 Q4	KS944	Glenard Road Newtownards Foul Sewer Extension	00			07	24	DRD
1289	2018_19 Q4	KS946	Mourneview, Newcastle, Flood Alleviation	04			07	12	UR
1290	2018_19 Q4	KS958	Bangor DAP Works Package 5 Clandeboye Stream UIDs Phase 2	03			07	12	NIEA
1291	2018_19 Q4	KS962	Dundrum WwTW	06			09	16	UR
1292	2018_19 Q4	KS964	106 Greencastle Road, Kilkeel, Storm Sewer Extension	00			07	24	
1293	2018_19 Q4	KS965	Killyleagh Rd, Crossgar Foul Sewer Extension	00			07	24	
1294	2018_19 Q4	KS968	Saintfield Road, Balloo Storm Sewer	00			07	24	
1295	2018_19 Q4	KS971	Cotton Wwps	06			12	02	
1296	2018_19 Q4	KS972	Ballystockart, Comber - Network Investigation	06			07	12	
1297	2018_19 Q4	KS974	PC15 Year 3 WwTW Capital Maintenance - East Region	06			09	02	
1298	2018_19 Q4	KS975	Drumaness WwTW MBR	06			09	16	
1299	2018_19 Q4	KS978	Foul Sewer Extension - Adjacent Rockfield Pk, Portaferry	06			07	24	
1300	2018_19 Q4	KS979	8 Talbot Street Newtownards, Storm Sewer Extension	06			07	24	
1301	2018_19 Q4	KS982	Kinnegar Drive Holywood Storm, Storm Sewer Extension	06			07	24	
1302	2018_19 Q4	KS983	Adj 110 Saul Road Downpatrick F&S Sewer	00			07	24	
1303	2018_19 Q4	KS984	Saul Rd Downpatrick Storm Sewer	06			07	24	
1304	2018_19 Q4	KS986	101 - 103 Ballynahinch Road Carryduff Storm Sewer	00			07	24	
1305	2018_19 Q4	KT114	Hillsborough WwTW	01			12	16	NIEA
1306	2018_19 Q4	KT126	Stoneyford WwTW	06			09	16	NIEA
1307	2018_19 Q4	KT391	Lisburn DAP Stage 1	00			07	12	NIEA
1308	2018_19 Q4	KT398	Mill Street/Bridge Street ,Hilden ,Lisburn, Storm Sewer Extension	00			07	24	NIEA
1309	2018_19 Q4	KT402	Dunmurry WWTW Sludge Facility	05			10	16	DRD
1310	2018_19 Q4	KT412	Ballynahinch Public Realm Sewer & Watermain Rehabilitation	00			07	24	DRD
1311	2018_19 Q4	KT413	Orchard Annahilt WWPS - Feasibility Study	00			12	02	DRD
1312	2018_19 Q4	KT416	Annahilt WWTW Phase 2 Base Maintenance	00			09	02	DRD
1313	2018_19 Q4	KT421	Station Road, Lambeg, Sewer Upgrade (DG5)	03			07	12	UR
1314	2018_19 Q4	KT422	Longstone St, Lisburn Storm Sewer Extension	00			07	24	
1315	2018_19 Q4	KT423	Mossvale Rd, Dromore Foul Sewer Requisition	00			07	24	
1316	2018_19 Q4	KT425	St Jame's Park, Hillsborough Storm Sewer	00			07	24	
1317	2018_19 Q4	KT428	Ballymacash Road, Lisburn, Flood Alleviation	06			07	12	UR
1318	2018_19 Q4	KT435	Graham Garden's Lisburn - Storm Sewer Extension	06			07	24	
1319	2018_19 Q4	KT437	The Brae, Ballygown Storm Sewer Extension.	06			07	24	
1320	2018_19 Q4	KT438	Glenwood Green Lisburn F&S Sewer	00			07	24	
1321	2018_19 Q4	KU113	Ballysillan Road, Belfast Sewerage Scheme	01			07	24	
1322	2018_19 Q4	KV013	Rostrevor Sewerage Scheme	00			12	12	NIEA
1323	2018_19 Q4	KV064	Lurganare WwTW	01			07	15	NIEA
1324	2018_19 Q4	KV079	McShanes Road, Bessbrook Foul Sewer Extension	00			07	24	
1325	2018_19 Q4	KV094	Whyte Acres, Banbridge SPS Upgrade	00			12	02	UR
1326	2018_19 Q4	KV117	Spring Meadows/Riverfields Warrenpoint Foul Sewer Extension	00			07	24	
1327	2018_19 Q4	KV122	High Street, Gilford Sewer Replacement	00			07	12	
1328	2018_19 Q4	KV125	Forkhill WWTW	01			09	16	NIEA
1329	2018_19 Q4	KV178	Cranfield WwTW Feasibility Study	03			14	16	NIEA
1330	2018_19 Q4	KV186	Kilkeel WWTW Feasibility Study	06			14	16	NIEA
1331	2018_19 Q4	KV189	Millturn WWPS - Feasibility Study	00			12	02	DRD
1332	2018_19 Q4	KV194	Banbridge WWTW's Phase 2 Base Maintenance	00			09	02	DRD
1333	2018_19 Q4	KV196	Hilltown WWTW Phase 2 Base Maintenance	00			09	02	DRD
1334	2018_19 Q4	KV200	Drumsesk Wastewater Header Tank - Feasibility Study	00			07	12	DRD
1335	2018_19 Q4	KV201	Moneyslane WWTWs Appraisal	04			09	16	NIEA
1336	2018_19 Q4	KV202	Meigh WWTW Feasibility Study	04			09	16	NIEA
1337	2018_19 Q4	KV207	Whyte Acres - Banbridge	00			07	12	DRD
1338	2018_19 Q4	KV219	Newpoint WWPS Screen upgrade	04			13	12	
1339	2018_19 Q4	KV220	Warrenpoint Flooding Investigations	00			07	12	
1340	2018_19 Q4	KV224	The Slopes Rathfriland Wwps appraisal	06			12	12	
1341	2018_19 Q4	KV225	Newpoint TPS Fire - Odour Control	00			13	02	
1342	2018_19 Q4	KV228	Chapel View, Carran Rd SS Crossmaglen	00			07	24	
1343	2018_19 Q4	KV230	Cranfield Catchment , Kilkeel Storm Seperation	00			07	12	
1344	2018_19 Q4	KV231	75 Kilkeel Rd, Annalong Storm Sewer Extension	00			07	24	
1345	2018_19 Q4	KV232	115-117 Main st, Newcastle Storm Sewer Extension	00			07	24	
1346	2018_19 Q4	KV236	Sheemore Crescent/Hanwood Way, Kilkeel, Foul&Storm Sewer Extension	06			07	24	
1347	2018_19 Q4	KV237	Greencastle Road Kilkeel Storm Sewer	00			07	24	
1348	2018_19 Q4	KZ002	Capital Works Programme Procurement	01			14	02	UR
1349	2018_19 Q4	KZ007	Storm Water Separation	06			07	12	
1350	2018_19 Q4	KZ008	Wastewater Networks Modelling/Surveys	06			14	20	
1351	2018_19 Q4	SP000	Capitalised Salaries and On-Costs	00			15	00	
1352	2018_19 Q4	SP001	PC15 Base Maintenance (Water) Parent (WTW prioritised programme)	00			02	01	
1353	2018_19 Q4	SP002	PC15 Base Maintenance (Water) Parent (WPS prioritised programme)	00			05	01	
1354	2018_19 Q4	SP005	WwTW base maintenance (prioritised programme)	00			09	02	
1355	2018_19 Q4	SP006	WwPS base maintenance (prioritised programme)	00			12	02	
1356	2018_19 Q4	SP013	Base balancing line	00			15	99	
1357	2018_19 Q4	SP014	Additional enhancement	00			15	22	
1358	2018_19 Q4	SP015	Storm Water Separation	06			07	12	
1359	2018_19 Q4	SP016	MG CWP Baseline	06			15	20	
1360	2018_19 Q4	SP017	Water Catchment Baseline	00			01	03	
1361	2018_19 Q4	AM086	CAR FME Server	00			15	20	
1362	2018_19 Q4	AM089	Positional Improvement (OSNI)	04			15	20	
1363	2018_19 Q4	AM090	Cost Base and Capex Comparative Efficiency	03			15	20	UR
1364	2018_19 Q4	AM093	PC15 M&G Parent	06			15	20	
1365	2018_19 Q4	AM094	Corporate GIS Project	06			15	20	
1366	2018_19 Q4	AM096	Westland - Main Building Kitchen / Coffee Lounge Extension	06			15	20	
1367	2018_19 Q4	AP036	CCTV Surveys Asset Performance 2011 - 2012	00			07	02	DRD
1368	2018_19 Q4	AP055	Condition Assessment	05			06	20	
1369	2018_19 Q4	AP059	Netownbreda MBV	02			14	20	DRD
1370	2018_19 Q4	AP066	Carrick MBV	03			14	20	DRD
1371	2018_19 Q4	AP084	Provision of Interim Bridging Services (Previously KI522)	00			06	20	DRD
1372	2018_19 Q4	AP089	Network Model Updates	03			06	20	DRD
1373	2018_19 Q4	AP093	Sewer network models- Cushendall,Ballykelly, Dungiven	03			14	20	
1374	2018_19 Q4	AP094	Service Reservoir Condition Assessments Pilot Study	05			06	20	
1375	2018_19 Q4	AP096	Base Maintenance Prioritisation	03			15	20	
1376	2018_19 Q4	AP100	PC13 Network Modelling Support Services	03			06	20	
1377	2018_19 Q4	AP101	Storm Analysis Reports	03			14	20	
1378	2018_19 Q4	AP102	Provision of PPRA Reports	03			03	20	
1379	2018_19 Q4	AP103	Investigation of Polluted Stormwater Outfalls	03			07	20	
1380	2018_19 Q4	AP105	Larne MBV	03			14	20	
1381	2018_19 Q4	AP106	Drainage Area Study Specification revision	03			14	20	
1382	2018_19 Q4	AP107	Sewer Network Modelling Support	03			14	20	
1383	2018_19 Q4	AP111	Larne Network Investigation	03			14	20	
1384	2018_19 Q4	AP114	Development of PC15 Lead Pipe Replacement Programme	04			06	23	DWI
1385	2018_19 Q4	AP120	Asset Performance CCTV surveys - 14/15	03			14	20	
1386	2018_19 Q4	AP122	Investigation of polluted stormwater outfalls - phase 1	05			07	12	
1387	2018_19 Q4	AP128	Trunk Main Condition Assessment 14/15	03			03	20	
1388	2018_19 Q4	AP130	Hydraulic Review + Verification of Water Network Schemes	03			03	20	DRD
1389	2018_19 Q4	AP142	Provision of Pressure Logging Equipment	06			06	20	
1390	2018_19 Q4	AP143	SR and CWB Risk and Consequence Model Update	06			06	20	
1391	2018_19 Q4	AP150	Provision of Flow Monitoring Equipment	00			14	20	
1392	2018_19 Q4	BC006	Meter reconciliation phase 2	01			06	20	DRD
1393	2018_19 Q4	BC007	Debt and Collections phase 2	01			06	20	DRD
1394	2018_19 Q4	BC009	CS Data Quality Programme	05			15	20	
1395	2018_19 Q4	BC010	Digital Customer Phase 1	03			15	20	
1396	2018_19 Q4	BC013	CBC Implementation	04			15	20	
1397	2018_19 Q4	BC014	Meter to Bill Improvement	06			06	20	DRD
1398	2018_19 Q4	BE006	Vehicle GPS	01			15	20	DRD
1399	2018_19 Q4	BE012	Monthly Pay and Oracle Enhancements	06			15	20	
1400	2018_19 Q4	BE016	Plant Purchasing Project (Short Term Strategy)	06			06	20	

Table B

	Baseline Milestone Dates							Baseline Service Cost Allocation				Baseline Expenditure Profile (£m 2012-13 prices)									Baseline Purpose Allocation			
Sort Ref	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign-off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	36	37	38	39
1249				31/03/2017				0	0	85	15	0	0	0	0	0	0.092442	1.924121067	0	0	80	0	0	20
1253			05/04/2010	31/12/2019		01/02/2008	31/01/2009	0	0	56	44	0.04	0.0195316	0.01143312	0.368839485	0.008960113	0	0	1.574313556	4.53290003	80	0	0	20
1254								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1257			11/01/2010	25/11/2011		25/11/2011	24/11/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1258			07/07/2008	15/12/2009		15/12/2009	15/12/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1259	17/01/2006	25/10/2012	01/04/2013	03/01/2015		03/04/2015	03/01/2016	0	0	0	100	0.229	-0.04785242	0.119095	1.369316588	1.429138069	0	0	0	0	41	15	0	44
1260			10/03/2011	28/02/2017		31/05/2010	31/05/2011	0	0	57	43	0	0	0	0	0	0	1.559615085	0	0	24	56	0	20
1261			10/08/2009	03/03/2010		03/03/2010	03/03/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1262			14/09/2009	15/04/2011		15/04/2011	14/04/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1263			31/03/2015	31/03/2016		30/06/2016	30/06/2017	0	0	0	100	0.009	0.00781264	0.01524416	0.046104936	0	0.313084803	0	0	0	75	8	0	17
1264			01/01/2013	30/09/2013		30/11/2013	30/11/2014	0	0	6	94	0.03	-0.02832082	0.07431528	0.549570833	0	0	0	0	0	97	3	0	0
1265			12/12/2011	19/08/2013		19/08/2013	19/08/2014	0	0	0	100	0.354	1.59963804	4.98865136	1.290016099	0	0	0	0	0	95	5	0	0
1266			01/04/2014	01/01/2015		01/01/2015	01/01/2016	0	0	100	0	0	0	0.0190552	0	0.358404532	0	0	0	0	90	10	0	0
1267								0	0	30	70	0	0	0	0	0	1.063083	0.597267762	0	0	100	0	0	0
1268			01/04/2013	30/09/2014		03/01/2015	03/01/2016	0	0	0	100	0	0	0.05621284	1.508553493	0.461445834	0	0	0	0	90	10	0	0
1269			05/01/2014	19/01/2015		19/01/2015	19/01/2016	0	0	100	0	0	0	0.08384288	0.221303691	2.167451404	1.38663	0	0	0	100	0	0	0
1270			05/01/2014	19/01/2015		19/01/2015	19/01/2016	0	0	75	25	0	0	0.0619294	0.027662961	1.336848903	0	0	0	0	70	30	0	0
1274			31/03/2014	19/01/2015		30/03/2015	30/03/2015	0	0	100	0	0	0.00390632	0.0142914	0.074689996	0.403205098	0.481082184	0.894058481	0	0	80	20	0	0
1275								0	0	100	0	0	0	0	0	0	0.016	0.011	0	0	85	15	0	
1276			01/03/2013	31/12/2015		01/02/2014	01/02/2014	0	0	0	100	0	0.01269554	0.03429936	0.903656738	0	1.717951766	0	0	0	0	52	0	48
1277								0	0	0	100	0	0.0048829	0.03239384	0.033195554	0	0	0	0	0	0	100	0	
1278								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1279								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1280								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1281								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1282				31/03/2021				0	0	38	62	0	0	0	0	0	0	0	0	0	0	100	0	
1284								0	0	17	83	0	0	0	0	0	1.022278109	0	0	0	51	46	3	0
1286								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1290								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1291				31/12/2017				0	0	41	59	0	0	0	0	0	0	0.976215137	0.93736568	0	0	100	0	0
1305			27/03/2012	28/03/2015		28/03/2015	28/03/2016	0	0	17	83	0	0.02343792	0.809846	0.502543798	0	0	0	0	0	0	35	0	65
1306			02/02/2014	28/03/2015				0	0	0	100	0.012	0.05566506	0.06383492	0.092209871	0.767881709	0	0	0	0	31	38	0	31
1307			30/06/2013	01/01/2015		01/01/2015	01/01/2016	0	0	100	0	0	0.0048829	0.02191348	0.968203648	0.896011329	0	0.018	0	0	70	20	0	10
1308	22/03/2011	31/03/2011	13/11/2010	31/08/2011		31/08/2011	30/08/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1309			20/03/2012	19/01/2015		19/03/2015	19/03/2016	0	0	0	100	0	0	0.1238588	1.67545336	1.792022658	0	0	0	0	23	71	0	6
1310								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1311								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1312								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1322			28/05/2007	16/09/2011		16/09/2011	15/09/2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1323			30/11/2009	01/10/2010		01/10/2010	01/10/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1324			01/04/2008	25/01/2012		25/01/2012	24/01/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1325	06/11/2009	16/11/2009	04/01/2010	27/04/2010		27/04/2010	27/04/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1326			02/01/2008	18/01/2012		18/01/2012	17/01/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1327			15/09/2008	25/01/2012		25/01/2012	24/01/2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1328			07/02/2011	30/05/2013		15/07/2013	14/03/2014	0	0	0	100	0.231	0.45117996	0.98801212	0.407567631	0	0	0	0	0	46	39	0	15
1329								0	0	30	70	0	0.01660186	0.023819	0.018441974	0	0	0	0	0	0	100	0	0
1330								0	0	0	100	0	0.00292974	0.04668524	0.023052468	0	0	0	0	0	0	100	0	
1331								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1332								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1333								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1348		25/09/2012						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1351								29	12	11	48	0	0	0	0	0	11.26105258	11.19128627	11.17578696	11.10653223	17	55	6	22
1352								0	100	0	0	0	0	0	0	0	3.079942731	2.978892282	2.960005651	2.942217391	0	100	0	0
1353								0	100	0	0	0	0	0	0	0	0.478057269	0.462107718	0.459994349	0.456782609	0	100	0	0
1354								0	0	0	100	0	0	0	0	0	15.67738656	15.58332224	15.4898223	15.39688337	0	100	0	0
1355								0	0	0	100	0	0	0	0	0	3.228188286	3.208819156	3.189566241	3.170428844	0	100	0	0
1356								0	0	0	0	0	0	0	0	0	4.443563333	0.155017193	-0.26542052	1.109283271	0	100	0	0
1357								0	0	0	0	0	0	0	0	0	6.446184395	9.862336764	13.39557804	13.87439408	100	0	0	0
1358								0	0	100	0	0	0	0	0	0	0.245268823	0.713983712	0.675722159	1.055114129	0	100	0	0
1359								0	46	8	46	0	0	0	0	0	1.539388831	1.502880524	1.493863241	1.484900062	0	62	38	0
1360								0	100	0	0	0	0	0	0	0	0.604808258	0.601179409	0.597572332	0.687381064	11	46	39	4
1364								0	46	8	46	0	0	0	0	0	9.019781297	8.805867222	8.753032019	8.700513827	0	62	38	0
1386								0	0	100	0	0	0	0	0	0	0.470429629	0.454916254	0.448305325	0.446580029	0	100	0	0

Table C

	Current Actual or Projected Milestone Dates						
Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign-off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date
1	40	41	42	43	44	45	46
1200	19/01/2017	20/01/2017	20/10/2015	22/01/2019		14/08/2018	
1201	07/07/2017	10/07/2017	25/09/2017	29/03/2019			
1202	30/03/2018	09/04/2018					
1203	21/02/2019	21/02/2019					
1205	05/05/2016	10/05/2016					
1208	24/02/2017	13/04/2017		12/03/2018			08/03/2019
1211	25/02/2019	12/03/2019	18/03/2019			16/03/2017	
1213	15/06/2016	16/06/2016					
1215	15/01/2018	15/01/2018					
1230	05/01/2018	16/01/2018					
1231	21/02/2019	21/02/2019					
1247	19/02/2019	20/02/2019					
1249	01/06/2011	08/08/2011		31/12/2018			
1250	09/10/2018	09/10/2018	07/01/2019	25/01/2019		11/02/2019	
1251	27/03/2018	27/03/2018	19/03/2019			23/04/2019	
1253	01/08/2018	13/08/2018					
1254	14/03/2018	14/03/2018	30/04/2018	05/06/2018		04/06/2018	24/09/2018
1255	31/05/2018	31/05/2018	30/07/2018	18/01/2019			
1256			01/04/2002			29/09/2003	
1257	13/11/1996	31/01/1997	11/01/2010	30/06/2011		26/08/2013	
1258			07/07/2008	14/12/2009		26/04/2010	
1259			01/04/2014	20/03/2015		22/12/2014	
1260	25/11/2016	05/12/2016					
1261	30/04/2009	18/05/2009	10/08/2009	02/03/2010		25/01/2010	
1262	13/03/2009	27/03/2009	14/09/2009	25/10/2012		11/04/2011	
1263	16/11/2012	21/11/2012		31/03/2015			
1264	08/09/2009	16/09/2009	03/06/2013	31/12/2013		31/03/2014	
1265	24/11/2010	12/01/2011	09/01/2012	09/12/2013		24/03/2014	06/05/2016
1266				31/07/2017			
1267	24/10/2018	08/11/2018					
1268	04/06/2013	17/06/2013	19/11/2013	27/08/2014		30/09/2014	
1269	11/03/2016	11/03/2016	01/08/2016	21/03/2018		20/10/2017	25/02/2019
1270	04/06/2013	17/06/2013	25/11/2013	27/08/2014		26/09/2014	
1271	13/11/2012	14/11/2012	30/11/2012	31/03/2014		28/03/2014	03/11/2014
1272	16/06/2014	17/07/2014	31/01/2014	30/03/2015			16/12/2015
1273	16/11/2012	21/11/2012	30/11/2012	11/11/2014		30/05/2014	11/11/2014
1274	18/01/2019	22/01/2019		30/12/2016			
1276	10/03/2014	18/03/2014	06/10/2014	10/03/2015		28/12/2015	
1278	18/05/2015	27/05/2015	12/10/2015	14/01/2016		29/01/2016	
1279	26/06/2018	26/06/2018					
1280	13/02/2015	16/02/2015					
1281	17/02/2015	18/02/2015					
1283	15/05/2014	19/05/2014					
1284	18/09/2014	24/09/2014					
1286	13/02/2015	16/02/2015	02/11/2015			08/07/2016	
1287	12/02/2016	19/02/2016					
1288	22/05/2015	02/06/2015	04/04/2016	06/06/2016		18/12/2015	
1290	29/01/2015	03/02/2015	01/04/2015	27/10/2017		26/01/2018	
1291	26/10/2017	08/11/2017	06/11/2017	05/12/2018			
1292	15/02/2017	01/03/2017					
1293	07/02/2017	01/03/2017					
1294	15/02/2017	01/03/2017					
1297	25/11/2016	05/12/2016					
1305	08/06/2009	02/09/2009	05/03/2012	18/03/2014		30/06/2014	23/06/2015
1306	20/10/2011	24/10/2011	03/03/2014	28/11/2014		21/12/2015	
1307	23/05/2014	03/06/2014		22/02/2016			
1308	22/03/2011	31/03/2011	06/03/2017	31/03/2017		31/03/2017	31/08/2017
1309	06/01/2012	10/01/2012	01/04/2014	18/03/2014		25/10/2017	
1310	15/10/2012	05/11/2012	18/02/2013	01/10/2013		21/10/2013	
1311	13/11/2012	14/11/2012	30/11/2012	14/01/2014		30/11/2012	03/11/2014
1312	13/11/2012	14/11/2012	30/11/2012	31/03/2014		29/11/2013	11/11/2014
1313	03/02/2015	04/02/2015					
1315	15/02/2017	01/03/2017	03/07/2017	26/09/2017		11/08/2017	21/02/2018
1317	13/12/2016	19/12/2016		03/03/2017			
1322	22/05/1997	03/09/1997	28/05/2007	15/09/2011		30/06/2008	
1323	07/10/2009	14/10/2009	30/11/2009	30/09/2010		27/09/2010	
1324	16/01/2008	23/01/2008	01/04/2008			03/03/2009	
1325	06/11/2009	16/11/2009	04/01/2010	26/04/2010		29/03/2010	03/11/2014
1326	29/01/2007	16/02/2007	02/01/2008	14/03/2008		02/07/2008	
1327	04/04/2008	22/05/2008	15/09/2008	09/01/2009		05/01/2009	
1328	20/01/2011	31/01/2011	09/01/2012	28/03/2013		26/05/2014	
1331	13/11/2012	14/11/2012	30/11/2012	31/03/2014			03/11/2014
1332	23/06/2014	17/07/2014	20/07/2015	29/04/2016		29/07/2016	25/04/2017
1333	13/11/2012	14/11/2012	01/04/2014	14/05/2014		28/03/2014	06/11/2014
1334	30/11/2018	30/11/2018					
1337	04/10/2016	14/10/2016	21/08/2017	22/01/2019		23/11/2017	
1338	03/05/2016	10/05/2016	21/11/2016	14/12/2017		27/10/2017	
1340	24/10/2016	25/10/2016					
1341	27/10/2015	14/12/2015		24/03/2016			03/10/2017
1348		25/09/2012					
1349	27/03/2015	20/04/2015					
1350	17/06/2015	02/07/2015					
1361	22/03/2016	22/03/2016					
1362	26/03/2014	28/03/2014					
1363	18/06/2013	19/06/2013					
1365	01/08/2016	01/08/2016					
1366	30/03/2017	30/03/2017					
1367	31/08/2011	07/09/2011					
1368	24/10/2012	31/10/2012					
1369	01/02/2013	06/02/2013					
1370	14/02/2013	22/02/2013					
1371	15/02/2013	22/02/2013					
1372	23/01/2013	30/01/2013					
1373	04/07/2013	16/07/2013					
1374	22/03/2013	26/03/2013					
1375	22/04/2013	23/04/2013					
1376	30/05/2013	31/05/2013					
1377	27/06/2013	28/06/2013					
1378	09/08/2013	12/08/2013					
1379	14/08/2013	16/08/2013					
1380	11/09/2013	21/09/2013					
1381	09/08/2013	12/08/2013					
1382	14/08/2013	16/08/2013					
1383	22/07/2013	30/07/2013					
1384	21/07/2014	25/07/2014					
1385	10/04/2014	14/04/2014					
1386	18/08/2014	18/08/2014					
1387	05/08/2014	11/08/2014					
1388	24/07/2014	25/07/2014					
1389	15/01/2016	15/01/2016					
1390	12/02/2015	12/02/2015					
1391	01/03/2016	01/03/2016					
1392	18/06/2012	20/06/2012					
1393	19/06/2012	27/06/2012					
1394	02/09/2013	12/09/2013					
1395	23/09/2013	24/09/2013					
1396	02/06/2014	02/06/2014					
1397	10/09/2014	17/09/2014					
1398	18/09/2012	28/09/2012					
1399	24/02/2016	21/04/2016					
1400	20/08/2015	20/08/2015					

Table D

	Current Actual or Projected Service Cost Allocation				Current Actual or Projected Capital Expenditure Profile (£m money of the day)										Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
Sort Ref	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	47	48	49	50	51	52	53	54	55	56	57	58	59	60	66	67	68	69	70	71	72
1200	0	0	0	100	0.434	0	0	0	0	0	0.01	0.019	0.344	0.434	0	100	0	0	0	0	01
1201	0	0	100	0	1.053	0	0	0	0	0	0	0	0.05	1.053	0	49	0	51	0	49	01
1202	0	0	100	0	1.867	0	0	0	0	0	0.011	0.115	0.162	1.867	0	100	0	0	0	100	01
1203	0	0	100	0	0.004	0	0	0	0	0	0.01	0.013	0.02	0.004	0	100	0	0	0	100	01
1204	0	50	0	50	0	0	0	0	0	0	0.016	0	0	0	0	40	60	0	0	0	01
1205	0	0	0	100	-0.004	0	0	0	0	0	0	3.87	0.429	-0.004	0	79	0	21	0	0	01
1206	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1207	0	0	100	0	0.005	0	0	0	0	0	0	0	0.003	0.005	0	0	100	0	0	0	01
1208	0	0	100	0	-0.002	0	0	0	0	0	0	0	0.056	-0.002	0	0	0	100	0	0	01
1209	0	0	0	100	0.087	0	0	0	0	0	0	0.001	-0.001	0.087	75	25	0	0	0	0	10
1210	0	0	100	0	0.021	0	0	0	0	0	0	0	0.012	0.021	0	100	0	0	0	100	01
1211	0	0	100	0	0.052	0	0	0	0	0	0.004	0.004	0	0.052	0	0	0	100	0	0	01
1212	0	0	100	0	0	0	0	0	0	0	0	0.001	0	0	0	0	0	100	0	0	01
1213	0	0	100	0	0.002	0	0	0	0	0	0	0.819	-0.002	0.002	100	0	0	0	0	0	02
1214	0	0	100	0	-0.001	0	0	0	0	0	0	0.026	0.001	-0.001	0	100	0	0	0	100	01
1215	0	0	0	100	0	0	0	0	0	0	0	0.048	0	0	0	100	0	0	0	0	01
1216	0	0	0	100	0.004	0	0	0	0	0	0	0.03	0.068	0.004	0	100	0	0	0	0	01
1217	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1218	0	0	0	100	0	0	0	0	0	0	0	0.008	0.017	0	0	100	0	0	0	0	01
1219	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1220	0	0	100	0	0.022	0	0	0	0	0	0	0	0	0.022	0	100	0	0	0	100	
1221	0	0	100	0	0.01	0	0	0	0	0	0	0	0	0.01	0	0	100	0	0	0	
1222	0	0	0	100	0.055	0	0	0	0	0	0	0	0.04	0.055	41	43	0	16	0	0	03
1223	0	0	100	0	0.131	0	0	0	0	0	0	0	0.1	0.131	0	100	0	0	0	100	01
1224	0	0	100	0	0.012	0	0	0	0	0	0	0	0	0.012	0	50	50	0	0	50	
1225	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	
1226	0	0	100	0	0.083	0	0	0	0	0	0	0	0.121	0.083	0	100	0	0	0	100	
1227	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.001	-0.001	0	0	0	100	0	0	
1228	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1229	0	0	100	0	-0.001	0	0	0	0	0	0	0	0.001	-0.001	0	0	0	100	0	0	
1230	0	0	0	100	0.91	0	0	0	0	0	0	0	0	0.91	0	100	0	0	0	0	
1231	0	0	100	0	0.013	0	0	0	0	0	0	0	0.1	0.013	0	100	0	0	0	100	
1232	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1233	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1234	0	0	100	0	0.01	0	0	0	0	0	0	0	0	0.01	0	0	100	0	0	0	
1235	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	01
1236	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1237	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1238	0	0	100	0	0.017	0	0	0	0	0	0	0	0	0.017	0	40	60	0	0	40	01
1239	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1240	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1241	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1242	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1243	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1244	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1245	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1246	0	0	100	0	0.004	0	0	0	0	0	0	0	0	0.004	0	40	60	0	0	40	01
1247	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	01
1248	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1249	0	0	85	15	0.471	0.047	0.004	0.026	-0.001	0.058	0.01	0.06	0.264	0.471	80	0	0	20	0	0	02
1250	0	0	100	0	0.043	0	0	0	0	0	0	0	0	0.043	0	0	0	100	0	0	01
1251	0	0	100	0	0.037	0	0	0	0	0	0	0	0	0.037	0	100	0	0	0	100	01
1252	0	0	100	0	0.002	0	0	0	0	0	0	0	0	0.002	0	0	0	100	0	0	
1253	0	0	31	69	0.849	0.04	0.02	0.023	0.03	0.061	-0.011	0.012	0.063	0.849	85	6	0	9	0	2	02
1254	0	0	100	0	0.034	0	0	0.003	-0.001	0.001	0	0	0	0.034	0	0	0	100	0	0	01
1255	0	0	100	0	0.042	0	0	0	0	0	0	0	0	0.042	0	0	0	100	0	0	01
1256	0	0	0	100	0.052	0	0	0	0	0	0	0	0	0.052	60	20	0	20	0	0	
1257	0	0	51	49	0	0.111	0.039	0.016	0.004	0	0	0	-0.007	0	0	9	0	91	0	0	
1258	0	0	0	100	0	0.125	-0.07	0.023	0.001	0	0.001	0	0	0	42	42	0	16	0	0	09
1259	0	0	0	100	0	0.229	-0.049	0.555	2.78	0.579	0.234	0.268	0.009	0	41	15	0	44	0	0	08
1260	0	0	71	29	0.133	0.022	0.034	0.026	0.036	0.056	0.012	0.046	0.059	0.133	0	78	0	22	0	56	02
1261	0	0	51	49	0	0	-0.002	0.004	0	0	-0.002	0	0	0	0	9	0	91	0	0	01
1262	0	0	100	0	0	0.009	-0.007	0.015	-0.001	0	-0.013	0	0	0	0	26	0	74	0	26	01
1263	0	0	60	40	0.019	0.009	0.008	0.024	0.343	0.761	0.71	0.043	-0.013	0.019	72	14	0	14	0	10	02
1264	0	0	6	94	0	0.03	-0.029	0.062	0.597	0.031	0	0	0.005	0	97	3	0	0	0	0	
1265	0	0	0	100	0	0.354	1.638	5.446	2.679	0	0.001	0	0	0	77	23	0	0	0	0	08
1266	0	0	100	0	-0.001	0	0	0.02	-0.002	0.007	0.007	0	0.003	-0.001	100	0	0	0	0	0	02
1267	0	0	30	70	0.015	0	0	0.072	-0.024	0.027	-0.002	0.004	0.039	0.015	100	0	0	0	0	0	02
1268	0	0	0	100	0	0	0	0.059	1.107	0.571	-0.037	0.007	-0.002	0	88	12	0	0	0	0	08
1269	0	0	13	87	0.009	0	0	0.088	-0.003	0.131	0.103	1.585	1.463	0.009	84	16	0	0	0	3	02
1270	0	0	0	100	0	0	0	0.065	1.043	0.256	-0.016	0	0	0	100	0	0	0	0	0	08
1271	0	0	0	100	0	0	0	0.032	0.198	0	-0.001	0	0	0	26	70	4	0	0	0	
1272	0	0	0	100	0	0	0	0	0.006	0.346	0.004	0.001	0	0	0	100	0	0	0	0	01
1273	0	0	0	100	0	0	0	0.096	0.593	0.071	0.001	0	0	0	12	74	14	0	0	0	08
1274	0	0	31	69	0.431	0	0.004	0.027	0.043	0.025	0.061	0.004	0.018	0.431	88	12	0	0	0	7	02
1275	0	0	22	78	0.034	0	0.005	0.041	-0.003	0	0.011	0.014	0	0.034	85	15	0	0	0	2	06
1276	0	0	6	94	-0.007	0	0.013	0.033	0.036	1.451	0.729	0.092	0.048	-0.007	0	53	0	47	0	3	02
1277	0	0	0	100	0.005	0	0.005	0.014	0.044	0.008	-0.001	0.008	-0.006	0.005	34	26	0	40	0	0	03
1278	0	0	100	0	0.002	0	0	0.01	0.01	0	0.257	0.015	0	0.002	0	0	100	0	0	0	01
1279	0	0	0	100	0	0	0	0.029	-0.005	0	0.001	0	0	0	40	36	12	12	0	0	01
1280	0	0	0	100	0.001	0	0	0.02	0.004	0.002	0.064	0.016	0.004	0.001	81	19	0	0	0	0	
1281	0	0	0	100	0	0	0	0.018	0.005	0.002	0.068	0.001	0	0	78	22	0	0	0	0	03
1282	0	0	0	100	0.05	0	0	0.006	0	-0.001	0	0	0	0.05	47	53	0	0	0	0	02
1283	0	0	0	100	0	0	0	0.002	0.012	0.01	-0.001	0	0	0	0	100	0	0	0	0	
1284	0	0	17	83	0.03	0	0	0	0	0.061	0.66	0.072	0.065	0.03	54	46	0	0	0	13	02
1285	0	0	100	0	-0.007	0	0	0	0	0	0	0.02	0.01	-0.007	90	10	0	0	0	10	10
1286	0	0	85	15	-0.001	0	0	0	0	0.006	0.133	0.02	0	-0.001	90	10	0	0	0	10	02
1287	0	0	57	43	-0.012	0	0	0	0.004	0.012	0.016	0.104	0.024	-0.012	0	72	0	28	0	29	01
1288	0	0	100	0	0	0	0	0	0	0	0	0.047	0	0	0	0	0	100	0	0	01
1289	0	0	100	0	0	0	0	0	0	0.01	0.033	0.02	0.259	0	0	50	50	0	0	50	01
1290	0	0	35	65	-0.024	0	0	0	0	0.264	1.301	0.132	0.112	-0.024	100	0	0	0	0	0	02
1291	0	0	0	100	1.612	0	0	0	0	0	0.035	0	1.146	1.612	0	100	0	0	0	0	02
1292	0	0	100	0	-0.001	0	0	0	0	0	0	0.001	0	-0.001	0	0	0	100	0	0	01
1293	0	0	100	0	-0.002	0	0	0	0	0	0	0	0.048	-0.002	0	0	0	100	0	0	01
1294	0	0	100	0	-0.003	0	0	0	0	0	0	0.001	0.018	-0.003	0	0	0	100	0	0	01
1295	0	0	0	100	0	0	0	0	0	0	0	0.004	0.006	0	0	100	0	0	0	0	01
1296	0	0	100	0	0.104	0	0	0	0	0	0	0.022	0.024	0.104	0	0	100	0	0	0	01
1297	0	0	0	100	0.659	0	0	0	0	0	0	0.001801	1.801	0.659	0	100	0	0	0	0	01
1298	0	0	0	100	0.004	0	0	0	0	0	0	0	0	0.004	0	100	0	0	0	0	03
1299	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1300	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1301	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1302	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1303	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1304	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1305	0	0	17	83	0	0	0.024	0.287	1.202	0.031	0.012	0.003	-0.003	0	0	35	0	65	0	7	08
1306	0	0	12	88	0.57	0.012	0.057	0.014	0.216	1.442	0.042	0.055	0.04	0.57	26	37	0	37	0	4	08
1307	0	0	100	0	0.902	0	0.005	0.005	0.073	0.273	0.439	0.138	0.181	0.902	70	20	0	10	0	20	02
1308	0	0	100	0	0	0.002	0.001	0	0	0	0.002	0.041	-0.004	0	0	0	0	100	0	0	01
1309	0	0	0	100	-0.002	0	0	0.443	3.742	0.24	0.008	0.021	0.159	-0.002	23	71	0	6	0	0	08
1310	68	0	32	0	0	0	0	0.068	0.723	-0.048	0	0	-0.001	0	0	100	0	0	68	32	
1311	0	0	0	100	0	0	0	0.013	0.056	0	0	-0.001	0	0	2	86	12	0	0	0	01
1312	0	0	0	100	0	0	0	0.032	0.117	0.039	0.005	0	0	0	2	98	0	0	0	0	01
1313	0	0	100	0	0	0	0	0	0	0.03	0	0	-0.001	0	0	0	100	0	0	0	09
1314	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1315	0	0	100	0	0	0	0	0	0	0	0	0	0.041	0	0	0	0	100	0	0	01
1316	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1317	0	0	100	0	0.016	0	0	0	0	0	0	0.044	-0.006	0.016	0	0	100	0	0	0	01
1318	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1319	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
1320	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1321	0	0	100	0	0.007	0	0	0	0	0	0	0	0	0.007	100	0	0	0	0	0	
1322	0	0	30	70	0	0.01	0	0.006	0	0	-0.006	0	0	0	62	35	0	3	0	3	01
1323	0	0	65	35	0	0.014	0.006	-0.061	0	0	0	-0.005	0	0	53	0	0	47	0	0	09
1324	0	0	100	0	0	0	-0.003	0.002	0	0	-0.002	0	0	0	0	0	0	100	0	0	01
1325	0	0	0	100	0	0.002	-0.003	-0.005	-0.001	0	0	0	-0.002	0	0	100	0	0	0	0	
1326	0	0	100	0	0.003	0	0	0	0	0	0	0	0	0.003	0	100	0	0	0	100	
1327	0	0	100	0	0	0	-0.002	0	0	0	-0.003	0	0	0	0	100	0	0	0	100	01
1328	0	0	0	100	0	0.231	0.462	1.388	0.161	0.084	0	0	-0.001	0	46	39	0	15	0	0	
1329	0	0	0	100	0	0	0.017	-0.008	0.02	0.05	0	0.012	-0.012	0	44	26	0	30	0	0	03
1330	0	0	0	100	0.006	0	0.003	0.017	0.06	-0.001	0	0.01	-0.01	0.006	34	26	0	40	0	0	03
1331	0	0	0	100	0	0	0	0.05	0.117	0.011	0	0	-0.001	0	0	100	0	0	0	0	
1332	0	0	0	100	-0.013	0	0	0.005	0.001	0.043	0.67	0	-0.013	-0.013	0	100	0	0	0	0	01
1333	0	0	0	100	0.001	0	0	0.052	0.27	0.003	0.005	0	0.005	0.001	14	45	41	0	0	0	01
1334	0	0	100	0	0	0	0	0	0.004	0.012	0.001	0.001	0.012	0	0	100	0	0	0	100	01
1335	0	0	0	100	0	0	0	0	0.025	0	0	0.029	-0.018	0	37	60	0	3	0	0	03
1336	0	0	0	100	0	0	0	0	0.025	0	0	0.003	-0.003	0	48	24	0	28	0	0	03
1337	0	0	100	0	0.006	0	0	0	0	0.005	-0.001	0.01	0.125	0.006	0	100	0	0	0	100	01
1338	0	0	0	100	0.077	0	0	0	0	0.004	0.01	1.101	0.88	0.077	0	60	40	0	0	0	01
1339	0	0	100	0	-0.04	0	0	0	0	0.003	0.142	0.016	0.082	-0.04	0	100	0	0	0	100	01
1340	0	0	0	100	0	0	0	0	0	0	0.008	0.007	0	0	20	25	0	55	0	0	03
1341	0	0	0	100	0	0	0	0	0	0	0.117	0.012	0	0	0	100	0	0	0	0	01
1342	0	0	10	90	0	0	0	0	0	0	0	0	0	0	0	52	0	48	0	6	01
1343	0	0	100	0	0.003	0	0	0	0	0	0	0.058	0.041	0.003	0	80	0	20	0	80	01
1344	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1345	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1346	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1347	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	01
1348	25	25	25	25	0.009	0.001	0	0	0.087	-0.001	0.046	0.057	0.019	0.009	0	100	0	0	25	25	01
1349	0	0	100	0	0	0	0	0	0	0.006	0.05	0.019	-0.015	0	0	100	0	0	0	100	01
1350	0	0	100	0	1.069	0	0	0	0	0	0.375	1.056	1.239	1.069	0	100	0	0	0	100	01
1351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1352	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1353	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1355	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1360	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1361	0	50	0	50	0	0	0	0	0	0	0.021	0	0	0	0	0	100	0	0	0	
1362	0	50	0	50	0	0	0	0	0	0.083	0.138	0	0	0	0	100	0	0	0	0	
1363	25	25	25	25	0	0	0	0	0.158	0.09	-0.004	0	0	0	0	100	0	0	25	25	
1364	0	46	8	46	0	0	0	0	0	0	0	0	0	0	0	63	37	0	0	5	
1365	0	50	0	50	0.091	0	0	0	0	0	0	0.27	0.179	0.091	0	100	0	0	0	0	
1366	0	100	0	0	0	0	0	0	0	0	0	0.005	0.137	0	0	100	0	0	0	0	
1367	0	0	100	0	0	0	0.13	0.152	0	0	-0.008	0	0	0	0	100	0	0	0	100	01
1368	100	0	0	0	0	0	0	0	0.498	0.061	-0.017	-0.004	0	0	0	100	0	0	100	0	
1369	0	0	100	0	0	0	0	0.015	0.065	0.015	0.002	0	0	0	0	100	0	0	0	100	
1370	0	0	100	0	0.006	0	0	0	0.093	0.02	0.027	0.029	0.02	0.006	0	100	0	0	0	100	
1371	100	0	0	0	0	0	0	0.298	-0.042	0	-0.005	0	0	0	0	100	0	0	100	0	
1372	100	0	0	0	0	0	0	0	0.469	0.18	-0.038	0	0	0	0	100	0	0	100	0	
1373	0	0	100	0	0	0	0	0	0.047	0.091	0.001	0	0	0	0	100	0	0	0	100	
1374	0	100	0	0	0	0	0	0.02	0.422	0.127	-0.001	0	0	0	0	100	0	0	0	0	
1375	0	40	20	40	0	0	0	0	0.058	0	-0.001	0	0	0	0	100	0	0	0	20	
1376	100	0	0	0	0	0	0	0	0.012	0.117	0.014	0	-0.001	0	0	100	0	0	100	0	
1377	0	0	100	0	0	0	0	0	0.006	0.003	-0.001	0	0	0	0	100	0	0	0	100	
1378	100	0	0	0	0	0	0	0	0.226	0.029	-0.01	0	0	0	0	100	0	0	100	0	
1379	0	0	100	0	0	0	0	0	0.157	0.034	-0.001	0	0	0	0	100	0	0	0	100	
1380	0	0	100	0	0	0	0	0	0.035	0.092	-0.001	0	0	0	0	100	0	0	0	100	
1381	0	0	100	0	0	0	0	0	0.015	0.011	0.004	0	0	0	0	100	0	0	0	100	
1382	0	0	100	0	0	0	0	0	0.033	0.063	0.022	0	0	0	0	100	0	0	0	100	
1383	0	0	100	0	0	0	0	0	0.012	0.02	-0.002	0	0	0	0	100	0	0	0	100	
1384	100	0	0	0	0	0	0	0	0	0.17	0.056	0.006	-0.001	0	100	0	0	0	0	0	01
1385	0	0	100	0	0	0	0	0	0	0.249	-0.004	0	0	0	0	100	0	0	0	100	
1386	0	0	100	0	0	0	0	0	0	0.097	0	0	0	0	0	100	0	0	0	100	
1387	100	0	0	0	0	0	0	0	0	0.242	-0.022	0	-0.002	0	0	100	0	0	100	0	
1388	100	0	0	0	0	0	0	0	0	0.415	0.183	-0.005	0	0	0	100	0	0	100	0	
1389	0	100	0	0	0	0	0	0	0	0	0.02	0.008	-0.001	0	0	100	0	0	0	0	
1390	0	100	0	0	0	0	0	0	0	0.006	0.016	-0.001	0	0	0	0	100	0	0	0	
1391	0	0	0	100	0	0	0	0	0	0	0	0.042	-0.001	0	0	100	0	0	0	0	
1392	0	100	0	0	0	0	0	0.215	0.013	0.019	0.001	0	0	0	0	0	100	0	0	0	
1393	0	100	0	0	0	0	0	0.173	0.009	0	0.011	0	0	0	0	0	100	0	0	0	
1394	0	50	0	50	0	0	0	0	0.264	0.265	-0.01	0	0	0	0	0	100	0	0	0	
1395	0	100	0	0	0	0	0	0	0.06	0.015	-0.002	0	0	0	0	0	100	0	0	0	
1396	0	50	0	50	0.285	0	0	0	0	1.472	0.831	0.535	0.111	0.285	0	0	100	0	0	0	
1397	0	50	0	50	0	0	0	0	0	0.399	0.031	0	-0.001	0	0	50	50	0	0	0	
1398	0	49	0	51	0	0	0	0.195	0	0	0	-0.001	0	0	0	100	0	0	0	0	
1399	25	25	25	25	0	0	0	0	0	0	0.132	0.118	-0.014	0	0	0	100	0	0	0	
1400	0	100	0	0	0	0	0	0	0	0	0.061	0.063	0	0	0	100	0	0	0	0	

Project Identification									
Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
1401	2018_19 Q4	BE017	Energy M&G	06			09	02	
1402	2018_19 Q4	BE020	Additional Solar Installations	06			15	20	
1403	2018_19 Q4	BE021	Accommodation	06			15	20	
1404	2018_19 Q4	BE022	EY Sow for IOC	06			15	20	
1405	2018_19 Q4	BI121	Contractor Ellipse Interface	02			14	20	
1406	2018_19 Q4	BI139	SCaMP (Sustainable Catchment Management Plan) Mournes Water restric	00			01	20	
1407	2018_19 Q4	BI151	DG2 Stage 2	06			03	20	
1408	2018_19 Q4	BI152	Nisrans automated interface	01			15	20	
1409	2018_19 Q4	BI156	Optimal Control & management System site surveys	00			14	20	
1410	2018_19 Q4	BI226	Sustainable Local Power	01			06	20	
1411	2018_19 Q4	BI231	AGGREGATED GENERATION	01			15	20	
1412	2018_19 Q4	BI232	Installation of Sub Electricity Meters - Pilot Study @ Killyhevlin WTW	01			06	20	
1413	2018_19 Q4	BI240	Development of ICAT Standards	03			15	20	
1414	2018_19 Q4	BI249	Test and Development Telemetry System	01			06	20	
1415	2018_19 Q4	BI250	ANSWER Agricultural Need for Sustainable Willow Effluent Recycling	03			09	20	NIEA
1416	2018_19 Q4	BI254	Network Distribution Systems Control (NDCS) Phase 1	03			04	20	
1417	2018_19 Q4	BI259	Network Distribution control system pilot sites.	01			04	20	
1418	2018_19 Q4	BI272	Project Manager for the Property Address Cleansing Project Phase 3 (Pilot)	01			06	20	
1419	2018_19 Q4	BI280	ICAT Programme Manager - Level 3	03			14	20	
1420	2018_19 Q4	BI282	ILMS Schneider Hardware & Software Support	03			03	20	
1421	2018_19 Q4	BI287	PC15 Innovation Programme Projects	06			15	20	
1422	2018_19 Q4	BI291	MCC replacement at Killyclogher SR	03			04	20	
1423	2018_19 Q4	BI295	Sludge Density Monitoring Using Coreollis Flowmeters	03			02	20	
1424	2018_19 Q4	BI301	i WATCH (Intelligent Water Automation, Telemetry and Control Hybrid) site	06			03	20	
1425	2018_19 Q4	BI303	Use of thermal and near infrared camera's in conjunction with an UAV	06			15	20	
1426	2018_19 Q4	BI305	Revision of Sewers for Adoption (N.I.)	06			14	20	
1427	2018_19 Q4	BI313	Jet Vac Screening Trial	06			07	20	
1428	2018_19 Q4	BT004	Telemetry Radio Digital Upgrade	00			15	20	
1429	2018_19 Q4	BT005	Scada Services Provision	00			15	20	
1430	2018_19 Q4	BT012	Document Management	01			15	20	
1431	2018_19 Q4	BT021	Enhancement program for End of Life equiptments 7 Ethernet delivery for T	01			15	20	
1432	2018_19 Q4	BT023	HVCA Implementation Project	01			15	20	
1433	2018_19 Q4	BT026	Business Services Office Signage Requirements	06			15	20	
1434	2018_19 Q4	CE004	SME support for Capital Efficiency Portfolio	06			15	20	
1435	2018_19 Q4	CE006	In-sourcing Network Modelling Into Strategic Client	06			15	20	
1436	2018_19 Q4	CO001	Commercial Excellence	06			15	20	
1437	2018_19 Q4	CS001	Customer Connections	02			06	20	
1438	2018_19 Q4	CS007	Account Services Case Mgmt	01			15	20	DRD
1439	2018_19 Q4	CS008	Self Service Phase 2	01			14	20	DRD
1440	2018_19 Q4	CU001	1CEX1 Metering & Billing	06			0	20	
1441	2018_19 Q4	CU002	PC15 ICAT Delivery - Omagh / Cookstown Area	04	BE014		06	20	
1442	2018_19 Q4	CU003	PC15 ICAT Delivery - Belfast Area	06	BE014		04	20	
1443	2018_19 Q4	CU004	PC15 ICAT Delivery - Newry Area	06			06	20	
1444	2018_19 Q4	CU005	PC15 ICAT Delivery - Enniskillen Area	06			06	20	
1445	2018_19 Q4	CU006	PC15 ICAT Delivery - Ards / Bangor Area	06			04	20	
1446	2018_19 Q4	CU007	PC15 ICAT Delivery - Derry / Coleraine Area	06			04	20	
1447	2018_19 Q4	CU008	PC15 ICAT Delivery - Pilot Studies	06			06	20	
1448	2018_19 Q4	CU011	Service Incentive Mechanism (SIM) Improvements	06			15	20	
1449	2018_19 Q4	CU012	IVR	06			15	20	
1450	2018_19 Q4	CU013	Self Service Web Enhancements	06			15	20	
1451	2018_19 Q4	CU014	Knowledge Centre	06			15	20	
1452	2018_19 Q4	CU015	Digital Client Side Support	06			15	20	
1453	2018_19 Q4	CU016	Customer Interface Renewal	06			15	20	
1454	2018_19 Q4	CU017	ESRI Network Schematics	06			15	20	
1455	2018_19 Q4	CU018	Digital implementation: customer portal and channel shift	06			15	20	
1456	2018_19 Q4	CU019	Digital Implementation: case management and workflow solution	06			15	20	
1457	2018_19 Q4	CU020	Smart Meter Implementation (Phase 1)	06			15	20	
1458	2018_19 Q4	CU021	Activat8 Scoping	06			15	20	
1459	2018_19 Q4	CU023	Robotic Process Automation (RPA) Proof of Value	06			15	20	
1460	2018_19 Q4	EP013	Capitalisation of Estates Maintenance	00			15	20	
1461	2018_19 Q4	EP017	Electricity generation from wind power or alternative green energy solution	06			09	02	
1462	2018_19 Q4	EP031	Intelligent Pump Manager IWWF West Region	02	EP046		12	20	DRD
1463	2018_19 Q4	EP037	Climate Change Mitigation - Reducing Emissions	02			15	20	
1464	2018_19 Q4	EP038	Additional Accommodation and Upgrades at Westland House	00			14	20	DRD
1465	2018_19 Q4	EP039	NIW Contaminated Land Remedial Project	06			15	20	
1466	2018_19 Q4	EP040	Ballycastle Depot - Remediation of Contamination.	01			15	20	NIEA
1467	2018_19 Q4	EP043	Capital Maintenance 13/14 & 14/15	03			15	20	
1468	2018_19 Q4	EP045	Enniskillen Area: Provision of MIP Facilities	03			06	20	DRD
1469	2018_19 Q4	EP052	CPMR imps PC15	06			11	20	
1470	2018_19 Q4	EP053	Estates management PC15	06			15	20	
1471	2018_19 Q4	EP056	CALM Network Facility	06			06	20	
1472	2018_19 Q4	ER002	Purachse of Automatic Sampling Machines for TE Charging and Complianc	06			14	20	
1473	2018_19 Q4	ER003	Trade Effluent Store - Tullygarley	06			14	20	
1474	2018_19 Q4	FR014	Oracle E-business suite minor enhancements during PC13	03			15	20	
1475	2018_19 Q4	FR015	Capital allowance review	05			15	20	
1476	2018_19 Q4	FR017	Computer Associates upgrade related to new Oracle E-business suite Cont	05			15	20	
1477	2018_19 Q4	FR018	Enhancements to the Oracle E-Business Suite and Associated Systems	06			15	20	
1478	2018_19 Q4	FR020	16/17 Enhancement to Oracle E-Bus Suite and Associated Systems	06			15	20	
1479	2018_19 Q4	FR021	Migration of Oracle EBS & OBIEE to new OVM/Linux hardware	06			15	20	
1480	2018_19 Q4	FR022	17/18 Minor enhancements to the Oracle E-business suite and OBIEE	06			15	20	
1481	2018_19 Q4	FR025	18/19 Oracle Minor Enhancements	06			15	20	
1482	2018_19 Q4	FR026	Oracle Upgrade	06			15	20	
1483	2018_19 Q4	FR028	Making Tax Digital for VAT	06			15	20	
1484	2018_19 Q4	HR002	Creation of Interface between NI Water's payroll and Capita Employee Ben	03			15	20	
1485	2018_19 Q4	HR005	Payroll Changes in relation to CARE 2015 pension introduction	06			15	20	
1486	2018_19 Q4	HR006	Oracle OLM Change Request	06			15	20	
1487	2018_19 Q4	IA001	Data Analytics Solution	06			15	20	
1488	2018_19 Q4	IT002	Provision and support of corporate AutoCAD MAP 3D Licenses	00			14	20	
1489	2018_19 Q4	IT004	PC Refresh Programme	01			06	20	
1490	2018_19 Q4	IT010	ICT – Telemetry Base Maintenance	02			15	20	
1491	2018_19 Q4	IT017	Upgrade Programme for the Protection of Lightning Protection Phase 2	01			15	20	
1492	2018_19 Q4	IT038	MWM Toughbook Refresh Project	03			15	20	
1493	2018_19 Q4	IT039	Mobile Work Management (MWM) Contract Renewal	03			15	20	
1494	2018_19 Q4	IT043	Information Flows 2	03			15	20	
1495	2018_19 Q4	IT044	Critical Security Controls	03			15	20	
1496	2018_19 Q4	IT050	Telecoms Infrastructure Improvement	03			15	20	
1497	2018_19 Q4	IT052	Internet Web Server Refresh	03			15	20	
1498	2018_19 Q4	IT053	Windows Servers & Storage Array (2013)	03			15	20	
1499	2018_19 Q4	IT055	MC2 Implementation	03			15	20	DRD
1500	2018_19 Q4	IT056	Slieve Gallion mast site refurbishment	06			15	20	
1501	2018_19 Q4	IT068	Site SCADA Upgrade	03			14	20	
1502	2018_19 Q4	IT069	ICT Base Maintenance	05			15	20	
1503	2018_19 Q4	IT070	EMCI	03			15	20	
1504	2018_19 Q4	IT071	MC1 Exit Plan	03			15	20	
1505	2018_19 Q4	IT072	Implementation of PCI DSS	04			15	20	
1506	2018_19 Q4	IT073	EMCI Phase 2	04			15	20	
1507	2018_19 Q4	IT076	ICT Base Maintenance 15/16	06			15	20	
1508	2018_19 Q4	IT077	SCADA Services Provision	06			15	20	
1509	2018_19 Q4	IT082	Telemetry Server Hardware Replacement	03			15	20	
1510	2018_19 Q4	IT084	End of Life Hardware and Software upgrade – Db Authorise invoice scannir	03			15	20	
1511	2018_19 Q4	IT085	Microsoft Enterprise Agreement	06			15	20	
1512	2018_19 Q4	IT086	ICT Base Maintenance	06			15	20	
1513	2018_19 Q4	IT087	Additional Blades and Finance Netbackup Licenses	06			15	20	
1514	2018_19 Q4	IT089	Corporate Wifi	06			15	20	
1515	2018_19 Q4	IT090	Mobile Phone Refresh 2016	06			15	20	
1516	2018_19 Q4	IT091	Desktop & Laptop Refresh	06			15	20	
1517	2018_19 Q4	IT093	CSD Dashboard	06			15	20	
1518	2018_19 Q4	IT094	ICT Base Maintenance 17 18	06			15	20	
1519	2018_19 Q4	IT095	Desktop Hardware Refresh	06			15	20	
1520	2018_19 Q4	IT099	Telemetry Outstation Refresh Project - Phase 2	06			15	20	
1521	2018_19 Q4	IT101	ICT Telemetry and Telecoms Base Maintenance	06			15	20	
1522	2018_19 Q4	IT102	MC2 XRM Pilot	06			15	20	
1523	2018_19 Q4	IT105	Mobile Phone Refresh 2018	06			15	20	
1524	2018_19 Q4	IT106	ICT Base Maintenance 18/19	06			15	20	
1525	2018_19 Q4	IT107	Data Centre Refresh	06			15	20	
1526	2018_19 Q4	IT109	MC3 Development	06			15	20	
1527	2018_19 Q4	IT111	Cyber Resilience Programme	06			15	20	
1528	2018_19 Q4	IT112	Field Device Replacement 2019	06			15	20	
1529	2018_19 Q4	IT113	IT Ops Base Maintenance	06			15	20	
1530	2018_19 Q4	LC001	Silent Valley Park Enhancement	01			06	20	
1531	2018_19 Q4	NA004	Laboratory Capital Equipment	01			15	20	
1532	2018_19 Q4	NA006	NIAMP4 Project Support	02			15	20	
1533	2018_19 Q4	NA018	LIMS Server Upgrade	06			15	20	
1534	2018_19 Q4	NA020	Remote Sampler Hardware Refresh	03			15	20	
1535	2018_19 Q4	NA025	Upgrade of LIMS AQC Module to AqcTools	05			15	20	
1536	2018_19 Q4	NA035	Purchase of Automatic Sampling Equipment and Batteries	06			14	20	
1537	2018_19 Q4	NA060	MMT	06			15	20	
1538	2018_19 Q4	NA061	19/20 Energy (draft)	06			15	20	
1539	2018_19 Q4	NA062	Pilot on Wireless Sub Metering	06			15	20	
1540	2018_19 Q4	NA064	Additional Functionality of Energy Management Software	06			15	20	
1541	2018_19 Q4	OP041	Meter Reading Hand Held Units & Software	05			06	20	
1542	2018_19 Q4	OP042	TMG - Fleet Purchases 13/14	03			15	20	DRD
1543	2018_19 Q4	OP048	Toughbook Refresh Project – Cradle purchase & installation	03			15	20	DRD
1544	2018_19 Q4	OP058	M&E Stores Rationalisation	06			15	20	
1545	2018_19 Q4	OP060	TMG Fleet Purchases - 15/16	06			15	20	
1546	2018_19 Q4	OP061	Emergency Planning 15/16	06			15	20	
1547	2018_19 Q4	OP063	Emergency Emergency Holding line 16/17	06			15	20	
1548	2018_19 Q4	OP064	TMG - Vehicle & Plant Replacements 16/17	06			15	20	
1549	2018_19 Q4	OP065	Lone Worker Refresh	06			15	20	
1550	2018_19 Q4	OP067	TMG - V&P Requirements (17/18)	06			15	20	
1551	2018_19 Q4	OP068	TMG - V&P Requirements (18/19)	06			15	20	
1552	2018_19 Q4	OP069	TMG - V&P Requirements (19/20)	06			15	20	
1553	2018_19 Q4	PL001	Ops Contracts Material Testing	06			15	20	
1554	2018_19 Q4	PL002	2PL2 Wastewater PL Phase 1	06			15	20	
1555	2018_19 Q4	PL005	Energy Efficiency - Process Optimisation	06			15	20	
1556	2018_19 Q4	PL006	Repair & Maintenance Review Project	06			06	20	
1557	2018_19 Q4	PL008	Wastewater Recycling & Reuse	06			15	20	
1558	2018_19 Q4	QC011	Laboratory Capital Equipment 12/13	01			15	20	
1559	2018_19 Q4	QC012	Laboratory Equipment 13/14 & 14/15	03			15	20	DWI
1560	2018_19 Q4	QC015	Defibrillators for NIW depots & Hubs	03			06	20	
1561	2018_19 Q4	QC018	Laboratory Capital 15/16	06			15	20	
1562	2018_19 Q4	QC019	2015/16 SCAMP NI (Sustainable Catchment Area Management Planning)	06			06	03	
1563	2018_19 Q4	QC020	Watson Marlow pump - Crypto	06			15	20	
1564	2018_19 Q4	QC021	2016/17 SCAMP NI (Sustainable Catchment Area Management Planning)	06			06	03	
1565	2018_19 Q4	QC022	Laboratory Capital 16/17	06			06	20	
1566	2018_19 Q4	QC023	Laboratory Capital 17/18	06			06	20	
1567	2018_19 Q4	QC024	2017/18 SCAMP NI (Sustainable Catchment Area Management Planning)	06			06	03	
1568	2018_19 Q4	QC026	Laboratory Capital 18/19	06			15	20	
1569	2018_19 Q4	QC027	2018/19 SCAMP NI Projects	06			06	20	
1570	2018_19 Q4	QC028	CSOLS AQC Tools UOM Licensing	06			06	20	
1571	2018_19 Q4	QC029	Laboratory Capital 19/20	06			15	20	
1572	2018_19 Q4	QC030	Laboratorys Additional Capital 18/19	06			15	20	
1573	2018_19 Q4	QC031	Laboratory Capital 20/21	06			15	20	
1574	2018_19 Q4	QC032	Waste Water Random Sampling Project 18/19	06			09	20	
1575	2018_19 Q4	QC033	2019/20 SCAMP NI Projects	06			01	20	
1576	2018_19 Q4	BN051	PC15 Ops Capital (Sewerage) BSP & SDB Parent	06			07	18	
1577	2018_19 Q4	CF114	Installation of water meters and separations Baseline	06			03	19	
1578	2018_19 Q4	LN134	Leakage Parent PC15	06			03	09	
1579	2018_19 Q4	WS121	Ops Capital (Water) BSP & SDB Parent PC15	06			03	10	
1580	2018_19 Q4	CS020	Capitalised Salaries and On-Costs	00				00	
1581	2018_19 Q4		Leakage-Detection	00			03	09	
1582	2018_19 Q4		Leakage-Repairs	00			03	09	
1583	2018_19 Q4		Leakage-Other	00			03	09	
1584	2018_19 Q4		Water Supply	00			02	10	
1585	2018_19 Q4		Wastewater	00			09	18	
1586	2018_19 Q4		Customer Field Services	00			03	19	
1587	2018_19 Q4		DSCT-Water	00			03	10	
1588	2018_19 Q4		DSCT-Sewerage	00			07	18	
1589	2018_19 Q4		M & E	00			09	18	
1590	2018_19 Q4		Networks Water	00			03	10	
1591	2018_19 Q4		Lead Pipe	00			03	10	
1592	2018_19 Q4		Cost of connections sewerage	00			07	18	
1593	2018_19 Q4		Cost of connnections water	00			03	10	
1594	2018_19 Q4		Cost of watermains relignment	00			03	10	
1595	2018_19 Q4		Cost of Sewer realignment	00			07	18	

	Baseline Milestone Dates							Baseline Service Cost Allocation				Baseline Expenditure Profile (£m 2012-13 prices)									Baseline Purpose Allocation			
Sort Ref	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign-off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	36	37	38	39
1461								0	0	0	100	0	0	0	0	0	0	0	1.945457309	0	0	0	100	0
1576								0	0	23	77						7.327	7.283	7.239	7.196	0	91	0	9
1577								0	100	0	0						3.780	3.709	3.646	3.584	0	89	0	11
1578								45	55	0	0						2.687	2.687	2.554	2.629	0	80	0	20
1579								56	44	0	0						6.200	6.163	6.126	6.089	5	53	0	43
1580								29	12	11	48						11.284	11.216	11.203	11.136	23	57	4	15

	Current Actual or Projected Milestone Dates						
Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign-off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date
1	40	41	42	43	44	45	46
1401	29/10/2015	29/10/2015					
1402							
1403							
1404							
1405	05/12/2011	09/12/2011					
1406	26/01/2011	26/01/2011					
1407							
1408	12/10/2011	21/10/2011					
1409							
1410	14/10/2011	21/10/2011					
1411	15/11/2011	16/11/2011					
1412	31/10/2011	09/11/2011					
1413	14/01/2014	16/01/2014					
1414	21/12/2012	07/01/2013					
1415	02/01/2013	03/01/2013					
1416	13/02/2014	18/02/2014					
1417	21/12/2012	31/12/2012					
1418	04/01/2013	04/01/2013					
1419	19/08/2014	26/08/2014					
1420	13/09/2013	21/09/2013					
1421							
1422	11/12/2013	15/12/2013					
1423	04/02/2014	07/02/2014					
1424	16/07/2015	20/07/2015					
1425	24/11/2015	24/11/2015					
1426	28/01/2016	28/01/2016					
1427	30/07/2018	30/07/2018					
1428	03/03/2011	24/03/2011					
1429	26/08/2010	20/09/2010					
1430	24/03/2011	25/03/2011					
1431	12/10/2011	18/10/2011					
1432	02/05/2012	08/05/2012					
1433	11/01/2018	17/01/2018					
1434	28/01/2016	28/01/2016					
1435	25/01/2017	16/05/2017					
1436							
1437	22/09/2011	29/09/2011					
1438	23/11/2011	15/12/2011					
1439	23/11/2011	15/12/2011					
1440	22/12/2015	04/01/2016					
1441	11/02/2016	11/02/2016					
1442	17/07/2017	17/07/2017					
1443							
1444							
1445	28/03/2018	28/03/2018					
1446	28/03/2018	29/03/2018					
1447							
1448	09/06/2016	21/06/2016					
1449	05/06/2017	05/06/2017					
1450	05/06/2017	05/06/2017					
1451	08/11/2017	08/11/2017					
1452	11/01/2018	12/01/2018					
1453							
1454	28/11/2017	28/11/2017					
1455							
1456							
1457	21/01/2019	21/01/2019					
1458	12/11/2018	12/11/2018					
1459							
1460	21/06/2011	09/08/2011					
1461	02/09/2010	20/09/2010					
1462	17/10/2012	18/10/2012					
1463	01/09/2015	02/09/2015					
1464							
1465							
1466							
1467	14/06/2013	24/06/2013					
1468	21/10/2013	24/10/2013					
1469	27/05/2015	29/05/2015					
1470	01/04/2015	03/04/2015					
1471	14/12/2017	21/12/2017					
1472	25/02/2019	25/02/2019					
1473	14/03/2019	14/03/2019					
1474	18/11/2013	02/01/2014					
1475	27/03/2014	28/03/2014					
1476	21/07/2015	30/09/2015					
1477	01/09/2015	30/09/2015					
1478	19/04/2016	08/07/2016					
1479	08/12/2016	13/03/2017					
1480							
1481							
1482							
1483							
1484	19/12/2014	19/12/2014					
1485	20/08/2015	09/09/2015					
1486	17/08/2015	09/09/2015					
1487	02/03/2016	02/03/2016					
1488	18/07/2011	22/07/2011					
1489	24/08/2011	26/08/2011					
1490	15/11/2012	19/11/2012					
1491	26/07/2012	03/08/2012					
1492	30/08/2013	02/09/2013					
1493	21/02/2013	27/02/2013					
1494	08/10/2013	15/10/2013					
1495	05/08/2013	07/08/2013					
1496	10/12/2013	16/12/2013					
1497	03/09/2013	06/09/2013					
1498	26/09/2013	03/10/2013					
1499	26/11/2013	02/12/2013					
1500	16/06/2015	23/06/2015					
1501	17/02/2014	18/02/2014					
1502	13/05/2014	13/05/2014					
1503	08/05/2014	13/05/2014					
1504	18/06/2014	19/06/2014					
1505	19/06/2014	20/06/2014					
1506	12/09/2014	12/09/2014					
1507	22/05/2015	26/05/2015					
1508	24/04/2015	24/04/2015					
1509	06/03/2015	09/03/2015					
1510	13/03/2015	13/03/2015					
1511	08/04/2015	08/04/2015					
1512	27/05/2016	02/06/2016					
1513	25/01/2016	25/01/2016					
1514	02/03/2016	02/03/2016					
1515	25/04/2016	28/04/2016					
1516	08/11/2016	08/11/2016					
1517	21/11/2016	21/11/2016					
1518	04/05/2017	04/05/2017					
1519	22/02/2017	28/09/2017					
1520	03/03/2017	08/03/2017					
1521	06/06/2017	06/06/2017					
1522	17/05/2017	18/05/2017					
1523	24/04/2018	01/05/2018					
1524							
1525							
1526							
1527	30/07/2018	06/08/2018					
1528							
1529							
1530	18/01/2013	05/02/2013					
1531	15/02/2011	15/02/2011					
1532	23/05/2013	27/05/2013					
1533	25/10/2016	27/10/2016					
1534	11/10/2013	22/10/2013					
1535	04/11/2014	06/11/2014					
1536	20/02/2017	20/02/2017					
1537	10/05/2018	31/05/2018					
1538							
1539	13/08/2018	28/08/2018					
1540	25/03/2019	01/04/2019					
1541	24/02/2014	24/02/2014					
1542	19/09/2013	23/09/2013					
1543	30/10/2013	04/11/2013					
1544	23/10/2016	01/11/2016					
1545	11/08/2015	18/08/2015					
1546	21/09/2015	22/09/2015					
1547	17/10/2016	19/10/2016					
1548	04/07/2016	05/07/2016					
1549	19/10/2016	19/10/2016					
1550	16/01/2018	16/01/2018					
1551	15/01/2019	15/01/2019					
1552							
1553	11/09/2015	11/09/2015					
1554	11/01/2016	11/01/2016					
1555	13/01/2016	13/01/2016					
1556	30/06/2017	11/07/2017					
1557							
1558	27/01/2012	03/02/2012					
1559	05/06/2013	12/06/2013					
1560	05/08/2013	12/08/2013					
1561	04/06/2015	04/06/2015					
1562	08/05/2015	11/05/2015					
1563	15/04/2015	15/04/2015					
1564	15/04/2016	16/04/2016					
1565	28/07/2016	28/07/2016					
1566	24/03/2017	29/03/2017					
1567	21/12/2016	04/01/2017					
1568	23/04/2018	23/04/2018					
1569	05/03/2018	08/03/2018					
1570	16/05/2018	16/05/2018					
1571	15/02/2019	20/02/2019					
1572	17/10/2018	18/10/2018					
1573							
1574	12/03/2019	12/03/2019					
1575	01/04/2019	02/04/2019					

	Current Actual or Projected Service Cost Allocation				Current Actual or Projected Capital Expenditure Profile (£m money of the day)										Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
Sort Ref	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	47	48	49	50	51	52	53	54	55	56	57	58	59	60	66	67	68	69	70	71	72
1401	0	9	0	91	0	0	0	0	0	0	0.197	0.012	-0.002	0	0	55	45	0	0	0	01
1402	0	50	0	50	-0.011	0	0	0	0	0	0	0	0.248	-0.011	0	0	0	100	0	0	01
1403	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1404	0	50	0	50	0.291	0	0	0	0	0	0	0	0	0.291	0	100	0	0	0	0	
1405	0	49	0	51	0	0	0.064	0.007	0	0	-0.008	0	0	0	0	0	100	0	0	0	
1406	0	100	0	0	0	0.014	0.097	0.08	0.105	0.185	-0.013	0	0	0	100	0	0	0	0	0	
1407	100	0	0	0	0	0	0	0	0	0	0	0	-0.001	0	0	0	100	0	0	0	
1408	0	70	0	30	0	0.043	-0.006	0	0	0	-0.017	0	0	0	0	100	0	0	0	0	
1409	0	0	0	100	0	0	0	0	0	0	-0.006	0	0	0	0	0	100	0	0	0	
1410	0	100	0	0	0	0	0.024	0.042	0	0	-0.02	0	0	0	0	100	0	0	0	0	
1411	0	50	0	50	0	0	0	0.032	0.017	0	-0.006	0	0	0	0	100	0	0	0	0	
1412	0	100	0	0	0	0	0.02	0	0.004	0	-0.001	0	0	0	0	100	0	0	0	0	
1413	0	50	0	50	0	0	0	0	0.039	0.156	0.014	0	0	0	0	0	100	0	0	0	
1414	0	50	0	50	0	0	0	0.101	0.009	0	-0.009	0	0	0	0	100	0	0	0	0	
1415	0	0	0	100	0	0	0	0.001	0.007	-0.006	0.005	0	-0.002	0	0	0	100	0	0	0	
1416	0	100	0	0	0	0	0	0	0	0.145	0.008	0	0	0	0	90	10	0	0	0	
1417	0	100	0	0	0	0	0	0.025	0.001	0	-0.006	0	0	0	0	0	100	0	0	0	
1418	0	100	0	0	0	0	0	0.022	0.004	0	-0.005	0	0	0	0	100	0	0	0	0	
1419	0	50	0	50	0	0	0	0	0.039	0.069	0.001	0	0	0	0	0	100	0	0	0	
1420	0	100	0	0	0	0	0	0	0.015	0	-0.008	0	0	0	0	0	100	0	0	0	
1421	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	
1422	0	100	0	0	0	0	0	0	0.006	0	-0.007	0	0	0	0	100	0	0	0	0	
1423	0	100	0	0	0	0	0	0	0.03	0	-0.002	0	0	0	0	100	0	0	0	0	
1424	0	100	0	0	0	0	0	0	0	0	0.044	0	-0.008	0	0	72	28	0	0	0	
1425	0	100	0	0	0	0	0	0	0	0	0.006	0	-0.001	0	0	0	100	0	0	0	
1426	0	0	100	0	0	0	0	0	0	0	0	0.035	0	0	0	100	0	0	0	100	
1427	0	0	0	100	0.01	0	0	0	0	0	0	0	0	0.01	0	100	0	0	0	0	
1428	0	49	0	51	0	0	1.29	0.244	0.093	0	0	0.005	-0.008	0	0	100	0	0	0	0	
1429	0	23	0	77	0.001	0.208	0.168	0.167	0.065	0.065	-0.001	0	0	0.001	34	26	10	30	0	0	
1430	0	50	0	50	0	0	0	0	0	0	0	0	-0.001	0	0	0	100	0	0	0	
1431	0	40	0	60	0	0	0.295	0.138	0.226	0	-0.033	0	0	0	0	100	0	0	0	0	
1432	0	50	0	50	0	0	0	0.335	0	0	-0.021	0	-0.01	0	0	0	100	0	0	0	
1433	0	50	0	50	0	0	0	0	0	0	0	0	0.01	0	0	0	100	0	0	0	01
1434	25	25	25	25	0.175	0	0	0	0	0	0.01	0.225	0.382	0.175	0	51	49	0	13	13	
1435	40	10	40	10	0.377	0	0	0	0	0	0	0	0.039	0.377	30	0	20	50	0	0	
1436	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
1437	0	50	0	50	0	0	0.103	0.126	0.013	0.05	-0.05	0	0	0	0	0	100	0	0	0	
1438	0	100	0	0	0	0	0.031	0.048	0.025	0.03	-0.017	0	0	0	0	100	0	0	0	0	
1439	0	60	0	40	0	0	0.13	0.463	0.158	0.004	0.002	0	0	0	0	0	100	0	0	0	
1440	0	100	0	0	0.983	0	0	0	0	0	0.19	0.726	0.955	0.983	0	100	0	0	0	0	
1441	0	100	0	0	-0.005	0	0	0	0	0	0	0.851	0.102	-0.005	0	72	28	0	0	0	
1442	0	100	0	0	0.011	0	0	0	0	0	0	0	0.609	0.011	0	71	29	0	0	0	
1443	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	71	29	0	0	0	
1444	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	71	29	0	0	0	
1445	0	100	0	0	0.609	0	0	0	0	0	0	0	0	0.609	0	73	27	0	0	0	
1446	0	100	0	0	0.422	0	0	0	0	0	0	0	0	0.422	0	73	27	0	0	0	01
1447	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	71	29	0	0	0	
1448	0	50	0	50	0.011	0	0	0	0	0	0	0	0.021	0.011	0	0	100	0	0	0	
1449	0	50	0	50	0.053	0	0	0	0	0	0	0	0.002	0.053	0	0	100	0	0	0	01
1450	0	50	0	50	0.026	0	0	0	0	0	0	0	0.02	0.026	0	0	100	0	0	0	01
1451	0	50	0	50	0.044	0	0	0	0	0	0	0	0.011	0.044	0	0	100	0	0	0	01
1452	0	50	0	50	0.301	0	0	0	0	0	0	0	0.01	0.301	0	0	100	0	0	0	01
1453	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	40	60	0	0	0	01
1454	0	100	0	0	0.032	0	0	0	0	0	0	0	0.015	0.032	0	0	100	0	0	0	01
1455	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	01
1456	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	01
1457	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	50	0	01
1458	0	50	0	50	0.017	0	0	0	0	0	0	0	0	0.017	0	0	100	0	0	0	01
1459	0	50	0	50	0.04	0	0	0	0	0	0	0	0	0.04	0	0	100	0	0	0	
1460	0	50	0	50	0	0	0.136	0.121	0.147	0.002	-0.001	0	0	0	0	100	0	0	0	0	
1461	0	20	0	80	-0.011	0.08	-0.045	0.028	0.05	0.051	0.003	1.173	0.017	-0.011	0	0	100	0	0	0	01
1462	0	0	0	100	0	0	0	0.186	0.041	0.012	-0.001	0	0	0	0	100	0	0	0	0	
1463	0	50	0	50	0	0	0	0.001	0.041	0.003	0.096	0.064	-0.002	0	0	100	0	0	0	0	
1464	0	50	0	50	0.203	0	0	0.005	0.015	0.013	0	0.007	0.003	0.203	0	30	70	0	0	0	
1465	0	50	0	50	0	0	-0.002	0	0.033	0	-0.001	0	0	0	0	100	0	0	0	0	
1466	0	60	0	40	0.002	0	0	0	0.017	-0.002	0	0	0	0.002	0	100	0	0	0	0	
1467	0	50	0	50	0	0	0	0	0.236	0.174	-0.008	0	0	0	0	100	0	0	0	0	
1468	0	100	0	0	0	0	0	0	0.015	0.094	0.009	0	0	0	0	100	0	0	0	0	
1469	0	50	0	50	0.04	0	0	0	0	0	0.085	0.055	0.065	0.04	0	50	50	0	0	0	
1470	0	50	0	50	0.213	0	0	0	0	0	0.108	0.088	0.061	0.213	0	100	0	0	0	0	
1471	0	100	0	0	0.039	0	0	0	0	0	0	0	0.132	0.039	0	0	100	0	0	0	
1472	0	0	0	100	0.02	0	0	0	0	0	0	0	0	0.02	0	100	0	0	0	0	
1473	0	0	0	100	0.011	0	0	0	0	0	0	0	0	0.011	0	0	100	0	0	0	01
1474	0	50	0	50	0	0	0	0	0.05	0.075	0.001	0	-0.001	0	0	0	100	0	0	0	
1475	0	50	0	50	0	0	0	0	0.088	0.078	-0.027	0	0	0	0	100	0	0	0	0	
1476	0	50	0	50	0	0	0	0	0	0.01	0.029	0	0	0	0	0	100	0	0	0	
1477	0	50	0	50	0.012	0	0	0	0	0	0.088	0	0	0.012	0	100	0	0	0	0	
1478	0	50	0	50	0	0	0	0	0	0	0	0.157	-0.005	0	0	100	0	0	0	0	
1479	0	50	0	50	0.15	0	0	0	0	0	0	0.1	0.275	0.15	0	100	0	0	0	0	01
1480	0	50	0	50	0.002	0	0	0	0	0	0	0	0.043	0.002	0	0	100	0	0	0	01
1481	0	50	0	50	0.075	0	0	0	0	0	0	0	0	0.075	0	0	100	0	0	0	
1482	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1483	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
1484	0	50	0	50	0	0	0	0	0	0.176	0.002	0	0	0	0	100	0	0	0	0	
1485	0	50	0	50	0	0	0	0	0	0	0.09	0	0	0	0	100	0	0	0	0	
1486	0	50	0	50	0	0	0	0	0	0	0.01	0	0	0	0	0	100	0	0	0	
1487	0	50	0	50	0	0	0	0	0	0	0	0.007	0	0	0	0	100	0	0	0	
1488	0	49	0	51	0	0	0.051	0	0	0.045	0	0.059	0	0	0	100	0	0	0	0	
1489	0	51	0	49	0	0	1.105	0.36	0	0	0	-0.004	-0.001	0	0	100	0	0	0	0	
1490	0	50	0	50	-0.002	0	0	0.039	0.052	0.392	1.552	1.116	0.127	-0.002	0	100	0	0	0	0	
1491	0	73	0	27	0	0	0	0	0	0	0	0	-0.001	0	0	100	0	0	0	0	
1492	0	51	0	49	0	0	0	0	0.877	0.059	0.05	-0.009	-0.004	0	0	0	100	0	0	0	
1493	0	51	0	49	0	0	0	0	0.128	0	0	-0.019	0	0	0	100	0	0	0	0	
1494	0	50	0	50	0	0	0	0	0.026	0.008	-0.002	0	0	0	0	100	0	0	0	0	
1495	0	50	0	50	0	0	0	0	0	0	0	0	-0.004	0	0	100	0	0	0	0	
1496	0	50	0	50	0	0	0	0	0.095	0.015	0	-0.003	0	0	0	100	0	0	0	0	
1497	0	100	0	0	0	0	0	0	0	0	0	0	-0.008	0	0	100	0	0	0	0	
1498	0	50	0	50	0	0	0	0	0	0	0	0	-0.003	0	0	100	0	0	0	0	
1499	0	51	0	49	0	0	0	0	0.604	1.998	0.615	0.035	-0.006	0	0	100	0	0	0	0	
1500	0	100	0	0	0	0	0	0	0	0	0.087	0.152	-0.003	0	0	100	0	0	0	0	
1501	0	49	0	51	0	0	0	0	0.706	0.141	0	-0.002	0	0	0	100	0	0	0	0	
1502	0	50	0	50	0	0	0	0	0	0.637	0.029	0.001	-0.003	0	0	100	0	0	0	0	
1503	0	49	0	51	0	0	0	0	0	0.024	0	-0.008	0	0	0	0	100	0	0	0	
1504	0	50	0	50	0	0	0	0	0	0.11	0.05	-0.022	0	0	0	0	100	0	0	0	
1505	0	55	0	45	-0.01	0	0	0	0	0.037	0.048	0.045	-0.009	-0.01	0	0	100	0	0	0	
1506	0	49	0	51	0	0	0	0	0	0.262	-0.001	-0.002	0	0	0	0	100	0	0	0	
1507	0	50	0	50	0	0	0	0	0	0	0.576	0.046	-0.023	0	0	100	0	0	0	0	
1508	0	49	0	51	0.057	0	0	0	0	0	0.057	0.174	0.057	0.057	0	49	51	0	0	0	
1509	0	50	0	50	0	0	0	0	0	0.005	0.033	0	0	0	0	100	0	0	0	0	
1510	0	50	0	50	0	0	0	0	0	0	0	0	-0.009	0	0	100	0	0	0	0	
1511	0	50	0	50	0	0	0	0	0	0	0.777	0	0.245	0	0	100	0	0	0	0	
1512	0	50	0	50	-0.001	0	0	0	0	0	0	0.673	0.024	-0.001	0	100	0	0	0	0	
1513	0	50	0	50	0	0	0	0	0	0	0.119	0	0	0	0	100	0	0	0	0	
1514	0	50	0	50	0	0	0	0	0	0	0	0.327	-0.002	0	0	0	100	0	0	0	
1515	0	50	0	50	0	0	0	0	0	0	0	0.041	0	0	30	30	20	20	0	0	
1516	0	50	0	50	0	0	0	0	0	0	0	0.412	-0.006	0	0	100	0	0	0	0	01
1517	0	51	0	49	-0.001	0	0	0	0	0	0	0.038	0	-0.001	0	100	0	0	0	0	
1518	0	50	0	50	0.01	0	0	0	0	0	0	0	0.137	0.01	0	100	0	0	0	0	01
1519	0	50	0	50	0.119	0	0	0	0	0	0	0	0.407	0.119	0	100	0	0	0	0	01
1520	0	50	0	50	1.279	0	0	0	0	0	0	0.011	0.996	1.279	0	100	0	0	0	0	01
1521	0	50	0	50	0.648	0	0	0	0	0	0	0	0.265	0.648	0	100	0	0	0	0	01
1522	0	50	0	50	0	0	0	0	0	0	0	0	0.045	0	0	100	0	0	0	0	01
1523	0	50	0	50	0.297	0	0	0	0	0	0	0	0	0.297	0	100	0	0	0	0	01
1524	0	50	0	50	0.01	0	0	0	0	0	0	0	0	0.01	0	100	0	0	0	0	
1525	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1526	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1527	0	50	0	50	0.199	0	0	0	0	0	0	0	0	0.199	0	100	0	0	0	0	
1528	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1529	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1530	0	100	0	0	0	0	0	0.059	-0.003	-0.066	0.005	0	0	0	0	100	0	0	0	0	
1531	0	49	0	51	0	0.106	0.003	0	0	0	-0.001	-0.001	0	0	0	100	0	0	0	0	
1532	25	25	25	25	0	0	0	0.02	0.568	0.354	0.002	0	0	0	0	100	0	0	25	25	
1533	0	50	0	50	0	0	0	0	0	0	0	0.067	0.007	0	0	100	0	0	0	0	
1534	0	50	0	50	0	0	0	0	0.069	0.061	-0.004	0	-0.002	0	0	100	0	0	0	0	
1535	0	50	0	50	0	0	0	0	0	0.029	-0.001	0.002	0	0	0	100	0	0	0	0	
1536	0	0	0	100	0	0	0	0	0	0	0	0.02	-0.001	0	0	100	0	0	0	0	
1537	0	40	0	60	0.044	0	0	0	0	0	0	0	0	0.044	0	45	55	0	0	0	
1538	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
1539	0	50	0	50	0.024	0	0	0	0	0	0	0	0	0.024	0	0	100	0	0	0	
1540	0	50	0	50	0	0	0	0	0	0	0	0	0	0	35	25	40	0	0	0	
1541	0	100	0	0	0	0	0	0	0.216	0.079	0.016	0	0	0	0	70	30	0	0	0	
1542	0	62	0	38	0	0	0	0	1.885	0	-0.006	0	0	0	0	100	0	0	0	0	
1543	0	50	0	50	0	0	0	0	0.45	0.098	0.047	-0.032	0	0	0	0	100	0	0	0	
1544	0	30	0	70	0.146	0	0	0	0	0	0	0	0.179	0.146	0	100	0	0	0	0	
1545	0	62	0	38	0	0	0	0	0	0	0.816	-0.005	0	0	0	100	0	0	0	0	
1546	0	100	0	0	0	0	0	0	0	0	0.058	0	-0.001	0	0	100	0	0	0	0	
1547	0	100	0	0	0	0	0	0	0	0	0	0.02	0	0	0	100	0	0	0	0	
1548	0	62	0	38	-0.016	0	0	0	0	0	0	1.791	0	-0.016	0	100	0	0	0	0	
1549	0	50	0	50	0	0	0	0	0	0	0	0.012	0	0	0	100	0	0	0	0	01
1550	0	60	0	40	0.025	0	0	0	0	0	0	0	0.59	0.025	0	100	0	0	0	0	01
1551	0	50	0	50	1.004	0	0	0	0	0	0	0	0	1.004	0	100	0	0	0	0	
1552	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1553	0	100	0	0	0	0	0	0	0	0	0.001	0.001	-0.001	0	0	100	0	0	0	0	
1554	0	0	0	100	0	0	0	0	0	0	0.088	0	0	0	0	0	100	0	0	0	
1555	0	0	0	100	0.001	0	0	0	0	0	0.176	0.072	0.004	0.001	0	55	45	0	0	0	
1556	0	100	0	0	0.141	0	0	0	0	0	0	0	0.067	0.141	0	100	0	0	0	0	01
1557	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1558	0	51	0	49	0	0	0	0.071	0	0	-0.004	0	0	0	0	100	0	0	0	0	
1559	0	51	0	49	0	0	0	0	0.223	0.234	-0.022	0.087	0	0	0	100	0	0	0	0	
1560	0	50	0	50	0	0	0	0	0.015	0	-0.003	0	0	0	0	0	100	0	0	0	
1561	0	51	0	49	0	0	0	0	0	0	0.046	0.004	-0.001	0	0	100	0	0	0	0	
1562	0	100	0	0	0	0	0	0	0	0	0.15	0.001	-0.002	0	30	20	40	10	0	0	
1563	0	100	0	0	0	0	0	0	0	0	0.002	0	0	0	0	100	0	0	0	0	
1564	0	100	0	0	0.014	0	0	0	0	0	0	0.207	-0.015	0.014	30	20	40	10	0	0	
1565	0	51	0	49	0	0	0	0	0	0	0	0.041	0.003	0	0	100	0	0	0	0	
1566	0	51	0	49	0	0	0	0	0	0	0	0	0.039	0	0	100	0	0	0	0	01
1567	0	100	0	0	0.028	0	0	0	0	0	0	0	0.199	0.028	0	30	50	20	0	0	01
1568	0	51	0	49	0.065	0	0	0	0	0	0	0	0	0.065	0	100	0	0	0	0	
1569	0	100	0	0	0.128	0	0	0	0	0	0	0	0	0.128	0	30	50	20	0	0	
1570	0	51	0	49	0.01	0	0	0	0	0	0	0	0	0.01	0	100	0	0	0	0	
1571	0	51	0	49	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1572	0	51	0	49	0.023	0	0	0	0	0	0	0	0	0.023	0	100	0	0	0	0	
1573	0	51	0	49	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1574	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
1575	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	30	50	20	0	0	
1576						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
1577						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
1578						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
1579						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
1580	21.26	19.96	21.19	37.59	14.630				11.543	11.724	12.446	12.318	13.957	14.630	17.63	55.71	9.36	17.29			
1581	100	0	0	0	0.470	0.000	0.000	0.000	0.538	0.541	0.564	0.484	0.484	0.470	0	100	0	0			
1582	100	0	0	0	0.309	0.000	0.000	0.000	0.229	0.229	0.309	0.309	0.309	0.309	0	100	0	0			
1583	50	50	0	0	1.741	0.000	0.000	0.000	2.442	2.309	1.895	1.629	1.629	1.741	0	80	1	20			
1584	0	100	0	0	1.233	0.000	0.000	0.000	1.974	1.425	1.804	1.206	1.206	1.233	0	100	0	0			
1585	0	0	62	38	3.979	0.000	0.000	0.000	4.191	3.693	4.792	3.901	3.901	3.979	0	100	0	0			
1586	0	100	0	0	1.396	0.000	0.000	0.000	2.301	2.477	3.250	1.045	1.045	1.396	0	98	0	2			
1587	100	0	0	0	2.215	0.000	0.000	0.000	1.419	1.211	1.330	2.170	2.170	2.215	0	0	0	100			
1588	0	0	100	0	0.206	0.000	0.000	0.000	0.460	0.561	0.357	0.250	0.250	0.206	0	33	0	67			
1589	0	1	0	99	5.265	0.000	0.000	0.000	6.923	6.298	6.564	5.069	5.069	5.265	0	100	0	0			
1590	52	48	0	0	2.643	0.000	0.000	0.000	2.300	2.171	2.299	1.885	1.885	2.643	0	100	0	0			
1591	100	0	0	0	0.351	0.000	0.000	0.000	0.331	0.368	0.421	0.370	0.370	0.351	100	0	0	0			
1592	0	0	100	0	1.564	0.000	0.000	0.000	0.677	0.827	0.951	1.679	1.679	1.564	0	0	0	100			
1593	100	0	0	0	2.515	0.000	0.000	0.000	1.740	1.787	1.722	2.376	2.376	2.515	0	0	0	100			
1594	100	0	0	0	0.133	0.000	0.000	0.000	0.110	0.045	0.082	0.043	0.043	0.133	0	100	0	0			
1595	0	0	100	0	0.000	0.000	0.000	0.000	0.096	0.018	0.000	0.003	0.003	0.000	0	100	0	0			

Table 40 – Capital Investment Monitoring (CIM)

Refer to chapter 30 for detailed commentary.

- The data reported in this table reconciles to the other AIR Tables.
- The table has been populated following the column definitions.
- Capitalised Salaries have been allocated by examining each of the 3 main investment areas as follows:
    - o Capital works Programme
    - o Management and General
    - o Operations Capital

  The total Capitalised Salaries and overheads were pro-rated against each project on the CIM to arrive at a Salaries and overheads allocation for the single line on the CIM (Table 40) using the same method as applied in AIR 18.

- The variance between Table 40 (Q4 CIM) and other associated AIR tables is reported in Chapter 30. The main reason for variance is on complex projects which contain a blend of infra and non-infra as well as a blend of purpose allocations which does not allow for creating a robust 16 component summary. The AIR table's data is more reliable than table 40 for accuracy.

Total Asset Additions reconciliations

NI Water moved to IFRS accounting from GAAP in 2018/19.

- Total asset additions – Water Service – Check to Table 25 line 5 col 4.
  For AIR 19 the reported numbers in these two tables are as follows:
  Table 25 – £72.075m
  Table 36 – £70.162m

The main variances in the above two figures are explained as follows:

a) PPP Alpha Capital maintenance of [redacted] is not included in Table 36
b) No decapitalised projects in 2018/19
c) An element of Capital Interest (Total value £5m) is included in table 25

- Total asset additions – Sewerage Service – Check to Table 25 line 5 Col 8.
  For AIR 19 the reported numbers in these two tables are as follows:
  Table 25 – £140.552m
  Table 36 – £135.119m

The main variances in the above two figures are explained as follows:

d) PPP Omega Capital Maintenance of [redacted] was not included in Table 36.
e) No decapitalised projects in 2018/19
f) An element of Capital Interest (Total value £5m) is included in table 25

Note: NI Water has complied with the column definitions in respect of the baseline and current actual or projected milestone dates in Table 40. The milestones dates are relevant, sequential and relate to the PC15 outputs.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 40A
NOMINATED OUTPUTS DELIVERED BY PC15 CAPITAL PROJECTS AND PROGRAMMES OF WORK

A								B																		
Project Information								Project Outputs																		
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline						PC13 Actual		PC15 Current Actual/ Forecast						
PI_Project_ID	PI_Project_Name	PI_PC13_Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	UID Status
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18	
	Water Treatment Base Maintenance																												
JA271	Killylane WTW	1			31/12/2014			7	nr					1								1							
	Water Treatment Works																												
JN390	Lough Bradan WTWs Upgrade	4			02/03/2011			7	nr	1																			
JL723	Carmoney Water Treatment Works Upgrade	4			30/03/2011			7	nr	1																			
JP669	Killyhevlin WTW - Enforcement Order	4			31/03/2015			7	nr					1								1							
JR463	Dorisland WTW GAC plant	4			27/03/2015			7	nr					1								1							
JI052	Glenhordial Treatability	4		30/09/2015	29/01/2016	29/01/2016		7	nr						1								1						
JI052	Dorisland Treatability	4		31/12/2020	n/a		31/03/2021	7												1							0	1	
JI052	Killyhelvin Treatability	4		31/12/2020	n/a		31/03/2021	7												1							0	1	
JL772	Caugh Hill Treatability	4		31/01/2019	n/a		31/03/2021	7										1									0	1	
	Trunk Mains																												
JR416	CTM Extension - Barnetts Park to Purdysburn	5			29/11/2010			6	nr	1																			
JG036	Castor Bay to Dungannon Strategic Trunk Mains	5			24/05/2011			6	nr	1																			
JG035	Ballydougan to Newry Main Link Reinforcement Phase 1	5			04/12/2012			6	nr			1																	
JG035	Ballydougan to Newry TM - Phase 2A	5			17/12/2012			6	nr			1																	
JR460	Gravity II McVeighs Well to Oldpark SR	5			30/11/2014			6	nr					1								1							
JG035	Ballydougan to Newry TM - Phase 2B	5		28/08/2015	31/03/2016	31/03/2016		6	nr						1								1						
JR342	Castor Bay to Belfast TM	5		27/03/2015	08/05/2015	08/05/2015		6	nr					1									1						
JB693	Carland to Cookstown Trunkmain	5		31/03/2021	n/a	31/03/2017	21/09/2016	6												1				1					
JL715	Carmoney to Strabane Strategic Link Watermain	5		31/01/2019	n/a		31/01/2021	6										1									0	1	
	Service Reservoirs																												
JB665	Tullaghans SR, Dunloy, New Reservoir	6			13/08/2010			8	nr	1																			
JC381	Altnahinch WTP, Ballymoney, New CWB.	6			10/11/2010			8	nr	1																			
JC378	Glenlough SR, Ballymoney, New SR	6			20/12/2010			8	nr	1																			
JR151	West Belfast/ North Lisburn (Crew Hill)	6			18/01/2011			8	nr	1																			
JB648	Dungonnell Command Service Reservoir	6			31/03/2011			8	nr	1																			
JF583	Carland Service Reservoir	6			11/04/2011			8	nr		1																		
JS179	Ballykine Gravity Distribution	6			20/04/2011			8	nr		1																		
JV827	Tullyhappy SR	6			09/12/2011			8	nr		1																		
JB649	Tully SR	6			06/12/2012			8	nr			1																	
JV830	Crieve SR	6			27/03/2015			8	nr					1								1							
JS274	Drumaroad WTW Clear Water Tank	6		31/03/2021	n/a		31/03/2021	8												1								1	
JP631	Killyhelvin Clear Water Tank	6		30/09/2017	n/a	29/03/2019	31/05/2020	8									1										0	0		1	
JB709	Lough Fea CWB	6		30/09/2019	n/a		31/03/2020	8											1									1		
	Monaclogh SR (additional output in 16/17 draft adjusted outputs submission)	6		n/a	n/a		01/08/2017	8																			1			
	Major Incident Mitigation Water Main Projects																												
JI024	MIMP West (Major Incident Mitigation Project West Region) Freeze Thaw Improvements	8			14/02/2014			15	nr				1								1								
JI025	MIMP South (Major Incident Mitigation Project West Region) Freeze Thaw Improvements	8			24/01/2014			15	nr				1								1								
JI027	MIMP Central (Major Incident Mitigation Project Central Region) Freeze Thaw Improvements	8			28/03/2014			15	nr					1							1								
JI028	MIMP East (Major Incident Mitigation Project East Region) Freeze Thaw Improvements	8			09/02/2015			15	nr				1									1							
JI026	MIMP North (Major Incident Mitigation Project North Region) Freeze Thaw Improvements	8			18/08/2014			15	nr					1								1							
	Unsatisfactory Intermittent Discharges																												
KR403	Whitehouse DAP Phase 1	11			13/04/2010			12	nr	3																			
KR402	Joymount WWPS	11			01/06/2010			12	nr	1																			
KR400	Lukes Point DAP Phase 1	11			23/06/2010			12	nr	1																			
KL450	Londonderry DAP : Strathfoyle & Drmahoe Work Package : Caw WWPS	11			01/07/2010			12	nr	1																			
KB428	Draperstown DAP	11			02/07/2010			12	nr	2																			
KG153	Gilford Road, Portadown, Sewerage Upgrades	11			10/08/2010			12	nr	3																			
KL449	Londonderry DAP : Strathfoyle & Drmahoe Work Package : Drumahoe Old WWPS	11			02/09/2010			12	nr	1																			
KR440	Ballywalter DAP Phase 1	11			30/09/2010			12	nr	1																			
KL445	Londonderry DAP: Victoria road Work Package - UID's	11			11/10/2010			12	nr	1		1																	
KL448	Londonderry DAP : Victoria Road Work Package : CSO Rationalisation	11			29/10/2010			12	nr	3																			
KL428	Londonderry Sewer Imps Stage 2 - Duke St PS Group Schemes - UID's	11			28/03/2011			12	nr	3																			
KR441	Montgomery Rd, Flood Alleviation - UID's	11			27/04/2012			12	nr		4																		
KS807	Kilkeel Harbour SPS and Sewerage Improvements - UID's	12			04/06/2012			12	nr			2																	
KS379	Murlough SPS Upgrade & Network Improvements - UID's	12			29/04/2011			12	nr		8	1																	
KR452	Baroda Street/Ormeau Park, Belfast CSO	12			07/09/2011			12	nr		2																		
KT138	Beechlawn SPS Hillsborough Upgrade - UID's	12			30/11/2011			12	nr		1																		
KL443	Londonderry DAP Duke Street Work Package - UID's	12			02/12/2011			12	nr		4																		
KR432	Beechmount Avenue/Gortfin Street Belfast Hydraulic Upgrade. - UID's	12			02/12/2011			12	nr		4																		
KL444	Londonderry DAP, Buncrana Road, Work Package Stage 1- UID's	12			07/05/2012			12	nr			2																	
KL446	Londonderry DAP, Duke Street Work Package, Flood Alleviation	12			13/12/2011			12	nr		3																		
KS377	Downs Road/Castle Park Sewer Upgrade/ Attenuation - UID's	12			23/01/2012			12	nr		4																		
KC404	Coleraine DAP Phase 1 - UID's	12			31/01/2012			12	nr		5																		
KR434	Annadale Flats, Belast	12			30/03/2012			12	nr		4																		
KS878	Bangor DAP Work Package 7: WWPS - UID'S	12			28/03/2012			12	nr		3																		
KA201	Ballyeaston, Sewerage System Upgrade	12			23/04/2012			12	nr		1																		
KL447	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation - UID's	12			24/09/2012			12	nr			10																	
KS373	Church Street, SPS Upgrade, Downpatrick - UID's	12			06/05/2013			12	nr																				
KS373	UID046 Meadowlands CSO3	12			06/05/2013			12	nr				1								1								
KS373	UID047 Church Street CSO1	12			06/05/2013			12	nr				1								1								
KS373	UID048 Scotch Street CSO4	12			06/05/2013			12	nr				1								1								
KS373	UID049 Scotch Street CSO11	12			06/05/2013			12	nr				1								1								
KS373	UID050 Rathkeltair Terr CSO12	12			06/05/2013			12	nr				1								1								
KS835	South Street Newtownards WWPS Refurbishment - UID'S	12			28/01/2013			12	nr			1																	
KG184	Portadown Drainage Area Network Improvements - Obins Street and Park Road - UID's	12			31/08/2012			12	nr			4																	
KR488	Linen Gardens Belfast CSO Screening - UID's	12			01/01/2014			12	nr				1								1								
KN595	Brookmount Road, Hunters Cresent, Omagh	12			31/05/2011			12	nr			5																	
KS812	Greyabbey DAP Phase 1 - UID's	12			24/09/2012			12	nr			2																	
KV014	Castlewellan DAP - UIDs	12			19/08/2010			12	nr			2																	
KG178	Annaghanoon Road WWPS, Waringstown	12			05/09/2011			12	nr			1																	
KL451	Londonderry DAP, Strathfoyle + Drumahoe Package: CSO Abandonments - UID's	12			24/09/2012			12	nr			3																	
KR439	Millisle DAP 1	12			29/11/2012			12	nr			1																	
KV063	Newry Rehab	12			05/09/2011			12	nr			1																	
KV159	Water Street/Horners Lane Rostrevor	12			24/06/2011			12	nr			1																	
KN646	Winters Lane, CSO Upgrade - UID	12			27/03/2013			12	nr			1																	
KT415	Glenmore WwPS Lisburn CSO upgrade	12						12	nr																				
KT415	UID065 Glenmore SPS CSO 22	12			25/06/2013			12	nr				1								1								
KS939	Central Promenade, Newcastle CSO Upgrade (Pattons Bridge)	12						12	nr																				
KS939	UID259 Pattons Bridge (Blackrock WwPS	12			31/03/2016	24/03/2016	24/03/2016	12	nr					1										1					PC13
KV154	Newry Road SPS Warrenpoint - UID's	12						12	nr																				
KV154	UID095 Newry Road TPS CSO	12			14/01/2014			12	nr					1							1								
KV154	UID234 Drumsesk Road Header Tank CSO	12			14/01/2014			12	nr					1							1								
KS372	Market Street SPS Upgrade, Downpatrick - UID's	12						12	nr																				
KS372	UID044 Market Street SPS Upgrade, Downpatrick - UID's	12			18/12/2015	18/02/2016	18/02/2016	12	nr					1										1					PC13
KF037	Annagher Sewage Pumping Station and Rising Main - UID's	12						12	nr																				
KF037	UID245 Annagher SPS	12			28/03/2014			12	nr				1								1								
KF037	UID246 Campbells Garage WwPS CSO	12			28/03/2014			12	nr				1								1								
KF037	UID247 Washing bay Road WwPS CSO	12			28/03/2014			12	nr				1								1								
KF037	UID359 Canal Quay WWPS (not required)	12			x			12	nr				1								x								
KV161	Castlewellan DAP Stage 1 - UIDs	12						12	nr																				
KV161	UID033 Mill Hill CSO 04	12			31/03/2014			12	nr				1								1								
KV161	UID031 Ballylough CSO 04	12			31/03/2014			12	nr				1								1								

A								B																				
Project Information								Project Outputs																				
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline							PC13 Actual		PC15 Current Actual/ Forecast						
PI_Project_ID	PI_Project_Name	PI_PC13_Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	UID Status
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18	
KV161	UID036 Annesborough Park CSO 01	12			31/03/2014			12	nr				1																
KS937	Annesborough Park WWPS Upgrade	12						12	nr																				
KS937	UID032 Annesborough Park WwPS	12			31/10/2016	30/09/2016	30/06/2016	12	nr						1									1					PC15 FD
KT403	Drumbeg Drive, Lisburn WWPS Enhancement	12						12	nr																				
KT403	UID070 Maralin Ave CSO 02	12			30/09/2014			12	nr					1								1							
KS875	Bangor DAP Works Package 6: Lukes Point WWPS UIDs	12						12	nr																				
KS875	UID189 Bangor DAP Works Package 6: Lukes Point WWPS UIDs	12			30/09/2014			12	nr					1								1							
KT391	Lisburn DAP Stage 1 - UID's	12						12	nr																				
KT391	UID066 Waterside 2 CSO 07	12			12/03/2015			12	nr					1								1							
KT391	UID067 B Hilden PS CSO 13B	12			30/03/2015			12	nr					1								1							
KT391	UID068 Hilden PS CSO 13A	12		31/03/2015	30/10/2015	22/02/2016	15/10/2015	12	nr					1									1						PC13
KT391	UID069 Antrim St CSO 25	12		22/02/2016	31/08/2016	30/10/2016	22/08/2016	12	nr						1									1					PC15 FD
KT391	UID072 New Holland WWT (not required)	12			01/01/2015			12	nr						1								x						PC15 FD
KT391	UID073 Duncans Rd CSO 15 (not required)	12			01/01/2015			12	nr						1								x						PC15 FD
KT391	UID074 Laws Yard CSO 14	12		22/02/2016	30/10/2015	22/02/2016	30/10/2015	12	nr						1								1						PC15 FD
KT391	UID221 Waterside 1 CSO 01	12			12/03/2015			12	nr					1								1							
KT391	UID222 Linenhall Street CSO 03	12			30/03/2015			12	nr						1							1							PC15 FD
KT391	UID223 Antrim Street CSO 05	12		22/02/2016	31/10/2016	20/09/2017	30/06/2019	12	nr						1											1	0		PC15 FD
KT391	UID224 Clonevin Park CSO 10	12		22/02/2016	09/09/2015	22/02/2016	09/09/2015	12	nr						1								1						PC15 FD
KT391	UID225 Sprucefield WWPS Screen CSO 20	12			30/03/2015			12	nr					1								1							
KT391	UID226 Antrim Road CSO 24 + flooding	12		22/02/2016	30/10/2015	22/02/2016	30/10/2015	12	nr						1								1						PC15 FD
KT391	UID227 Bow Street CSO 26	12		22/02/2016	30/10/2015	22/02/2016	22/03/2016	12	nr						1								1						PC15 FD
KT391	UID228 Ballynahinch Rd 2 CSO 27	12			18/03/2015			12	nr					1								1							
KT391	UID229 Grand Street Screen CSO 28	12		31/03/2015	30/10/2015	22/02/2016	20/11/2015	12	nr					1									1						PC13
KT391	UID423 Eglantine WWPS CSO 16	12			30/03/2015			12	nr					0								1							
KT391	UID424 Culcavy WWPS CSO 17	12			30/03/2015			12	nr					0								1							
KT391	UID425 Ballinderry WWPS CSO 23	12			30/03/2015			12	nr					0								1							
KT391	UID421 Edgewater WWPS	12		31/03/2015	04/09/2015	22/02/2016	04/09/2015	12	nr					1									1						PC13
KT391	UID422 Hoggs Weir CSO 04	12		n/a	30/10/2015	30/10/2015	30/10/2015	12	nr														1						PC15 New
KS873	Bangor DAP Work Package 2: Rathmore Stream UIDs	12						12	nr																				
KS873	UID013 Westburn Cresc. CSO 3A	12		01/03/2015	31/03/2016	27/04/2017	31/03/2019	12	nr					1												0		1	PC13
KS873	UID014 Crawfordsburn Rd CSO 03B	12		01/03/2015	29/04/2016	22/05/2017	31/03/2019	12	nr					1												0		1	PC13
KS873	UID015 Crawfordsburn Rd CSO 03C	12		01/03/2015	29/04/2016	09/05/2017	31/03/2019	12	nr					1												0		1	PC13
KR480	Holywood Sewer Catchment Investigations - UIDs	12						12	nr																				
KR480	UID218 Palace Barracks CSO 110	12		31/12/2015	29/06/2016	30/11/2016	07/09/2016	12	nr						1									1					PC15 FD
KR480	UID219 Jackson Road CSO 52	12			06/10/2014			12	nr					1								1							
KR640	Holywood Sewer Network Improvements- Phase 2	12						12	nr																				
KR640	UID220 Strathearn Court CSO 53	12		31/12/2015	29/06/2016	31/10/2017	20/12/2016	12	nr						1									1					PC15 FD
KS930	Millisle DAP Stage 2 Phase 2	12						12	nr																				
KS930	UID076 Millisle SPS CSO 02	12		18/01/2016	31/03/2016	30/03/2017	12/12/2018	12	nr						1											0		1	PC15 FD
KR417	Ormeau Avenue Sewer investigation and feasibility study for pollution resolution - UID's	12						12	nr																				
KR417	UID191 Cromac Street CSO 95	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1										1	0		PC15 FD
KR417	UID192 Outside Holiday Inn CSO97	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1										1	0		PC15 FD
KR417	UID193 Dublin Road Cinema CSO 96	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1										1	0		PC15 FD
KR417	UID194 Bankmore Street / Dublin Road CSO 81	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1										1	0		PC15 FD
KR417	UID265 Sandy Row CSO 94	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1										1	0		PC15 FD
KG183	Portadown Drainage Area Network Improvements - Meadow Lane and Bann Street - UID's	12						12	nr																				
KG183	UID081 Meadow Lane CSO 06	12		30/09/2017	27/03/2017	04/05/2018	31/03/2020	12	nr								1										0	1	PC15 FD
KG183	UID082 Meadow Lane CSO 07	12		31/03/2017	27/03/2017	25/05/2018	31/03/2020	12	nr							1											0	1	PC15 FD
KG183	UID083 Portmore Street CSO 08	12		30/09/2017	27/03/2017	28/09/2018	31/03/2020	12	nr								1										0	1	PC15 FD
KG183	UID085 Clonavon Avenue CSO 11	12		30/09/2017	27/03/2017	28/09/2018	31/03/2020	12	nr								1										0	1	PC15 FD
KG183	UID233 Meadow Lane WWPS CSO 32	12		31/03/2017	27/03/2017	06/04/2018	31/03/2020	12	nr							1											0	1	PC15 FD
KG183	UID086 Meadow Lane CSO 12	12		30/09/2017	27/03/2017	06/04/2018	31/03/2020	12	nr								1										0	1	PC15 FD
KF330	Armagh DAP Stage 1 - UID's	12						12	nr																				
KF330	UID001 Scotch Street CSO. 2	12		31/03/2016	22/02/2016	31/03/2016	25/03/2016	12	nr						1									1					PC15 FD
KF330	UID002 Scotch Street. CSO 1	12		31/03/2016	18/12/2015	31/03/2016	25/03/2016	12	nr						1									1					PC15 FD
KF330	UID003 Courthouse 1 CSO	12		31/03/2015	30/11/2015	31/03/2016	30/11/2015	12	nr					1										1					PC13
KF330	UID005 The Mall East CSO	12		31/03/2016	31/05/2016	31/03/2017	14/10/2016	12	nr						1										1				PC15 FD
KF330	UID006 English St CSO. Scheme 2	12		31/03/2015	31/07/2016	10/03/2017	21/01/2017	12	nr					1											1				PC13
KF330	UID007 Drumcairn SPS. Scheme 3	12		31/03/2015	30/03/2015			12	nr					1								1							
KF330	UID431 Ballycrummy WWPS	12			30/03/2015			12	nr					0								1							
KF330	UID430 Longstone WWPS	12			30/03/2015			12	nr					0								1							
KF330	UID010 Newry Road SPS	12		31/03/2016	29/04/2016	31/03/2017	28/04/2017	12	nr						1											1			PC15 FD
KF330	UID173 Mall West CSO	12		31/03/2016	30/11/2015	31/03/2016	23/03/2016	12	nr						1									1					PC15 FD
KF330	UID175 Alexender Road CSO	12		31/03/2015	13/11/2015	31/03/2016	13/11/2015	12	nr					1										1					PC13
KF330	UID176 Gillis Lane CSO	12		31/03/2015	30/03/2015			12	nr					1								1							
KF396	UID008 Milford SPS	12		31/03/2015	30/03/2018	30/04/2019	04/08/2017	12	nr					1												1		0	PC13
KF397	UID009 Killylea SPS	12		31/03/2015	30/03/2018	30/03/2020	31/03/2020	12	nr					1														1	PC13
KS879	Bangor DAP Work Package 4: Bangor Marina UIDs	12						12	nr																				
KS879	UID018 Somerset Ave. CSO 11	12			27/08/2014			12	nr					1								1							
KS879	UID019 Bridge St CSO 13	12			27/08/2014			12	nr					1								1							
KS879	UID020 Quay St CSO 14	12			27/08/2014			12	nr					1								1							
KS879	UID021 Tennyson CSO 10	12			27/08/2014			12	nr					1								1							
KS879	UID022 Queens parade CSO 12	12			27/08/2014			12	nr					1								1							
KS877	Bangor DAP Works Package 5 - Clandeboye Stream UIDs	12						12	nr																				
KS877	UID023 Castle Park CSO 07	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1												1		PC15 FD
KS877	UID179 13 Rugby Avenue CS0 8A	12		31/03/2015	27/10/2016	29/01/2018	31/03/2018	12	nr					1													1		PC13
KS877	UID180 11 Brunswick Road CSO 8B	12		31/03/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1												1		PC15 FD
KS877	UID181 104 Abbey Street CSO 8F	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1												1		PC15 FD
KS877	UID182 114 Abbey Street CSO 8E	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1												1		PC15 FD
KS877	UID183 Railway View Street CSO 8G (not required)	12		31/03/2015	27/10/2016	29/01/2018	31/03/2018	12	nr					1													x		PC13
KS877	UID184 Abbey Park CSO 9	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1												1		PC15 FD
KS877	UID263 57 Belfast Road CSO 8C	12		31/03/2015	27/10/2016	29/01/2018	21/03/2017	12	nr					1											1				PC13
KS877	UID264 17 Belfast CSO 8D	12		31/03/2015	27/10/2016	29/01/2018	21/03/2017	12	nr					1											1				PC13
KS958	Bangor DAP Works Package 5 Clandeboye Stream UIDs Phase 2	12						12	nr																				
KS958	UID185 Avonlea Park CSO 6	12		31/03/2015	30/10/2015	31/03/2016	30/03/2016	12	nr					1										1					PC13
KS958	UID186 Rosemary Crescent / Inglewood Pk CSO 5	12		31/03/2015	30/10/2015	31/03/2016	30/03/2016	12	nr					1										1					PC13
KS958	UID187 Clandeboye Road CSO 5B	12		31/03/2015	30/10/2015	31/03/2016	30/03/2016	12	nr					1										1					PC13
KS902	Dundrum DAP, UID Upgrades - UID's	12						12	nr																				
KS902	UID237 Parochial House CSO 02	12		31/12/2016	21/08/2017	29/06/2018	31/03/2020	12	nr							1											0	1	PC15 FD
KS902	UID238 Main Street CSO 04	12		31/12/2016	21/08/2017	29/06/2018	31/03/2020	12	nr							1											0	1	PC15 FD
KS902	UID239 Flynn's WWPS CSO 05	12		31/12/2016	21/08/2017	05/04/2019	31/03/2020	12	nr							1											0	1	PC15 FD
KT114	Hillsborough WWTW	16						12	nr																				
KT114	UID071 Magherageery PS CSO 18	16			18/03/2014			12	nr				1									1							
KS848	Newcastle WwTW	16						12	nr																				
KS848	UID 260 Harbour WwPS	16			09/12/2013			12	nr				1									1							
KR501	Carrickfergus WWTW Upgrade	2						12	nr																				
KR501	UID272 Carrickfergus CSO	2			19/03/2015			12	nr					1								1							
KL468	Strathfoyle, Londonderry Syphon Inlet Screen	12						12	nr																				
KL468	UID114 Caw Park CSO 023	12		23/05/2014	31/03/2016	31/03/2016	21/03/2016	12	nr					1										1					PC13
KL468	UID380 Gransha Park WwPS No. 2	12		23/05/2014	31/03/2016	31/03/2016	22/03/2016	12	nr					1										1					PC13
KC415	Coleraine	12						12	nr																				
KC415	UID043 Screen Road CSO	12		31/03/2016	30/03/2015			12	nr						1								1						PC15 FD
KC415	UID040 Ballysally CSO	12		31/03/2016	30/11/2016	31/03/2017	31/03/2018	12	nr						1												1		PC15 FD
KA248	Ballygally Sewer Rehabilitation	12						12	nr																				
KA248	UID190 Brustin Lee WWPS	12			30/03/2015			12	nr					1								1							
KA248	UID319 Croft Manor WWPS	12			30/03/2015			12	nr					1								1							
KA248	UID320 Ballygalley Slipway WWPS	12			30/03/2015			12	nr					1								1							
KA248	UID321 Ballygalley North WWPS	12			30/03/2015			12	nr					1								1							

A								B																			
Project Information								Project Outputs																			
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline							PC13 Actual		PC15 Current Actual/ Forecast						
PI_Project_ID	PI_Project_Name	PI_PC13_Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	UID Status
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18	
KA248	UID322 Ballygalley Coast Road CSO	12			30/03/2015			12	nr					1								1							
KI488	Removal of Inlet Screens and Installation of Solid Handling Pumps	02						12	nr																				
KI488	UID400 Braeside WWPS	02			01/08/2013			12	nr				1								1								
KI488	UID401 Cloughy Road WWPS	02			01/09/2013			12	nr					1							1								
KI488	UID402 Old Mill Race WWPS	02			01/08/2013			12	nr				1								1								
KI488	UID403 Glen Park WWPS	02			01/09/2013			12	nr				1								1								
KI488	UID404 Kerries Glen	02			01/01/2014			12	nr				1								1								
KI488	UID405 Carnesure Terrace WWPS	02			01/04/2014			12	nr					1								1							
KI488	UID406 Hillside WWPS	02			01/10/2013			12	nr				1								1								
KI488	UID407 Chimera Wood WWPS	02			01/12/2013			12	nr				1								1								
KI488	UID408 Ballystockart WWPS	02			01/11/2014			12	nr					1								1							
KI488	UID409 Milltown WWPS	02			01/10/2014			12	nr					1								1							
KI488	UID419 Ratalla WWPS	02			01/04/2013			12	nr					1							1								
KS374	Hunter's Mill Storm Attenuation and Network Improvements	12						12	nr																				
KS374	UID045 Downpatrick - Stream St CSO	12			19/02/2015			12	nr					1								1							
KS374	UID124 Hunters Mill Attenuation Stream Street CSO2	12			19/02/2015			12	nr					1								1							
KA251	Umry Lodge CSO	12						12	nr																				
KA251	UID394 Clotworthy House CSO	12			22/01/2014			12	nr				1								1								
KT139	River Road SPS Upgrade	02						12	nr																				
KT139	UID276 River Road WWPS	02			09/04/2014			12	nr					1								1							
KS867	Copeland Road, Comber, Tank Sewer	12						12	nr																				
KS867	UID343 Copeland Road CSO 61	12			30/10/2014			12	nr					1								1							
KA252	Glynn WWPS	02						12	nr																				
KA252	UID398 Glynn WWPS	02			19/02/2015			12	nr					1								1							
KS900	WwPS Upgrades at Groomsport, Killinchy & Craigavad	12						12	nr																				
KS900	UID410 Glencraig WWPS	12			01/05/2014			12	nr				0									1							
KF354	Dernagh WWPS Upgrade	02						12	nr																				
KF354	UID416 Dernagh WWPS	02			01/09/2014			12	nr					1								1							
KN644	Greenbridge WWPS Upgrade	02						12	nr																				
KN644	UID417 Greenbridge WWPS	02			14/11/2013			12	nr				1								1								
KF360	Blackwater Town WWPS Upgrade	02						12	nr																				
KF360	UID418 Blackwatertown WWPS	02			31/03/2014			12	nr				1								1								
KN628	Carrickmore WWPS Upgrade	02						12	nr																				
KN628	UID427 Carrickmore WWPS	02			27/08/2014			12	nr					0								1							
KL504	Londonderry DAP : Buncrana Road Work Package, Stage 2	12						12	nr																				
KL504	UID273 Knockalla New WWPS	12		31/03/2015	29/02/2016	31/08/2016	13/09/2016	12	nr					1										1					PC13
KL504	UID274 Upper Galliagh Road WWPS	12		31/03/2015	31/03/2016	31/03/2016	31/03/2016	12	nr					1									1						PC13
KL504	UID275 Glen Road CSO	12		31/03/2015	24/04/2015	24/04/2015	24/04/2015	12	nr					1									1						PC13
KL504	UID433 Fairview Knockalla CSO	12		n/a		21/03/2016	21/03/2016	12	nr														1						PC15 New
KS872	Bangor DAP Work Package 1	12						12	nr																				
KS872	UID011 Carnalea Golf Club CSO 1	12		30/09/2018	30/07/2018	31/03/2019	31/03/2020	12	nr									1								0	1		PC15 FD
KS872	UID012 KillaneyWWPS 3	12		30/09/2018	30/07/2018	31/03/2019	31/03/2020	12	nr									1								1	0		PC15 FD
KS872	UID177 Killaire WWPS 1	12		30/09/2018	30/07/2018	31/03/2016	31/03/2016	12	nr									1					1						PC15 FD
KS874	Bangor DAP Works Package 3	12						12	nr																				
KS874	UID016 Maxwell CSO 4	12		30/09/2016	03/06/2019	29/03/2019	31/03/2020	12	nr							1										0		1	PC15 FD
KS874	UID017 Stricklands Glen WWPS	12		30/09/2016	03/06/2019	29/03/2019	31/03/2020	12	nr							1										0		1	PC15 FD
KS874	UID178 Brompton Road SPS (PS06)	12		30/09/2016	03/06/2019	29/03/2019	31/03/2020	12	nr							1										0		1	PC15 FD
KG177	Portadown DAP Stage 2	12						12	nr																				
KG177	UID090 Annagh Catchment CSO 20	12		31/12/2018	04/12/2017	30/09/2020	31/03/2022	12	nr									1								x			PC15 FD
KG177	UID091 Annagh SPS CSO 20	12		31/12/2018	04/12/2017	03/04/2020	31/03/2022	12	nr									1								x			PC15 FD
KG177	UID092 Chambers Park CSO 01	12		31/12/2018	04/12/2017			12	nr									1								x			PC15 FD
KG177	UID093 Ballynacor CSO21	12		31/12/2018	04/12/2017	03/04/2020	31/03/2022	12	nr									1								x			PC15 FD
KR489	Glenmachan Strategic Project Phase 1a	12						12	nr																				
KR489	UID411 Balmoral Avenue CSO63	12		31/03/2016	19/06/2017			12	nr						1								x						PC15 FD
KR489	UID412 Balmoral Court CSO54	12		31/03/2016	19/06/2017			12	nr						1								x						PC15 FD
KR489	UID413 Lisburn Road Golf Club CSO58	12		31/03/2017	19/06/2017			12	nr							1								x					PC15 FD
KR489	UID414 Park Royal CSO57	12		31/03/2017	19/06/2017			12	nr							1								x					PC15 FD
KR489	UID415 Priory Park CSO55	12		30/09/2017	19/06/2017	30/09/2017		12	nr								1											x	PC15 FD
KR504	Portaferry Road, N.Ards WWPS Upgrade	12						12	nr																				
KR504	UID351 Portaferry Road WWPS	12		31/03/2019	31/03/2017	31/08/2017	31/03/2020	12	nr									1								0	1		PC15 FD
KB486	Galgorm WWPS Upgrade	12						12	nr																				
KB486	UID399 Galgorm Raphael WWPS	12		30/09/2016	31/03/2017	20/03/2018	20/03/2018	12	nr							1									0	1			PC15 FD
KS903	Annalong DAP	12						12	nr																				
KS903	UID266 Halfway House CSO	12		n/a	31/03/2016	21/03/2016	21/03/2016	12	nr														1						PC15 New
KS903	UID267 Marine Park CSO	12		n/a	31/03/2016	21/03/2016	21/03/2016	12	nr														1						PC15 New
KL527	Manorwood WWPS Replacement	12						12	nr																				
KL527	UID432 Manorwood WWPS	12				31/10/2016	01/12/2016	12	nr															1					PC15 New
KL524	Bleachgreen WWPS, Londonderry, Upgrade/Replacement	12						12	nr																				
KL524	UID420 Bleachgreen WWPS	12				30/04/2017	60/06/2017	12	nr																1	0			PC15 New
KA260	Muckamore WWPS Upgrade	12						12	nr																				
KA260	UID389 Muckamore WwPS	12				04/04/2017	04/04/2017	12	nr																1				PC15 New
KA261	Milltown Road WWPS Upgrade	12						12	nr																				
KA261	UID388 Milltown Road WWPS Upgrade	12					21/03/2017	12	nr															1					PC15 New
KA247	Crumlin Town WWPS Upgrade	12						12	nr																				
KA247	UID387 Crumlin Town WWPS Upgrade	12					01/03/2020	12	nr																		1		PC15 New
KA262	Islandreagh WWPS Upgrade	12						12	nr																				
KA262	UID391 Islandreagh WWPS Upgrade	12					30/03/2019	12	nr																	0		1	PC15 New
KA263	Dunadry WWPS Upgrade	12						12	nr																				
KA263	UID390 Dunadry WWPS Upgrade	12					30/03/2019	12	nr																	0		1	PC15 New
	Wastewater Treatment Works																												
KT102	Dunmurry WwTW Modifications	15			19/03/2012			13	nr		1																		
KB436	Whitehead, Ballystruder & Ballycarry Rationalisation	15			16/02/2012			13	nr		1																		
KR389	Ballyhalbert WwTW Interim Solution	15			28/03/2013			13	nr			1																	
KA195	Mullaghboy WWTW	15			04/04/2011			13	nr		1																		
KR391	Portavogie WwTW Interim Solution	15			24/09/2012			13	nr			1																	
KS253	Drumaness WwTW	15			31/08/2010			13	nr	1																			
KB282	Magherafelt WwTW	15			28/03/2011			13	nr	1																			
KT125	Hook's Corner WwTW	15			28/03/2011			13	nr	1																			
KL393	Ballymonie WwTW	15			18/03/2011			13	nr	1																			
KB269	Toome (Creagh) Sewerage Scheme	15			22/03/2011			13	nr	1																			
KS307	Loughries WWTW	15			25/01/2011			13	nr	1																			
KB281	Maghera WwTW	15			03/02/2011			13	nr	1																			
KL363	Feeny WwTW	15			25/11/2011			13	nr		1																		
KR310	Newtownbreda WwTW	15			04/02/2011			13	nr	1																			
KG145	Derrytrasna WwTW Upgrade	15			29/11/2010			13	nr	1																			
KB333	Cargan WwTW	15			30/11/2010			13	nr	1																			
KC284	Cloughmills WwTW	15			30/11/2010			13	nr	1																			
KB322	Martinstown WwTW	15			13/12/2010			13	nr	1																			
KF005	Coalisland WwTW	15			01/12/2010			13	nr	1																			
KC299	Bushmills + Portballintrae WwTW	15			06/12/2010			13	nr	1																			
KB279	Stewartstown WwTW Improvements	15			10/11/2010			13	nr	1																			
KB284	Coagh WwTW Improvements	15			10/11/2010			13	nr	1																			
KL300	Dungiven WwTW	15			10/11/2010			13	nr	1																			
KV064	Lurganare WwTW	15			30/09/2010			13	nr	1																			
KN533	Rousky Sewerage Scheme	15			09/09/2010			13	nr	1												0							
KB278	Moneymore STW Imps	15			18/08/2010			13	nr	1																			
KS224	Downpatrick WwTW	15			14/12/2009			13	nr	1																			
KF319	Annaghmore WwTWs	15			27/09/2010			13	nr	1																			
KS225	Ardglass WWTW	15			20/03/2015			13	nr					1								1							

A								B																					
Project Information								Project Outputs																					
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline						PC13 Actual		PC15 Current Actual/ Forecast						
PI_Project_ID	PI_Project_Name	PI_PC13_Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	UID Status
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18	
KT377	New Holland WwTW	16			28/03/2011			13	nr	1																			
KS374	Darragh Cross WwTW	16			07/09/2010			13	nr	1																			
KC338	Causeway/Aird (New Pumping Station)	16			23/08/2011			13	nr		1																		
KC416	Glenstall WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																	
KN622	Omagh WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																	
KL465	Limavady WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																	
KF329	Ardress WWPS Upgrade	16			31/03/2012			13	nr		1																		
KS857	Glassdrumman WWTW	16			23/12/2011			13	nr		1																		
KS216	Dunmore Sewerage - EC Compliance	16			30/06/2011			13	nr		1																		
KF320	Bush WwTW	16			03/06/2010			13	nr	1																			
KF028	Keady Wwtw	16			29/11/2012			13	nr			1																	
KL482	Tamnaherin Wwtw	16			28/01/2013			13	nr			1																	
KV105	Newry WwTW Extension Phase 1	16			28/01/2013			13	nr			1																	
KF060	Brockagh Terrace/Mountjoy WtWT	16			13/08/2012			13	nr			1																	
KV125	Forkhill WwTW	16			28/03/2013			13	nr			1																	
KV045	Mullaghbane WwTW	16			28/03/2013			13	nr			1																	
KB287	Swatragh WwTW	16			21/03/2013			13	nr			1																	
KB314	Gulladuff WwTW	16			16/12/2013			13	nr				1										1						
KT114	Hillsborough WWTW	16			18/03/2014			13	nr				1										1						
KS848	Newcastle WwTW	16			09/12/2013			13	nr				1										1						
KR501	Carrickfergus WWTW Upgrade	2			31/03/2014			13	nr				1										1						
KR530	Belfast WwTW Base Maintenance Phase 2	2			18/03/2014			13	nr					1									1						
KN631	Strabane WWTW's Refurbishment	2			20/12/2013			13	nr				1										1						
KL350	Benone Area Sewerage	16			16/09/2013			13	nr																				
KL350	Decommission Benone WwTW & construct WwPS	16			16/09/2013			13	nr				1										1						
KL350	Decommission Drumavelly WwTW & construct WwPS	16			16/09/2013			13	nr				1										1						
KL350	Decommission Aughil WwTW & construct WwPS	16			16/09/2013			13	nr				1										1						
KL350	Decommission MoD WwTW & construct WwPS	16			16/09/2013			13	nr				1										1						
KL350	Decommission NIPS WwTW & construct WwPS	16			16/09/2013			13	nr				1										1						
KL350	Provision of new Magilligan WwTW	16			16/09/2013			13	nr				1										1						
KP672	Tempo WwTW	16			06/01/2015			13	nr					1										1					
KS844	Ballyhornan Outfall - NIEA Enforcement	16			31/12/2013			13	nr				1										1						
KL424	Magheramason Wwtw	16			20/03/2015			13	nr					1										1					
KR409	Moneyreagh WwTW (Storm Pumping station)	16			12/12/2013			13	nr				1										1						
KP586	Clabby Wwtw	16		30/09/2015	31/03/2017	31/03/2017	30/03/2018	13	nr							1								0					
KN599	Donaghmore Wwtw	16			19/03/2015			13	nr					1										1					
KL487	Nixon's Corner	16			30/01/2015			13	nr					1										1					
KL386	Gortnahey Wwtw	16			24/07/2014			13	nr					1										1					
KS389	Ballymartin & Blackrock WwTWs	16						13	nr																				
KS389	Ballymartin WwTW	16			31/03/2015			13	nr						0									1					
KS389	Blackrock WwTW	16		31/03/2016	31/03/2016	30/06/2016	20/10/2016	13	nr						1										1				
KS355	Ballynahinch Wwtw	16			21/03/2014			13	nr				1										1						
KS905	Kilmore & Annacloy WwTW	16						13	nr																				
KS906	Kilmore WwTW	16			10/03/2015			13	nr					1										1					
KS907	Annacloy WwTW	16			11/03/2015			13	nr						1									1					
KS887	Ards South (Ballycranbeg WwTW load reduction)	16			31/03/2015			13	nr					1										1					
KL496	Feeny WwTW - Replacement Secondary Treatment	16			08/08/2014			13	nr				1											1					
KF346	Robinsonstown WwTW	16		01/01/2020	30/06/2019	31/03/2018	31/03/2021	13	nr										1										1
KN596	Ballymagory WWTW	16			30/03/2015			13	nr					1										1					
KL493	Artigarvin WwTW	16		31/03/2015	21/12/2015	21/12/2015		13	nr					1											1				
KN640	Dromore (Tyrone) WWTW	16			20/03/2015			13	nr					1										1					
KT402	Dunmurry WWTW Sludge Facility	16			18/03/2014			13	nr				1										1						
KB459	Maghera WwTW: Phase 2	16			04/02/2014			13	nr				1										1						
KL394	Drumsurn Wwtw	16			16/12/2014			13	nr					1										1					
KP668	Lisnarrick Wwtw	16			01/12/2014			13	nr					1										1					
KT126	Stoneyford Wwtw	16			28/11/2014			13	nr					1										1					
KI508	UWWTR MCERT compliance	16		31/03/2016	31/01/2016	31/01/2016		13	nr					1	1										1				
KC296	Ballycastle WwTW	16		01/01/2017	30/12/2017	31/03/2018	31/12/2017	13	nr							1										1			
KN656	Castle Archdale WwTW	16		31/03/2015	30/03/2016	30/03/2016		13	nr					1											1				
KG202	Aghagallon WwTW	16			31/03/2015			13	nr					1										1					
	Waringsford	16			30/09/2014			13	nr					0										1					
KC302	Ballintoy WwTW	16		31/03/2018	31/01/2017	31/01/2018	29/03/2020	13									1												
KS235	Ballygowan/Moneyreagh WwTW	16						13																					
KS235	Ballygowan WwTW	16		31/03/2018	28/02/2017		31/03/2020	13									1												
KS235	Moneyreagh WwTW	16		31/03/2018	28/02/2017		31/03/2020	13									1												
KS111	Ards South - Cloughey	16		31/03/2017	n/a	31/03/2019	31/03/2020	13								1													
KL489	Ballykelly WwTW	16		31/03/2017	n/a	30/10/2018	31/03/2020	13								1													
	Dundrum WwTW	16		31/12/2017	n/a		31/03/2019	13									1												
KS113	Ards North - Carrowdore, Ballywalter, Ballyhaskin	16						13																					
KS113	Carrowdore WwTW	16		31/03/2021	n/a		31/03/2021	13												1									
KS113	Ballywalter WwTW	16		31/03/2021	n/a		31/03/2021	13												1									
KS113	Ballyhaskin WwTW	16		31/03/2021	n/a		31/03/2021	13												1									
KF350	Dungannon WwTW	16		01/01/2021	01/01/2021		31/03/2023	13												1									x
KC463	Ballybogy WwTW	16		31/01/2021	31/01/2021		31/03/2021	13												1									0
KA239	Mullans WwTW (Antrim)	16		31/03/2021	n/a	30/09/2017	29/03/2018	13												1									
	Greyabbey WwTW	16		31/03/2021	31/03/2021		31/03/2020	13												1									0
	Maghaberry WwTW (additional output in 16/17 draft adjusted outputs submission)	16				02/04/2018	29/03/2019	13																					
	The Loup	16					15/03/2017	13																					
	Small Wastewater Treatment Works																												
	Small Wastewater Treatment Works - PC10 Programme >250pe to be detailed																												
KI486	Annahugh WwTW	17			2010/2011			13	nr	1																			
KI486	Galbally WwTW	17			2010/2011			13	nr	1																			
KI486	Maghery WwTW	17			2010/2011			13	nr	1																			
KI486	Montieth WwTW	17			2011/2012			13	nr		1																		
KI486	Orritor WwTW	17			2011/2012			13	nr		1																		
KI486	Garvaghy WwTW	17			2011/2012			13	nr		1																		
KI486	Donagheady WwTW	17			2010/2011			13	nr	1																			
KI486	Attical Tullyframe WwTW	17			2011/2012			13	nr		1																		
KI486	Donagh WwTW	17			2011/2012			13	nr		1												0	0					
KI486	Glack WwTW	17			2012/2013			13	nr			1																	
KI486	Teemore WwTW	17			2011/2012			13	nr		1																		
	Small Wastewater Treatment Works - PC10 Programme <250pe to be detailed	17			2010-2013			14	nr	11	23	14																	
	Small Wastewater Treatment Works - PC13 Programme <250pe to be detailed	17			2013-2015			14	nr				7	18	7	8	7	8	7	8			7	18					
	Small Wastewater Treatment Works - PC15 Programme <250pe to be detailed	17			2015-2021			14	nr																4	8	4	10	7	

BP T4.1	Water Outputs		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
19	Completion of nominated trunk main schemes	6	2	0	2	0	2	1	0	0	1	0	1	0	1	2	1	0	0	0	1
20	Completion of nominated water treatment works schemes	7	2	0	0	0	3	1	0	0	1	0	2	0	3	1	0	0	0	0	3
21	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	8	5	3	1	0	1	0	0	1	0	1	1	0	1	0	0	1	0	1	2

BP T4.2	Sewerage Outputs		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
8	Delivery of improvements to nominated UIDs as part of a defined programme of work	12	20	43	38	25	59	27	16	5	8	0	0	28	39	26	11	11	8	4	18
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	13	29	14	13	17	18	3	4	4	0	1	7	17	18	3	2	1	6	3	6
10	Small wastewater treatment works delivered as part of the rural wastewater investment programme	14	11	23	14	7	18	7	8	7	8	7	8	7	18	4	8	4	10	7	0

Table 40a – Nominated Outputs

The following tables identify those PC15 nominated outputs delivered during the programme. The information aligns with that claimed in the relevant AIR Tables and also endeavours to update the status of the nominated outputs yet to complete.

The delivery of Nominated Outputs has been measured against the Final Determination Targets with any accepted Change Controls incorporated. This is against a backdrop of a constrained budget within the period for each year.

On the Water side the Watermains Programme has achieved efficiencies through cost management, more efficient delivery methods and utilising the new Risk Management Framework, however this has been offset against higher costs in the Service Reservoir and Clear Water Tank programme with Killyhevlin CWB outturn costs significantly higher than those initially estimated.

On the Sewerage side the First Time Services programme has out turned at a much higher average run rate per year due to increased demand. The main variance however has related to the UID programme which has seen a major increase in outturn costs against the FD allowance throughout PC15. This can be attributed to the initial allowances for UID work being artificially low and applied pro rata across the programme as opposed to working off individual scheme costs.

The information is presented by Sub-Programme and reflects the layout as submitted in Table 40A.

NIW project Code	Project title	Year claimed	Outstanding outputs/ comments
Sub programme 1 – Base Maintenance Water			
N/A	N/A	N/A	
Sub programme 4 – WTW			
JI052	Glenhordial Treatability	2015/16	
JI052	Dorisland Treatability		
JI052	Killyhelvin Treatability		
JL772	Caugh Hill Treatability		
Sub programme 5 – Trunkmains			
JG035	Ballydougan to Newry TM – Phase 2B	2015/16	
JR342	Castor Bay to Belfast TM	2015/16	See note a
JB693	Carland to Cookstown Trunkmain	2016/17	
JL715	Carmoney to Strabane Strategic Link Watermain		See note b
Sub programme 6 – Service Reservoirs and Towers			
JS274	Drumaroad WTW Clear Water Tank		
JP631	Killyhelvin Clear Water Tank		
JB709	Lough Fea CWB		

Note:

a) Castor Bay to Belfast TM – this was a PC13 output. Whilst the trunk main pipeline was complete by the end of March 2015, the new pumps associated with the scheme could not be installed by the PPP contractor without first emptying the Magheraliskmisk service reservoir. This could not be done due to the risk of industrial action. Once the risk of industrial action had ended, the new pumps were installed and the trunk main achieved beneficial use by May 2015. This was included in AIR 16 as a PC15 output.

b) Carmoney to Strabane Strategic Link Watermain – the scope and start date of this scheme was to be informed by the conclusions of the Water Resource and Supply Resilience plan. It is proposed that subject to an ORG Change Control this project shall be substituted out and Northern Zone Resilience shall be substituted in.

Summary (Sub programme 12 – UIDs)

UID performance 2018/19

The table below presents UID performance during 2018/19.

UID delivery	**2018/19**
PC15 FD UIDs delivered in 2018/19	8
Total	**8**

Complete PC15 UID programme

	Category of output	**Number of UIDs in category**	
		PC15 scope	**Outside PC15**
	PC15 baseline, delivery in PC15	43	
	PC15 baseline, cannot claim		3
	PC15 baseline, delivery in PC21		8
	PC15 baseline, delivered in PC13	2	
	New, added to PC15	11	
	PC13 carryover, delivery in PC15	24	
	PC13 carryover, cannot claim		1
	Totals	**80**	**12**

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KA260	UID389	Muckamore WwPS		2017/18	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set but these were subsequently resolved.
KA261	UID388	Milltown Road WwPS Upgrade		2016/17	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set but these were subsequently resolved.
KA247	UID387	Crumlin Town WwPS Upgrade		2019/20	NO	YES	Will assist with completion of Antrim DAP
KA262	UID391	Islandreagh WwPS Upgrade		2019/20	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set.
KA263	UID390	Dunadry WwPS Upgrade		2019/20	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set.
KB486	UID399	Galgorm Raphael WwPS	2016/17	2018/19	YES	YES	
KC415	UID040	Ballysally CSO	2015/16	2017/18	YES	YES	
KC415	UID043	Screen Road CSO	2015/16	2014/15	YES	YES	Delivered during PC13
KF330	UID001	Scotch Street CSO. 2	2015/16	2015/16	YES	YES	
KF330	UID002	Scotch Street. CSO 1	2015/16	2015/16	YES	YES	
KF330	UID003	Courthouse 1 CSO	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KF330	UID005	The Mall East CSO	2015/16	2016/17	YES	YES	
KF330	UID006	English St CSO. Scheme 2	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KF330	UID010	Newry Road SPS	2015/16	2017/18	YES	YES	
KF330	UID173	Mall West CSO	2015/16	2015/16	YES	YES	

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KF330	UID175	Alexender Road CSO	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KF396	UID008	Milford SPS	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15
KF397	UID009	Killylea SPS	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15
KG177	UID090	Annagh Catchment CSO 20	2018/19	PC21	YES	NO	Modelling has highlighted issues - constraints regarding flows. This scheme has an interdependence with Meadow Lane which must be addressed first.
KG177	UID091	Annagh SPS CSO 20	2018/19	PC21	YES	NO	Modelling has highlighted issues - constraints regarding flows. This scheme has an interdependence with Meadow Lane which must be addressed first.
KG177	UID092	Chambers Park CSO 01	2018/19	N/A	YES	NO	The area of Chambers Park WwPS and CSO manhole was acquired by ASDA to erect their new store. ASDA designed their site drainage to cater for all flows previously running toward Chambers Park WwPS. The new sewers carry these flows to the new (as yet unadopted) pumping station to the rear of the ASDA site. The pipework was sized to accommodate all flows without the need to retain the existing CSO. On 22/09/2016, NIEA stated that NI Water could not claim this UID.

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KG177	UID093	Ballynacor CSO21	2018/19	PC21	YES	NO	Modelling has highlighted issues - constraints regarding flows. This scheme has an interdependence with Meadow Lane which must be addressed first.
KG183	UID081	Meadow Lane CSO 06	2017/18	2019/20	YES	YES	
KG183	UID082	Meadow Lane CSO 07	2016/17	2019/20	YES	YES	
KG183	UID083	Portmore Street CSO 08	2017/18	2019/20	YES	YES	
KG183	UID085	Clonavon Avenue CSO 11	2017/18	2019/20	YES	YES	
KG183	UID086	Meadow Lane CSO 12	2017/18	2019/20	YES	YES	
KG183	UID233	Meadow Lane WWPS CSO 32	2016/17	2019/20	YES	YES	
KL468	UID114	Caw Park CSO 023	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL468	UID380	Gransha Park WwPS No. 2	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL504	UID273	Knockalla New WwPS	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KL504	UID274	Upper Galliagh Road WwPS	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL504	UID275	Glen Road CSO	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL504	UID433	Fairview Knockalla CSO		2015/16	NO	YES	Was discovered during delivery of related UID273 – was spilling and was endorsed by NIEA. A pumping station was originally in place but was one pump - pump was removed, benched and manhole constructed. It was only during upgrade of new pumping station that overflow was located. Costs associated with this UID were incurred through the delivery UID273.

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KL524	UID420	Bleachgreen WwPS		2019/20	NO	YES	Was not identified in DAP but a large number of NIEA pollution incidents were recorded against this site discharging to the River Faughan. Driven and requested by NIEA: pressure also raised by Loughs Agency due to heavy pollution incidents. Had been raised to highest priority by NIEA.
KL527	UID432	Manorwood WwPS		2016/17	NO	YES	NIEA recognised that this WwPS was problematic and approved that this was a legitimate and UID and that it should be addressed during PC15. NIEA had identified spillage from overflow of WwPS to the Ardnabrocky Burn.
KR417	UID191	Cromac Street CSO 95	2016/17	2018/19	YES	YES	
KR417	UID192	Outside Holiday Inn CSO97	2016/17	2018/19	YES	YES	
KR417	UID193	Dublin Road Cinema CSO 96	2016/17	2018/19	YES	YES	
KR417	UID194	Bankmore Street / Dublin Road CSO 81	2016/17	2018/19	YES	YES	
KR417	UID265	Sandy Row CSO 94	2016/17	2018/19	YES	YES	
KR480	UID218	Palace Barracks CSO 110	2015/16	2016/17	YES	YES	

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KR489	UID411	Balmoral Avenue CSO63	2015/16	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.
KR489	UID412	Balmoral Court CSO54	2015/16	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.
KR489	UID413	Lisburn Road Golf Club CSO58	2016/17	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.
KR489	UID414	Park Royal CSO57	2016/17	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KR489	UID415	Priory Park CSO55	2017/18	PC21	YES	NO	This UID may be included within the redefined scope of scheme KR489 (Sicily Park) but will not achieve Beneficial Use during PC15. Project KR489 is primarily a DG5 project with only a small fraction of the budget used to address UIDs. The project was 100% Enhanced Service Levels in the PC15 baseline.
KR504	UID351	Portaferry Road WwPS	2018/19	2019/20	YES	YES	
KR640	UID220	Strathearn Court CSO 53	2015/16	2016/17	YES	YES	
KS372	UID044	Market Street SPS Upgrade, Downpatrick - UID's	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS872	UID011	Carnalea Golf Club CSO 1	2018/19	2019/20	YES	YES	
KS872	UID012	KillaneyWwPS 3	2018/19	2018/19	YES	YES	
KS872	UID177	Killaire WwPS 1	2018/19	2015/16	YES	YES	
KS873	UID013	Westburn Cresc. CSO 3A	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15
KS873	UID014	Crawfordsburn Rd CSO 03B	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15
KS873	UID015	Crawfordsburn Rd CSO 03C	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15
KS874	UID016	Maxwell CSO 4	2016/17	2019/20	YES	YES	
KS874	UID017	Stricklands Glen WwPS	2016/17	2019/20	YES	YES	
KS874	UID178	Brompton Road SPS (PS06)	2016/17	2019/20	YES	YES	
KS877	UID023	Castle Park CSO 07	2015/16	2017/18	YES	YES	
KS877	UID179	13 Rugby Avenue CS0 8A	2014/15	2017/18	NO	YES	Originally PC13, delivery in PC15
KS877	UID180	11 Brunswick Road CSO 8B	2015/16	2017/18	YES	YES	
KS877	UID181	104 Abbey Street CSO 8F	2015/16	2017/18	YES	YES	
KS877	UID182	114 Abbey Street CSO 8E	2015/16	2017/18	YES	YES	

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KS877	UID183	Railway View Street CSO 8G (not required)	2014/15	N/A	NO	NO	Although initially identified as a UID, subsequent modelling indicated that it did not spill with sufficient frequency to be categorised in this manner. There is no financial impact due to the removal of this UID from scope.
KS877	UID184	Abbey Park CSO 9	2015/16	2017/18	YES	YES	
KS877	UID263	57 Belfast Road CSO 8C	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KS877	UID264	17 Belfast CSO 8D	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KS902	UID237	Parochial House CSO 02	2016/17	2019/20	YES	YES	
KS902	UID238	Main Street CSO 04	2016/17	2019/20	YES	YES	
KS902	UID239	Flynn's WWPS CSO 05	2016/17	2019/20	YES	YES	
KS903	UID266	Halfway House CSO		2015/16	NO	YES	Had potential to pollute Annalong Harbour – delivery endorsed by NIEA. UID advanced following Cross party Councillor complaints regarding discharges.
KS903	UID267	Marine Park CSO		2015/16	NO	YES	Had potential to pollute Annalong Harbour – delivery endorsed by NIEA. UID advanced following Cross party Councillor complaints regarding discharges.
KS930	UID076	Millisle SPS CSO 02	2015/16	2019/20	YES	YES	
KS937	UID032	Annesborough Park WwPS	2015/16	2016/17	YES	YES	
KS939	UID259	Pattons Bridge (Blackrock WwPS	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS958	UID185	Avonlea Park CSO 6	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS958	UID186	Rosemary Crescent / Inglewood Pk CSO 5	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KS958	UID187	Clandeboye Road CSO 5B	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID068	Hilden PS CSO 13A	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID069	Antrim St CSO 25	2015/16	2016/17	YES	YES	
KT391	UID072	New Holland WwTW	2015/16	N/A	YES	NO	Investigations established that this was not a network UID – it is located within the boundary of the site: this was not a KT391 UID. This was incorrectly carried through into the PC15 outputs.
KT391	UID073	Duncans Rd CSO 15	2015/16	N/A	YES	NO	Investigation during DAS discovered that no CSO exists at this location: it was established that this was not a UID - was a bifurcation. This was incorrectly carried through into the PC15 outputs.
KT391	UID074	Laws Yard CSO 14	2015/16	2015/16	YES	YES	
KT391	UID222	Linenhall Street CSO 03	2015/16	2014/15	YES	YES	Delivered during PC13
KT391	UID223	Antrim Street CSO 05	2015/16	2018/19	YES	YES	
KT391	UID224	Clonevin Park CSO 10	2015/16	2015/16	YES	YES	
KT391	UID226	Antrim Road CSO 24 + flooding	2015/16	2015/16	YES	YES	
KT391	UID227	Bow Street CSO 26	2015/16	2015/16	YES	YES	
KT391	UID229	Grand Street Screen CSO 28	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID421	Edgewater WwPS	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID422	Hoggs Weir CSO 04		2015/16	NO	YES	Was identified in DAP but was not included in baseline list of PC15 UIDs

Sub-programme 15 and 16 WwTW				
PC15 Cumulative Total	**NI Water project Code**	**Project title**	**Year claimed**	**Outstanding outputs/ comments**
	KS907	Annacloy WwTW	2014/15	See note a
1	KL493	Artigarvin WwTW	2015/16	See note b
2	KI508	UWWTR MCERT compliance	2015/16	
3	KN656	Castle Archdale WwTW	2015/16	See note c
4	KS389	Blackrock WwTW	2016/17	
5		The Loup	2016/17	See note d
6	KC296	Ballycastle WwTW	2017/18	
7	KP586	Clabby WwTW	2018/19	
8	KS235	Moneyreagh WwTW	2018/19	
9	KS111	Ards South - Cloughey	2018/19	
10	KS962	Dundrum WwTW	2018/19	
11	KA239	Mullans WwTW (Antrim)	2018/19	
12		Maghaberry WwTW	2018/19	See note e
	KC302	Ballintoy WwTW		
	KC427	Ballyvoy WwTW		
	KL489	Ballykelly WwTW		
	KC463	Ballybogy WwTW		
	KS235	Ballygowan WwTW		
		Greyabbey WwTW		
	KS113	Carrowdore WwTW		
	KS113	Ballywalter WwTW		
	KS113	Ballyhaskin WwTW		
	KF350	Dungannon WwTW		
	KF346	Robinsonstown WwTW		

Notes

a) Land issues necessitated combined Kilmore/ Annacloy solution. It is significant to note that Annacloy WwTW was originally scheduled to deliver during PC15 but was successfully delivered during PC13.
b) Artigarvin was originally a PC13 output but a review of the delivery approach delayed completion until 2015/16.
c) Castlearchdale WwTW was added to PC13 scope through change control but carried through into PC15: re-profiling into PC15 was due to the requirement for a wildlife survey.
d) The Loup was initially included in the scope of the Rural Wastewater Treatment Works programme. The actual PE of the site has exceeded the 250 PE threshold and a Change Control has re-designated it as a Sub Programme 16 output.
e) Maghaberry WwTW was added to PC15 scope through the draft adjusted outputs submission.

Sub programme 17 – Small Wastewater Treatment Works				
PC15 Cumulative Total	CAR Site Reference	Project title	Year claimed	Outstanding outputs
1	S01566	Dunmullan	2015/16	
2	S01455	Cappagh	2015/16	
3	S03002	Curglasson	2015/16	
4	S05877	Straid	2015/16	
5	S00320	Drumlough	2016/17	
6	S01462	Glenoe WwTW	2016/17	
7	S04118	Trench Road	2016/17	
8	S02111	Acton	2016/17	
9	S02276	McKinley Park	2016/17	
10	S01160	Longs Glebe	2016/17	
11	S01622	Kilross	2016/17	
12	S02593	Milltown (Aghory)	2016/17	
13	S02284	Oliver Plunkett	2017/18	
14	S00332	Bresagh	2017/18	
15	S02987	Ardgarvan	2017/18	
16	S01137	Bellany WwTW	2018/19	
17	S03104	Edenderry WwTW	2018/19	
18	S01447	Newtown Crommelin WwTW	2018/19	
19	S03088	Drumenny WwTW	2018/19	
20	S01581	Kilbaskey WwTW	2018/19	
21	S02566	Cladymore WwTW	2018/19	
22	S02164	Dougan Place WwTW	2018/19	
23	S01569	Donaghey WwTW	2018/19	
24	S01643	Waterfoot Road WwTW	2018/19	
25	S01163	Mayboy WwTW	2018/19	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 41 KEY OUTPUTS
HEALTH & SAFETY INFORMATION (NIW only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	OCCUPATIONAL ILL HEALTH																				
1	Employee total	nr	0	1,304	A2	1,250	A2	1,240	A2	1,230	A2	1,246	A2	1,261	A2	1,277	A2				
2	Total days lost due to sickness, accident and occupational ill health	nr	0	9,081	A2	9,962	A2	9,767	A2	10,395	A2	10,188	A2	11,268	A2	11,251	A2				
3	Total days lost - rate per 1000 employees	nr	2	6,963.96	A2	7,969.60	A2	7,876.61	A2	8,451.22	A2	8,176.57	A2	8,935.77	A2	8,810.49	A2				
4	Number of incidents of occupational ill health	nr	0	137	A2	142	A2	131	A2	134	A2	135	A2	143	A2	176	A2				
5	Incidents of occupational ill health - rate per 1000 employees	nr	2	105.06	A2	113.60	A2	105.65	A2	108.94	A2	108.35	A2	113.40	A2	137.82	A2				
B	RIDDOR REPORTS																				
6	Total RIDDOR incidents	nr	0	10	A1	6	25	5	A1	7	A1	4	A1	6	A1	6	A1				
7	RIDDOR - rate per 1000 employees	nr	2	7.67	A1	4.80	A1	4.03	A1	5.69	A1	3.21	A1	4.76	A1	4.70	A1				
8	3-day accident rate per 1000 employees	nr	2	7.67	A1	4.80	A1	5	A1	5.68	A1	3.21	A1	4.76	A1	4.70	A1				
9	Major/fatal accident rate per 1000 employees	nr	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
C	AND INCIDENCE OF OCCUPATIONAL ILL HEALTH																				
10	Contractors' employees total	nr	0	No data		No data		NA		NA		NA		NA		NA					
11	Total days lost due to sickness, accident and occupational ill health	nr	0	No data		No data		NA		NA		NA		NA		NA					
12	Total days lost - rate per 1000 employees	nr	2	No data		No data		No data		No data											
13	Number of incidents of occupational ill health	nr	0	No data		No data		NA		NA		NA		NA		NA					
14	Incidents of occupational ill health - rate per 1000 employees	nr	2	No data		No data		No data		No data											
D	CONTRACTORS' RIDDOR REPORTS																				
15	Total RIDDOR incidents	nr	0	6	B2	6	B2	5	BX	7	BX	9	BX	6	BX	5	BX				
16	RIDDOR - rate per 1000 contractors' employees	nr	2	No data		No data		No data		No data											
17	3-day accident rate per 1000 contractors' employees	nr	0	No data		No data		NA		NA		NA		NA		NA					
18	Major/fatal accident rate per 1000 contractors' employees	nr	2	0.00	B2	0.00	B2	0.00	A2	0.00	A2	0.00	A2	0.00	A2	NA					

Table 41 – Health and Safety Information (NI Water only)

Lines 1 - 5 - Lost time

In 2018/19 financial year NI Water lost a total of 11,251 working days due to sickness which was equivalent to 8.8 working days lost per employee. The Key Performance Indicator (KPI) attendance in 18/19 was 96.5% and NI Water delivered an actual rate of 96.0%, 0.5% below the target.

HR Advisors, in conjunction with line managers, continue to manage employee absence cases that meet the sick absence breach set points to highlight the importance of good attendance and corrective action taken where appropriate.

Human Resources work in partnership with line managers, the NI Water Employee Support Officer, occupational health provider, Inspire (our Employee Assistance Programme provider) and employees to assist those on long term sick to return to work and to facilitate reasonable adjustments where required.

Absence reporting is undertaken by the Human Resources department on a weekly basis to update senior management on current absence levels (this information is also reported on in more detail on a monthly basis). Senior management are advised of the actual absence rate against NI Water's KPI for attendance. A more meaningful analysis has been included in the reporting, mainly a line graph depicting comparison of % attendance over the current and previous 2 years. Further information provided highlights the top 3 reasons for absence in the reporting month and also a year to date breakdown of short-term and long-term sickness absence. We are also due to produce an enhanced end of year report.

Our attendance rate has increased from 95.9% in 17/18 to 96.0% in 18/19. There was a decrease in staff absence due to cold/flu/respiratory illnesses. 301 working days were lost to these illnesses during 18/19. (Compared to 1097 working days during 17/18). The decrease since 17/18 in cold/flu/respiratory absences may be attributed to the fewer incidences of flu outbreaks during the winter of 18/19 than the previous winter. The flu vaccine was offered to all employees and 254 employees took up the offer, approximately 20% of the workforce.

There were no deaths in service this year. There were two medical retirements after periods of long-term absences.

Frontline operatives attended yearly medical assessments for Hand Arm Vibration, audio and working in confined spaces. NI Water also provided medical assessment for driving and HGV which is currently carried out by occupational health providers.

Psychiatric/psychological absences remain the highest reason for days lost due to sickness in 18/19 at 29.3% this is an increase from 17/18 when the percentage of total working days lost due to Psychiatric/psychological illness was 20.2%.

There are a number of Health and Wellbeing initiatives that continued during 18/19, which are as follows:

- Health & Wellbeing annual calendar of activity linked to local and national health campaigns
- Introduction of the flu vaccine on a yearly basis during autumn/winter seasons since October 2016.
- Health and Wellbeing training delivered by Inspire (Managing Mental Health in the Workplace, Building Emotional Resilience, Dealing with Difficult Situations,

Mindfulness). These sessions continued throughout 18/19 from the previous financial year with a refresher training course delivered to the 48 mental health first aiders in 2019

- Dedicated Workplace Counselling on site though Inspire Workplaces, 9 Wellbeing Champions representing employee views on wellbeing and providing input to our the Health and Wellbeing programme and contributing to articles on the 'Wellbeing Works' Website
- Health awareness campaigns though our dedicated 'Wellbeing Works" intranet site, poster campaigns and targeted employee communications
- Provision of facilities for mindfulness, yoga, slimming clubs, company choir and sports teams
- Roadshow '4 Ways to Live Well' visited at each of our Hubs during October and November 2018 with healthy eating, sleep well advice, Cancer Focus bookable sessions, mediation and massage and a range of interactive stands
- 100-day Virgin Pulse Global Challenge initiative returned in summer 2018 following a pilot the previous year and scheduled to commence again in May 2019
- Suggested walking routes that are close to our sites published for employees
- Parenting NI seminars facilitated across all hubs
- 'Ready to Quit' smoking cessation programme delivered across a variety of hubs
- Phased retirement programme

NI Water's activities in this area resulted in NI Water winning the 'Best Health & Wellbeing Initiative' in the 2019 Chartered Institute of Personnel and Development NI Awards and shortlisted for the Wellbeing at Work award for Business in the Community 2018.

NI Water's reason for absence reporting differs to the occupational reasons as listed by the Utility Regulator. Our current reporting systems do not specifically record Hand Arm Vibration or work related reasons for absence. In addition to this, work related stress is recorded under the general heading of anxiety/stress/depression.

As per last year, due to our failure to meet our KPI, improving attendance remains of high importance to both EC and Board along with further developing and implementing a continued programme of initiatives to improve the health and well-being for all our staff.

Line 6 – Total RIDDOR (and >3 Lost Day) Incidents

The NI Water procedure for reporting of all incidents is set out in H&S Procedure PRO 008 within the NI Water Health & Safety Manual, (rev. October 2014). All incidents and near misses must be reported to line management as soon as practical, and at least within 24 hours of any incident. An electronic Risk Management and Reporting System (DATIX) is utilised for recording and tracking of all incidents and has been in place since April 2009.

It is the relevant Line Manager's responsibility to ensure all incident details are recorded and managed within the DATIX system.

DATIX entries are monitored by NI Water's Safety, Health and Environment (SHE) Team with statistical safety performance and trends presented monthly by the Head of Safety, at H&S Focus Group, Executive Committee and Board for consideration and discussion.

There were 6 RIDDOR (greater than) >3 Lost Day reportable incidents within NI Water during 2018/19, all of which resulted in more than 3-day work activity-related absences.

Datix Ref	Date of Incident	Brief Description	Incident Category	Underlying / Root Cause	RIDDOR Classification
NIW2968	23/07/18	Replacing 2no toby frame/lids – cut around bitmac with saw and using pick to lever out old tar – twisted back.	Reportable	Failure to follow safe Handling and Lifting training techniques.	> 3 day absence
NIW2985	08/08/18	Whilst freeing-up the nearside rear brake calliper on (TNI) Roads Service Gritter lorry. IP struck his elbow against the rear spring causing pain and swelling.	Reportable	Failure to follow safe working techniques or to recognise all risks while carrying out this type of work	> 3 day absence
NIW2992	21/08/18	Craftsman suffered fall of approx 1.5 m when the open grid flooring he was working on gave way.	Reportable	Failure of flow-forge open grid flooring to be suitably secured over inlet channel.	> 3 day absence
NIW3258	01/02/19	Plant operator felt unwell while cleaning a poly splitter tank.	Reportable	Possible pre-existing medical condition	> 3 day absence
NIW3297	15/02/19	Tanker driver tripped and fell from van resulting in a fractured finger.	Reportable	Lack of due care and attention	> 3 day absence
NIW3381	07/01/19	Employee strained his back while removing a gas cylinder from its trailer	Reportable	Incorrect manual handling techniques. i.e. failure to use a cylinder trolley for removal of the cylinders from the trailer.	> 3 day absence

NB: NI Water reports all over 3 day incidents under the RIDDOR (Northern Ireland) Regulations, whilst mainland GB reports on over 7 day absences, in line with recent legislative changes affecting only GB.

Line 7 – RIDDOR Rate per 1000 employees

The DATIX process, as described for Line 6 above, provides the total number of RIDDOR (>3 day) incidents, whilst the denominator, the total number of employees, has been calculated by the Human Resources (HR) Directorate as 1277. This gives the RIDDOR Rate per 1000 employees as 4.70 for 2018/19.

Line 8 – Greater than (>) 3 day Incident Rate per 1000 employees

As all RIDDOR incidents refer to incident-related absence (ref. line 6 commentary), the information in Line 8 mirrors that of Line 7.

Line 9 – Major Fatal Incident Rate per 1000 employees

The information gathering process is again as described for Line 6 above. No fatal injuries occurred during 2018/19.

Lines 10 – 14 - Contractor Lost Time Incidents

Contractors continue to be managed and directly engaged on a wide range of work activities, projects and contracts on behalf of NI Water. However, core activity, from a Health and Safety perspective relates only to the assistance given by contractors in relation to the provision of water and sewerage services and includes contractors engaged in the construction of new works (ref. line 15 commentary). NI Water has, throughout 2018/19 been engaged in a continuing process of change, regarding the numbers of contractors assisting in asset delivery and improvement of this core activity, as efficiency measures

continue to be put in place. Given the changing nature of contract provision as outlined above and the variety of work undertaken, NI Water has no available methodology for calculating and determining accurately the number of contractors' staff engaged in all core related activities and this is unlikely to change in the short term.

Line 15 – Contractors' RIDDOR Reports

The Northern Ireland public regards all work related with water and sewerage services, including design and build work, to be closely associated with NI Water. NI Water, in turn, recognises its own duty of care to all of its contractors as a Client organisation when they are carrying out work and therefore sees its duty as one of leadership. NI Water therefore maintains a record of monitoring on all contractor and subcontractor reported incidents, which includes all incidents relating to transient workers. NI Water encourages and requires the reporting of all near-miss incidents involving contractors to facilitate a shared learning experience, in line with NI Water's 'Zero Harm' ambition.

All Contractor and subcontractor incidents are recorded on DATIX and for 2018/19 the total number of RIDDOR related incidents reported to NI Water by all contractors was 5. This was a decrease in reports on last year when 6 incidents were recorded. Contractor performance continues to be monitored by NI Water's H&S Focus Group, by Executive Committee and by Board at their monthly meetings. On a quarterly basis Risk Committee also consider and review safety performance, recent incidents and trend analysis of both NI Water staff and contractor performance.

Datix Ref	Date of Incident	Brief Description	RIDDOR Classification
NIW2917	04/06/18	Operative was moving dumper toward on-site low depth excavation, dumper failed to stop continuing down slope. IP was thrown forward resulting in hurt to neck, back and legs.	> 3 days
NIW3039 2 RIDDORS	19/09/18	Two M&E operatives became trapped when a large tree fell across the site of a small Water Booster Station within the Forest Park. Later confirmed as 1x Fatality and 1x serious injury.	Fatality & > 3 days
NIW3154	23/11/18	Operative was working with a lifting/loading operation on the back of a flatbed trailer when he slipped and fell approx 5 feet to ground, suffering a fractured rib.	> 3 days
NIW3245	18/01/19	Pedestrian tripped over a road works sign which had been vandalised and fractured her ankle.	> 3 days

Lines 16 - 17 – Contractor RIDDOR and >3 Day Incident Rates

Information is not collected for this line, as NI Water has no available methodology for calculating and determining accurately the numbers of direct contractor employees working on all NI Water contracts. Incident Rates therefore become difficult to calculate.

Line 18 – Contractor Major Fatal Incident Rate per 1000 employees

There was 1 fatal incident connected with NI Water contractors /sub-contractors, including transient workers, during 2018/19.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 42 PPP REPORTING
PPP REPORTING

	DESCRIPTION	UNITS	DP	CG	Corresponding Report	Calculation	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME		TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
A	PROJECT DESCRIPTION																											
1	PPP Concession	text	na		na		Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water Service	Sewerage Sevice
2	Service Area	text	na		na		WT	WT	WT	WT	WD/WT	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	WWS	All	All	All		
3	Name of works	text	na		na		Balinrees	Castor Bay	Dunore Point	Moyola	DBP C LM & FKd BDG Cont TK	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor	North Down	Ballyrickard	Ballynacor Lagoons	Ballynacor	Duncrue	Sludge Service	Total	Total	Total	Total	Total
4	Commencement date	date	na		na		10/10/2008	09/12/2008	11/12/2008	16/09/2008	16/12/2008	15/10/2008	15/10/2008	24/05/2001	08/04/2009	27/08/2009	14/11/2009	05/05/2008	20/04/2009	N/A	31/03/2010	31/03/2010	31/03/2010					
5	Service duration	yrs	0		na		23	23	23	23	23	N/A	N/A	23	23	23	22	24	23	N/A	22	22	22					
6	Service completion date	date	na		na		30/05/2031	30/05/2031	30/05/2031	30/05/2031	30/05/2031	N/A	N/A	23/04/2024	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032					
B	PAYMENT TO PPP CONCESSIONAIRE																											
7	Unitary Charge Capacity	£m	3		na																							
8	Unitary Charge Variable	£m	3		na																							
9	Unitary Charge Deductions	£m	3		na																							
10	Atypical expenditure	£m	3		na																							
11	Efficiency Gains, included in 7 & 8	£m	3		na																							
12	Total PPP Payments (7to 10)	£m	3		na	Sum 7 to 10																						
13	Capital repayment	£m	3		na																							
14	Maintenance	£m	3		na																							
16	Atypical payments capitalised	£m	3		na																							
17	Total capitalised (13 to 16)	£m	3		na	Sum 13 to 16																						
18	Total PPP Expensed (12-17)	£m	3		na	Lines 12-17																						
19	Interest	£m	3		na																						2	
20	Total PPP Opex (18-19)	£m	3		na	Line 18-19																						
C	WATER DISTRIBUTION DATA																											
21	Distribution input	Mld	2	B2	Table 10 Line 26		29.29	122.82	113.30	15.47														280.88			280.88	
21a	Water Treatment Works Capacity	Mld	0	A1			50	147	180	19														396			396	
22	Length of mains	km	2	A2	Table 11 Line 12						16.42	0.00	0.00											16.42			16.42	
D	WATER RESOURCE AND TREATMENT DATA																											
23	Turbidity 95%ile greater or equal to 0.5NTU	1/0	0	A2			0	0	0	0	0													0			0	
24	Turbidity 95%ile less than 0.5NTU	1/0	0	A2			1	1	1	1	1													5			5	
25	Source Type	text		A1	Table 12 Block A		IR x 2 + River	River	River	River	N/A													2 x I.R. 4 x River			2 x I.R. 4 x River	
26	Treatment type	text		A1	Table 12 Block B		W4	W4	W4	W4	N/A													4 x W4			4 x W4	
27	Average pumping head	m.hd	1	B3	Table 12 Block A		144.8	145.8	173.0	146.5	N/A													156.7			0.0	
E	SEWERAGE DATA																											
28	Total length of sewer	km	2	B2										0.00	0.00	0.00	10.50	10.63	0.00						0.00	21.13		21.13
29	Total length of critical sewer	km	2	B2										0.00	0.00	0.00	10.50	10.63	0.00						0.00	21.13		21.13
F	SEWAGE TREATMENT AND DISPOSAL DATA																											
30	Population equivalent of total load received	000	0	B3	Table 17b line 2									69	2	14	152	60	41						69	269		338
31	Load received by STW's	kg BOD/day	0	B3	Table 17d									4127	111	849	9101	3595	2452						4127	16108		20235
32	Suspended solids consent	mg/l	0	A1	Table 17b line 3									45/150	20/50	20/50	35/-	35/90	10/30									
33	BOD5 consent	mg/l	0	A1	Table 17b line 4									25/80	07/30	08/30	25/50	25/50	10/35									
34	COD consent	mg/l	0	A1	Table 17b line 5									125	125	125	125	125	125									
35	Ammonia consent	mg/l	0	A1	Table 17b line 6									N/A	02/10	02/10	7.5/32	N/A	N/A									
36	Phosphates consent	mg/l	0	A1	Table 17b line 7									N/A	N/A	<1 Ann Avg	<1 Ann Avg	N/A	N/A									
37	Classification of Treatment Works	text		A1	Table 17b line 8									SAS	TA1	TA2	TA2	TA2	TA2									
38	Size band of sewage treatment works	nr	0	B3	Table 17c									6	3	5	6	6	6									
G	SLUDGE TREATMENT AND DISPOSAL DATA																											
39	Total sludge imported from NI Water	ttds	3	B2										0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.289	29.423	34.712		0.00	34.712		34.712
40	Sludge produced by the PPP facility	ttds	3	B2										0.805	0.067	0.486	2.307	1.514	1.150	0.000	0.00	0.00	0.000		0.805	5.524		6.329
41	Sludge exported to Duncrue Incinerator	ttds	3	B2										0.805	0.067	0.486	2.307	1.514	1.150	0.000	0.00	0.00	0.000		0.805	5.524		6.329
42	Sludge exported to other PPP facilities	ttds	3	A1										0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
43	Sludge exported to NI Water	ttds	3	A1										0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
44	Sludge disposed of from site to - Farmland Untreated	ttds	3	A1	Table 17G Col 1									0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
45	Sludge disposed of from site to - Farmland Convestional	ttds	3	A1	Table 17G Col 2									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
46	Sludge disposed of from site to - Farmland Advanced	ttds	3	B3	Table 17G Col 3									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.898	0.898		0.00	0.898		0.898
47	Sludge disposed of from site to - Incineration	ttds	3	B2	Table 17G Col 4									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.142	40.142		0.00	40.142		40.142
48	Sludge disposed of from site to - Landfill	ttds	3	B3	Table 17G Col 6									0.033	0.002	0.010	0.101	0.060	0.028	0.000	0.000	0.018	0.219		0.033	0.219		0.252
49	Sludge disposed of from site to - Composted	ttds	3	A1	Table 17G Col 7									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
50	Sludge disposed of from site to - Land Reclamation	ttds	3	B3	Table 17G Col 8									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
51	Sludge disposed of from site to - Other (Willow Coppice)	ttds	3	A1	Table 17G Col 9									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		0.00	0.000		0.000
52	Sludge disposed of from site - Total	ttds	3	B2										0.838	0.069	0.496	2.408	1.574	1.178	0.000	5.289	29.441	41.259		0.033	41.259		41.292

Table 42 – PPP Reporting

Preface

The Company highlights that on the 20 November 2017 a newly formed hold company subsidiary, NIW Clear Ltd, acquired sole ownership of both the Alpha PPP Contractor (Dalriada Water Ltd) and the Alpha PPP Operating Company (Kelda Water Services Alpha Ltd). These entities were acquired through a competitive bid process conducted by the previous owners, Kelda Water Services Ltd, which commenced in December 2016, following Kelda's announced sale of all their UK PPP/PFI water and energy commitments in September 2016. Post-acquisition, the contractual arrangements between the parties, including the senior lenders, has remained in place. There are no plans to collapse the Alpha PPP contract.

The reporting arrangements in Table 42 below remain unaffected by the acquisition and subsequent continuation of the existing commercial arrangements.

Work has progressed during 2018/19 with the Utility Regulator (UR) to determine the changes to be made to the basis for accounting for the 2018/19 Regulatory Accounts and AIR19 tables. The UR has provided guidance that the basis of accounting for the Regulatory Accounts and AIR tables for 2018/19 and its comparatives should move from the old UK GAAP basis to IFRS (similar to the basis on which the statutory accounts are prepared). This change has impacted Table 42 in that 2 of the 3 PPP contracts (Omega & Kinnegar) are classified as off-balance sheet under UK GAAP and on-balance sheet under IFRS. This change has resulted in significant changes to a number of lines within Table 42. Where changes have been necessary, this has been highlighted below.

Contracted Adjustments to Payment Mechanisms

Omega: The Company has notified a change in the requirements for Faecal Coliform performance at North Down Ards WWTW in line with its contractual entitlement. This has resulted in the predetermined [redacted]/day reduction in Unitary Charge on every day outside of the regulatory Bathing Season coming into effect since September 2011.

The Company and the Contractor have agreed the outcome of the mandatory process to correct Ballynacor tariffs and tariff bands in the event that the actual DWF encountered was similar to that determined in the pre contract Flow surveys, and not as low as that upon which the Contractor conditioned his bid tariffs upon. The result of the process is that the tariff for Ballynacor flows is marginally reduced for the remainder of the contract with effect from 1st January 2014.

The Company and the Contractor have engaged regarding the Contracted change [Schedule Defined] to the Sludge Lagoons at Ballynacor; which was valued at [redacted]. This has been effectively complete in Autumn 2015, the remaining [redacted] to finalise [Landscaping] was completed by August 2016.

Alpha: The EIB Step Down clause has become effective in the Alpha contract, with a resultant reduction in European Investment Bank interest charging to Dalriada Water, and the Unitary Charge being reduced by the predetermined contractual amounts for the remainder of the EIB loan period (2027). The amounts are, by agreement, deducted monthly from invoices rather than driving a new Unitary Charge tariff at considerable project expense (and loss of benefit).

Changes to the Contracts

- **Omega: Supplemental Agreement 3**

  This was executed on August 2011 to clarify the sludge performance requirements and deal with commercial matters surrounding uncertainty of sludge services performed in AIR11 period.

- **Omega: Supplemental 4**

  This was executed on 6th April 2012. It clarified the wastewater treatment flow management requirements to a measurable output, and in so doing dealt with the commercial issues surrounding disputed underperformance and payment entitlements in this area since May 2008. The Agreement also enabled the Company to reduce its monthly unitary charge liability by [redacted] (indexed) for the remainder of the contract term. A further passing down of rights and obligations in respect of NIE easements was included.

- **Omega: Change in Contractors Proposals – Duncrue St Centrifuge**

  In December 2012 the Company accepted a change in the contractor's asset base at Duncrue St, whereby the Contractor installed a Centrifuge in preference to the four belt presses inherited at Service Commencement. Whilst this improvement was funded by the Contractor and not the Company, the Company established an estimated change in electricity consumption liability and the Contractor agreed to fund the additional consumption at current tariffs (+ indexation), through a new payment Clause in the contract – consistent with the risk allocation at contract award.

- **Omega: Ballynacor Sludge Dewatering Plant Change**

  A pre-determined Change in the sludge disposal tariff arising from the underperformance of the Company's new Ballynacor Sludge Dewatering Facility following its initial commissioning in 2006/ 2007 during contract negotiations.

  The Omega contract was awarded on the understanding the new plant would be capable of producing >22% DS content in the years preceding Service Commencement.

  As was the case, records demonstrated the Company was only capable of achieving 19.6% DS operation during this period.

  The pre-determined (as agreed at Contract Award) cost reimbursement mechanism applies with the result that a schedule of semi-annual additional payments take place, dating back to Service Commencement in March 2010.

  Whilst the Contractor initially disputed the sums due, they finally conceded Company's valuation of such historical and future payments in September 2013.

  The cost of this mandatory change is approximately [redacted] (indexed) every semi-annual period until contract expiry in 2032.

- **Omega: Duncrue St Weighbridge Calibration Change**

  The weighbridge is integral to the determination of tonnes dry solid sludge for disposal and thus payment. The weighbridge is calibrated weekly and has never been outside calibration since first used in March 2010. The parties have agreed a cost reduction measure reducing the calibration to every 3 months. The cost saving to the Contractor is [redacted]/annum and is shared 50:50 with the Company. The arrangements have been in effect since 3 December 2013.

- **Omega: Duncrue St Condenser Change**

  An Authority Change issued in advance of Service Commencement in 2009 to deal with a defective existing asset. Whilst the work was completed in 2009 the costs were only agreed in late 2013, with payment by the Company in 2014/15

- **Omega Small Works NDA Access Change**

  A [redacted] Change to pay for securing alternative access road at North Down Ards; a legacy from Water Service Deed of purchase of NDA lands in 2005 where the seller had the right to close up existing NDA access and provide alternative access and a Deed of Easement. Work is complete and payment has been made.

- **Richhill DWF Change**

  The DWF into Richhill WWTW is lower than anticipated at commercial close, resulting in an unjust negative payment to the contractor at low flows due to a pre-agreed constant value for 0.8DWF. The parties have agreed an alternative value for the constant in the payment mechanism.

- **Donaghadee PS ICA Change**

  The Contractor offered and the Company accepted an energy saving change in the control of Donaghadee PS. The Company invested [redacted] in the project which has a payback in terms of electricity costs of <2 years. The project was delivered at the start of the AIR18 period.

- **Ballynacor WwTW Increased Capacity for Trade Effluent**

  At contract formation in 2007, the Company purchased a headroom for Trade Effluent of 500,000kg COD at Ballynacor WwTW for the term of the Contract. In 2016 the Company granted a Trade Effluent Discharge Consent to a trader in the Ballynacor Catchment which, in aggregate with all other active consents, has resulted in the purchased headroom being exceeded. This has triggered the Company's contractual liability to extend the treatment capacity. The parties are in discussion as to the most appropriate means of dealing with the fact that NIW now requires increased Trade Effluent capacity for the remaining term of the Contract.

- **Kinnegar Supplemental Agreement 2**

  This commercial agreement resolved historical disputed payments, along with affecting a new odour model for the works, and creating new contractor obligations in terms of regulatory reporting and sampling consistent with current Company obligations not envisaged at the time of procurement.

- **Kinnegar Clause 10 Payment**

  A Variation was required in relation to the provision of the Holywood C Pumping Station by NI Water E&P, requiring part of the Leased Premises being returned to Company occupation, and the reimbursement of the Contractors costs with altering the necessary sewerage infrastructure. These costs amounted to [redacted] This value was paid to the Contractor on 30th January 2015.

- **Alpha Deed of Variation No.3**

  Amended and restated the contract in respect of all previous changes and corrections made to date.

- **Alpha Contractor Notice of Change (June 2012)**

Reduced the scope of service (i.e. frequency and range of analytical tests) to achieve cost reduction in Unitary charge for the remaining contract period (Deriving £16,800 per year reduction in Company costs).

- **Alpha Contractor Change: Standby Generator Capacity for NI Power Grid**

  A contract change has been put in place to allow the Contractor to make the site generators at two WTW's available to an Aggregated Generation Unit (AGU) company in return for an 'availability charge'. The annual availability charge is estimated to be worth up to [redacted], with 50% of this revenue being netted off the Unitary Charge payable by NIW for the period of the AGU agreement (currently 5 years).

- **Alpha: Authority Change – Castor Bay to Belfast Pumping Station Upgrade**

  To support the increased output to Magheraliskmisk arising from the Castor Bay to Belfast Strategic link main project.

- **Sale of Kelda's ownership of the Contractor / Operating Company**

  In September 2016, Kelda indicated it was looking to sell all its UK PPP/PFI investments and operations. It invited several parties, including NIW, to bid for the Alpha PPP companies; Dalriada Water (the Alpha PPP Contractor) and KWSA (the Alpha PPP Operating Company).

  On 19 November 2017, NIW clear Ltd (a subsidiary holding company of NIW Ltd) acquired ownership of Dalriada Water and KWSA (now renamed NIW Alpha ltd) from Kelda.

  The Alpha PPP contract remains in place and the Company continues to pay Unitary Charge tariffs for the volume of water provided by the Contractor, Dalriada Water Ltd. The Contractor continues to engage the services of the Operating Company (NIW Alpha Ltd) for service delivery and continues to service the senior debt liabilities with the lenders. The contract commitments between the parties remain unaltered at the point of new ownership.

Contractual Performance Failures during AIR19 Period

- **Alpha Performance Deductions: 2018/19**
  - Water Quantity failures can be referenced (on a monthly basis) in the Payment Calculation Schedule Tab 5 spreadsheet under the column heading 'CRF' for each Facility. *(The Company can provide a supporting CD with all 12 monthly Payment Calculation Schedules for the AIR year). Total deductions:* [redacted] *[AIR18 period total deductions* [redacted] *].*
  - Water Quality Failures can be referenced on Payment Calculation Tab 9 under the column headed 'QRF' for each Facility *(The Company can provide a supporting CD with all 12 monthly Payment Calculation Schedules for the AIR year).*Further details of the exact water quality parameter failed result can be referenced on the monthly Exceedance Reports derived from the Company's LIMS system *(The Company can provide a supporting CD will all 12 LIM's Exceedance Reports for the Alpha Facilities. Total deductions:* [redacted] *[AIR18 period total deductions* [redacted] *.*

- **Kinnegar Performance Deductions 2018/19**

  The Company had determined no failures in the AIR19 period.

- **Omega Performance Deductions 2018/19**

  The Company has determined and the Contractor has accepted the following failures on the Wastewater services during the period:

OR1 Deductions applied at Bullay's Hill WwTW [July 2018]: [redacted]

- The Company has determined and the Contractor has not accepted the following failures on Wastewater Services during the period:
  - OR1 Deduction applied at Ballynacor WwTW [Jul 2018]: [redacted]
  - FM5 Deduction at Millisle SPS [Sept 2018]: [redacted].
  - SD1 Deduction at Duncrue line 2 [Sept 2018]: [redacted]
  - SD2 Deduction at Duncrue line 1 [Dec 2018]: [redacted].
  - OR1 Deduction applied at Bullay's Hill WwTW [Nov 2018]: [redacted].

The Contractor disputes the application of the Wastewater deductions and the Company has accrued the sums until the disputes are settled.

- **Contractual Deductions made**
  - Project Alpha as per Line 9 reporting for each Facility, based on the outputs of the monthly Payment Calculation Schedules.
  - Project Omega; The disputed deductions listed above totalling [redacted] have not been included in this line, as credit notes has not been received. The remaining disputed sums; and those of previous AIR periods, totalling [redacted] have not been credited and are not therefore reflected in Line 9.
  - Project Kinnegar; during the year it became apparent that the Contractor had not applied nor enabled the Authority to calculate the Csp indexation which directly affects the amount payable to the Contractor. The Authority has derived the Csp directly from information submitted by the Contractor and applied the revised Csp to the Invoices from September 2018 until March 2019. The Csp modification has reduced the payments to the Contractor by [redacted] [Sept 2018 to Mar 2019 inclusive]. This amount has been accrued. There is now an Arbitration procedure on-going to resolve the issue.

- **Equipment breakdowns**
  - The Company does not hold this level of operational detail as the risk has been transferred to the Contractors and passed down to the Operating sub-contractor.

- **Changes to the Descriptive Reports on the PPP Contracts**

  The Descriptive reports for the Alpha Omega and Kinnegar Contracts have been updated.

Service Dates

No Change

Line 4 & Line 5 (No change to methodology)

Note: As the atypical expenditure, efficiencies, performance deductions (Omega) and residual interest (Omega) were not divisible by site the cross tots on lines 9,10, 11, 12, 15, 17, 18 and 20 will not agree to the figures in the total column – the figures included in the total columns are correct for each concession.

Line 7 - Unitary charge capacity (No change to methodology)

The Unitary Charge Capacity Charge applies to Alpha only. The data used is derived from the invoices received from the Contractor, which separates the Unitary Charge Capacity Charge from the Unitary Variable Charge and the relevant Unitary Charge Performance

Deductions, all in accordance with the Payment Mechanism Schedule of the Contract. Costs on this line have increased by an inflationary amount from 2017/18.

Line 8 - Unitary charge variable (No change to methodology)

The Unitary Charge Variable Charge applies to all three PPP Contracts. The data used is derived from the invoices received from the Contractor which set out the Unitary Charge Variable Charge claimed. There are no payments in respect of the Ballynacor Sludge Facility and the Duncrue St Sludge Facility, rather a payment in respect of the Sludge Disposal Services. In total, costs on this line have decreased by 2.4% from 2017/18 driven by a combination of inflation and flow variations in the year. In terms of flow variations, the movements are as follows:

Alpha – variable costs have increased by 6.3%, DI increased by 2.4% (279.0 ML/D vs 272.4 ML/D in AIR18).

Omega – variable costs have decreased by 3.7%, waste water flows decreased by 9.5% (30.7 Mm3 vs 33.9 Mm3 in AIR18).

Omega SDS – variable costs have increased by 3.0%, sludge volumes have increased by 1.1% (41.0k TDS vs 40.6k TDS in AIR18)

Line 9 - Unitary charge deductions

By contract definition, where the PPP Contractors invoice to an amount higher than the amount payable in accordance with the relevant Payment Mechanisms, the variance becomes a disputed amount. The Company recognises the disputed amount as an outstanding liability until such time as the Parties choose to have the dispute determined, or agree an amount for payment with credit note issued for closure as appropriate.

Alpha

The Alpha Contractor, through engagement, invoices to the agreed amount which includes the relevant Performance Deductions. These Deductions are in accordance with the Payment Mechanism for failure events identified and can be separated by Facility (Scheme) as per the Payment Mechanism. Performance deductions in 2018/19 were [redacted], an increase of [redacted] on the 2017/18 amount of [redacted].

Omega

No credits for performance deductions have been received in the 2018/19 year.

Kinnegar

No credits for performance deductions at Kinnegar have been received in the 2018/19 year.

Line 10 - Atypical expenditure

Alpha [redacted]

	£m
Quality Monitoring Change credit	[redacted]
EIB Step-down	[redacted]
Refund in respect of reorganisation costs	[redacted]
Operating cost claim	[redacted]
Total	[redacted]

- As a result of the Quality Monitoring Change to the Contract an amount is deducted from the Alpha monthly invoice to reflect the reduced costs from lab services being carried out in house by NIW. The deduction amounted to [redacted] in 2018/19.
- In 2018/19 a reduction of [redacted] was realised in the unitary charge tariffs resulting from the EIB step-down. This was a pre-set change in the 45% finance provided by EIB, conditional upon achieving operational performance and Special Purpose Company (SPC) debt cover ratio targets.
- An agreement is in place to provide for a change in unitary charge arising from the lower number of TUPE transferees than that anticipated at financial close. The parties have agreed to reflect the variance in semi-annual Project Costs as per the Financial Model by making adjustments in the monthly invoice at the end of each Semi Annual Period. To this extent the repayments made in 2018/19 were [redacted].

Kinnegar [redacted]

- Relates to potential claim by CCW Ltd for costs incurred in relation to the Sydenham pumping main breach. These costs were accrued by NI Water into the 2018/19 year.

Omega [redacted]

	£m
Legal Provision	[redacted]
Claims Accrual	[redacted]
North Down & Ards Disinfection Change	[redacted]
Supplemental 4 agreement	[redacted]
Change in calibration frequency	[redacted]
Out of spec sludge (OOSS)	[redacted]
Total	[redacted]

- [redacted] in relation to the release of a legal provision.
- [redacted] additional costs accrued in relation to claims.
- The North Down Disinfection Change implemented in Sept 2011 resulted in a [redacted] efficiency saving in 2018/19. This was a Service Level Adjustment change in treated effluent performance requirements to reflect the lower standards of the Water Order Consent.
- As a result of Omega Supplemental Agreement 4, executed in 2011/12, an amount is deducted from the monthly invoice to reflect the change in wastewater flow management performance requirements. The deduction amounted to [redacted] in 2018/19.
- During 2013/14 a service level change was implemented relating to the frequency of calibration of the Sludge Cake Weighbridge at Duncrue St. This resulted in a [redacted] saving in 2018/19.
- [redacted] was accrued in relation to the cost of OOSS. This included [redacted] in relation to the 2018/19 year and [redacted] relating to previous years.

Line 11 - Efficiency Gains

The Company has transferred the cost risk of service provision (other than where relating to a Change in Law) to the Concessionaires, excluding the cost of electricity in Alpha and Omega. In so doing, the Concessionaires carry the downside risk of costs materializing and the benefits where they do not. The Company does not have the right to cost savings for **the same level of service** where the contractor has internally identified means of securing such savings.

Post procurement any reduction in the Company PPP Unitary charge costs (whether identified by the Company or the Concessionaires) emanate only from a Change in the level of service.

The following Changes for cost reduction have resulted in efficiency gains in the reporting year against the baseline contract at award:

Alpha

The reorganisation costs credit , quality monitoring change all detailed above are efficiency gains arising in the reporting year.

Omega

The North Down Disinfection Change implemented in Sept 2011 resulted in a efficiency saving in 2018/19.

Supplemental Agreement 4 executed in 2011/12 reflecting a change in wastewater flow management performance requirements resulted in a deduction in 2018/19.

The change in weighbridge calibration frequency implemented in 2013/14 resulted in of savings.

Kinnegar

No Contract Changes for cost reduction have been implemented during the Reporting Period.

Line 13 - Capital repayments

This line reflects the element of unitary charge payments allocated as capital repayments of the finance lease creditor. The data is consistent with the Company's financial accounts. The site split of the capital repayment is calculated as follows:

Alpha:

Capital Repayment and Interest					
	Capacity Charge by Site	Capital Maint	Capacity Charge less Cap Maint	Pro Rata Interest	Pro Rata Capital
Dunore Point					
Castor Bay					
Moyola					
Ballinrees					
Ballymoney LM					
Limavady LM					
CB to FB LM					

Omega:

Allocation of capital repaymant & interest			
	Initial Capital	Capital Repayment	Interest
Richill	[redacted]	[redacted]	[redacted]
Armagh			
Ballynacor			
NDA			
Ballyrickard			
SDS			

(The above tables are extracted from an excel spreadsheet with totals based on rounded values)

Line 14 - Capital maintenance

Capital maintenance is allocated straight line across the life of the contracts following a change implemented in 2013/14. This correctly reflects that the unitary charge does not fluctuate with changes in the capital maintenance spend in any year. This straight line amount has been allocated to the sites on the basis of the total amounts included in the original financial models as follows:

Alpha:

Capital Maintenance			
	To End per Fin Model	**After Indexation**	**2017/18**
Dunore Point	[redacted]	[redacted]	[redacted]
Castor Bay			
Moyola			
Ballinrees			

Omega:

Allocation of Capital Maintenance		
	Capital Maint	Capital Maintenance
Richill	[redacted]	[redacted]
Armagh		
Ballynacor		
NDA		
Ballyrickard		
SDS		

(The above tables are extracted from an excel spreadsheet with totals based on rounded values)

Line 16 - Atypical payments capitalised

Nil

Line 19 - Interest

On adoption of IFRS in regulatory reporting in 2018/19, all contracts are now on-balance sheet and for each, the Company has recognised a finance lease creditor on its balance sheet. Entries to this line represent the notional interest on the finance lease. The data is consistent with the Company's financial accounts. See line 13 above for site allocation workings.

Additional Information

A breakdown of the accruals included in the year end accounts in relation to each of the PPP contracts is as follows:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
Unitary Charge	[redacted]	[redacted]	[redacted]	[redacted]
Disputed Amts				
Claims				
Other				

An amount of [redacted] included in unitary charge accruals of [redacted] relates to the outstanding monthly invoices for February and March unpaid at 31 March 2019. Also included in this amount is [redacted] of additional unitary charge arising from the Ballynacor TDS mandatory contract change which became effective from 1 April 2010 and was agreed during 2013/14.

The [redacted] of disputed amounts largely arise from 2013/14 - 2018/19 Omega disputes in relation to performance deductions.

The claims figure includes an increase of [redacted] in the 2018/19 year and now excludes OOSS which is included within the 'other' line above.

The other accruals include [redacted] relating to an additional operating cost claim by Alpha, [redacted] in relation to OOSS and [redacted] in relation to a potential claim by CCW Ltd for costs in relation to a breach on the Sydenham pumping main.

Line 21 - Distribution input

Data has been updated to reflect the methodology in Table 10 Line 26, where the variance in demand from the PPP sites placed by the Company, along with the variation in total water into distribution delivered by the Company contrive to give a new calculated figure for the individual sites and the Alpha contract as a whole. As a reassurance, the Ballinrees WTW Distribution Input for AIR18 was 10,743 Ml while the Distribution Input for AIR19 was 10,690 Ml which resulted in 29.43 Mld average to supply during AIR18 and 29.29 Mld average to supply in AIR19. Please refer to Line 27 for further commentary on Ballinrees APH.

Line 21a – Water treatment works capacity

There has been no change to the minimum required capacity of the Alpha WTW under the contract.

Line 22- Length of mains

This data has not changed since AIR 18.

Lines 23 – 24 - Turbidity

Background – Year on Year

During the period 2005 to date, a number of non-compliant water treatment works (WTWs) and small sources have either been completely replaced with new works, or else taken out of service as and when a replacement supply is available. During 2008, 5 existing major WTWs were replaced/upgraded as part of the Alpha PPP project. This contributed to the closure during 2009 of 6 non-compliant small water treatment works/sources.

During 2010 a further 2 non-compliant small water treatment works/sources were also closed. However, these were temporarily reinstated during the 2010-11 freeze/thaw incident to supplement strained water supplies.

During 2011 a further 3 non-compliant small water treatment works/sources were also closed.

During 2016 one further non-compliant small water treatment works was also closed.

At the end of 2016, the WTWs in service were stabilised with 19 NIW sites and 5 PPP, however as W3315P Forked Bridge is solely classified as a WTW due to pH modification, this site may be downgraded to a service reservoir if this equipment is decommissioned.

The guidance now requires that the PPP sites are solely assessed in this table.

The calculations were carried using the following data criteria:

- Only scheduled audit final water samples lifted to meet Water Supply regulatory requirements during the calendar year were used, and using accredited laboratory analyses rather than onsite analyses.
- Only those WTWs which had more than 11 months' worth of data, or had temporary out of service gaps were included. This led to no PPP sites being excluded.

2018 PPP WTW Included in calculations

WTW Code	WTW Name	Turbidity 95 %ile	95%ile>0.5	>= 0.5 NTU
W1301P	Moyola PPP	0.198	0	0
W1701P	Ballinrees PPP	0.198	0	0
W2308P	Castor Bay PPP	0.278	0	1
W3301P	Dunore Point PPP	0.220	0	0
W3315P	Forked Bridge PPP	0.240	0	0

Line 25 – Source type

This data had changed in AIR13 to reflect the NI Water opinion that Ballinrees WTW should define three sources i.e. Ballinrees IR, Altikeeragh IR and an intake from the River Bann. All other WTW defined Sources remain unchanged from AIR 15. The changes have been reflected in Table 12.

Line 26 – Treatment type

No change to the data since AIR18.

Line 27 – Average pumping head

The APH for 'Alpha Total' and 'Water Services Total' has complied with the requirements of Table 42 Line 27 guidance notes, wherein the Company use the PPP Distribution Input utilised in AIR19. The static heads at the receiving reservoirs remain unchanged each year, therefore the only changeable head input is the dynamic head as a result of the volumes

pumped. The dynamic head is confirmed each year during pump efficiency tests across a range of flows to determine the figure to be used for AIR reporting purposes. While the DI for Ballinrees WTW has remained roughly the same as for AIR18 [DI for AIR18 was 10,743 Ml; DI for AIR19 was 10,690 Ml which equates to 29.43 Mld average to supply during AIR18 and 29.29 Mld in AIR19. The B2 average flow has reduced from 7.29 Ml/d to 6.53 Ml/d [pumped flow to Break Pressure Tank at Moys – 117m head lift] The reduction in B2 flow contributes less to the overall head at site and was compensated by increased abstraction from the River Bann.

Lines 28 – 29 – Sewerage data

No Change from AIR18 data.

Line 30 – population equivalent of total load received

Variation in calculated PE stems from variation in the measured sewage loads delivered to the sites by the Company, being the only variable part of the PE calculation.

Line 31 - Load received by STW's

Variation in calculated load stems from variation in the measured sewage loads delivered to the sites through the Company's sewer network.

Lines 32 – 36 - Consents

There have been no material changes to the Water Order Consents.

Line 37 - Classification of treatment works

No change to the treatment Facility classifications since AIR18.

Line 38 - Size band of sewage treatment works

Richhill WwTW has now been re-classified as a size band 3 works in accordance with the criteria.

Line 39 - Total sludge imported from NI Water

From the 31 March 2010 the Omega Contractor has assumed responsibility for disposal of all NI Water sludge's. The total Sludge imported from NI Water operated WWTW is recorded as 34.712 TTDS for the AIR19 period (last year the figure was 34.898 TTDS).

Lines 40 - Sludge produced by the PPP facility

Whilst the total sludge production recorded against each PPP contract and PPP as a whole is consistent with last year's records, the records for each of the individual Omega sites are different from those recorded in AIR18. The reporter also requested that an estimate of the re-cycled solids from the Incinerator be produced, this has equated to 3.822 TTDS and was returned via Duncrue WwTW for further processing [See Table 15 Line 17 Commentary].

The variations are tabulated below;

PPP Production	AIR19	AIR18	AIR17	AIR16	AIR15	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.486	0.534	0.605	0.535	0.579	0.547	0.535	0.570	0.759	0.840
Richhill WWTW	0.067	0.068	0.071	0.071	0.063	0.071	0.065	0.066	0.213	0.210
Ballynacor WWTW	2.307	1.882	1.739	1.564	2.269	2.007	2.069	3.330	2.468	2.290
Ballyrickard WWTW	1.150	1.246	1.293	1.064	1.337	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.514	1.629	1.656	1.818	1.633	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.805	0.331	0.302	0.501	0.668	0.643	0.726	0.823	0.792	0.700
Omega Screenings/Grit	0.220	0.233	0.206	0.083	0.083	0.088	0.106			
Kinnegar Screenings/Grit	0.033	0.035	0.058	0.049	0.057	0.047	0.022			
Totals	**6.582**	**5.958**	**5.930**	**5.685**	**6.689**	**6.449**	**6.309**	**7.573**	**7.612**	**7.411**

The changes in sludge production [shown on next page in graphical form] records data for Omega reflect a probable combination of:

(i) Cumulative tolerances in the representative nature of dry solids sampling and flowmeter accuracy (particularly on smaller sites)

(ii) a mix of improved methodologies and record keeping systems for liquid and cake movements (as demanded by the Omega contract payment processes) implemented by end of AIR11, and

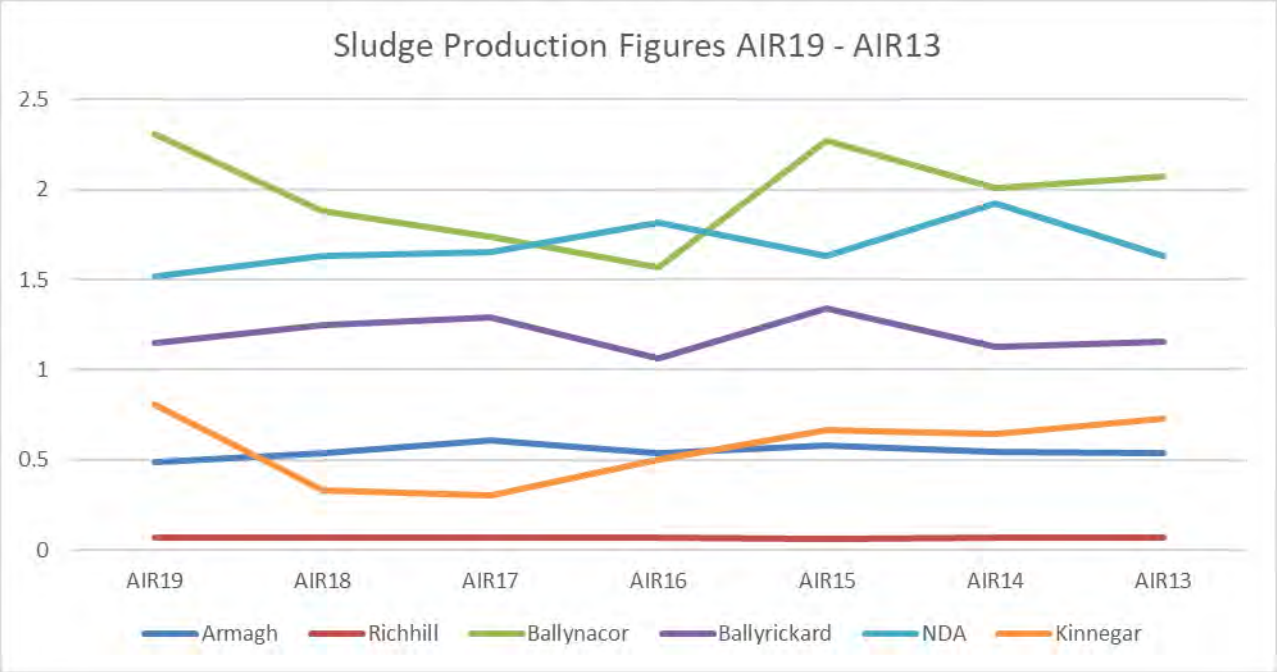
(iii) the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control, and

(iv) The timing of data capture, where prolonged dry periods can have a fluctuating effect from year to year on absolute values.

One notable exception to the trend is Ballynacor WwTW, which presents a clear upward trend with some recovery towards previous years. Given the treatment processes have not changed in the same period and effluent compliance has been maintained, it can be deduced the overall loading on the WwTW decreased from within the catchment and/or from tankered imports, and has recently shown signs of recovery. This is supported by the data behind Line 2 (Load Receiving Secondary Treatment).

The other Notable exception is Kinnegar WwTW where there is an expected upward trend as the installed Centrifuge is now processing the Sludge produced by the site and additionally eradicating the retained volume of Sludge due to the protracted Centrifuge provision.

Refer to Table 15 Commentary for a fuller explanation.



Line 41 - Sludge exported to Duncrue Incinerator

Variances are accounted for in Line 40 commentary above.

Line 42 - Sludge exported to other PPP facilities

No change from AIR18.

Line 43 - Sludge exported to NI Water

No change from AIR18.

Lines 44 - Sludge disposed of from site to - Farmland Untreated

Nil disposal arising from the Contractor's choice of alternative compliant disposal routes.

Lines 45 - Sludge disposed of from site to - Farmland Conventional

Nil disposal, arising from the Contractor's choice of alternative compliant disposal routes.

Lines 46 - Sludge disposed of from site to - Farmland Advanced

A full year service resulted in 0.898 TTDS arising from the Contractor's choice of alternative compliant disposal routes. This is at variance from the 0.788 TTDS report in AIR18.

Lines 47 - Sludge disposed of from site to - Incineration

A full year service resulted in 40.142 TTDS being incinerated as the contractor's preferred method of disposal, this being a slightly larger amount than reported in AIR18 [39.618 TTDS].

Lines 48 - Sludge disposed of from site to - Landfill

A full year service resulted in 0.253 TTDS [0.220 TTDS Omega and 0.033 TTDS Kinnegar] arising from the Contractor's choice of alternative compliant disposal routes. The value represents only both PPP Contractors sludge's arising from grit and/or screenings removed directly from the sites to landfill; which is smaller than that 0.268 TTDS reported in AIR18.

Lines 49 - Sludge disposed of from site to - Composted

A full year service resulted in 0.000 TTDS arising from the Contractor’s choice of alternative compliant disposal.

Lines 50 - Sludge disposed of from site to - Land Reclamation

A full year service resulted in 0.000 TTDS arising from the Contractor’s choice of alternative compliant disposal routes. AIR18 reported a disposal of 0.183 TTDS.

Lines 51 - Sludge disposed of from site to - Other (Willow Coppice)

A full year service resulted in 0.000 TTDS arising from the Contractor’s choice of alternative compliant disposal routes. AIR18 reported a disposal of 0.000 TTDS.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 43 PPP REPORTING
PPP REPORTING - OPERATIONAL COSTS

	DESCRIPTION	UNITS	DP	Corresponding Report	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
A	PROJECT DESCRIPTION				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	PPP Concession			na	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water	Sewerage
2	Service Area			na	WT	WT	WT	WT	WD	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	All	All	All	Service	Service
3	Name of works			na	Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor Craigavon	North Down	Ballyrickard	Ballinacor Lagoons	Ballynacor	Duncrue	Total	Total	Total	Total	Total
B	PPP INFORMATION																								
4	Payment to Concessionaire	£m	3	Table 42 Line 12																					
5	Payment by Concessionaire to Operating Company	£m	3																						
C	DIRECT COSTS TO NI WATER																								
6	Power	£m	3		0.922	2.907	2.443	0.486	0.000	0.000	0.000	0.000	0.042	0.130	0.813	1.116	0.255	0.000	0.107	1.269	6.758	0.000	3.732	6.758	3.732
7	Other direct costs	£m	3		0.058	0.009	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.085	0.000	0.000	0.085	0.000
8	Total direct costs	£m	3	sum 6 + 7	0.980	2.916	2.452	0.495	0.000	0.000	0.000	0.000	0.042	0.130	0.813	1.116	0.255	0.000	0.107	1.269	6.843	0.000	3.732	6.843	3.732
9	General and support expenditure	£m	3		0.021	0.021	0.022	0.021	0.021	0.021	0.021	0.043	0.028	0.028	0.028	0.029	0.028	0.000	0.028	0.029	0.148	0.043	0.198	0.148	0.241
10	Total functional expenditure	£m	3	sum 8 + 9	1.001	2.937	2.474	0.516	0.021	0.021	0.021	0.043	0.070	0.158	0.841	1.145	0.283	0.000	0.135	1.298	6.991	0.043	3.930	6.991	3.973
D	OPERATING EXPENDITURE - NI WATER																								
11	Scientific services	£m	3		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.003	0.003	0.008	0.003	0.004	0.000	0.000	0.076	0.000	0.030	0.097	0.000	0.127
12	Rates	£m	3		0.819	3.369	3.163	0.433	0.000	0.000	0.000	0.154	0.023	0.100	0.324	0.164	0.113	0.000	0.090	0.155	7.784	0.154	0.969	7.784	1.123
13	Estimated terminal pumping costs	£m	3									0.000	0.000	0.000	0.162	0.270	0.000	0.000	0.000	0.000		0.000	0.432		0.432
14	Estimated sludge costs	£m	3									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	8.605		0.000	8.830		8.830
E	TOTAL PPP OPERATING EXPENDITURE																								
15	Total PPP operating expenditure	£m	3	Sum 5, 10, 11 and 12																					

Table 43 - PPP Reporting – Operational Costs

Note: As the atypical expenditure, efficiencies and performance deductions (Omega) were not divisible by site the cross tot on line 4 for Alpha and Omega will not agree – the total included in the total column is correct for the Payments to the Concessionaire.

Preface

The Company highlights that on the 19 November 2017 a newly formed hold company subsidiary, NIW Clear Ltd, acquired sole ownership of both the Alpha PPP Contractor (Dalriada Water Ltd) and the Alpha PPP Operating Company (Kelda Water Services Alpha Ltd). These entities were acquired through a competitive bid process conducted by the previous owners, Kelda Water Services Ltd, which commenced in December 2016, following Kelda's announced sale of all their UK PPP/PFI water and energy commitments in September 2016. Post-acquisition, the contractual arrangements between the parties, including the senior lenders, has remained in place. There are no plans to collapse the Alpha PPP contract.
The reporting arrangements in Table 43 below remain unaffected by the acquisition and subsequent continuation of the existing commercial arrangements."

Line 4 – Payment to concessionaire

The figures on this line are taken directly from line 12 of table 42 and any significant changes from AIR18 have been commented on in the commentary to that table.

Alpha

The data is derived from the Contractors monthly invoice and can be split on a site-by-site basis and in each case represents the sum of the Unitary Charge payments (Capacity + Variable – Deductions) agreed with the Contractor.

It also includes atypical amounts as follows:

	£m
Quality Monitoring Change credit	[redacted]
EIB Step-down	[redacted]
Refund in respect of reorganisation costs	[redacted]
Operating cost claim	[redacted]
Total	[redacted]**8**

Kinnegar

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company. [redacted] of atypical expenditure is included relating to a potential claim by CCWL for costs incurred in relation to a breach in the Sydenham pumping main.

Omega

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company in respect of the Services. It includes the disputed amounts where the Contractor has not recognised the Performance Deductions made by the Authority and has not provided a credit note to the original invoice. During the reporting year no performance deductions were recognised by the contractor.

In addition this line includes atypical amounts as follows:

	£m
Legal Provision	[redacted]
Claims Accrual	[redacted]
North Down & Ards Disinfection Change	[redacted]
Supplemental 4 agreement	[redacted]
Change in calibration frequency	[redacted]
Out of spec sludge (OOSS)	[redacted]
Total	[redacted]

Line 5 - Payment by concessionaire to operating company

Alpha

This figure is equal to the figure quoted in Line 22a of Table 21. This figure will vary from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation.

Omega

This figure is equal to the figure quoted within Line 21a of Table 22. This figure will vary from year to year depending upon volumes of wastewater delivered, change in sludge volumes delivered for disposal, deductions incurred and indexation. The charge for Sludge Treatment has increased during AIR19 [redacted] compared with AIR18 [redacted] and it is considered this partly relates to the increase in Sludge processed [AIR19 – 41.3 TTDS; AIR18 – 40.9 TTDS], and the variance in performance deductions and/or claims passed down from the Contractor to the Operator in each period.

Kinnegar

This figure is equal to the figure quoted within Line 21a of Table 22. This figure will vary from year to year depending upon volumes of wastewater delivered, change in load delivered, deductions incurred and indexation.

Line 6 - Power

Power costs reported on this line reflect a facility breakdown of the power costs included in tables 21 and 22. This is taken directly from MPRN references and location codes in the Oracle system. In respect of the Kinnegar Concession the power costs are paid by the operating Company from the monthly payment from the Concessionaire.

Line 7 - Other direct costs

This line includes the cost of abstraction licences at each of the PPP Alpha sites. There are no other direct costs for Kinnegar or Omega.

Line 9 - General and support expenditure

General and support costs have been arrived at by running a report on P101 cost centre. Costs were allocated by scheme on the basis of percentage time spent by each staff member working on each scheme and in the case of consultancy based on actual invoices received. Costs were then allocated straight line across the number of sites included within each concession. No work giving rise to a general and support expenditure allocation was carried out on the Ballynacor Lagoons site during the year hence no costs have been attributed to this site.

Line 11 - Scientific services

Scientific services costs have been allocated to PPP sites on the basis of the percentage of samples attributable to each PPP site, an allocation of staff costs based on actual hours and operational contractor costs on the basis of estimated cost per site visit.

Line 12 - Rates

Alpha

Rates at water supply sites are based on water volumes. In order to allocate a proportion of the rates bill to the Alpha sites the volume of water supplied at each PPP site was taken as a percentage of the total NIW water supplied and this figure was multiplied by the total NIW rates cost.

Kinnegar

Kinnegar rates charge was taken directly from the rates bill.

Omega

The rates figure for each of the Omega sites was taken directly from the rates bills. The bill for the Duncrue site was allocated between PPP and NIW in line with the total area of the site occupied by PPP. PPP occupy 15% of the Duncrue site. The Ballynacor site rates have been split on a 65:35 wastewater to sludge split.

Line 13 - Estimated terminal pumping costs

This line reflects the power costs associated with Seagoe, Bullay’s Hill (Ballynacor facility) and Briggs Rock, Millisle and Donaghadee (North Down Facility). These were derived from the Oracle system using the location code for each site.

Line 14 - Sludge costs

This line reflects the costs associated with the PPP sludge facilities at Duncrue Street and Ballynacor. It totals the costs included at line 5, 10, 11 and 12.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 44 OPA INPUT DATA
OVERALL PERFORMANCE ASSESSMENT

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**WATER SUPPLY**																				
	DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL																				
1	Total connected properties at year end	nr	0	817,960	A2	824,974	B2	828,060	A2	839,710	A2	852,399	A2	862,988	A2	874,307	A2				
2	Properties below reference level at end of year	nr	0	1,420	B3	1,257	B3	1,082	B3	900	B3	862	B3	711	B3	719	B3				
3	% of total properties at risk of low pressure (OPA Low pressure value)	%	2	0.17	B3	0.15	B3	0.13	B3	0.11	B3	0.10	B3	0.08	B3	0.08	B3				
	DG3 PROPERTIES AFFECTED BY UNPLANNED INTERRUPTIONS																				
4	More than 6 hours	nr	0	10,487	B3	6,742	B3	43,767	B3	8,699	A3	5,128	A3	6,097	A3	3,509	A3				
5	More than 12 hours	nr	0	2,607	B3	1,195	B3	25,693	B3	841	A3	494	A3	861	A3	308	A3				
6	More than 24 hours	nr	0	1,554	B3	12	B3	13,788	B3	32	A3	0	A3	0	A3	0	A3				
7	Total connected properties at year end	nr	0	817,960	A2	824,974	B2	828,060	A2	839,710	A2	852,399	A2	862,988	A2	874,307	A2				
8	OPA supply interruption value	nr	2	1.98	B3	0.97	B3	11.72	B3	1.14	A3	0.66	A3	0.81	A3	0.44	A3				
	DRINKING WATER QUALITY																				
9	% iron compliance at consumers tap	%	2	97.36	A1	98.28	A2	98.90	A2	98.40	A2	98.66	A2	98.85	A2	98.94	A2				
10	% manganese compliance at consumers tap	%	2	99.83	A1	99.79	A2	99.82	A2	99.89	A2	99.84	A2	99.90	A2	99.95	A2				
11	% aluminium compliance at consumers tap	%	2	99.59	A1	99.60	A2	99.80	A2	99.25	A2	99.36	A2	99.79	A2	99.74	A2				
12	% turbidity compliance at consumers tap	%	2	99.70	A1	99.84	A2	99.85	A2	99.73	A2	99.95	A2	100.00	A2	100.00	A2				
13	% faecal coliforms compliance at consumers tap	%	2	99.89	A1	99.86	A2	99.99	A2	99.98	A2	100.00	A2	99.94	A2	100.00	A2				
14	% trihalomethanes compliance at consumers tap	%	2	97.50	A1	98.50	A2	99.00	A2	99.74	A2	96.94	A2	98.48	A2	99.48	A2				
15	Average overall compliance figure (Drinking Water Quality OPA value)	nr	2	98.98	A1	99.31	A2	99.56	A2	99.50	A2	99.13	A2	99.49	A2	99.69	A2				
B	**SEWERAGE SERVICE**																				
	DG5 SEWER FLOODING - OVERLOADED																				
16	Flooding incidents in the year (overloaded sewers)	nr	0	189	B2	6	B2	29	B2	4	B2	3	B2	0	B2	0	B2				
17	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	181	B2	5	B2	3	B2	1	B2	2	B2	0	B2	7	B2				
18	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630.0	A2	638.1	A2	648.6	A2	657.9	A2	668.3	A2				
19	% of domestic properties flooded by overloaded sewers (Overloaded sewers OPA value)	%	4	0.0013	B2	0.0002	B2	0.0041	B3	0.0005	B3	0.0002	B2	0.0000	B2	-0.0010	B2				
	DG5 SEWER FLOODING - OTHER CAUSES																				
20	Flooding incidents (other causes - equipment failures)	nr	0	15	B2	14	B2	2	B2	1	B2	1	B2	0	B2	2	B2				
21	Flooding incidents (other causes - blockages)	nr	0	22	B2	36	B2	38	B2	34	B2	38	B2	26	B2	17	B2				
22	Flooding incidents (other causes - collapses)	nr	0	4	B2	5	B2	12	B2	3	B2	8	B2	7	B2	4	B2				
23	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630.0	A2	638.1	A2	648.6	A2	657.9	A2	668.3	A2				
24	% of domestic properties flooded by other causes (Other causes OPA value)	%	4	0.0066	B2	0.0088	B2	0.0083	B3	0.0060	B3	0.0072	B2	0.0050	B2	0.0034	B2				
	DG5 PROPERTIES ON THE FLOODING REGISTER																				
25	2 in 10 register at end of year	nr	0	30	B2	62	B2	60	A2	59	B2	61	B2	57	B2	57	B2				
26	Problems solved due to ESL funding	nr	0	20	A1	3	B2	5	A2	3	B2	3	B2	6	B2	4	B2				
27	1 in 10 register at end of year	nr	0	10	B2	8	B2	8	A2	7	B2	6	B2	4	B2	2	B2				
28	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630.0	A2	638.1	A2	648.6	A2	657.9	A2	668.3	A2				
29	% of domestic properties considered to be at risk of flooding by sewage (At risk OPA value)	%	4	0.0088	B2	0.0110	B2	0.0110	A2	0.0103	B2	0.0103	B2	0.0099	B2	0.0093	C2				
C	**SECURITY OF SUPPLY**																				
	DG4 HOSEPIPE RESTRICTIONS																				
30	Hosepipe retrictions (OPA value)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	264	B2				
	LEAKAGE																				
31	Leakage (Target)	nr	2	168.00		169.00		165.00		163.00		161.00		159.00		157.00					
32	Leakage (Actual)	nr	2	161.75	B4	167.21	B3	165.99	B3	161.99	B3	163.43	B3	162.43	B3	160.14	B3				
33	% of leakage target not met (Leakage OPA value)	nr	2	0.00	B4	0.00	A1	0.00	B3	0.00	B3	0.49	B3	0.99	B3	1.85	B3				
	SECURITY OF SUPPLY - ABSOLUTE PERFORMANCE																				
34	Security of supply index – company's actual based on planned level of service (Absolute performance OPA value)	nr	0	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2				
	SECURITY OF SUPPLY - PERFORMANCE AGAINST TARGET																				
35	Security of supply index - planned (target) levels of service	nr	0	97	A2	97	A2	100	A2	100	A2	100	A2	100	A2	100	A2				
36	Security of supply index - company's actual based on planned level of service	nr	0	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2				
37	% of target not met (Performance against target OPA value)	%	2	0.00	A2	0.00	A2	0.00	A2	0.00	A2	0.00	A2	0.00	A2	0.00	A2				
D	**CUSTOMER SERVICE**																				
	DG6 - RESPONSE TO BILLING CONTACTS																				
38	Number dealt with within 5 working days	nr	0	77,118	B2	78,398	B2	75,520	B2	75,462	B2	77,679	B2	71,386	B2	77,010	B2				
39	Total billing contacts	nr	0	77,051	B2	78,463	B2	75,545	B2	75,490	B2	77,698	B2	71,409	B2	77,016	B2				
40	% of billing contacts answered within 5 working days (DG6 OPA value)	%	2	100.09	B2	99.92	B2	99.97	B2	99.96	B2	99.98	B2	99.97	B2	99.99	B2				
	DG7 - RESPONSE TO WRITTEN COMPLAINTS																				
41	Total written complaints	nr	0	3,173	B2	2,505	B2	2,364	B2	2,269	B2	2,375	B2	2,274	B2	2,133	B2				
42	Number dealt with within 10 working days	nr	0	3,166	B2	2,498	B2	2,363	B2	2,266	B2	2,375	B2	2,271	B2	2,133	B2				
43	% of written complaints answered within 10 working days (DG7 OPA value)	%	2	99.78	A1	99.72	A1	99.96	A1	99.87	A1	100.00	A1	99.87	B2	100.00	B2				
	DG8 - BILLING METERED CUSTOMERS																				
44	Company or customer readings (or both)	nr	0	66,622	A1	66,840	A1	66,916	A1	67,366	A1	68,051	A1	68,420	A1	68,621	A1				
45	Total metered accounts	nr	0	110,164	A1	115,227	A1	118,732	A1	123,763	A1	127,807	A1	128,705	A1	129,387	A1				
46	Metered accounts excluded from indicator	nr	0	42,688	A1	47,784	A1	51,214	A1	55,875	A1	59,428	A1	60,060	A1	60,542	A1				
47	% of metered accounts which have meter based bills (DG8 OPA value)	%	2	98.73	A1	99.11	A1	99.11	A1	99.23	A1	99.52	A1	99.67	A1	99.67	A1				
	DG9 TELEPHONE CONTACT																				
48	Total of calls not abandoned	nr	0	216,006	A2	223,256	A2	226,204	A2	209,284	A2	216,015	A2	211,061	A2	213,835	A2				
49	Total calls received on customer contact lines	nr	0	219,399	A2	226,881	A2	230,847	A2	210,487	A2	217,023	A2	212,095	A2	215,011	A2				
50	% calls not abandoned (0.25 of DG9 OPA value)	%	2	98.45	A2	98.40	A2	97.99	A2	99.43	A2	99.54	A2	99.51	A2	99.45	A2				
51	All lines busy	nr	0	0	A2	0	A2	32	A2	159	A2	63	A2	18	A2	29	A2				
52	% calls not engaged (0.25 of DG9 OPA value)	%	2	100.00	A2	100.00	A2	99.99	A2	99.92	A2	99.97	A2	99.99	A2	99.99	A2				
53	Call Handling Satisfaction - not used	nr	2	4.54	A1	4.63	A1	4.65	A1	4.59	A1										
E	**ENVIRONMENTAL PERFORMANCE**																				
	POLLUTION INCIDENTS																				
54	Number of High & Medium category pollution incidents (Sewage)	nr	0	18	A1	26	A1	25	A1	21	A1	22	A1	20	A1	15	A1				
55	Equivalent population served (resident)	000	2	2,107.96	C5	2,131.81	C5	2,110.77	C5	2,119.20	C3	2,098.83	C3	2,101.35	C3	2,265.55	C3				
56	Number of High and Medium sewage incidents per million resident population equivalent (pe) served (H&M sewage incidents OPA value)	nr	2	8.54	C5	12.20	C5	11.84	C5	9.91	C5	10.48	C5	9.52	C3	6.62	C3				
57	Number of Low category pollution incidents (Sewage)	nr	0	163	A1	188	A1	136	A1	117	A1	114	A1	109	A1	112	A1				
58	Number of Low sewage incidents per million resident population equivalent (pe) served (Low sewage incidents OPA value)	nr	2	77.33	C5	88.19	C5	64.43	C5	55.21	C5	54.32	C5	51.87	C3	49.44	C3				
59	Number of High & Medium category pollution incidents (Water)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	1	A1				
60	Winter population	000	2	1,842.61	C2	1,850.54	C2	1,862.72	C2	1,874.73	C2	1,887.10	C2	1,896.46	C2	1,902.33	C2				
61	Number of High and Medium water incidents per million resident population served (H&M water incidents OPA value)	nr	2	0.00	C5	0.00	C5	0.00	C5	0.00	C5	0.00	C5	0.00	C3	0.53	C3				
	SEWAGE - SLUDGE DISPOSAL																				
62	Percentage unsatisfactory sludge disposal (Sludge disposal OPA value)	%	2	0.00	A2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1				
	SEWERAGE SERVICE - BREACH OF CONSENT																				
63	WWTW Discharge consent % compliance (WWTW compliance OPA value)	%	2	1.10	C5	1.89	C5	1.54	C5	1.38	C5	1.08	C5	1.33	C5	0.60	C5				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 45 KEY OUTPUTS

ENERGY CONSUMPTION AND GREENHOUSE GAS ACCOUNTING

	DESCRIPTION	UNITS	DP	1 NIW	CG	2 PPP	CG	3 NIW Total	CG
A	**ELECTRICITY CONSUMPTION**								
1	Grid electricity purchased (excluding renewable energy)	MW.hr	0	106,039	A2	75,791	A2	181,829	A2
2	Grid electricity purchased - renewable energy	MW.hr	0	96,640	A2	10,774	A2	107,414	A2
3	Non-renewable electricity generated and used	MW.hr	0	0	A2	0	A2	0	A2
4	Renewable electricity generated and used	MW.hr	0	5,824	A2	4,951	A2	10,775	A2
5	Total electricity consumption	MW.hr	0	208,502	A2	91,516	A2	300,019	A2
6	Non-renewable electricity generated and exported to the grid	MW.hr	0	0	A2	0	A2	0	A2
7	Renewable electricity generated and exported to the grid	MW.hr	0	1,086	A2	0	A2	1,086	A2
8	Total renewable enegry generated	MW.hr	0	6,909	A2	4,951	A2	11,860	A2
B	**GROSS ANNUAL OPERATIONAL GHG EMISSIONS**								
B.1	**Scope 1 Emissions**								
9	Direct emissions from burning fossil fuels (including natural gas CHP generation on site)	$t.CO_2 e$	0	2,086	C3	4,729	A2	6,815	B2
10	Process and fugitive emissions	$t.CO_2 e$	0	4,410	A3	5,606	A2	10,016	B3
11	Transport: company owned or leased vehicles	$t.CO_2 e$	0	2,751	A2	221	A2	2,971	A2
B.2	**Scope 2 Emissions**								
12	Total grid energy used (including CHP electricity purchased).	$t.CO_2 e$	0	53,894	A2	27,982	A2	81,876	A2
B.3	**Scope 3 Emissions**								
13	Business travel on public transport and private vehicles used for company business	$t.CO_2 e$	0	563	A2	13	A2	576	A2
14	Outsourced activities (if not included in Scope 1 or 2) Energy and other	$t.CO_2 e$	0	0	A2	11,208	A2	11,208	A2
15	Not used								
16	Not used								
17	Gross operational emissions	$t.CO_2 e$	0	63,703	A2	49,759	0	113,463	A2
C	**Net annual operational emissions**								
18	Exported renewables (generated on-site and exported)	$t.CO_2 e$	0	-426	A2	0	A2	-426	A2
19	Green tariff electricity purchased	$t.CO_2 e$	0	-29,652	A2	0	A2	-29,652	A2
20	Net operational emissions	$t.CO_2 e$	0	33,626	A2	49,759	A2	83,385	B3
D	**ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES**								
21	Operational GHG per Ml of treated water	$t.CO_2 e/Ml$	0	0.100	B3	0.205	A2	0.139	A2
22	Operational GHG per Ml of sewage treated (flow to full treatment)	$t.CO_2 e/Ml$	0	0.264	B3	0.698	A2	0.433	B3
23	Operational GHG per Ml of sewage treated (based on water distribution input)	$t.CO_2 e/Ml$	0	0.175	B3	0.463	B3	0.287	B3
E	**RENEWABLE INCENTIVES**								
24	Revenue from renewable energy sales and incentives	£000	3	820.399	A2	0.000	A2	820.399	A2

Table 45 - Energy Consumption and Greenhouse Gas Accounting

Table 45 contains data relevant to the Company's energy consumption and greenhouse gas accounting as requested for the AIR19 return.

Table 45 has been populated in line with guidance provided by NIAUR and contains data sets both internal and external as required and as set out within the sections detailed below.

Table 45 reports emissions generated by the Company and outsourced PPP concessions working for the appointed business in carrying out any part of its regulated activities.

Table 45 reports emissions generated by the Company and by outsourced PPP concessions in separate columns and also calculates a Company total.

Reporting Outputs

Table 45 has been populated in line with the reporting requirements outlined in the methodology statement for this table and this is detailed further below.

Data has been provided in Table 45 for energy consumption, gross and net tonnes CO_2e of operational emissions, GHG intensity ratios and revenue from the sale of renewable electricity and other incentives.

Lines 1 – 8 Electricity Consumption

This section provides data relevant to the total electricity consumption within NI Water and PPP concessions, a breakdown by renewable and non-renewable energy sources and data related to company generated renewable electricity.

The Company has purchased and self-generated circa 39.39% of its total electricity consumption from renewable sources within the reporting period.

Self-generated renewable electricity has been via Hydro, Solar schemes across several sites and a steam turbine at the Incinerator. The outputs are detailed in Table 1

Table 1

Site	kWhrs
Hydro – Silent Valley (REGO)	868,623
Hydro – Oaklands (Non-REGO)	216,892
Hydro – Fofanny (Non-REGO)	111,677
Steam (Non-REGO)	4,951,169
Dunore Solar Farm (REGO)	4,665,724
58 Solar PV Installations (Non-REGO)	1,046,415

Further investigatory work is ongoing to enable installation of hydro and wind turbine systems at other sites. These will likely occur within the next Regulatory period.

The level of self-generation is further complemented by procurement of renewable electricity from the SEM. NI Water has built into the electricity contract that approximately 30% of consumption would be electricity from a renewable source and covered by Renewable Energy Guarantees of Origin (REGO). This is achieved by placing a specific schedule of c280 sites on a green supply.

Lines 9 – 17 Gross Annual Operational GHG Emissions (Lines 15 and 16 not used)

This section provides gross annual operating GHG emissions in tonnes CO_2e within NI Water and PPP concessions, broken down as follows:

- direct emissions from burning fossil fuels;
- process and fugitive emissions and
- transport emissions

Emissions have been reported under Scope 1, 2 and 3 headings and these are detailed further below.

Scope 1 (lines 9-11) report on all emissions emitted directly from the company's appointed activities. This includes direct emissions from burning of fossil fuels, direct process emissions and transport owned or leased by the company.

Scope 2 (line 12) reports on all emissions indirectly emitted as a result of electricity usage.

Scope 3 (lines 13 - 14) reports on all other indirect emissions not included in scope 2. Scope 3 emissions will be those from business travel on public transport and private vehicle usage for company business (line 13)

Lines 18 – 20 Net annual operation Emissions

This section reports on net annual operational emissions derived from renewable energy generated onsite and then exported (line 18) and green energy purchased (line 19). These reductions have been subtracted from the gross emissions value (line 17) to provide a net operational emissions figure in (line 20).

Lines 21 – 23 Annual operating GHG Intensity Ratio Values

This section provides annual operating GHG intensity ratios in tonnes CO_2e per mega litre for the provision of water and sewerage service using water and waste flows as a denominator. Two intensity ratios have been provided for sewerage service, one using table 14 data as a denominator and one using additional road drainage in-flow. Confidence grading around the latter figure is at B3 as the accuracy is not verifiable. Details of intensity ratios are included in Table 2

Table 2

Description	Unit	NIW	PPP	TOTAL	CG
Annual operational emissions intensity ratio per Ml of treated water	tonnes CO_2e/ML	0.100	0.205	0.139	A2
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO_2e/ML	0.264	0.698	0.433	B3
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO_2e/ML	0.175	0.463	0.287	B3

Calculations for the tonnes CO_2e/ML intensity ration have been generated from the UK Water Industry Carbon Accounting Workbook 13.0 (March 2019) outputs using data from AIR19 Table 10 and Table 14. The confidence grading for the FFT is at B3 due to uncertainty over the accuracy of the data provided.

Line 24 Renewable Incentives

This section provides data relevant to Company income from renewable electricity sales and associated incentives such as ROC revenue.

Confidence Grades

Confidence grades have been assigned for each line of data and these are based on the criteria set out in the Introduction to the Annual Information Return Reporting Requirements and guidance within the UK Water Industry Carbon Accounting Workbook 13.0

Processing rules and Emissions Conversion Factors:

The Company has provided output data within Table 45 as calculated using the Water UK Carbon Accounting Workbook Version 13.0 (March 2019) for greenhouse gas emissions associated with the provision of water, wastewater, sludge disposal, administrative function and transport in its AIR19 return.

Data sources for the AIR19 return have been generated from supplier's monthly consumption figures associated with the use of electricity, gas and other fuels where data is attainable. Estimations have only been used where there is deemed material impact and enough historical information is available with which to estimate quantities.

All energy conversions have been derived from the Carbon Accounting Workbook 13.0 and are aligned to the DECC/Defra guidelines using the relevant emissions factor for kg of CO_2 per measured unit of energy. The calculations are carried out within locked cells in the Carbon Accounting Workbook 13.0

Gross operational emissions reported in Table 45 are the company's total carbon emissions resulting from operational activities.

Nett operational emissions reported in Table 45 are a calculation of gross operational emissions taking into account emissions reductions for on-site renewable energy that is exported and renewable energy that has been purchased.

The t.CO_2e/ML GHG intensity output figure for treated water emissions includes all carbon emissions from the abstraction, treatment and distribution of water, associated administrative and transport emissions divided by the volume of treated water.

The t.CO_2e/ML GHG intensity output figure for treated waste water includes all carbon emissions from waste water pumping, waste water treatment, sludge treatment and disposal, and associated administrative and transport emissions divided by the volume of waste water treated.

The GHG intensity figures for treated water and waste water for the calculations above have been derived from the volumes of water and waste water as reported in tables 10 and 14 of the Company's AIR19 data.

Assumptions

The Company has assumed that the boundary for data collection is any activity associated with the operation of the appointed business. This will include all areas where the company has direct management responsibility such as the PPP concessions.

Additional Commentary

The Company can provide details of planned future work in carbon accounting, carbon management, mitigation and adaptation. This development is linked to the Company's developing climate change strategy and in particular it is aligned to Company reporting under the new UK Government Legislation, the Carbon Reduction Commitment Energy Efficiency Scheme.

Assistance to the Auditor and Reporter

The Company has assisted the Auditor to enable informed judgments about the validity of energy usage and carbon emissions return data.

The Company has assisted the Auditor to confirm that the reporting methodology has been applied correctly and has assisted in the audit process as required to confirm that:

- the Company has adhered to the correct carbon accounting boundaries;
- the Company has used appropriate greenhouse gas conversion factors;
- the Company has appropriate and documented systems, management responsibly and sign off, for its carbon accounting submissions;
- the Company can validate the assumptions made and the reasons behind any omissions; and

The Company will assist the Reporter to enable informed judgments about the validity and necessity of returned data.

Omissions

The following areas have been omitted from the AIR19 submission due to inability to source or lack of access to data.

- Supply chain, embedded and 'short cycle' emissions or those from non-appointed business activities have not been included in the return.
- Outsourced activities from call centres and maintenance contractors.
- Emissions from leakage/maintenance of refrigerant gases from refrigeration and air conditioning equipment.

The GHG emissions associated with the omissions above are believed to be a very small part of the overall GHG emissions reported and as such have no material impact on the data provided.

The GHG omissions above will be addressed in year to enable a fuller return for AIR19 reporting only if deemed in further discussion to have a material impact on the emissions level.

Green Purchased Electricity Adjustment

Green Tariffs are electricity tariffs marketed as having environmental credentials. Defra/BEIS (formally DECC) recognise as green those tariffs which comply with the ‘Good Quality’ Criteria specified on pages 51 and 52 of the ‘Defra/DECC’s Guidance on How to Measure and Report your GHG Emissions’ published in Sept 2009.

The company has evidence verified by Capture Carbon to support the 104,750,159 kWhrs recorded in CAW 13.0 sourced from 100% renewable electricity generation for the period 01.04.18 to 31.03.19. The renewable electricity generation is verified by Renewable Energy Guarantees of Origin (REGOs) issued by the UK Office of Gas and Electricity Markets (Ofgem).

The company for AIR13 to AIR16 purchased green energy by the same principal though did not have the appropriate evidence to support the green energy as being verified by REGOs. As the inclusion of green energy in CAW 11.0 (AIR17) drastically reduces the Net Operational Emissions the company has included Table 3 detailing the change in emissions and other applicable data from AIR14 to AIR19 inclusive had the green purchased energy been supported by REGOs and included in all CAWs since 2014.

Table 4 demonstrates the change in Annual operational GHG intensity ratio values as supported by REGO accredited green purchased electricity.

Table 3

Description	Unit	AIR14	AIR15	AIR16	AIR17	AIR18	AIR19
Gross Operational Emissions	tonnes CO_2e	168,108	187,099	175,585	160,447	143,491	120,442
Green Tariff electricity purchased reduction	tonnes CO_2e	-43,511	-74,482	-54,112	-41,296	-36,396	-29,651
Net Operational Emissions	tonnes CO_2e	123,969	111,526	120,327	118,778	106,816	90,364

Table 4

Description	Unit	AIR14	AIR15	AIR16	AIR17	AIR18	AIR19
Annual operational emissions intensity ratio per Ml of treated water	tonnes CO_2e/ML	0.154	0.185	0.141	0.143	0.176	0.139
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO_2e/ML	0.410	0.561	0.467	0.574	0.611	0.433
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO_2e/ML	0.638	0.366	0.490	0.376	0.379	0.287

Data Quality Assurance Check – Table 45

On completion of the CAW, the applicable values from the homepage are populated in a data checklist. The values in the checklist are populated in the related cells of Table 45. A comparison on the two files is taken to ensure consistency.

The values populated in Table 45 being presented to the regulator are given a final data quality sign off by line management.

Green House Gas (GHG) Reduction

NIW has made strides to reduce GHG emissions from AIR16 reporting year to AIR19 reporting year by increasing its self-supply installations particularly in Solar PV. Also with the inclusion of a company driven process optimisation project with the main objective to reduce consumption within Wastewater Treatment sites. Also, the development of Integrated Constructed Wetlands (ICW) to replace inefficient Wastewater Treatment works. The company has also been able to provide evidence from the 2017/18 reporting year that the green purchased energy is certified REGO accredited electricity.

Taking all these factors in consideration alongside a reduction in the emission factors for 2018/19 against the emission factors for 2017/18 has seen an overall reduction in gross and net GHG emissions.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 46 SERVICEABILITY
SERVICEABILITY RETURN

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2004-05	2 REPORTING YEAR 2005-06	3 REPORTING YEAR 2006-07	4 REPORTING YEAR 2007-08	5 REPORTING YEAR 2008-09	6 REPORTING YEAR 2009-10	7 REPORTING YEAR 2010-11	8 REPORTING YEAR 2011-12	9 REPORTING YEAR 2012-13	10 REPORTING YEAR 2013-14	11 REPORTING YEAR 2014-15	12 REPORTING YEAR 2015-16	13 REPORTING YEAR 2016-17	14 REPORTING YEAR 2017-18	15 REPORTING YEAR 2018-19	16 REPORTING YEAR 2019-20	17 REPORTING YEAR 2020-21
A	**WATER INFRASTRUCTURE**																			
1	Water population	000	2	1,710.06	1,735.00	1,732.85	1,748.53	1,775.11	1,790.16	1,798.48	1,808.82	1,819.47	1,827.79	1,840.54	1,850.27	1,861.58	1,869.17	1,873.14		
2	Total connected properties at year end	000	1		786.1	794.7	800.0	804.4	798.7	806.4	810.4	818.0	825.0	828.1	839.7	852.4	863.0	874.3		
3	Total length of mains	km	2		27,114.59	25,972.00	26,067.07	26,349.22	26,435.45	26,441.81	26,499.03	26,700.79	26,710.55	26,712.44	26,728.83	26,778.15	26,837.45	26,958.40		
4	Number of mains bursts (incl Active leakage)	nr	0			5,054	3,611	3,764	3,910	3,634	2,665	2,474	2,299	2,266	1,972	2,135	2,444	2,467		
5	Mains bursts per 1000km	nr	1		-	194.6	138.5	142.9	147.9	137.4	100.6	92.7	86.1	84.8	73.8	79.7	91.1	91.5		
6	Interruptions to supply greater than 3 hours resulting from equipment failure	nr	0	35,700	24,995	30,360	39,883	36,882	34,268	39,647	44,960	40,697	44,499	70,272	98,979	85,239	94,549	55,414		
7	DG3 Properties affected by interruptions >12 hrs (unplanned & unwarned)	nr	0	1,676	1,670	767	1,839	2,010	1,588	4,180	765	1,019	1,195	929	841	494	190	308		
8	DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned)	%	2	0.22	0.21	0.10	0.23	0.25	0.20	0.52	0.09	0.12	0.14	0.11	0.10	0.06	0.02	0.04		
9	Number of regulatory samples taken for Iron at customer taps	nr	0	1,962	1,971	1,928	2,012	2,124	2,036	1,736	1,732	1,710	1,876	1,896	1,876	1,868	1,916	1,894		
10	Number of regulatory Iron samples exceeding the drinking water standard PCV	nr	0	46	41	45	34	41	43	35	30	47	36	20	30	25	22	20		
11	Number of regulatory Iron samples exceeding 75% of the drinking water standard PCV	nr	0	108	72	71	64	66	76	55	50	74	62	43	54	45	48	28		
12	Percentage of regulatory Iron samples exceeding 75% of the drinking water standard PCV	%	2	5.50	3.65	3.68	3.18	3.11	3.73	3.17	2.89	4.33	3.30	2.27	2.88	2.41	2.51	1.48		
13	Customer contacts (Discoloured water)	nr	0					4,085	3,840	3,010	2,344	2,464	3,465	2,744	3,179	3,029	2,632	3,447		
14	Customer contacts per 1000 population (Discoloured water)	nr	2				-	2.30	2.15	1.67	1.30	1.35	1.90	1.49	1.72	1.63	1.41	1.84		
15	Distribution losses	Ml/d	2	141.90	127.76	118.74	111.38	131.49	140.55	130.66	122.02	115.44	127.31	126.08	122.08	123.52	125.44	120.23		
16	Company's overall serviceability assessment for water infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable		
B	**WATER NON-INFRASTRUCTURE**																			
17	Number of regulatory samples taken for Turbidity at operational WTWs (excluding PPP)	nr	0					5,275	5,252	5,139	4,948	4,810	4,795	4,642	4,523	4,561	4,421	4,584		
18	Number of regulatory samples taken for Turbidity at operational WTWs which exceed 1.0 NTU (excluding PPP)	nr	0					10	14	16	17	11	14	10	3	6	10	4		
19	Number of regulatory samples taken for Turbidity at operational WTWs which exceed 0.8 NTU (excluding PPP)	nr	0	135	158	79	30	15	27	23	23	16	29	21	19	12	18	12		
20	Percentage of regulatory samples taken for Turbidity at operational WTWs which exceed 0.8 NTU (excluding PPP)	%	2					0.28	0.51	0.45	0.46	0.33	0.60	0.45	0.42	0.26	0.41	0.26		
21	Number of regulatory samples taken for THMs at customer taps	nr	0	1,057	952	704	752	765	784	432	408	392	396	391	388	392	396	389		
22	Number of regulatory THM samples exceeding the drinking water standard PCV	nr	0	358	239	150	243	141	30	8	3	10	6	4	1	12	6	2		
23	Number of regulatory THM samples exceeding 75% of the drinking water standard PCV	nr	0	578	439	280	441	289	57	32	21	52	31	34	44	53	44	29		
24	Percentage of regulatory THM samples exceeding 75% of the drinking water standard PCV	%	2	54.68	46.11	39.77	58.64	37.78	7.27	7.41	5.15	13.27	7.83	8.70	11.34	13.52	11.11	7.46		
25	Events at WTW resulting from treatment difficulties or ineffective treatment categorised as 'significant' or higher	nr	0				14	27	28	12	28	26	15	23	24	15	12	18		
26	Number of regulatory samples taken at Service Reservoirs for coliform bacteria	nr	0	18,258	18,232	17,914	17,581	17,408	17,429	16,966	16,862	16,690	16,118	15,640	15,433	15,213	14,897	14,921		
27	Number of regulatory samples taken for coliform bacteria at Service Reservoirs exceeding the drinking water standard PCV	nr	0	59	86	68	43	22	24	8	22	27	26	17	20	15	14	8		
28	Percentage of regulatory samples taken for coliform bacteria at Service Reservoirs exceeding the drinking water standard PCV	%	2	0.32	0.47	0.38	0.24	0.13	0.14	0.05	0.13	0.16	0.16	0.11	0.13	0.10	0.09	0.05		
29	Unplanned (reactive) maintenance	%	1										3.6	2.6	1.7	1.0	1.5	1.2		
30	Company's overall serviceability assessment for water non-infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable		
C	**SEWERAGE INFRASTRUCTURE**																			
31	Total length of sewers	km	2		13,911.23	14,263.62	14,319.50	14,465.23	14,745.61	14,904.68	15,090.35	15,254.37	15,410.44	15,581.51	15,625.13	15,777.29	15,890.63	16,009.10		
32	Total number of rising main failures	nr	0					25	25	37	26	41	16	11	9	5	12	20		
33	Total number of gravity sewer collapses	nr	0					1,368	988	1,229	1,191	1,081	1,104	1,325	1,218	1,243	1,192	1,221		
34	Total number of sewer collapses	nr	0				677	1,393	1,013	1,266	1,217	1,122	1,120	1,336	1,227	1,248	1,204	1,241		
35	Sewer collapses per 1,000km	nr	1			-	47.3	96.3	68.7	84.9	80.6	73.6	72.7	85.7	78.5	79.1	75.8	77.5		
36	Total number of sewer blockages	nr	0				16,912	28,010	26,409	26,230	24,444	20,801	18,062	16,729	15,991	15,755	14,393	15,815		
37	Sewer blockages per 1,000km	nr	1			-	1,181.0	1,936.4	1,791.0	1,759.8	1,619.8	1,363.6	1,172.1	1,073.6	1,023.4	998.6	905.8	987.9		
38	Number of H, M pollution incidents from sewer network (CSOs, rising mains and foul sewers)	nr	0						38	34	30	14	14	17	11	15	13	12		
39	Number of H, M and L pollution incidents from sewer network (CSOs, rising mains and foul sewers)	nr	0						244	221	199	137	149	126	86	102	96	97		
40	Properties flooded in the year (other causes)	nr	0				366	23	5	28	23	41	55	52	38	47	33	23		
41	Areas flooded externally in the year (other causes	nr	0				4,283	7,968	6,872	1,314	Not reported	3,212	3,348	4,379	3,889	3,819	3,466	4,273		
42	Total number of equipment failures repaired	nr	0				11,715	10,965	10,882	11,492	11,476	10,333	10,899	11,245	9,986	9,883	9,262	7,238		
43	Number of pumping station emergency overflows triggered by equipment failure	nr	0									21	18	22	15	8	9	5		
44	Number of sewer repairs	nr	0						1,013	1,266	1,217	1,122	1,120	1,336	1,227	1,248	1,204	1,241		
45	Company's overall serviceability assessment for sewerage infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable		
D	**SEWERAGE NON-INFRASTRUCTURE**																			
46	% WwTW discharges not compliant with numeric consents	%	1	20.0	18.0	16.0	16.0	12.0	12.0	11.7	6.9	6.9	8.2	7.8	7.4	6.6	6.6	5.3		
47	% of total p.e. served by WwTWs not compliant with numeric consents excluding upper tier failures	%	2	37.00	33.20	23.10	15.50	9.80	8.60	5.08	4.80	1.68	2.40	1.85	1.71	1.31	1.60	0.71		
48	Number of BOD, SS and Ammonia sample results recorded for compliance reporting at WwTWs with numeric consents	nr	0	11,234	11,251	11,461	11,524	9,088	8,747	8,585	8,863	9,161	8,938	8,528	8,738	7,027	7,369	7,011		
49	Number of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value	nr	0	652	817	444	297	363	333	361	279	302	370	299	276	283	290	157		
50	Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value	%	2	5.80	7.26	3.87	2.58	3.99	3.81	4.21	3.15	3.30	4.14	3.51	3.16	4.03	3.94	2.24		
51	Number of WwTWs with one or more compliance sample result (BOD, SS or Ammonia) exceeding the numeric consent value	nr	0	104	132	115	99	103	98	102	91	76	87	60	55	44	51	42		
52	Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	2										72.64	76.87	80.72	83.99	87.21	86.64		
53	Unplanned (reactive) maintenance	%	1										5.5	3.6	2.2	2.4	1.8	1.5		
54	Company's overall serviceability assessment for sewerage non-infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable		

Table 46 – Serviceability

Line 16 - Company's overall serviceability assessment for water infrastructure

Overview

The number of Burst Mains per 1000 km is 91.51 for AIR19.

The output figure for this serviceability indicator for AIR19 Line 5, shows that the recent trend has levelled out at the median line in the target envelope for the last two years.

*The output for this serviceability measure is **"Stable"***

In relation to Line 6 "Interruptions to Supply > 3hrs resulting from Equipment failure", we believe the recent apparent deterioration since AIR14 is due to the transition to the IMS methodology, this may require an adjustment to the reference level. Since this new methodology has been embedded, the trend rate is looking stable. This analysis is supported by the stable trend in the > 12 hour metric. Considering this analysis, this indicator is considered Stable but NIW will continue to monitor trends and review as necessary.

All other metrics suggest that the ongoing trends demonstrated above are within their respective upper and lower tolerances. (Note: Line 12 AIR17 figure, for iron samples is below the lower limit.)

The burst rate, (the Primary Indicator), shows evidence of an average declining average trend (improvement) over the last 9 years. An increasing rate trend over the previous 3 years has levelled out at the median burst rate with a similar burst rate to AIR18 .The rate is well within the target envelope, levelling out at the median point of the target envelope.

NIW will monitor the trend for this important primary indicator.

The overall Serviceability assessment of the Water Infrastructure Network is "Stable"

Summary Table

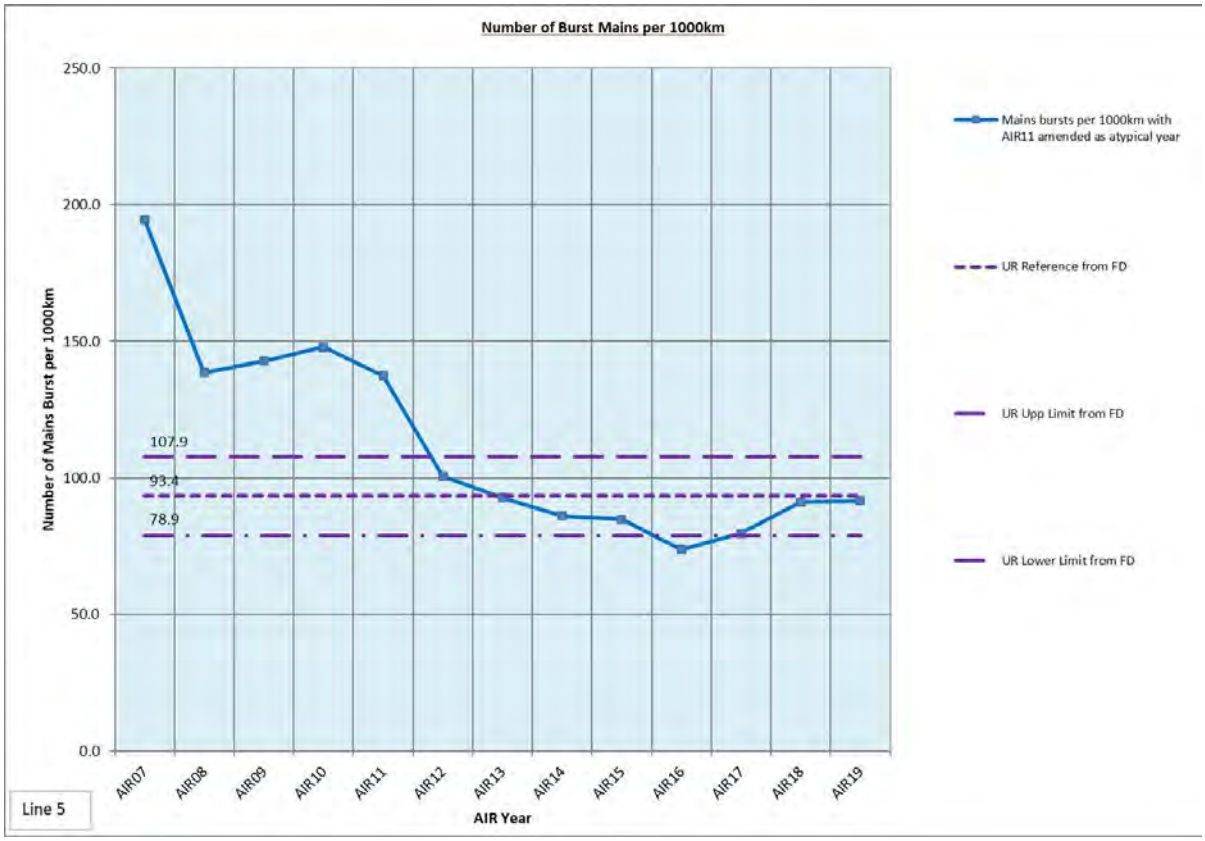
Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
No. of Bursts per 1000km	Line 5	The total annual number of bursts has fallen by approximately 40% in the last 8 years. There is a slight increase in the figures since AIR16 but not thought to be significant as the AIR18 return is still below the median threshold. The recent slight upward trend in the past 3 years seems to have levelled off in AIR19, however the trend needs to be monitored and analysed.	**Stable**

Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
Interruptions to Supply > 3hrs	Line 6	We believe the recent apparent deterioration since AIR14 is due to the transition to the IMS methodology, this may require an adjustment to the reference level in future reporting. Due to the analysis and commentary below it is shown that from AIR16, the percentage has been relatively stable. In addition, the figure for this year is less than that last year when it was considered Stable. An increased internal resource focused on this issue has suggested that the outputs for the last 5 years is actually considerably lower than previously reported, this will be discussed with the Reporter. However, this indicator is considered Stable due to the consistent pattern over the last 4 years looking at both the original methodology and the new improved methodology. NIW will continue to monitor trends and review as necessary. Note: An adjustment to the reference levels may need to be considered for the PC 21 period to re-define the upper and lower limits, in light of better automated data capture systems since 2014.	**Stable**
DG3 % of Properties Interrupted supply > 12 hrs	Line 8	Although this trend continues to indicate outputs well below the lowest threshold, the more recent improvements in the last two years may be more likely to be attributed to changes in a more focused work practice, than being a reflection of improved asset performance of the Network. **This output is therefore considered to be Stable**	**Stable**
% of iron Samples Exceeding 75% of PCV	Line 12	The AIR19 output shows that the ongoing trend has fluctuated around the lowest control boundary for the last 3 years, with a marked drop in failures, below the control level, in the AIR19 period within the random geographical areas sampled.	**Stable**

Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
Number of Customer Contacts per 1000 population (Discoloured Water)	Line 14	The graph demonstrates fluctuation of the trend between the upper and median control limits since AIR15. The trend has been decreasing on this issue in the past few years within the control boundaries. The recent rise may be attributable to severe weather events in Feb and March of 2018 and the high demand issue relative to low rainfall in the summer. The final figure is still just below the upper acceptable target range.	Stable
Water Distribution Losses	Line 15	Explanatory factor. See below.	Explanatory factor
Overall Rating		**Final Explanatory Text**	**Stable**

Primary Indicator

Line 5 – Number of Burst Mains per 1,000km



Number of Burst Mains per 1,000km

The number of Burst Mains per 1000 km is 91.51 for AIR19.

This assessment suggests that burst rates have dropped significantly since AIR10 with six consecutive previous year-on-year improvements between AIR10 and AIR16. Whilst the AIR17 to 19 total remains well within the Control Limits. This year's figures show similar outputs to AIR18, but the following continue to be a factor:

- Mains rehabilitation schemes continue to have a positive impact in reducing the no. of defects with older iron mains being replaced
- Pressure Management Schemes in targeted areas including new installations, replacements and relocations of pressure reducing / sustaining valves
- Continuing detail has been paid to the classification of mains repairs as opposed to communication pipe repairs or replacements

Although the number of mains repairs due to non-proactive leakage detective methods shows a slight increase, this is offset by an increase in the number of mains repairs down to third party damage (95no.).

The number of mains repairs down to proactive leakage detection methods is almost identical to the numbers for AIR18 (1111no. versus 1116no. for AIR18). There has been a relatively mild winter period this year with only one noticeable 10 day freeze / thaw period towards the end of January / early February.

Between AIR17 and AIR18, the movement of burst rates relative to the movement in interruptions to supply was similar, as indicated by a 14% increase in the Table 11 Line 11 outturn compared to a 16% increase in the Table 2 Line 5 outturn.

Between AIR18 and AIR19, the burst rate remained consistent with a variance of only 1% whilst there was a notable reduction in the Table 2 Line 5 outturn number of properties affected by an unplanned interruption of more than 3 hours.

Detailed data for the reporting period April 18 – March 19 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spread sheet. *A number of repairs attributable to third party damage have also been extracted from the final total.* The total no. of mains bursts repairs for Networks Water was then converted to bursts per 1,000km.

Calculation of Mains Bursts per 1,000km for AIR19

AIR 18 Total (for comparison)
Total Burst Mains divided by Total length of mains multiplied by 1,000
2510 – 66 (rechargeable) / 26,837.45.km = 0.0911 (x 1,000 = 91.11)

AIR19 Total
Total Burst Mains divided by Total length of mains multiplied by 1,000
2562 – 95 (rechargeable) / 26,958.4km = 0.0915 x 1,000 = 91.51

The total number of Mains Repairs carried out by NIW was 2562 (including 95no. due to third party damage).

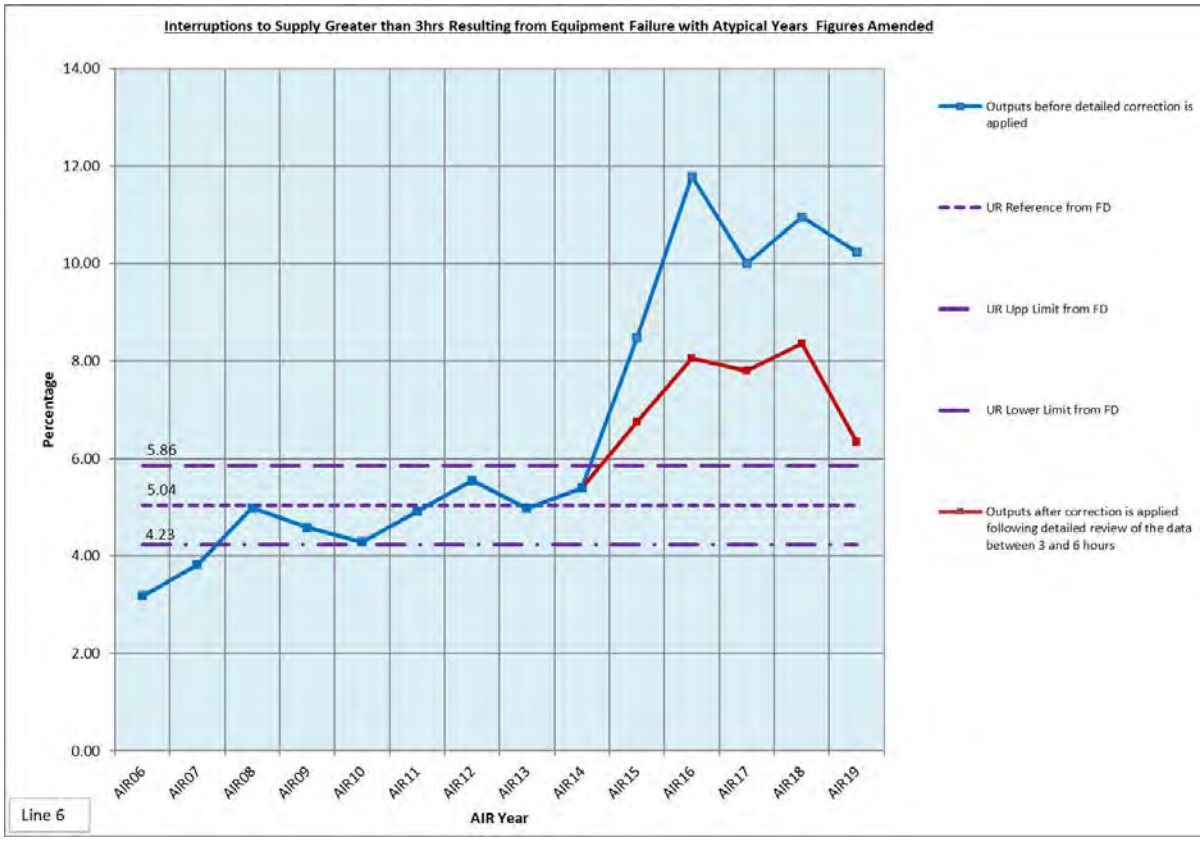
The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1111.

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1451.

This Serviceability Indicator is considered as Stable (with two slight increases in the last two years, compared to the previous 2 years). This trend needs to be monitored and would be a concern if the trend continues upwards in AIR19 to see if the trend is due to deterioration or increase Leakage activity.

Secondary Indicators

Line 6 – Interruptions to Supply > 3hrs resulting from Equipment failure



The figures in yellow highlight below, are those indicated on the blue line graph
The figure of 55 414 highlighted is the AIR19 figure shown on the red graph
To avoid confusion the first line of the table has been plotted in blue and the third line from the bottom (outputs calculated with increased resource and focus on individual incidents) has been plotted in red.

	AIR15 (inc. industrial action)	AIR15 (exc. industrial action)	AIR16	AIR17	AIR18 (inc. flooding)	AIR18 (exc. flooding)	AIR19
Original Table 46 Line 6 Outturn (AIR15 to AIR18) and AIR19 outturn (**before** review)	111,081	70,272	98,979	85,239	106,176	94,549	89,466
Total Connected Properties	828,060	828,060	839,710	852,399	862,988	862,988	874,307
Percentage of Total Connected Properties Affected by Interruptions >3hrs caused by Equipment Failure	**13.41**	**8.49**	**11.79**	**10.00**	**12.30**	**10.96**	**10.23**
Recalculated Table 46 Line 6 Outturn (AIR15 to AIR18) and AIR19 outturn (**after** review)	91,432	55,931	67,715	66,451	83,777	72,150	55,414
Total Connected Properties	828,060	828,060	839,710	852,399	862,988	862,988	874,307
Percentage of Total Connected Properties Affected by Interruptions >3hrs caused by Equipment Failure	**11.04**	**6.75**	**8.06**	**7.80**	**9.71**	**8.36**	**6.34**

Note: AIR outturns are highlighted yellow and were reported excluding the impact of Dec 14/Jan 15 industrial action and Aug 17 flooding

Original Methodology Employed Up to 2019

The AIR19 outturn, (in blue line on the graph above), was calculated using the same methodology previously used to calculate the outturns for AIR15 to AIR18.

AIR19 Calculation

Utilising the original methodology utilised in previous returns, the outturn figure for this line for AIR19 would have been calculated at 89,455 properties affected, divided by the total number of properties connected to the Network (874,307) = 10.2% as shown on the blue

line trend above. (Note: there were considered to be no atypical events in this period to adjust this figure, as there was in the AIR18 outturn).

Adjusted AIR19 Calculation

The CSD Team reviewed the methodology for this line during the 18/19 period. It was considered that the figures returned for the 3 hour to 6 hour periods had not been reviewed with the same scrutiny as those for the outages that exceeded 6 hours.

Following a detailed incident-by-incident review of these figures, it was considered that NIW were over-reporting the figures for this line.

Following detailed scrutiny of the figures for 18/19 a percentage adjustment was considered to be applied to this figure and also historical figures for the period that the IMS system has been implemented), in order to make the ongoing reporting more accurate.

AIR19 Utilising the Updated Dataset

Utilising the updated dataset, the revised outturn figure for this line for AIR19 would have been calculated at 55,414 properties affected, divided by the total number of properties connected to the Network (874,307) = 6.34%. (Note: there were considered to be no atypical events in this period to adjust this figure, as there was in the AIR 18 outturn).

Discussion on the Impact on the Trend Line of the Implementation of the IMS System during 2014 /15

The overall pattern here may suggest a deterioration in Network performance over a 10 year period however, on 4 July 2014, the Company introduced the Central Incident Management System (CIMS), aimed at addressing any outstanding issues relating to the reliability of its data on supply interruptions. The new system ensures that more unplanned, unwarned interruptions are being captured than would previously have been the case and this is helping to improve the accuracy of NI Water's return. The decision has been taken to exclude from the assessment, all properties affected by interruptions attributed to:

- proactive work, new work and third party interference
- all properties affected by planned and warned interruptions where it was not possible to positively ascertain the precise cause of interruption from the comments provided
- all properties affected by interruptions attributed to human error
- all properties affected by interruptions to facilitate third parties/NI Water contractors
- all properties affected by interruptions involving the 'above ground' infrastructure since this is the subject of a separate assessment in Table 46

Another reason for the increase in outturn since 2014, is likely to have been the introduction of the weekly circulation of 'no water' complaint reports in the AIR14 period, enabling Field Managers to determine more accurately, the times and affected properties associated with each interruption event. This is resulting in the identification of additional properties and longer durations than would possibly have been recorded for historical interruptions.

We believe the recent apparent deterioration since AIR14 is due to the transition to the IMS methodology, this may require an adjustment to the reference level in PC21. NIW do not believe that the annual figures represented in the graph indicate a deterioration in the Network but rather reflect an improved reporting methodology as:

- The OMIS data had consistently indicated stability

- IMS data shows 4 full years of stability (excluding atypical events such as August Flooding 2017 and atypical cold weather in March 2018)
- Note: the figures for the atypical Dec 2017 cold snap impact are included.

Bearing in mind the above issues which affected the Network in this period, the following table lists the unadjusted annual actual outturn numbers of unplanned interruption **events** lasting more than 3 hours, more than 6 hours and more than 12 hours in 2015/16, 2016/17 and 2017/18 and 2018/2019.

Number of Events/Incidents in Each Category Contributing to Unplanned Outages Includes atypical factors where applicable (there are none for AIR19)

	2015/16	2016/17	2017/18	2018/19
More than 3 hours	781	779	803	654
More than 6 hours	119	95	81	75
More than 12 hours	17	12	9	4

This table further suggests stability in the network for the > 3hours category.

Due to the analysis above, this indicator is considered as Stable but we will continue to monitor trends and review as necessary.

Conclusion

The trend from AIR16 to present has been relatively stable, when the transition to IMS was embedded.

In the AIR17 period, 14% fewer properties were affected than in the AIR16, period this decrease was mainly due to a reduction in the number of interruption events involving more than 2,000 properties.

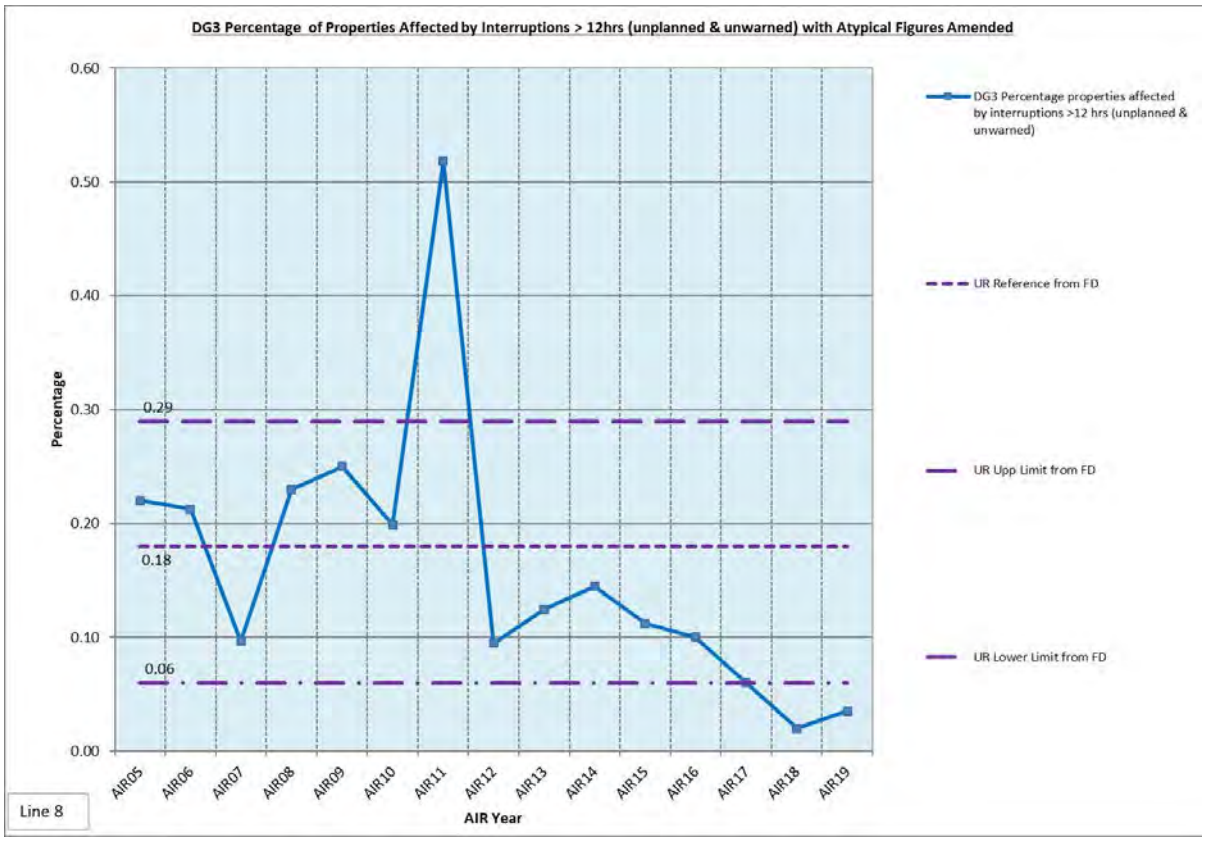
There is no evidence in either the IMS dataset or the IMS dataset to suggest that serviceability has been ‘marginal’ or ‘deteriorating’. An assessment of asset performance based on the OMIS dataset confirms that serviceability was ‘**Stable**’ during the 7-year period from 2007/08 to 2013/14.

An assessment of asset performance based on of the IMS dataset confirms that serviceability has been “**Stable”** during the 4-year period from 2015/16 to 2018/19.

As the 2017/18 outturn did not conform to an improving trend due to a very cold winter weather event and as the trend is based now on four years of robust IMS data, the conclusion is that NI Water’s performance against this measure remains ‘**Stable**’.

As the quantity of IMS data continues to increase over the coming years, the reliability of the associated serviceability trend should improve and the long-term trend should become more apparent. The Company will continue to monitor asset serviceability on a yearly basis.

Line 8 – Percentage of Properties Affected by Interruptions > 12hrs



For AIR 18 the graph shows that, the percentage outturn of properties with outages lasting greater than 12 hours (190) divided by the number of connected props of 862,988 in AIR18 was 0.02%

For AIR19 the graph shows that, the percentage outturn of properties with outages lasting greater than 12 hours (Total number = 308) divided by the number of connected props of 874,307 in AIR19 = 0.035%.

Outturn is 0.04% rounded to two significant figures.

Table Summary of equipment failures 2007-2019

Summary Table annual outturns of property outages **excluding** atypical factors for >12hrs

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Outturn	**1,655**	**1,358**	***1,563***	***697***	**663**	***1,017***	**1,105**	***928***	**839**	**344**	***190***	**308**

This suggests a stable trend as the outturn figures, (including the AIR19 figure of 0.035%), are still well below the lower range of the acceptable target envelope of 0.06%

This figure is considered a very accurate output, as it has been arrived at by a thorough examination of several individual incidents on a one by one basis by NIW staff. Unlike the 3 hour figure above which has been compiled from the new IMS system which came into use between AIR15 and AIR16, this pattern of improvement is not affected by the automated IMS data collection.

The conclusion is that, although the annual outturn for Table 46: Line 8: DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned) continues to be stable,

the ongoing improvement of the last couple of years may be more likely to be attributed to an improved operational focus on work practices than asset performance.

This is consistent with the conclusion reached for Table 46: Line 6: Interruptions to supply greater than 3 hours resulting from equipment failure. (See also the table above for Line 6 comparing the annual returns for >12 hrs and > 3 hrs.

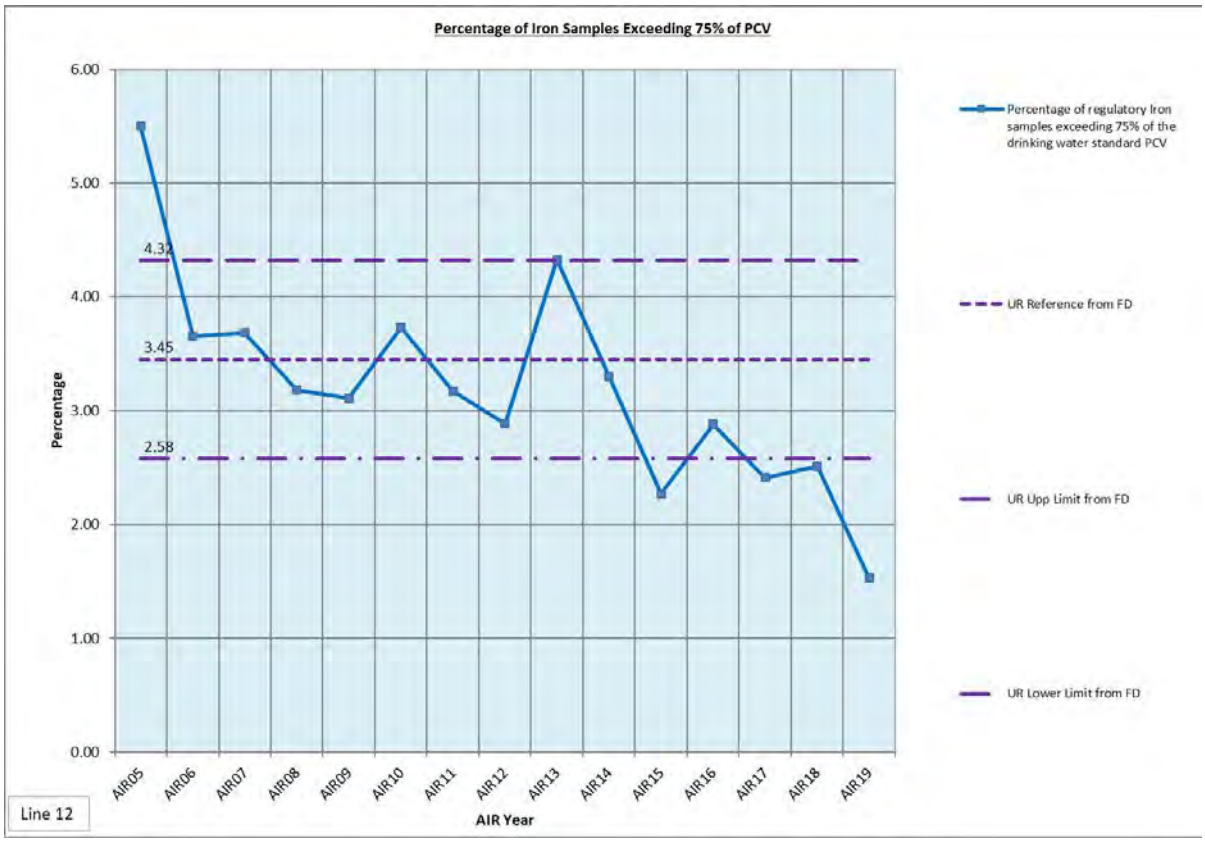
The outturn reductions for unplanned interruption events lasting more than 6 hours and more than 12 hours are therefore more likely to be associated with changes in work practice, aimed at reducing the duration of unplanned interruptions and driven by DG3 annual target reductions.

To date, the impact of initiatives targeted towards improving performance has been greatest on the 'more than 12 hour' time band as the main focus has been on those interruptions that last the longest and which therefore have the greatest potential to inconvenience customers. The Company has a Service Failure Analysis process where all unplanned interruption events lasting more than 12 hours are fully investigated to determine the root cause and to establish if any lessons can be learnt which could prevent a repeat occurrence of incidents in the future.

The conclusion is that although the annual outturn for Table 46: Line 8: DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned) is still below the lowest threshold target, the ongoing improvement of the last couple of years may be more likely to be attributed to an improved operational focus on work practices than asset performance.

The performance for this Serviceability measure is "Stable"

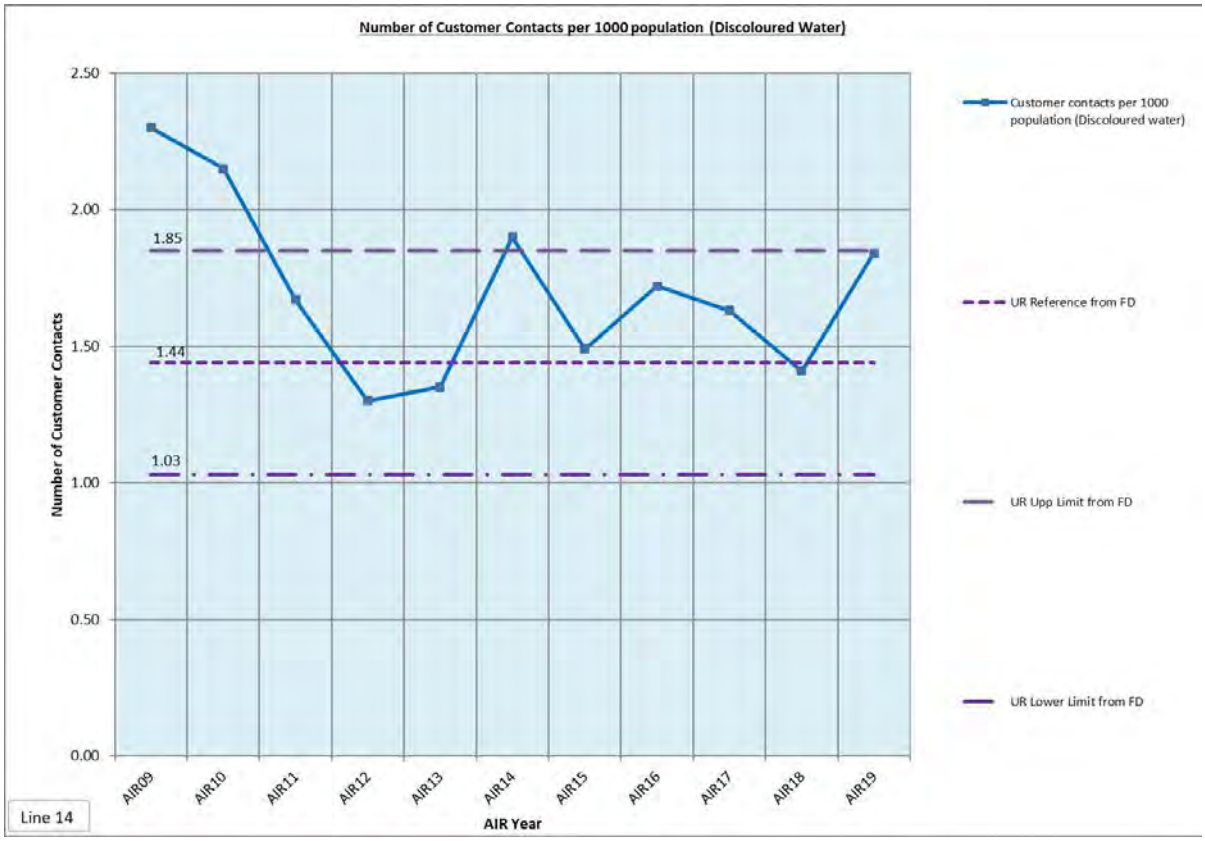
Line 12 – Percentage of Iron Samples Exceeding 75% of PCV



The AIR19 output is 1.48 % Calculated from a total of 28 failures out of 1894 samples.

Note: There were 48 failures in AIR18, this shows that the failure rate is relatively low with the ongoing trend fluctuating around the lowest control boundary for the last 4 years.
This therefore indicates that this measure indicates a **Stable** trend**.**

Line 14 – Number of Customer Contacts per 1000 population (Discoloured Water)



The Company has arrived at a 'Stable' assessment for this measure.

The Population figure utilised here for **AIR19** is 1,873,140 so figure would then be 3447/1, 873,140 = 1.84%

For **AIR18** the measure for discoloured water Customer Contacts, (calculated from the number of Customer Contacts = 2632 divided by the population figure of 1,869,170 = 0.00141 –multiplied by 1000 for this measure was = 1.41).

This output suggests that this trend is Stable, as some specific weather incidents have contributed to this increase in the AIR19 reporting period, (as the figures returned refer to the Calendar Year rather than the April to March period like the other graphs).

Due to the timeframe for which this data was submitted, the severe (yellow warning) weather events in Feb and March 2018 are included increasing the number of calls in these months by 10% over the typical monthly average for 2018. (See table below showing calls logged per calendar month).

In June and July the total of calls on this issue were approx. 25% greater than the average for 2018 due to the dry (drought) spell in June July with August call total being 50% greater than the average.

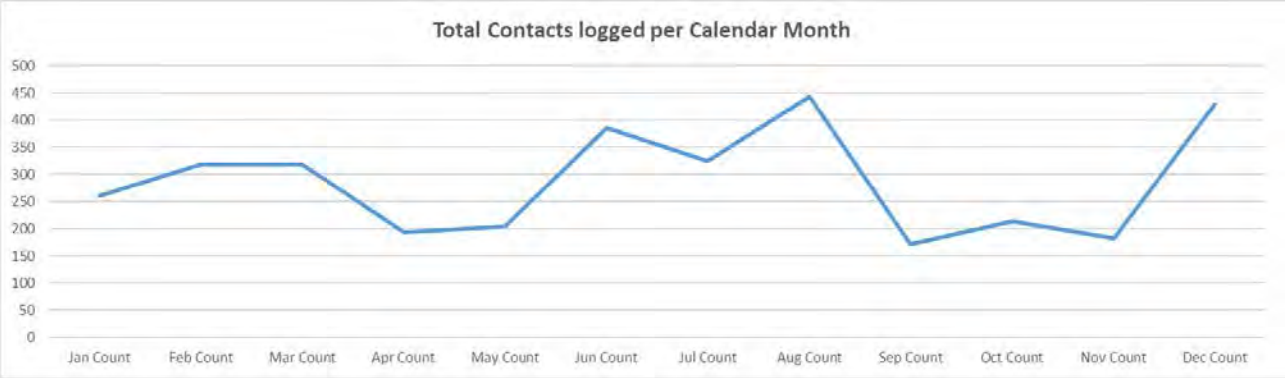
A peak was also recorded in Aug 2018 due to a Pumping Station test at Drumfane SR in Broughshane, Antrim which required re –zoning work to be implemented following on from the high demand issue during the summer. A similar rezoning event also occurred in Dec 2018 in the Finaghy area of Belfast

The current measure on the graph above is just below the upper point of the target envelope with the trend remaining between the upper and median ranges of the graph since AIR15.

See the actual contacts numbers on this specific issue in the table below.

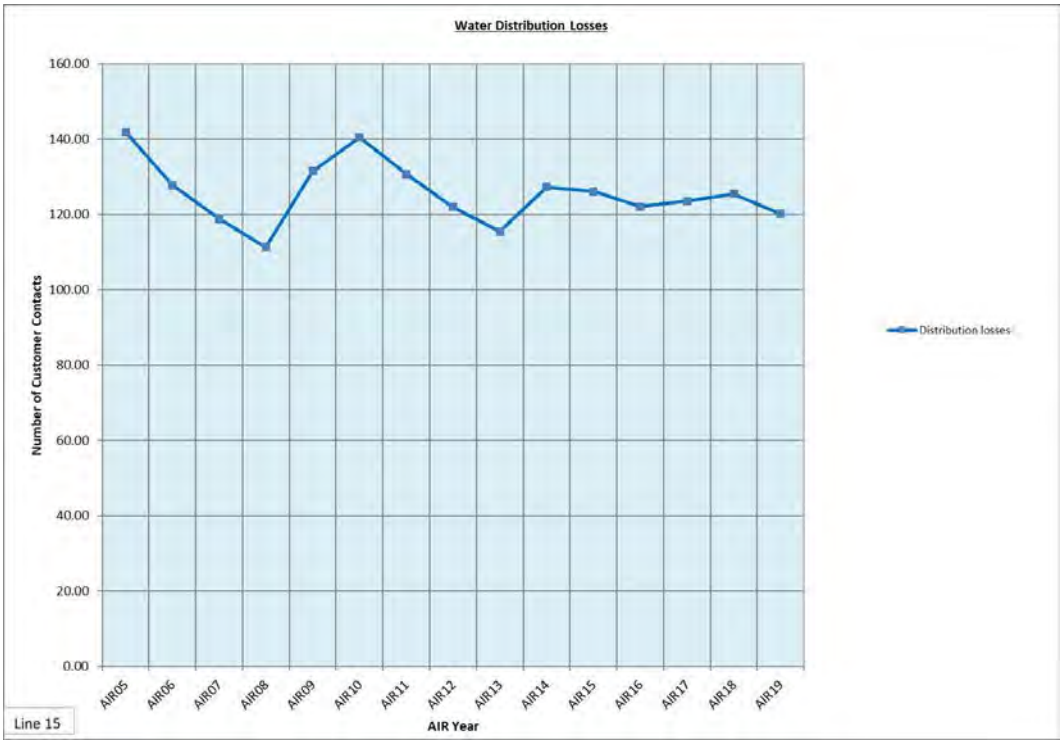
	AIR 17	AIR 18	AIR 19
Average Monthly Number of Calls on This Issue	252	219	287
Total Customer Contacts on Water Network for Discolouration Issues	3029	2632	3447

Total Calls Logged Per Calendar Month in 2018



Line 15 – Water Distribution Losses

This information as an explanatory factor for mains bursts which can be monitored for potential mains bursts trends.



The Water Distribution losses total for **AIR19** =120.23 ML/day
The pattern for the past 4 years has been:
AIR15 = 126.08, AIR16 = 122.08, AIR17 =123.55, AIR18 = 125.44

This is calculated by subtracting Lines 16 (DSOU) and 20 (Water Delivered) from Line 26 (Distribution Input), Distribution losses from AIR19 are estimated to be 120.23 Ml/d.

Distribution losses had risen slightly in AIR17 and AIR18 because of an increase in reported leakage due to excessive weather events, however, the output for this period is comparable to the relatively low figure in AIR16.

The increasing trend in this indicator, in the last two reporting period seems to have levelled off as the extreme weather events of the past two years that have contributed to this pattern did not occur during this reporting period. (See more detailed commentary in Table 10).

Line 30 – Company's overall serviceability assessment for water non-infrastructure

The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for water non-infrastructure, are either within, or have outperformed the control limits based on the latest AIR19 information.

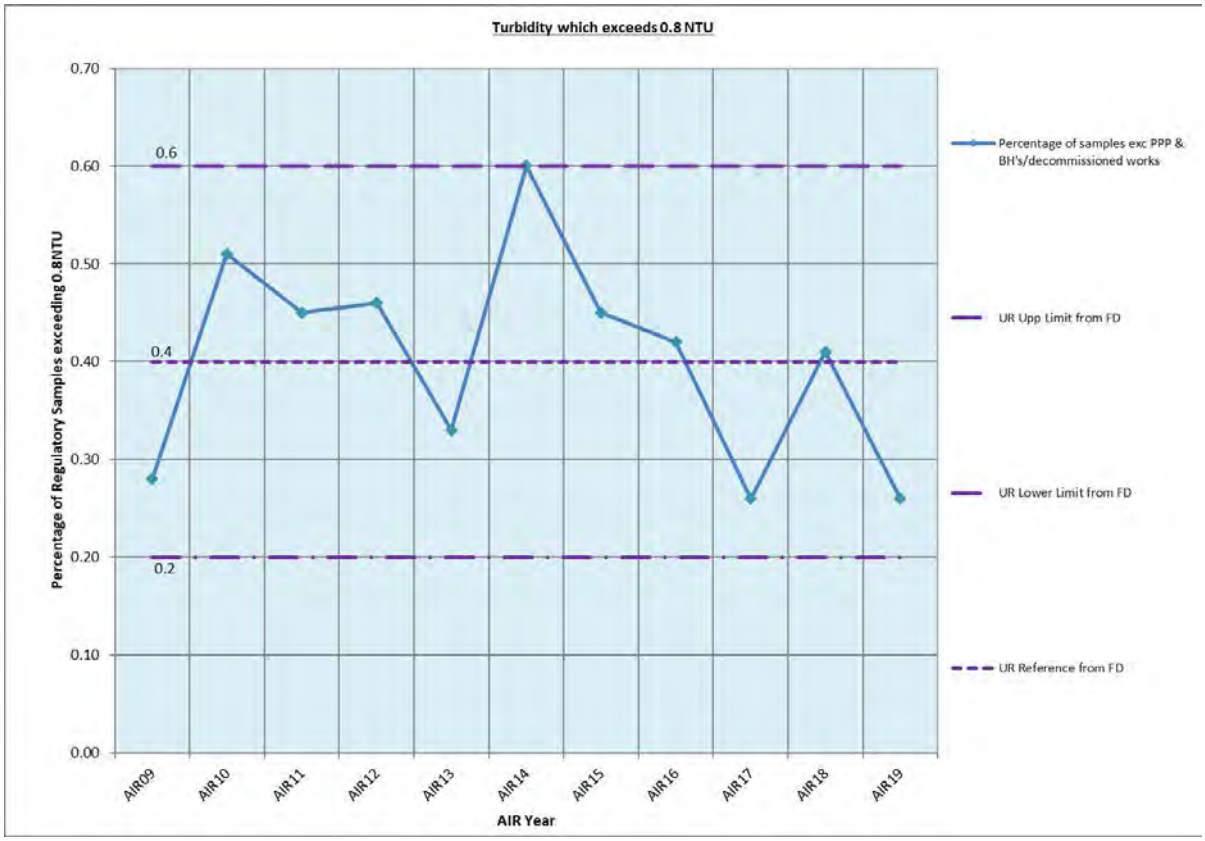
This can be seen in the serviceability graphs:

Primary Indicator

Line 20 – Turbidity which exceeds 0.8NTU – excluding PPP & BH's/decommissioned works

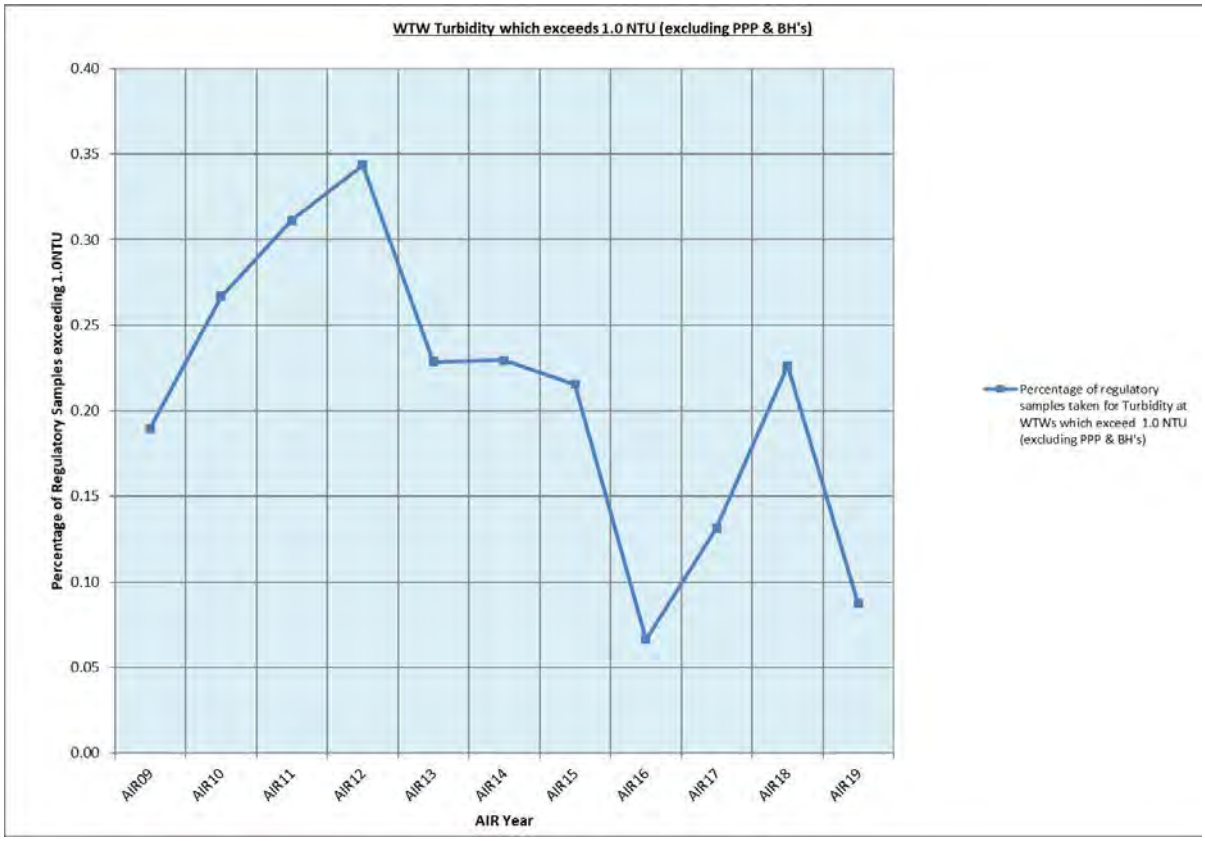
The output is 0.26% which is similar to the two previous years. The AIR19 figure has therefore remained within the agreed Limits, between the lower and median targets on the graph, this measure is therefore considered to be Stable.
As the figure for AIR16 was unusually elevated, the Regulator requested NIW carry out investigations as to the reason, resulting in the figure being reduced by the Regulator due to unrepresentative sample failures, such as issues with sample points or faulty analytical equipment, which can cause a sample to fail but are not reflective of the water quality, or the Serviceability of the WTW. The graph includes the amended reduced figure for AIR16.

The AIR19 figure is calculated from Line 19 (12) divided by Line 17(4584) and calculated as a percentage.



Secondary Indicators

Line 18 - WTW Turbidity which exceeds 1.0 NTU

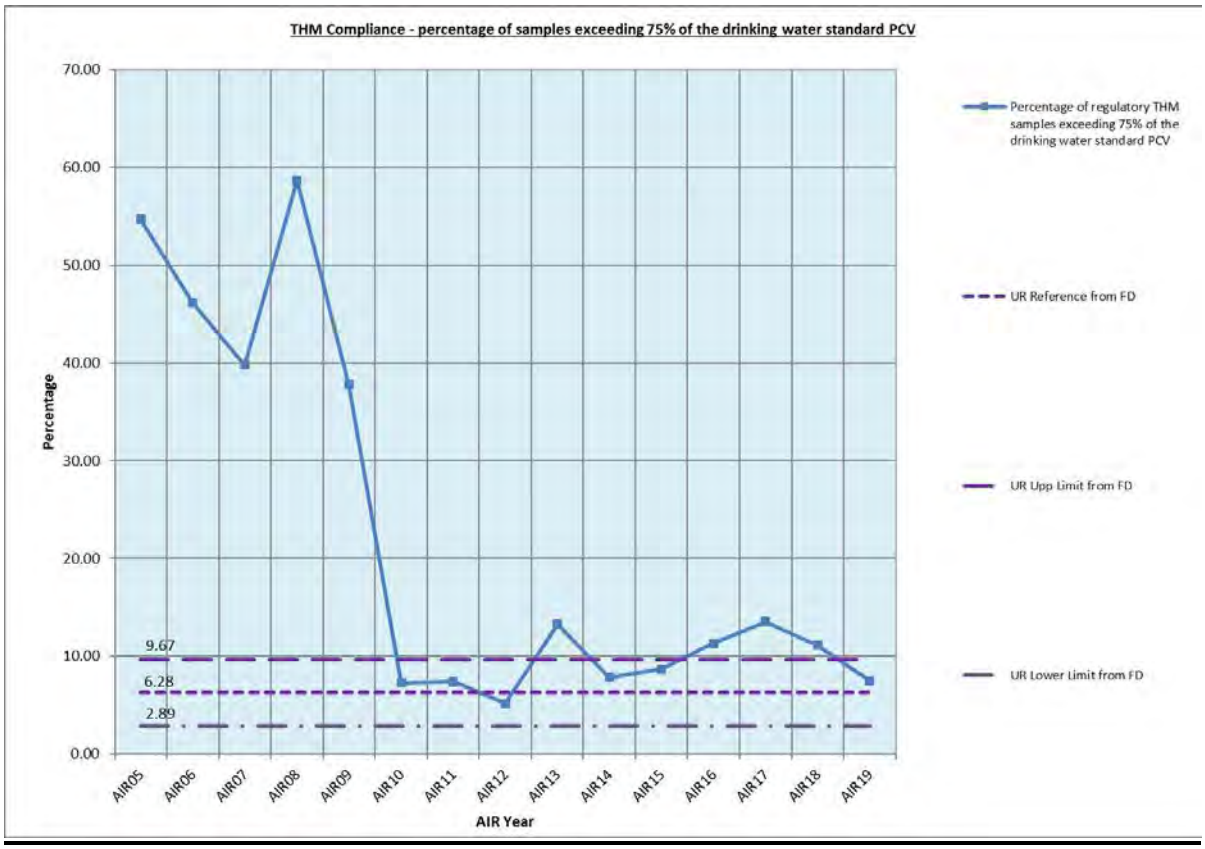


The AIR19 figure is calculated from line 18 divided by Line 17, expressed as a percentage = 4/4584 = 0.09%. This is a significant improvement on last year's figure of 0.22%.

The "WTW Turbidity which exceeds 1.0 NTU – excluding PPP & BH's/decommissioned works" indicator is neither commented or have limits/references set by the Regulator. It has been included for illustrative purposes only.

As the figure for AIR16 was unusually elevated, the Regulator requested NIW carry out investigations as to the reason, resulting in the figure being reduced by the Regulator due to unrepresentative sample failures, such as issues with sample points or faulty analytical equipment, which can cause a sample to fail but are not reflective of the water quality, or the Serviceability of the WTW. The graph depicts the amended reduced figure for AIR16.

Line 24 - THM Compliance - percentage of samples exceeding 75% of the drinking water standard PCV



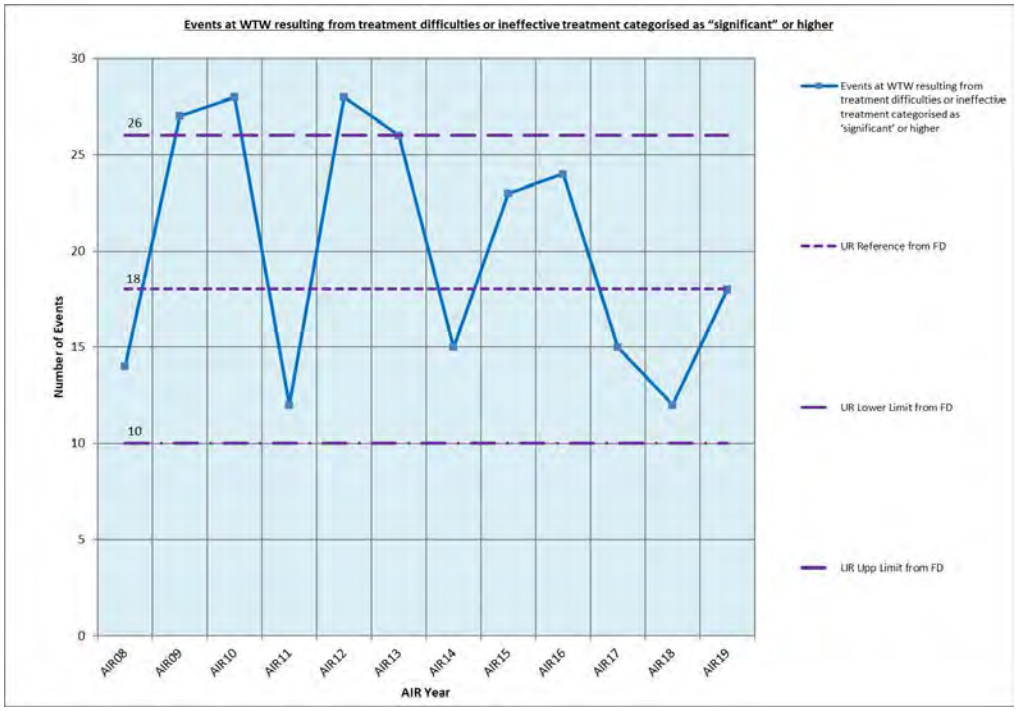
This output is calculated by diving Line 23 by Line 21 i.e. 29/389 expressed as a percentage = 7.5%.This output shows the trend for this year settling at a point near halfway between the upper and median target .Outputs similar to AIR14 and 15.

As the AIR17 figure had resulted in a significant cumulative rise above the Upper Limit for the second consecutive year, serviceability for this indicator was seen as Deteriorating. AIR18 had shown improvement from AIR17, but still remains above the Upper Limit, and therefore now Stable.

The WTWs have a final water operational monitor for THMs, which acts as a proactive alarm if 50% of the PCV (50µg/l) is measured. It should be noted that mains water temperature was higher in 2016/17 than in previous years, which would contribute to the increase in concentration and the further exceedance to greater than 75% of the PCV.

THM Action Plans have been developed, and both THM results and the Action Plans are discussed on a monthly basis at the Water Quality Compliance Review Group.

Line 25 - Events at WTW resulting from treatment difficulties or ineffective treatment categorised as “significant” or higher

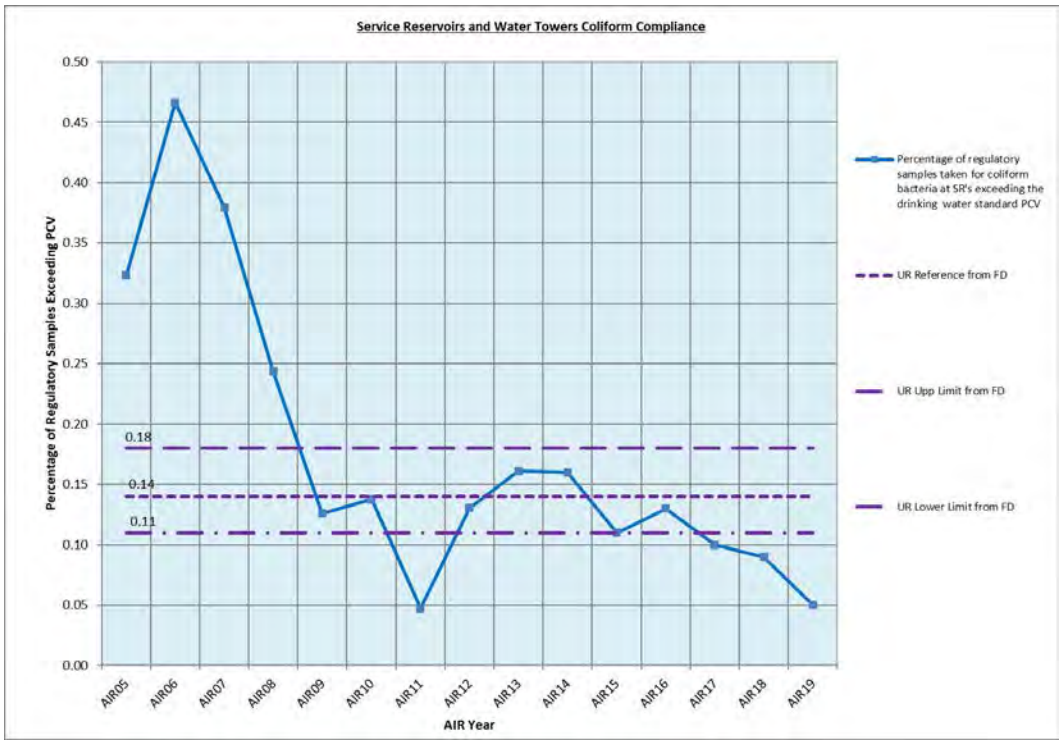


The output for AIR19 is a number of events recorded as 18 nr.

This figure is on the median line for AIR19. The trend here seems to be fluctuating around the median and has been comfortable within the upper and lower envelope target since AIR14.

“Events at WTW resulting from treatment difficulties or ineffective treatment categorised as significant or higher” has continued, for the sixth year, to perform as Stable.

Line 28 - Service Reservoirs and Water Towers Coliform Compliance – Secondary Indicator

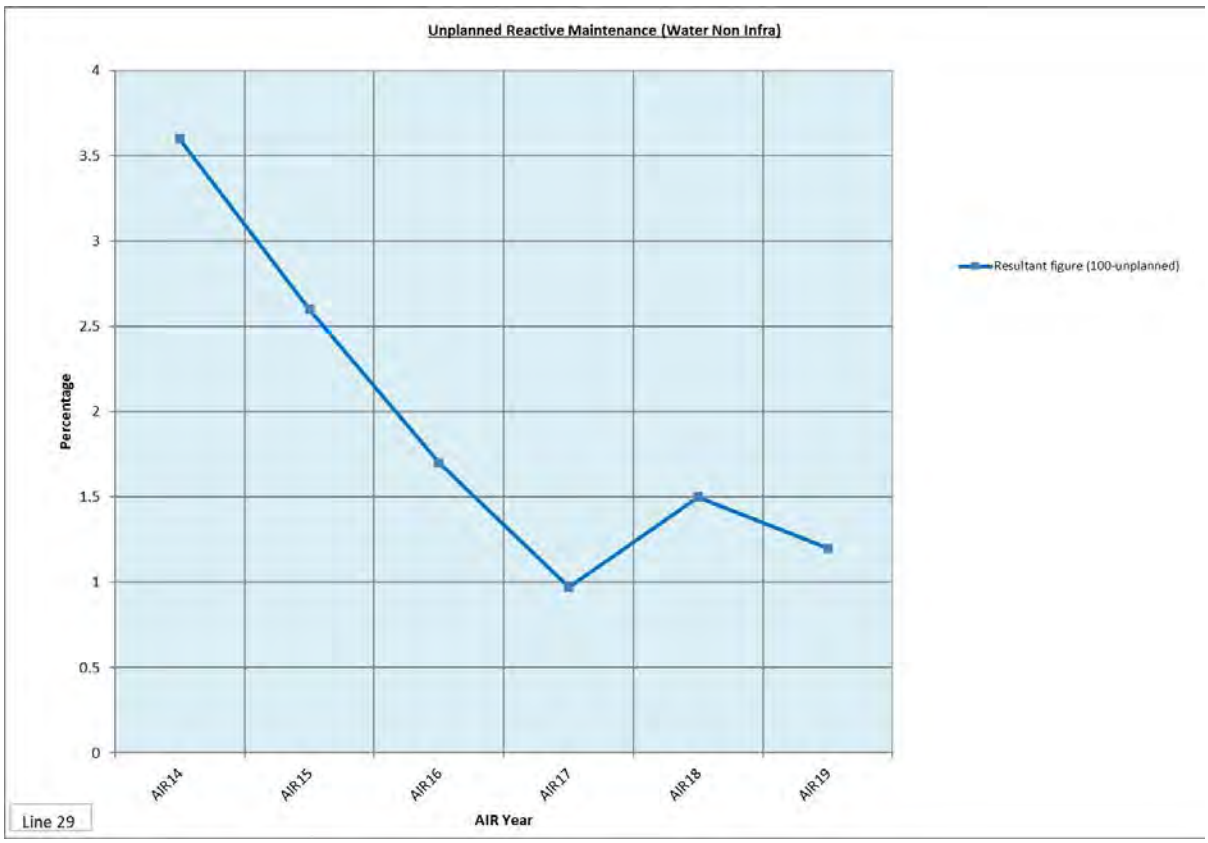


The AIR19 figure is calculated from Line 27 divided by Line 26 =8/14921 = 0.05%

This figure has dropped significantly over this period to a figure well below the lowest target limit.

“Service Reservoirs and Water Towers Coliform Compliance” has continued to show Stable performance over recent years.

Line 29 – Unplanned Reactive Maintenance (Water Non Infra) – Percentage of Availability of Critical Assets



The figure for AIR19 is 1.19%

Although this indicator is the Percentage of Availability of Critical Assets the figures in the above graph depict the non-availability of critical assets for illustrative purposes, and to maintain a consistent approach with other graphs within this document.

The figures are based on telemetry data for the critical items of plant in a failed state. As this is relatively new reported data, Reference and Limits have not been set as a larger range of data is required before Serviceability can be reasonably assessed.

The reduction of items in a failed state over recent years may be due to routine proactive maintenance and the prioritisation of capital investment to sites/assets where most required.

There is a continued focus on the out of service database and returning failed assets to service as soon as possible. This has resulted in this reduction over previous few years, however, it is accepted that due to the nature of the industry there will always some level of unavailability of assets. Which has now levelled off at around 1-1.5% over the last 3 years.

Line 45 – Company's overall serviceability assessment for sewerage infrastructure

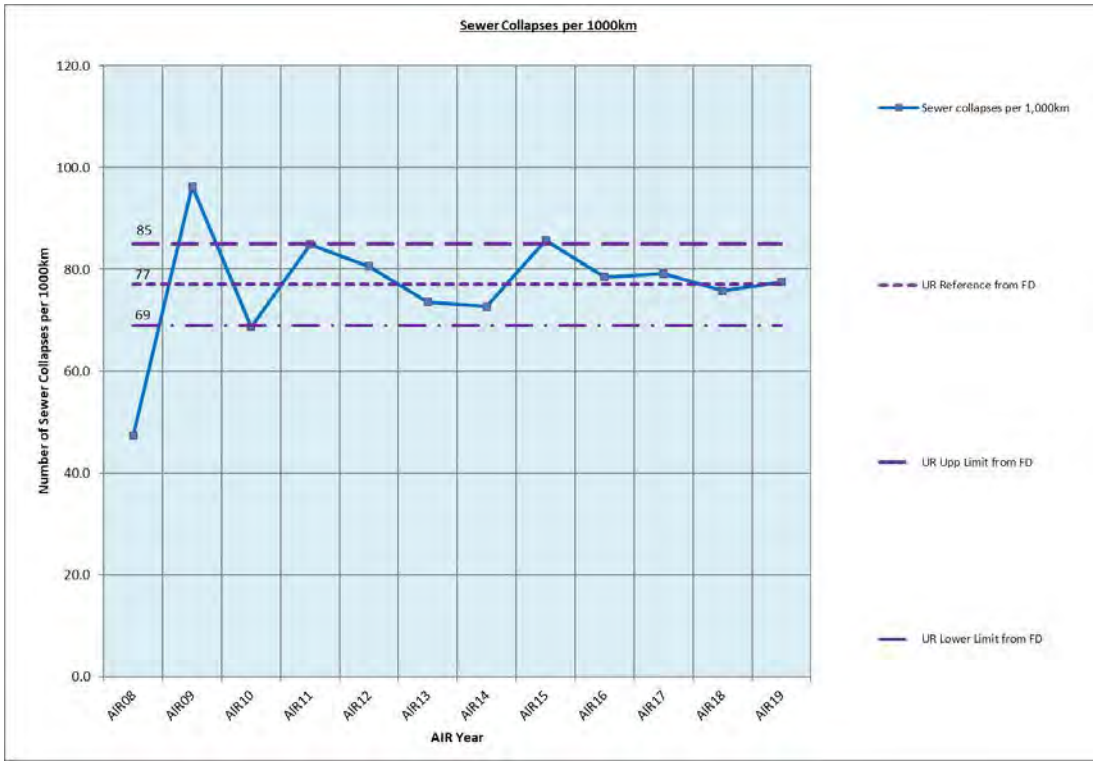
The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for sewerage infrastructure, are all within the control limits or under the lower control limits based on the latest AIR19 information.

Wastewater Infra Serviceability

Primary Indicator

Line 35 – Sewer collapses per 1,000km

This graph shows the number of collapses reported over the AIR return periods, which would indicate a stable output.



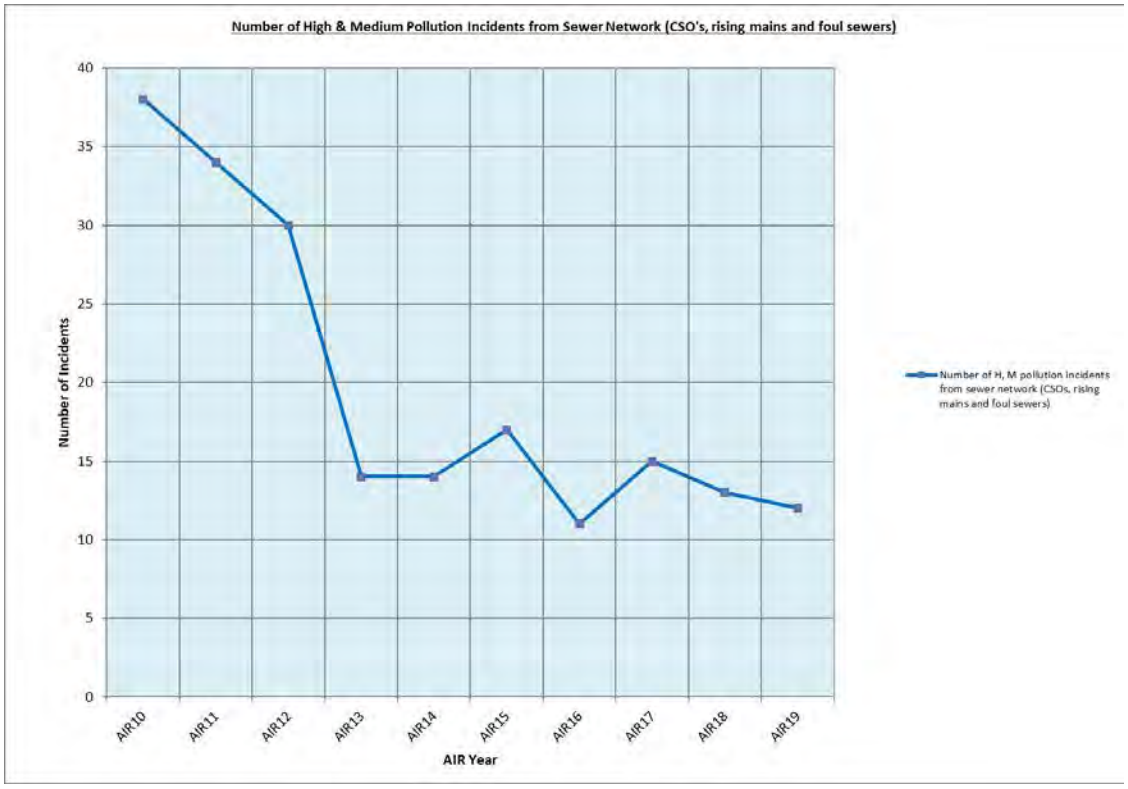
Secondary Indicators
Line 37 – Sewer blockages per 1,000km

This graph indicates the number of blockages per 1000km over the different AIR return periods, which would indicate an improvement on the output.

The reduction strategy set out by NI Water is making a positive impact in the reduction of sewer blockages. By the use of the hotspot tool, letter drops in certain catchment and an increase programme of CCTV. Is reducing the number of blockages.

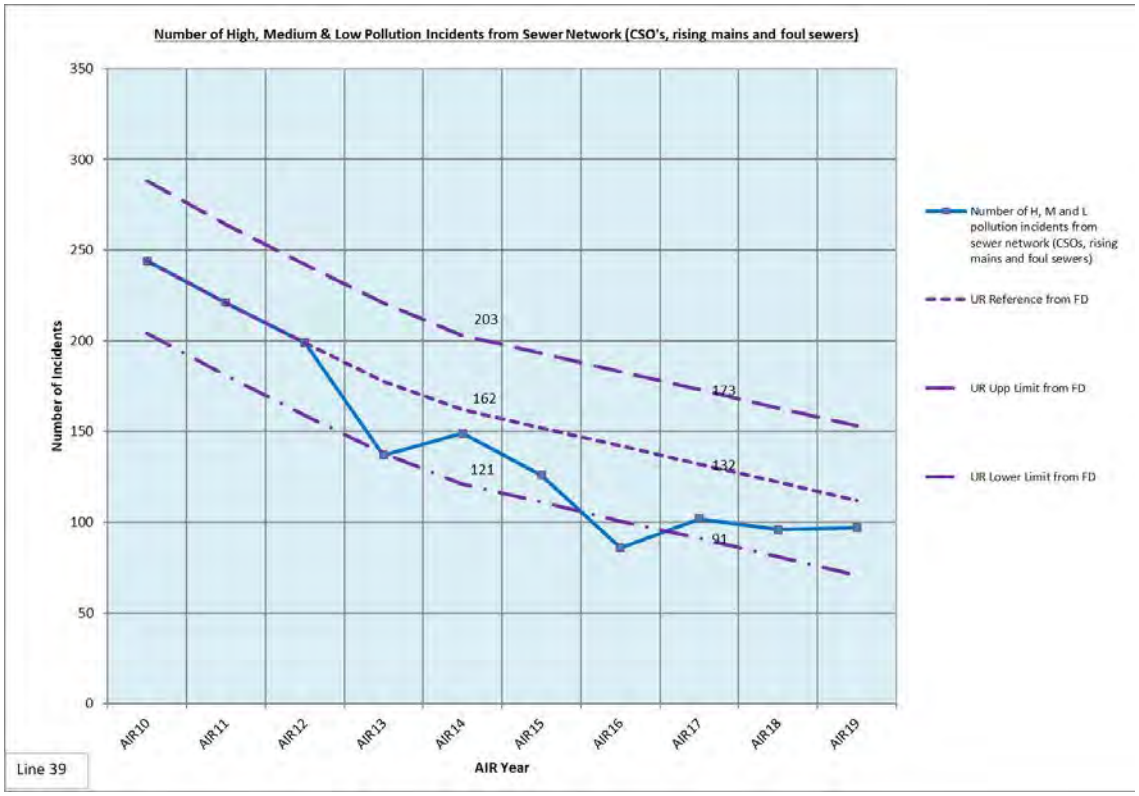
Line 38 – Number of H, M pollution incidents from sewer network

This graph has been submitted for information purposes only.



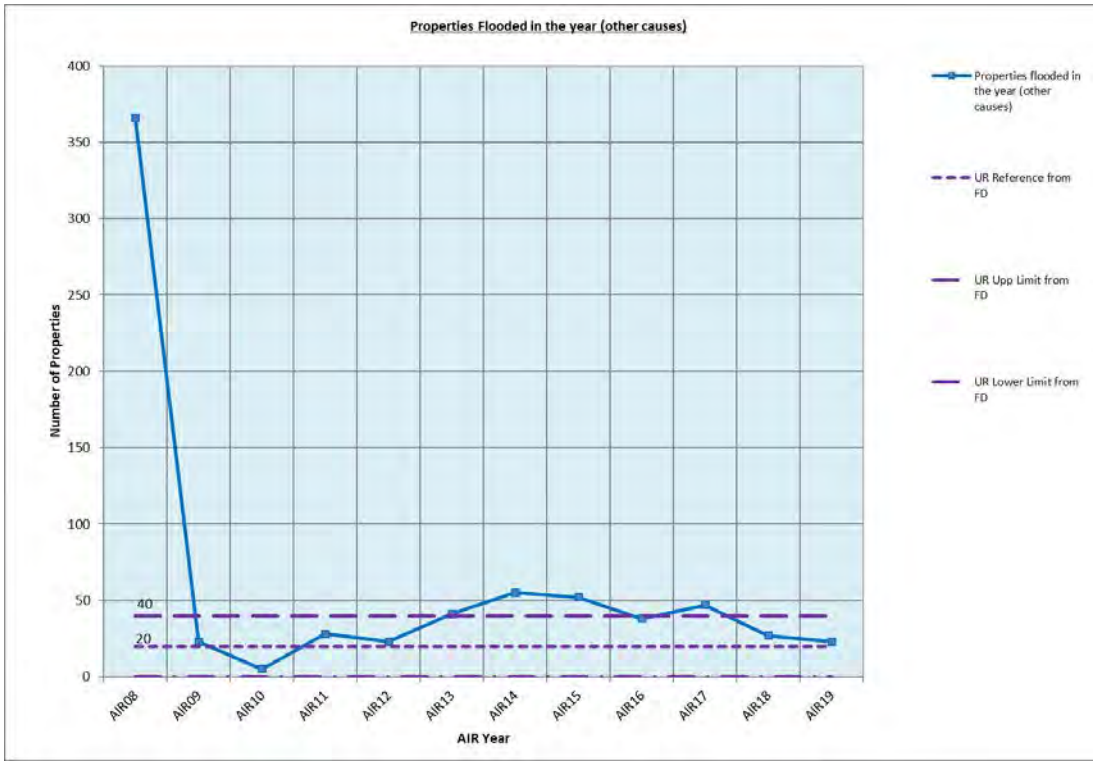
Line 39 - Number of H, M and L pollution incidents from sewer network

This graph shows the high, medium and low pollution incidents from the sewer network over the AIR return periods for CSO's, rising mains and foul sewers. Which would indicate a stable performance.



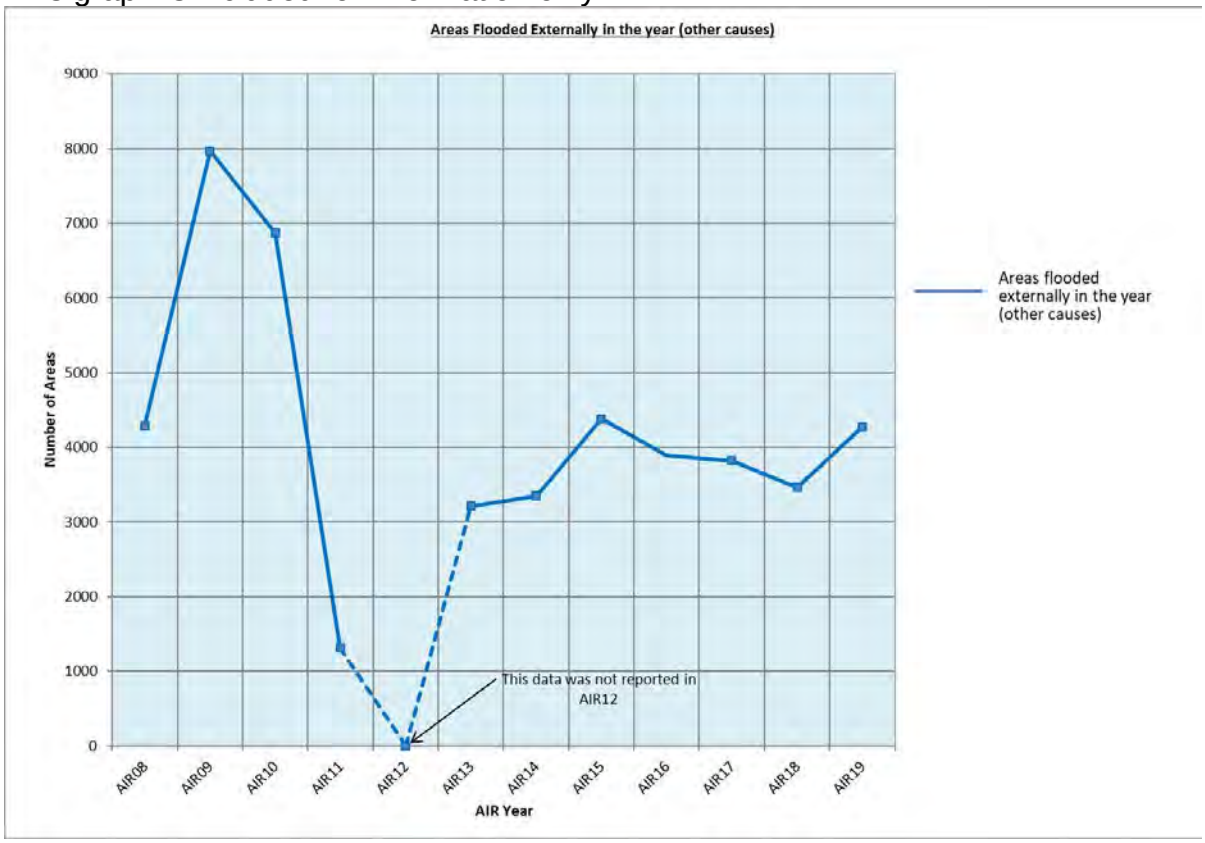
Line 40 – properties flooded in the year

This indicator is to monitor performance and not incorporated in the serviceability assessment, it has however been included as a Tertiary Indicator. It continues to perform as stable.



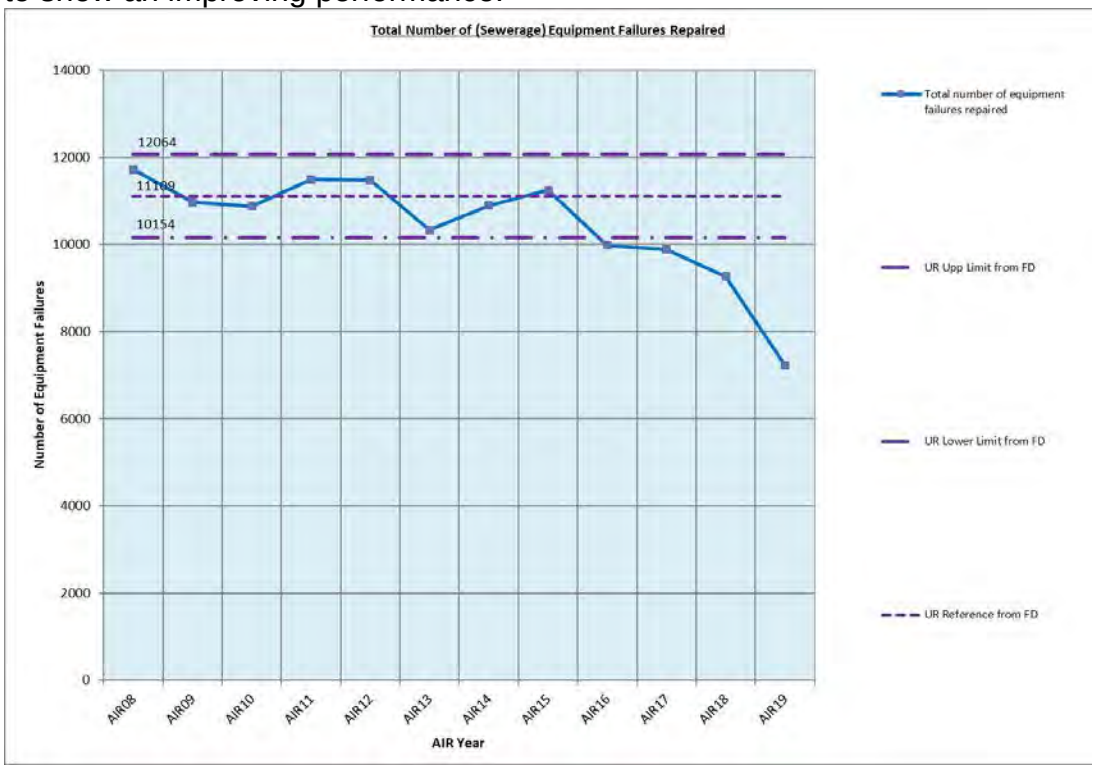
Line 41 – Areas flooded externally in the year

This graph is included for information only.



Line 42 – Total Number of (Sewerage) Equipment Failure Repairs.

This graph shows the total number of sewerage equipment failures repaired, and continues to show an improving performance.



Line 44 – Number of sewer repairs

This graph is included for information only.

Line 54 – Company's overall serviceability assessment for wastewater non-infrastructure

The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for wastewater non-infrastructure, shows all the indicators are within or below control limits.

Primary Indicator

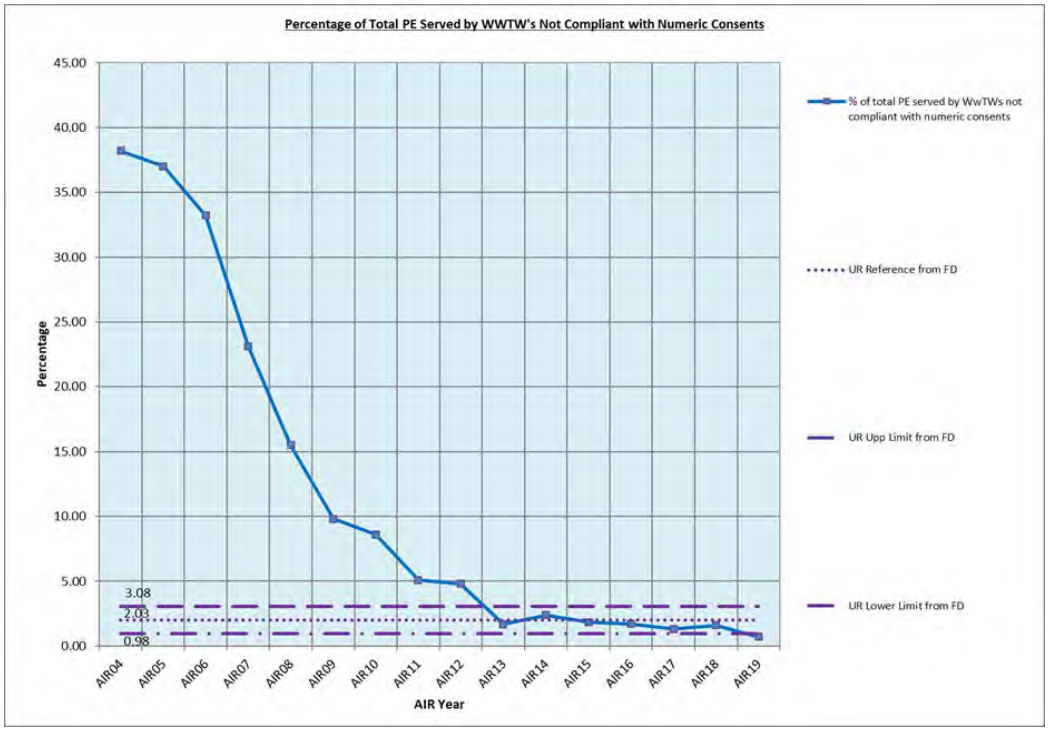
Line 46 – Percentage of WwTW Discharges Not Compliant with Numeric Consents

"Percentage of WwTW Discharges Not Compliant with Numeric Consents" has continued to show Stable performance over recent years. The regular investment from Capital Maintenance and Quality driven projects has helped maintain this Stable output.

Secondary Indicator

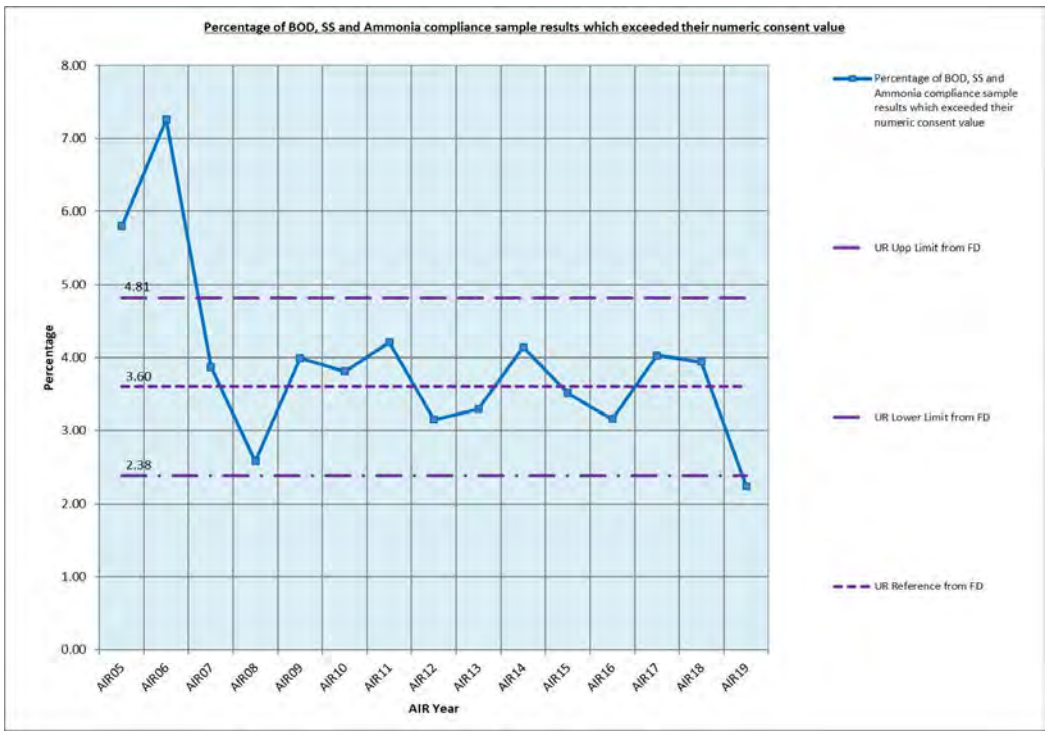
Line 47 – Percentage of Total PE Served by WwTWs Not Compliant with Numeric Consents

"Percentage of Total PE Served by WwTWs Not Compliant with Numeric Consents" has again shown Stable performance.



Line 50 – Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value

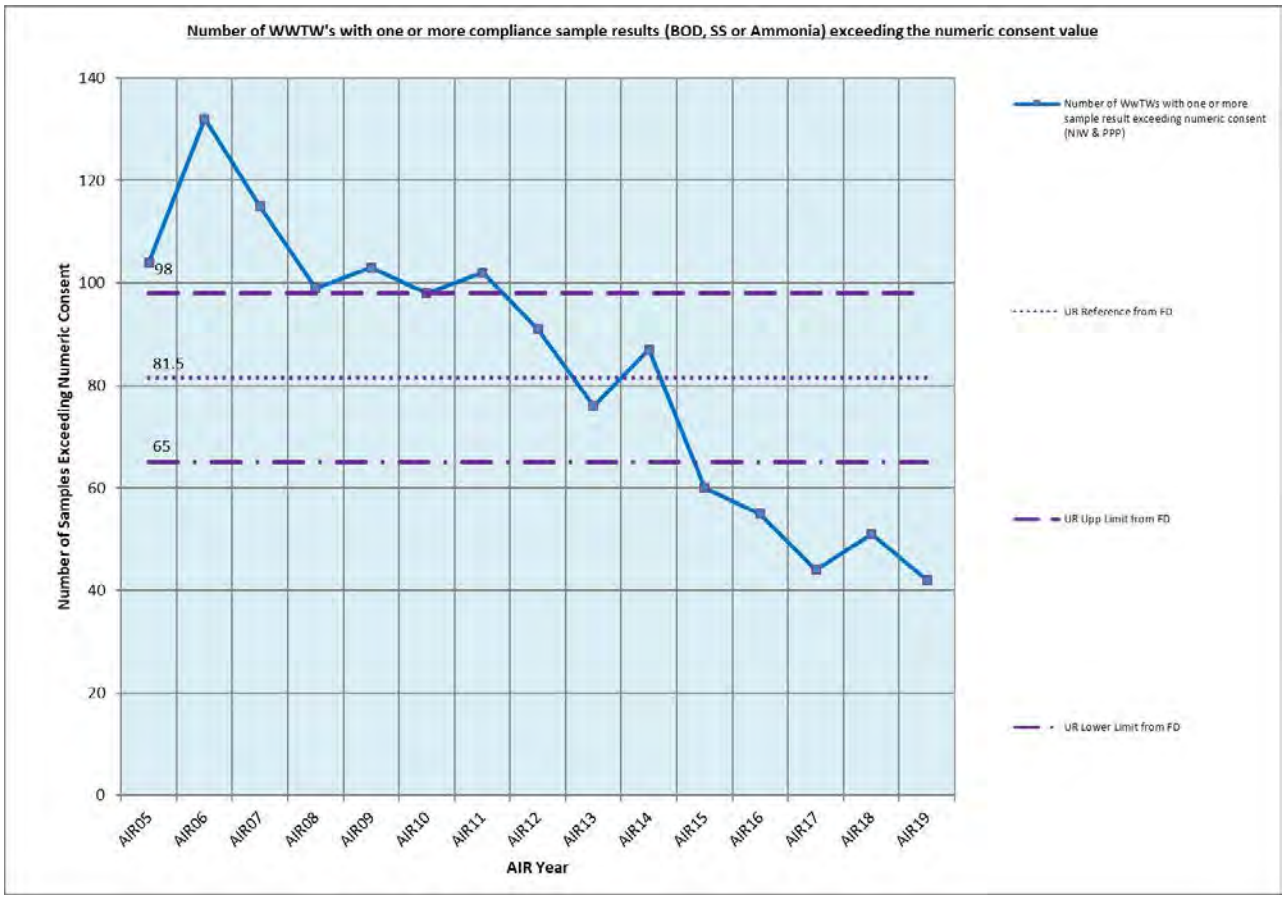
Since the initial outlying figures of AIR05 & AIR06 the "Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value" has continued to perform as Stable.



Line 51 - Number of WwTWs with one or more compliance sample results (BOD, SS or Ammonia) exceeding the numeric consent value

“Number of WwTWs with one or more compliance sample results (BOD, SS or Ammonia) exceeding the numeric consent value” has for the fourth consecutive year out-performed the Lower Limit. This has become evident by both the annual investment in assets and the extensive operational effort.

This has been assessed as Improving.



Line 53 – Unplanned Reactive Maintenance (Wastewater Non Infra) – Percentage of Availability of Critical Assets

Although this indicator is the Percentage of Availability of Critical Assets the figures in the above graph depict the non-availability of critical assets for illustrative purposes, and to maintain a consistent approach with other graphs within this document.

The figures are based on telemetry data for the critical items of plant in a failed state. As this is relatively new reported data, Reference and Limits have not been set as a larger range of data is required before Serviceability can be reasonably assessed.

The reduction of items in a failed state over recent years may be due to the benign weather, routine proactive maintenance and/or the prioritisation of capital investment to sites/assets where most required.

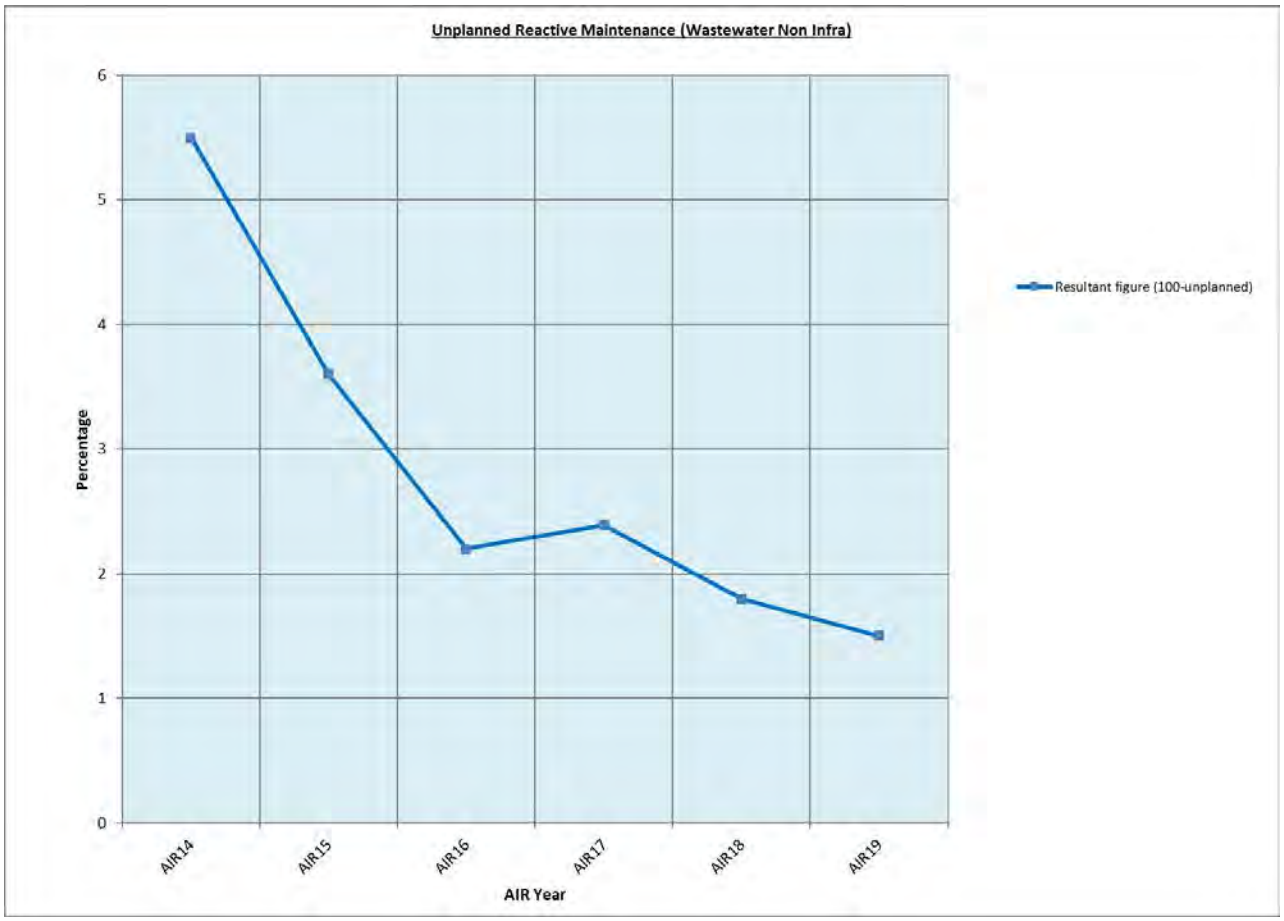


Table 47 – Development Outputs

DEVELOPMENT OUPUT			
1. Development of new consumer measures			
Final Determination: *The company shall report progress on the development of new consumer measures and satisfaction survey outlined in Section 3.7 of the PC15 final determination.*			
GOVERNANCE			
Directorate	**SRO**	**Project Lead**	**Approving Authority**
CSDD	Des Nevin	Rod Neill	EC
Additional Details:			
N/A			
PROJECT SUMMARY			
• New consumer measures have been developed in conjunction with stakeholders as part of the joint CEOG/CSat working group. • 4 new metrics were initially agreed by CEOG – 3 Quantitative and 1 Qualitative: o total contacts o first point of contact resolution (FPOCR) o repeat contacts o Net promoter score (NPS) style measure • This was then amended to: o total contacts o Unwanted Contacts o first point of contact resolution (FPOCR) o customer advocacy measure (CAM) based on NPS • The trial for the new metrics was completed and reported in AIR16. • They continue to be measured and reviewed by NIW, the UR and CSat group members. • There was insufficient data to set targets (based on trendline analysis) at the PC15 mid-term review for performance reporting during the second half of PC15. • It is anticipated that performance targets for the new measures will now be proposed for inclusion in the PC21 business plan and draft/final determinations.			
KEY MILESTONES		Target	Status
1. Development of new consumer measures and approval by CEOG			Complete
2. Complete a trial of new consumer measures		30 Sep 15	Complete
3. Complete a trial of a new consumer satisfaction survey		31 Dec 15	Complete
4. Go live with a new consumer satisfaction survey		01 Apr 16	Complete
5. Report new measures in AIR16		15 Jul 16	Complete
6. Provide update for PC15 Mid-Term Review (via AIR17)		15 Jul 17	Complete
7. Propose targets in PC21 Business Plan		Q3 2019/20	On target

Line 1 - Development of new consumer measures

The company shall report progress on the development of new consumer measures and satisfaction survey outlined in Section 3.7 of the PC15 final determination. The company shall:

- *Complete a trial of new consumer measures by 30 September 2015;*
- *Go-live with new consumer measures on 1 April 2016;*

- *Complete a trial of a new consumer satisfaction survey by 31 December 2015; and*
- *Go live with a new consumer satisfaction survey 1 April 2016.*

Activity Completed to date and its outcome

Listening to our customers' views and building these into our plans is essential for us to ensure that our customers' needs are at the heart of our service delivery.

NI Water has been working extensively on providing an improved customer experience. Under the auspices of the Customer Engagement Oversight Group (CEOG), NI Water has been actively engaging with NIAUR, CCNI and DRD to develop a range of new quantitative and qualitative customer measures which are most relevant to us and our customers, including the merits (or otherwise) of the current (OPA/DG) regulatory measures.

These new measures include the development of targets and methodologies for:

- Reducing unwanted contacts,
- Resolving customer queries at first point of contact (FPOCR), industry trends show that Customer Satisfaction increases in line with FPOCR increase,
- Reducing repeat contacts, by analysing and understanding the reasons for these contacts, and
- Developing a solution to obtain more meaningful and timely customer satisfaction feedback to highlight, as close to real time as possible, those areas and activities, which cause dissatisfaction for customers.

The measures above were trialled and reported on for the first time in AIR16.

The customer satisfaction measure has been further developed through the implementation of Voice of the Customer (supported by Watermelon), which will eventually replace the current Allto Survey. This survey allows us to significantly increase the sampling of customer satisfaction above the current 800 per annum to approx. 800 per month (c10, 000 per annum). It is expected that Voice of the Customer data will be used for AIR 20.

CEOG is currently working on the development of PC21 Customer Research in support of the above.

DEVELOPMENT OUPUT		
2. Plan for Asset Maintenance		
Final Determination: The company shall provide a clear plan of how it will develop its approach to asset maintenance by 30 June 2015 with an interim update by 30 April 2015. The plan shall meet the basic requirements set out in Section 4 of the final determination. The company shall report progress against the plan throughout PC15. We shall determine the frequency of reporting once the plan has been developed.		
PROJECT SUMMARY		
A detailed PID and programme plan have been developed and progress is monitored by the Project Board.		
KEY MILESTONES	Target	Status
1. Interim update to UR	30 Apr 15	Complete
2. Approach document to UR	30 Jun 15	Complete
3. Complete visits with sample E/W/S water Co.s	31 Jan 2017	Complete
4. Update EC and gain approval on way forward	8 Mar 17	Complete
5. Verbal update to UR on progress to date and way forward	16 Mar 17	Complete
6. Business Case for Development of CMP Tools AO CIP Approval	May 17	Complete
7. Provide update for PC15 Mid Term Review (via AIR17)	15 Jul 17	Complete
8. Award Contract for Development of CMP Tools	Sep 17	Complete
9. Scenario Analysis to inform PC21 draft capital submission	Feb-Aug 19	On target
10. PC21 Business Plan – Capital Maintenance Plan	Sep-Dec 2019	On target

Summary of Progress since AIR18

In previous correspondence, NI Water set out its approach to asset maintenance in accordance with the Final Determination Main Report 2014. There have been a number of formal updates since this time including the Development Output update for AIR18 and at a meeting with the Utility Regulator (UR) on the 8th June 2018.

In general it was initially planned that the majority of actions would complete by May 19 to inform the Outline Capital submission however where appropriate some actions have been extended past this time to ensure the outputs are further refined for the final submission.

The Development Output update for AIR18 highlighted that NI Water had completed a procurement process to appoint a Service Provider to implement Deterioration Models and Service Impact & Reliability Modelling. The contract being awarded to a partnership of Atkins and Servelec Technologies. The Service Provider was tasked with developing Deterioration Models and associated Service Impact & Reliability Models for the facilities and infrastructure detailed below for the PC21 Submission:

Clean Water
Raw Water Pumping Stations
Treated Water Pumping Station
Water Treatment Works
Strategic Water Mains
Distribution Mains and Structures

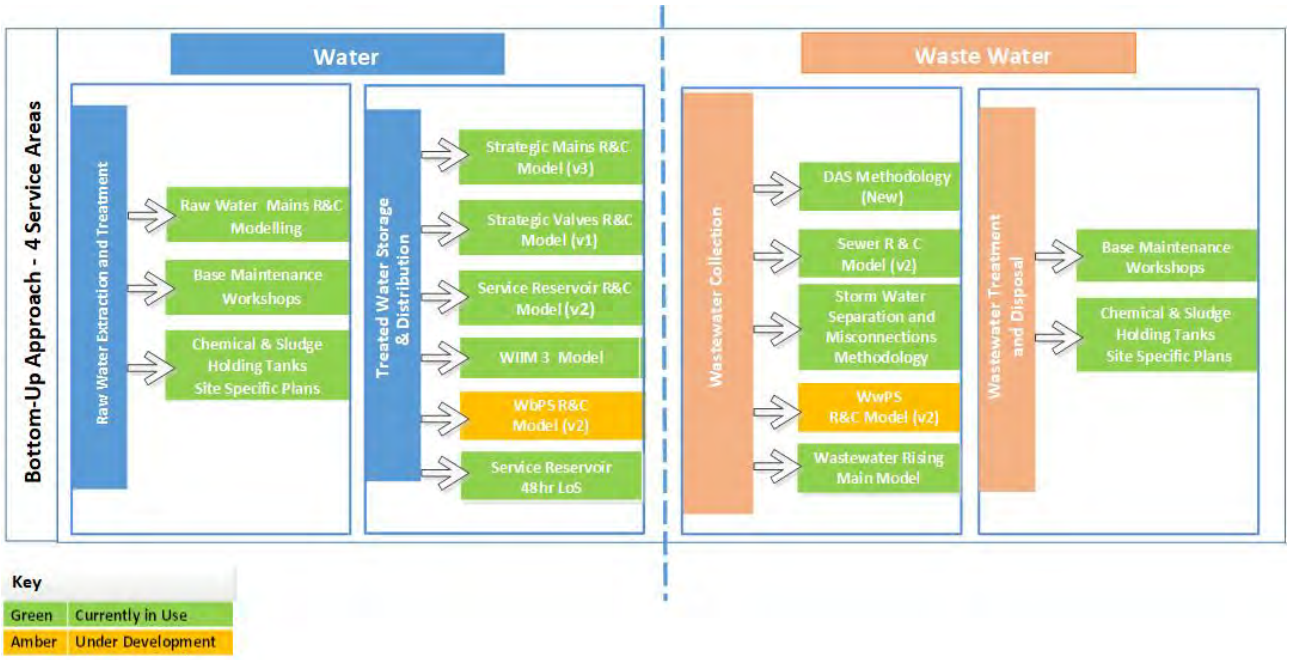
Waste Water
Sea Outfalls Headwork's
Sewage Pumping Stations (Inline & Terminal)
Wastewater Treatment Works
Sewers and Pumping Mains
Sludge Treatment

Since this time work has continued to develop these models with initial outputs for the Non-Infra Models being received in September 2019. This followed a series Water & Wastewater Non-Infra workshops with key CSDD staff during June 18 to assist the development of the models. In addition the initial drafts of the Infra Models were received in October 18 for water infra and December 18 for wastewater infra.

These models have been subsequently reviewed and outputs challenged were appropriate with a number of challenge workshops taking place with relevant personnel within the company. This has included challenges in regards to costs which are based on the outputs of the NI Water Unit Costs Database (UCD).

The outputs from version 2 of the Infra models and version 3 of the Non-Infra models have been used to inform the Outline Capital Submission and following further challenge workshop final iterations of all models are due to be completed by the end of June 19 to further refine the outputs for the final PC21 submission. This will enable scenario analysis to take place in the run up to the Final submission.

There has also been further development of NI Waters Tactical Investment Planning Tools and the table below highlights the Tactical Investment Tools that are currently in use or under development to assist Capital Maintenance Planning.



These tools have all been developed or enhanced since the PC15 submission and are continuously being refined were appropriate during the current planning period. In the past year there has been further work in refining Trunk Main Risk and Consequence Model with the development of a Trunk Main Maintenance Strategy.

A key development in enhancing data quality and been the establishment of the Watermains Infrastructure Schemes Tracker (WIST). This is a GIS layer that tracks all water mains schemes from inception to the point the schemes outputs are digitised onto GIS ensuring all Watermain improvement are captured. In regards to Wastewater an exercise is underway to improve the information on CSOs across the network and ensuring the correct consent information is captured.

As highlighted last year the number of initiatives related to the original CMP High Level Roadmap was rationalised to enable greater clarity going forward. The table below highlights the rationalised list of Key Initiatives with the latest update:

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
1	General	Development of a CMP High Level Roadmap and an initial framework of Key Service Targets	Q4 16/17	Y	A high level Roadmap & PID were developed for the project and have been approved by the Project Board, this included an initial framework. Subsequently it was agreed at Dec 17 Project Board it would be an appropriate time to review the original key initiatives submitted to NIAUR. This took place and the number of initiatives related to the original CMP High Level Roadmap was rationalised to enable greater clarity going forward.

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
2	General	A Capital Maintenance Planning Guide to be developed to ensure developed models can be maintained, enhanced in the future and support future Business Plans	Q3 19/20	On-Going	It was initially indicated a Capital Maintenance Planning Guide would be complete in Q18/19 however as part of the Deterioration and Risk & Reliability Modelling Project the assessment of NI Water data is on-going and a guide will be produced subsequent to the PC21 final submission. This assessment will highlight areas were data issues/gaps exist and indicate what improvements should take place. There have been a number of areas already highlighted and a review of the attribute fields within CAR is currently taking place. In relation to the Tactical Models these in the main are established as BAU with on-going review/improvements were appropriate.
3	General	The Development a Service Measure Framework that links to NI Waters KPIs. The Service Measure Framework should be used shape any risk and reliability models developed and link to the latest customer priorities where appropriate.	Q2 19/20	Y	A Service Measure Framework based around NI Waters KPIs has been developed and reviewed/approved by the Project Board. The current Risk & Reliability Models are based around these Service Measures were appropriate.
4	General	The Development of both Capex and Opex Cost Models are required to support the PC21 Capital Maintenance Submissions. This should include proposals for continual improvement and enhancement	Q3 18/19	On-Going	The development of Cost Models has progressed substantially since AIR18 and all the costs within the DRRM model are based on the Unit Cost Database (UCD). There will be further refinement of the UCD in the coming months but this will be generally minor.

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
5	General	Consequence of Failure Costs linked directly to the Service Measure Framework to be developed. These are to be used to support the Risk & Reliability Modelling.	Q3 18/19	Complete	As highlighted previously consequence of failure costs had been developed and were being reviewed by the Service Provider. Following the review a further update to the costs took place involving key personnel within NI Water and these updated costs will be used in the final iterations of the DRRM models.
6	General	Implement an annual review of serviceability performance and assess how the capital maintenance delivered in Pc15 has influenced the indicators.	Q4 18/19	On-Going	This is ongoing as BAU as part of the AIR process.
7	General	Where appropriate staff development should be arranged to develop in-house skills to ensure the continued maintenance and enhancement of various models. This should be balanced against outsourcing additional resources and capabilities were required.	Q3 19/20	On-Going	As part of the Deterioration and Risk & Reliability Project there is a specific element of Knowledge Transfer. This will be delivered throughout the life of the project and will ensure NI Waters ownership of the process without an ongoing dependence on 3rd parties.
8	Water Infra - Raw Water Trunk Mains, Trunk Mains & Strategic mains	Improve Asset Knowledge through available techniques such as root-cause analysis of failure, pro-active condition assessment, enhanced processes for data capture and using all relevant datasets were appropriate.	Q2 19/20	On-Going	As BAU all bursts are linked to specific Assets. The models are updated regularly to reflect the latest Carto Map data, including third party data. A project was initiated to assess cut-outs for condition grading of mains >300mm, however the current costs of these inspections are somewhat prohibited to advance the process as BAU. The Deterioration and Risk & Reliability Models identified data gaps and developed infill and elicitation techniques that were used to improve the data

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
					within the models. This data will subsequently fed back into Cartomap.
9	Water Infra - Raw Water Trunk Mains, Trunk Mains & Strategic mains	Assess the Likelihood & Impact of Asset failure to include consequential cost/score linked to developed Service Measure Framework were applicable	Q3 19/20	On-Going	The Deterioration and Risk & Reliability Project is currently ongoing and this models the predicted failure and consequence of all Raw Water Trunk Mains, Trunk Mains & Strategic Mains. The consequence is directly linked to the Service Measure Framework and there are 10 Service Measures relating to these assets. In addition there have been ongoing improvements to the Strategic Main Tactical Models (incl Trunk Mains) including ongoing review of scores and weightings, updates with latest data were applicable.
10	Water Infra - Raw Water Trunk Mains, Trunk Mains & Strategic mains	Identify Intervention Options and Impacts/Benefits of Approach	PC21	On-Going	The outputs from DRRM modelling does not assess the benefits of various intervention options as it reflects current practices. However various techniques to assess the condition of Trunk Mains are being investigated to enable enhanced targeting of Trunk Mains for rehabilitation. A pilot watermain rehab project is taking place in Ballygomartin zone assessing the benefits of mains conditioning/cleaning techniques rather than mains replacement. The output from this pilot will inform PC21 approaches
11	Water Infra - Sluice Valves	Prioritise critical sluice valves for intervention (based on risk and consequence approach) and identify capital need	Q4 18/19	On-Going	As previously indicated NI Water had embarked on a Strategic Valve Pilot analysis. The initial Project identified 100 critical valve interventions on the top 100 critical strategic mains. The associated site work has been delayed but due to go on site imminently and should complete by Q2 19/20. This scheme could

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
					potentially be extended dependant on the assessed cost/benefits of the pilot. In addition a new sluice valve layer in Car2Map and an associated app has been developed and is being piloted. This app will enable the leakage section to record the open/close status of valves as well as valve condition, (operable or non-operable) on a live layer and identify those were an intervention is required.
12	Water Infra - Distribution Mains	Improve Asset Knowledge through enhanced processes for data capture, development of cohorts were applicable	Q4 18/19	On-Going	All models are updated regularly to reflect the latest CartoMap data, including the latest available third party data that will improve the model outputs. There have been ongoing improvements to WIIM and the 3rd iteration of the model has been developed and this now incorporates a scoring system which promotes mains for rehabilitation with bursts that cause significant DG3 events. The outputs from the model are used to identify the schemes for inclusion within the Water Mains Rehab programme for which £20m is invested annually The work in developing Deterioration and Risk & Reliability Models identified data gaps and an infill and elicitation exercise was carried out to improve data. This data will subsequently fed back into Cartomap. Rather than use cohorts individual pipes have been modelled and this enables the models to identify specific mains for improvement.

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
13	Water Infra - Distribution Mains	Assess the likelihood and Impact of Asset failure to include consequential cost/score linked to developed Service Measure Framework were applicable	Q4 18/19	On-Going	The Water Infra DRRM Models the predicted failure and consequence of all distribution mains. The consequence is directly linked to the Service Measure Framework and there are 10 Service Measures relating to these assets. To further improve the outputs network models were used to provide additional data for use in the clean water infra deterioration and risk models. In addition there have been ongoing improvements to the Tactical Models including ongoing review of scores and weightings, updates with latest data were applicable
14	Water Infra - Distribution Mains	Identify Intervention Options and Impacts/Benefits of Approach	PC21	PC21	The outputs from DRRM modelling does not assess the benefits of various intervention options as it reflects current practices. However there has been some refinement in the approach to replacing Distribution Mains due to water quality issues. It is also proposed to initiate a development output in PC21 to trial various 'softer' rehab techniques such as mains conditioning.
15	Water Infra - Service Reservoirs & CWTS	Improve Asset Knowledge through available techniques such as integrating SR Inspections with Cleaning/Maintenance Programme and development of robust Risk Assessments	Q4 18/19	Complete	In regards to the Tactical SR & CWT model the cleaning maintenance programmes have been integrated with the SR inspections as BAU. Robust Risk Assessments have been developed for data capture as part of the inspections and a review group has been established. The DRRM project will look at CWTs as part of the WTWs aspect but does not cover SRs which are sufficiently covered by the Tactical SR & CWT models.

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
16	Water Infra - Service Reservoirs & CWTS	Continual development of the SR Risk and Consequence Model including costed asset condition assessment programme and assessment of economic level of service risk	Q4 18/19	Complete	The SR Risk and Consequence models are established as BAU with on-going improvements.
17	Water Infra - Service Reservoirs & CWTS	Identify Intervention Options and Impacts/Benefits of Approach	Q4 18/19	On-Going	The benefits of the SR survey and subsequent rehab techniques are assessed on an on-going basis. This has seen the cessation on concrete pull-off tests as they proved to be off limited benefit. There has also been various techniques used in regards to the sealing of joints to assess benefits.
18	Waste Water Infra – Critical Sewers/Rising Sewers/Other Sewers/CSO & Ancillaries	Improve Asset Knowledge through enhanced processes for data capture, the prioritising of CCTV Surveys, Sensitivity of CSO Locations, etc.	Q4 18/19	On-Going	In regards to the Tactical Sewer Risk and Consequence and SIIM Models, critical sewers are included within these. CSO monitoring project is ongoing which should eventually cover all CSOs within 2km of Shellfish & Bathing waters. To date 115 monitors have been installed. An exercise is underway to improve the information on CSOs across the network and ensuring the correct consent information is captured. A Risk and Consequence Model for Rising Mains is currently under development with phase 1 of the project complete. CCTV surveys are being prioritised and the information is being used to feed back into models. The information is also being recorded on the corporate systems. The Deterioration and Risk &

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
					Reliability Models identified data gaps and infill and elicitation techniques were developed to improve the data (with the exception of CSOs). This data will subsequently fed back into Cartomap.
19	Waste Water Infra – Critical Sewers/Rising Sewers/Other Sewers/CSO & Ancillaries	Assess the Likelihood & Impact of Asset failure to include consequential cost/score linked to developed Service Measure Framework were applicable	Q2 19/20	On-Going	The Deterioration and Risk & Reliability Project is currently ongoing and this models the predicted failures associated with Sewers and the consequence of these failures. The consequence is directly linked to the Service Measure Framework and there are 7 Service Measures relating to these assets. The Weightings used for the tactical models are reviewed on an annual basis
20	Waste Water Infra – Critical Sewers/Rising Sewers/Other Sewers/CSO & Ancillaries	Identify Intervention Options and Impacts/Benefits of Approach	PC21	On-Going	The outputs from DRRM modelling does not assess the benefits of various intervention options as it reflects current practices. It is proposed to initiate a development output in PC21 to trial various 'softer' rehab techniques such as increased pro-active desilting activities
21	Water and Wastewater Non-Infra - WTWs/Raw Water Intakes/PS/WWTWs/WWPS/Sea Outfalls	Improve Asset Knowledge through enhanced processes for data capture This to include improve data capture from MWM, enhanced access to corporate systems, through Business Analytics, such as telemetry data were applicable	Q4 18/19	On-Going	In regards to the Tactical Non-Infra Base Maintenance a risk methodology has been developed. This captured Criticality and Time to Repair/Replace from Expert Panels. The Asset Data Quality Sustainability group has been established to ensure the information on repair/interventions at Asset Level are being recorded correctly and feeding back to corporate systems. Asset Performance have carried out some preliminary work with ICT to develop Asset Performance Business Analytics to assist in improved

Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
					processes. A 'Data Specification' document is being developed to identify the most beneficial data to be collating. The SCADA system has been investigated to establish how beneficial this data maybe to assist in the CMP Process. Currently there is no way to access data on a global scale and therefore will not be used to assist the PC21 submission. The Deterioration and Risk & Reliability Models have identified data gaps and infill and elicitation techniques have been developed. This data will subsequently fed back into Cartomap.
22	Water and Wastewater Non-Infra - WTWs/Raw Water Intakes/PS/ WWTWs/WWPS/Sea Outfalls	Assess the Impact of Asset failure to include consequential cost/score linked to developed Service Measure Framework were applicable	Q4 18/19	On-Going	The Deterioration and Risk & Reliability Project is currently ongoing and this will model the predicted consequences associated with the failure of Non-Infra Assets. The consequence is directly linked to the Service Measure Framework and there are upwards of 9 Service Measures relating to these assets. The Weightings used for the tactical models are reviewed on an annual basis
23	Water and Wastewater Non-Infra - WTWs/Raw Water Intakes/PS/ WWTWs/WWPS/Sea Outfalls	Identify Intervention Options and Impacts/Benefits of Approach	Q4 18/19	On-Going	The outputs from the DRRM models assesses the benefit of repair/refurbishment over replacement for all non-infra assets.

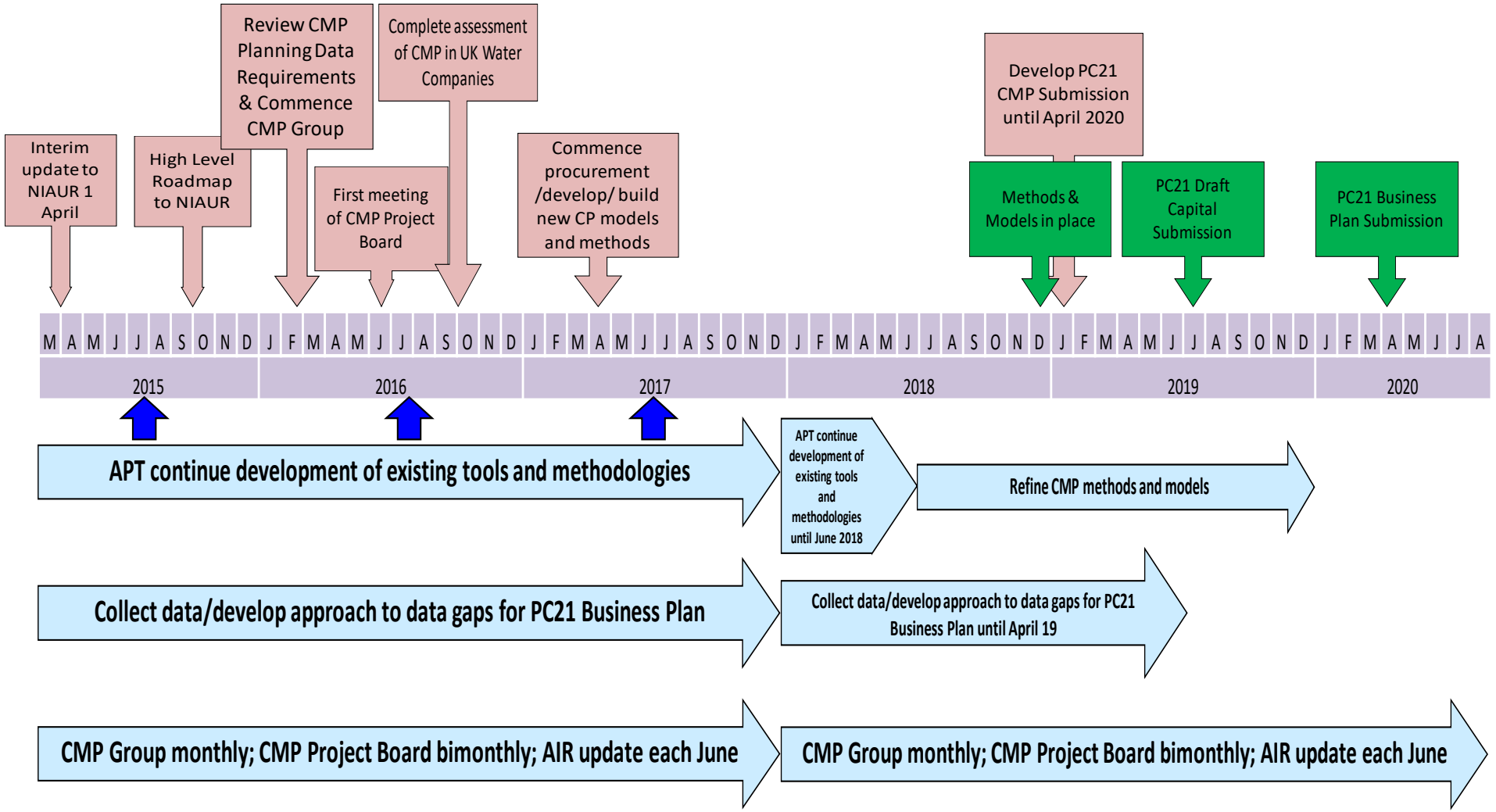
Nr	Initiative Type	Key Initiative Overview	Delivery Milestone	Complete	Latest Update
24	Water and Wastewater Non-Infra - WTWs/Raw Water Intakes/PS/ WWTWs/WWPS/Sea Outfalls	Review and Develop the approach to standard asset lives, include benchmarking were possible	Q4 18/19	On-Going	Asset Performance have carried out some preliminary work with ICT to develop Asset Performance Business Analytics to assist in improved processes and this will include Asset Lives were applicable. As part of the outputs of the Deterioration and Risk & Reliability Model asset life information has been assessed with a focus on failure rates
25	General	MEAV analysis to be carried out for PC21, to provide an alternative top down assessment of future replacement costs of non-infrastructure assets	Q4 18/19	On-Going	Since the last update it has been agreed that a MEAV is not required for the PC21 submission. Progress is underway to provide an Asset inventory for PC21 submission demonstrating the extent of the asset base and the age of those associated assets.

The Next Steps

The next steps in the development of NI Water's 'Plan for Asset Maintenance' include:

1. The completion of the final iterations of the various DRRM models
2. Scenario Analysis to take place across all assets to assess the impact on service of constraining the capital maintenance expenditure
3. A Capital Maintenance Planning Guide to be developed to ensure developed models can be maintained, enhanced in the future and support future Business Plans
4. Further development of the CMP methodologies and tools which currently exist within NI Water
5. Continuation of Project Board Meetings to review progress, understand risks and endorse the key strategic decisions.

Capital Maintenance Planning - Key Inputs & Milestones



DEVELOPMENT OUPUT		
3. Preservation of Services and Civil Emergency Measures Direction (PSCEMD)		
Final Determination: *The company will report progress on delivery of PSCEMD enhancements agreed with the Department for Infrastructure (DfI).* *The Utility Regulator will seek updates from DfI to confirm that the agreed work has been completed.*		
Additional Details:		
The NI Water Security & Resilience Manager works closely with DfI and CPNI to ensure compliance with PSCEMD.		
PROJECT SUMMARY		
PSCEMD is a Regulatory Instrument directing NI Water to undertake such works as are necessary to preserve services and mitigate the effects of a Civil Emergency. On an annual basis, NI Water appoints an approved external Certifier to prepare a Statement of Compliance and provide a supplementary report for DfI, detailing progress on delivery of key measures previously notified. In-year progress reporting, on an exception basis, is directly to DfI via regular QSM Reports.		
KEY MILESTONES	Target	Status
1. External Certifier has pre-audit meeting with WDPD staff	Dec 18	Complete
2. External Certifier completes PSCEMD Audit	Feb 19	Complete
3. Submission of Compliance Statement & PSCEMD Report to DfI	1st April 19	Complete
4. In-Year reporting to DfI by exception	As Required	On Target

Executive summary
With respect to activity completed to date and its outcome, details were provided to DRD Water Policy Shareholder Division as part of the Quarterly Shareholder Meeting Report for Quarter 2 (16/17) for the period to 30 September 2016. A subsequent joint review to refine reporting arrangements concluded that going forward, reports for PSCEMD Critical Sites will, as requested by Water Drainage Policy Division, be by exception only.

Regarding Planned Next Steps for Delivery, this was the subject of extensive bilateral discussion with WPSD staff commencing in July 2014 and continuing through various iterations and changes requested by the Department, until a programme was agreed, as confirmed in writing by the Director of Water Policy and Shareholder Division dated 12th April 2016.

The independent PSCEMD Audit Report and CNI Sites Audit Reports submitted to The Department for Infrastructure, Water Drainage Policy Division on 19th March 2019 included assessment of work done to date and endorsement of future work programme.

Detailed update
On 31st March 2016, NI Water wrote to The Department enclosing a programme of security hardening work to be completed during the remainder of the PC15 period, comprising

- 13 Non-CNI Water Treatment Works (5 Enhanced & 8 Basic Plus)
- 54 Service Reservoirs all Enhanced
- 2 Wastewater Treatment Works (2 Basic Plus) (Now not required see below)

It was agreed that the programme would be subject to ongoing review throughout the PC15 period to capture and reflect changes in the distribution network and in some instances reappraisal of needs.
For example, the number of Service Reservoirs to security hardened has changed due to decommissioning and overlap with other capital projects on the Base Maintenance Programme, the nett effect being a reduction from 54 to 53 sites requiring security hardening under this programme.

The most recent programme review indicated that:

- 13 Non-CNI Water Treatment Works will complete by May 2019 –previously reported as November 2018- delay due to budgeting alignment and the rescheduling of work programmes on site.
- 53 Enhanced Service Reservoirs will complete by August 2019- previously reported as January 2018- delay due to further work required to integrate alarm signals from site to a single user interface at our Alarm Receiving Centre
- 2 Wastewater Treatment Works, sites confirmed as Omagh Transfer Pumping Station and Newton Stewart WWTW, delivery programme still to be confirmed but will complete during PC15 period

Following review DfI have confirmed in their letter dated 9 November 2018 that no security hardening work will be required on wastewater sites.

Changes to the original estimated delivery timetable reflect actual time spend on issues such as programme scheduling, in-year budgeting alignment and revising design elements in light of experience gained from previous security hardening projects.

DEVELOPMENT OUPUT

4. ICAT Strategy

Final Determination:

The company shall report progress on the development and implementation of the ICAT strategy including implementation of the trial projects proposed for PC15 and its benefits and the economic case for extending the strategy.

PROJECT SUMMARY

The Instrumentation, Control, Automation and Telemetry (ICAT) Strategy is focussed on enabling NIW to become more customer focussed, to improve compliance and become more resilient, whilst simultaneously reducing costs. This project addresses this through development of reliable automation and controls, to minimise manual input and on site presence, for process and plant controls and to facilitate remote monitoring and control of plant and processes that is not currently available for our assets, (focusing on Service Reservoirs). The project is divided into 6 phases based around WTW supply zones. The full programme overview for the 6 phases for PC15 was provided in AIR 16. A shorter milestone programme is outlined below.

KEY MILESTONES	Target	Status
1. PC15 ICAT Business Case Approval	30/11/15	Complete
2. First PC15 ICAT Delivery Programme Board Meeting	06/05/16	Complete
3. PID Approval (Phase 1 Omagh / Cookstown)	06/05/16	Complete
4. ICAT delivery tam fully established	18/07/16	Complete
5. First task order issued to contractors (Phase 1)	08/08/16	Complete
6. First Site started - Brigh SR (ACE Key milestone)	22/08/16	Complete
7. Update to BIPB - Midway through Omagh / Cookstown (ACE Key milestone)	30/11/16	Complete
8. 2nd ICAT Delivery Programme Board Meeting	30/11/16	Complete
9. 3rd ICAT Delivery Programme Board Meeting	21/03/17	Complete
10. Approval of Business case for phase 2 (Belfast)	31/05/17	Complete
11. Completion of listed Service Reservoir in Omagh / Cookstown	30/06/17	Complete
12. PPE1 - Omagh / Cookstown Work Package	31/07/17	Complete
13. Update to BIPB - Completion of Omagh / Cookstown	31/08/17	Complete
14. PPE2 - Omagh / Cookstown Work Package	31/06/19	On target
15. Ards Work Package Start (ACE Roadmap Milestone)	01/04/18	Complete
16. North West Work Package Start (ACE Roadmap Milestone)	01/04/18	Complete
17. Completion Belfast Work Package	31/03/20	On target
18. PPE1 Report completion for Belfast Work Package	30/09/20	On target

19. PPE2 - Belfast Work Package	31/03/21	On target
20. North West Work Package Finish (ACE Roadmap Milestone)	31/03/19	On target
21. Ards Work Package Finish (ACE Roadmap Milestone)	31/09/19	On target
22. Newry Work Package Start	28/02/18	Paused
23. Newry Work Package Finish	31/12/18	Paused
24. Enniskillen Work Start	01/01/19	Paused
25. PPE1 Report completion for Newry Work Package	01/05/20	Paused
26. Enniskillen Work Package Finish	31/07/19	Paused
27. PPE1 Report completion for Enniskillen Work Package	30/09/20	Paused
28. PPE2 - Newry Work Package	01/05/21	Paused
29. PPE2 - Enniskillen Work Package	30/09/21	Paused

***** See Table 1 for detail of changes to milestones**

Activity completed to date and its outcome

PC15 ICAT delivery programme business case was approved by the NI Water Business Improvement Project Board (BIPB) on the 30th November 2015 with £4.784M of funding to install ICAT technology at approximately 200 sites. The delivery programme is divided into 6 phases based around water supply zones.

The overall project will deliver improved resilience through increased overall network storage volume, reservoirs spending less time in low-low level alarm, potentially quicker reaction time in operational incidents through remote intervention, remote access to controls in poor weather conditions and better overall management of the water network through the ability to manage storage and balance flows across the network.

The project will also contribute to reducing corporate risks and acting as an enabler for Customer Relations Centre (CRC) and Production lines benefit realisation.

The total nett financial savings of the total project is estimated at £1,317K over 10 years made up of reductions in base maintenance, overflows, site visits, overtime and truck rolls.

A dedicated ICAT delivery team was established in July 2016 and Phase 1 of the project consisted of the installation of ICAT technology into 50 sites at a cost of £1,032K within the Lough Fea, Moyola, Lough Braden, Loughmacrory, Lough Derg and Glenhordial supply zones.

Phase 2 Belfast supply zone, saw the installation of ICAT technology into 21 Service Reservoirs and the automation of a number of valves in the Dunore, Drumaroad and Dorisland supply areas at an expected cost of £710K. This phased commenced in July 2017 and is planned to be completed at the end of March 20, (previously January 18). Delays have caused due to lack of funding and programme rescheduling).

Phase 3 of the project is divided over two geographical areas Ards and North West. The business cases for these areas were approved in January 18 and commenced in April 18. They will be completed by September 2019.

To date feedback from Customer Services Delivery Directorate (CSDD) on these sites has been very positive. In addition other issues (e.g. hydraulic issues) within the network system have been identified and addressed.

Detailed baseline figures for estimating benefits in Phase 1 have been established and will be used to complete PPE stage 2 in July 19 after approval by internal audit.

ICAT non financial benefits and functionality have been clearly demonstrated during a recent operational events such as at Lough Fea where inlets to reservoirs where closed remotely without field staff being deployed ensuring customers stayed in supply and during planned works in the Drumaroad supply zone.

NI Water provided the Utility Regulator with a presentation on 13 October 2016 giving an overview of the PC15 ICAT programme.

Standardisation of the design has enabled a single, detailed user manual to be developed which covers all ICAT SR sites.

A dedicated training rig connected to telemetry and associated mimics allow staff to be trained, gain experience and familiarise themselves with the system.

NI Water have applied for Patent to protect the IP of the system and its unique controls.

Planned next steps for delivery

Funding for the remainder of the iCAT programme was removed by M&G Prioritisation Panel/ Capital monitoring group on 13th December 2018. This has had an impact on projects in the Belfast, Newry and Enniskillen areas over the 2019/20 and 2020/21 periods.

This Change has had an impact on timeline/ benefits/ deliverables.

Table1

Title of Milestone Impacted	**Original Baseline Date (PID)**	**Current Approved Date**	**'Revise to' Milestone Date**	**Comments**
PPE2 - Omagh / Cookstown Work Package	31/07/18	31/10/18	31/3/19	Revised due to resource constraints
Completion Belfast Work Package (ACE Roadmap Milestone)	31/01/18	31/03/19	31/03/20	Additional work in NW region impacted delivery in 18/19. Revised date dependant on funding in 19/20 being made available
PPE1 Report completion for Belfast Work Package	28/02/18	31/03/19	30/5/20	Additional work in NW region impacted delivery in 18/19. Revised date dependant on funding in 19/20 being made available

Title of Milestone Impacted	Original Baseline Date (PID)	Current Approved Date	'Revise to' Milestone Date	Comments
Newry Work Package Start	28/02/18	30/04/19	Unknown	Original schedule revised to accommodate operational need. Approved by BIPB Jan18. Funding for project removed by M&G Prioritisation Panel /Capital Monitoring Group 13/12/18 Start date unknown
PPE2 - Belfast Work Package	28/02/19	30/05/19	30/5/21	Additional work in NW region impacted delivery in 18/19. Revised date dependant on funding in 19/20 being made available
Newry Work Package Finish	31/12/18	30/03/20	Unknown	Original schedule revised to accommodate operational need. Approved by BIPB Jan18. Funding for project removed by M&G Prioritisation Panel /Capital Monitoring Group 13/12/18. Finish date will be 12 months after start date.
Enniskillen Work Start	01/01/19	30/04/20	Unknown	Original schedule revised to accommodate operational need. Approved by BIPB Jan18. Funding for project removed by M&G Prioritisation Panel /Capital Monitoring Group 13/12/18 Start date unknown
PPE1 Report completion for Newry Work Package	01/05/20	31/05/20	Unknown	Original schedule revised to accommodate operational need. Approved by BIPB Jan18. Funding for project removed by M&G Prioritisation Panel /Capital Monitoring Group 13/12/18. Finish date will be 15 months after start date.

Title of Milestone Impacted	Original Baseline Date (PID)	Current Approved Date	'Revise to' Milestone Date	Comments
Enniskillen Work Package Finish	31/07/19	31/08/20	Unknown	Original schedule revised to accommodate operational need. Approved by BIPB Jan18. Funding for project removed by M&G Prioritisation Panel /Capital Monitoring Group 13/12/18. Finish date will be 4 months after start date.
PPE1 Report completion for Enniskillen Work Package	30/09/20	30/09/20	Unknown	Original schedule revised to accommodate operational need. Approved by BIPB Jan18. Funding for project removed by M&G Prioritisation Panel /Capital Monitoring Group 13/12/18. Finish date will be 7 months after start date.

DEVELOPMENT OUPUT

6. Sustainable Economic level of Leakage

Final Determination:
The next economic level of leakage assessment shall be prepared in 2016-17 to inform the Water Resource Resilience Plan and revised leakage targets for PC15 from the mid-term review onwards. This should be updated in 2019-20 to inform the company's business plan submission and the establishment of leakage targets for the PC21 period.

Additional Details:

NIW developed its PC15 business plan based on the SELL 2014 assessment, proposing a leakage reduction profile to reduce leakage below the SELL to reach 153 Ml/d by 2021.

PROJECT SUMMARY

The SELL determination will incorporate all relevant findings with respect to data and methodology improvements and accounting for leakage review comments and relevant changes to the industry best practice since the 2014 SELL determination.
The outline scope of work for delivery includes:

1. Data Collection and Quality Assessment
2. Cohort Definition
3. AZNP / HDF
4. Background / Policy Minimum Leakage & Infrastructure Correction Factor determination
5. NRR 2015-16 (already completed)
6. ALC Cost Functions per HDZ
7. Asset Renewal Functions
8. Pressure Management Functions
9. MCoW Calculation
10. Social & Carbon Leakage Management Externalities
11. Environmental & Carbon LR Externalities (short-cut estimation)
12. SR ELL & SELL Calculation
13. SELL Sensitivity & Uncertainty Analysis (climate, MCoW etc.)
14. ELL/SELL Monte Carlo Analysis
15. Draft and Final Executive Reporting
16. Household night use allowances update
17. Customer supply pipe leakage update
18. Review of non-household night use calculations and data/logging requirements to update.

The SELL review takes into account the potential for further leakage reductions into the next PC period as part of a least cost plan to meet the future demand for water, whilst minimising environmental impacts.

KEY MILESTONES	Target	Status
1. Project initiation	Apr-16	Complete
2. Phase 1 scoping study documentation	Jul-16	Complete
3. Phase 2 SELL refresh initiation	Jul-16	Complete
4. Draft & Final Executive Reporting	Apr-17	Complete
5. Household night use & customer supply pipe updates	Apr-17	Complete
6. SELL19 project initiated	Mar-19	Complete
7. SELL19 scoping documentation	Mar-19	Complete
8. SELL19 – data transfer & analysis	Jul-19	Ongoing
9. SELL19 – draft SELL outputs for PC21 updating	Jul-19	On Target
10. SELL19 – draft & final executive reporting	Sep-19	On Target

Activity completed to date and its outcome

NI Water have procured an SELL study which commenced in April 2016, has completed its scoping stage and currently in process of collating Company data for analysis.
NI Water have met with the WRMP project team, will align with the proposed 7 resource zone boundaries and understand the WRMP project leakage requirements.

SELL analysis completed in June 2017 with outcome agreed. Final Executive Reporting and supplementary technical annexes to be completed July 2017.
Household night use and customer supply pipe update analysis complete. Final project reports and technical annexes to follow in July 2017.

Planned next steps for delivery

Outcomes for the SELL study and the supplementary review of customer supply pipe leakage, household night use and hour-to-day values are complete with final reports and technical annexes expected in July 2017.

NI Water plans to undertake a review of SELL in 2018/19 – 2019/20.

Key milestones 6 to 10 have been added regarding the project to rerun SELL analysis utilising the most recent and available base year data, 2018/19. This project has been initiated with initial strategic analysis and outputs to be completed by the end of July 2019.
These results will be used to refine the current draft PC21 submissions with executive reporting and the remaining SELL sub-programme outputs to be completed during September 2019.

DEVELOPMENT OUPUT

7. Controlled Reservoir Safety

Final Determination:
The company shall report progress on the inspection and maintenance of controlled reservoirs under the proposed Reservoir Bill addressing:
- Remedial work on Camlough Reservoir (see Annex K [of the Final Determination]);
- Implementation of the inspection requirements of the proposed Reservoir Bill for controlled reservoirs by the end of 2017/18;
- Completion of maintenance requirements arising from these inspections by 2020/21.Report on any material issues identified in the surveys which require immediate attention which cannot be delivered within the estimate PC15 funding.

PROJECT SUMMARY

- **Remedial Work on Camlough Reservoir.**
  - All work completed in June 2017
- **Implementation of Inspection Requirements of the Proposed Reservoir Bill for controlled reservoirs by the end of 2017-18.**
  - The new consultancy framework has been awarded
  - Section 10 inspections have been completed and improvement options and scope identified.
- **Completion of Maintenance Requirements Arising from Inspections by 2020/21.**
  - Although £4m BM (12/13 Costs) was identified within PC15 FD to action the outputs of the Section 10 reports only £810k (17/18 Costs) has been allocated for the latter years of PC15 for the highest priority issues
- **Designation of Service Reservoirs and Clear Water Basins Capacity > 10,000m^3 yet to be confirmed by DfI Rivers.**
  - The category designation of individual SRs and CWBs is still to be confirmed and agreed with DfI Rivers, as they require NI Assembly approval.
  - Panel Engineer inspections for these assets are not currently programmed as a PC15 output.

KEY MILESTONES	Target	Status
1. Remedial Work on Camlough reservoir	June 2017	Complete
2. The award of new consultancy framework	June 2017	Complete
3. Implementation of inspection requirements of the Proposed Reservoir Bill for controlled reservoirs	March 2018	Complete
4. Inspection Reports identifying improvement options and scope completed	Dec 2018	Complete
5. Complete all maintenance requirements identified by the Panel Engineer's reports within the PC15 period subject to funding availability	March 2021	Majority deferred to PC21

1. Remedial work on Camlough Reservoir

A contract (JV853 - Camlough Impounding Reservoir Refurbishment) was awarded to rehabilitate the dam core and outlet pipework. The contract was commenced in May 2016 and completed in June 2017.

2. Implementation of the inspection requirements of the proposed Reservoir Bill for controlled reservoirs by the end of 2017-18

The Reservoirs Act (Northern Ireland) 2015 received Royal Assent on 24 July 2015 however the main provisions of the act were not commenced at this time. It is anticipated that it will

take at least 18 months after the Executive and NI Assembly are returned to commence the remaining provisions.

NI Water presently has 47 Impounding Reservoirs, in service and out of service, which are recognised by the act as being 'controlled reservoirs'. A controlled reservoir is any structure or area that is capable of holding 10,000 cubic metres or more of water above the natural level of any part of the surrounding land. This also covers SRs & CWBs, which is an important change from the E&W 1975 act that only covered Impounding Reservoirs.

Although DfI Rivers had an initial list of SRs and CWBs, belonging to NI Water it was agreed that surveys would be required establish the volume above the natural level of any part of the surrounding land. This survey work is on-going with the list of controlled SRs and CWBs to be agreed with DfI Rivers once complete. Hence, NI Water has not reported any SRs or CWBs as 'controlled reservoirs' for AIR19.

A contract was let (Aug 2017) for the Section 10 inspections of the in-service and out of service Impounding Reservoirs. These inspections are now complete with approximately £7m required to rectify the identified measures from the various reports.

3. Completion of maintenance requirements arising from these inspections by 2020-21. Report on any material issues identified in the surveys that require immediate attention that cannot be delivered within the estimate PC15 funding.

Although £4m BM (12/13 Costs) was identified within PC15 FD to action the outputs of the Section 10 reports only £810k (17/18 Costs) has been allocated for the latter years of PC15 for the highest priority issues. This is due to NI Water not being funded to the full PC15 FD and with competing prioritises the remaining Base Maintenance budget is required elsewhere in the latter years of PC15.

4. Plans for Delivery of the inspection requirements of the proposed Reservoir Bill for controlled reservoirs

The legislation when fully enacted will require NI Water to ensure all its controlled Reservoirs are under the supervision of a Supervising Engineer and also that 10 years inspections are carried out by an All Reservoir Panel Engineer. Historically NI Water has always had 10 year inspections carried out by an All Reservoir Panel Engineer but the role of a Supervising Engineer was carried out internally. In the future the role of Supervising Engineer, at least in the short term, will have to be carried out by a third party. To be a supervising engineer the engineer has to be a member of a panel of reservoir engineers. This was not the case previously and currently no one internally could satisfy this requirement.

DEVELOPMENT OUPUT

8. Water mains prioritisation

Final Determination:
The company shall engage with stakeholders on the development of its water mains prioritisation process to incorporate the outcome of PC15 consumer engagement including interruption to supply and dirty water complaints by 31 March 2015.
The company shall provide updates on the implementation of the prioritisation annually throughout PC15.

PROJECT SUMMARY

- For PC15, NI Water developed a Watermains Infrastructure Investment Model (WIIM) to identify and prioritise water network rehabilitation investment. WIIM is now operating as a BAU tool for Capital Maintenance Planning.
- The model is refreshed every two years using updated corporate datasets (e.g. bursts customer contacts, water quality sampling exceedances, etc.) to inform the ongoing investment programme.
- WIIM1 incorporated dirty water complaints but not DG3 within the methodology. With the exception of DG3 there was a strong alignment between the original WIIM 1 methodology and CEOG analysis (Note: WIIM1 refers to the initial methodology used to identify the investment programmes for 2015/16 and 2016/17). WIIM2 model was modified to incorporate DG3 in April 2016 and used to identify the 2017/18 and 18/19 investment programme.
- NI Water acknowledged the omission of DG3 data in the original WIIM1 analysis. The UR was informed of the company's intention to revise the methodology approach in a detailed response in September 2014.
- A formal presentation delivered to CCNI in September 2014 to provide an update of the WIIM process, including plans to incorporate DG3 in the WIIM2 methodology. Further formal presentations to external stakeholders (CCNI, DWI and UR) were undertaken in May 2017 to achieve buy-in to the WIIM2 methodology.
- Ongoing review of the WIIM process ensures the methodology remains focused on NI Water's customer promises.

KEY MILESTONES	Target	Status
1. DG3 incorporated into WIIM 2	March '15	Completed Apr '16
2. WIIM methodology now operating as a BAU.	March 15	BAU
3. WIIM2 methodology to be communicated to key stakeholders	May 17	Completed May 17
4. WIIM methodology shared with key stakeholders when changes are made to methodology	As required	BAU

Activity completed to date and its outcome

The company shall engage with stakeholders on the development of its water mains prioritisation process to incorporate the outcome of PC15 consumer engagement including:

A) Interruption to Supply

- CEOG analysis ran in parallel with development of WIIM 1 in 2014
- Gap analysis established that strong alignment existed, however DG3 alignment DG3 needed to be addressed. Other than DG3, no recalibration of WIIM was required as a result of CEOG (see document 141006 WTC WIIM).
- Although it had initially been considered that issues around geo-coding historic DG3 data would prevent effective incorporation of DG3 into WIIM, this was incorporated

into the WIIM 2 procedure, as the outages were mapped by utilising the Project resources.

- The UR was informed of the proposed approach regarding incorporation of DG3 into WIIM in a detailed response to this and a number of related queries in September 2014 (see PC15 DD Response Annex K 5 11 9 V1.4 Watermain Rehab.doc available on request). A formal Presentation was also delivered to CCNI in September 2014 in order to inform them of progress around WIIM and explain plans regarding incorporation of DG3 into analysis.
- In addition there was a further Stakeholder presentation on 10th May 2017 in which the WIIM 2 and the proposed WIIM 3 approach was presented and discussed.

B) Dirty Water Complaints

- Dirty water complaints were incorporated into the model from the outset – this was something which DWI was satisfied with from the outset of the development of WIIM.
- DWI, CCNI, NIAUR and DRD Water Policy were members of a group who were invited to review the tender specification of the first WIIM contract. Engagement continued throughout the development of WIIM.

C) The Company shall provide updates on the implementation of the prioritisation annually throughout PC15.

- The WIIM 2 methodology incorporates the “Interruption to Supply” requirement .See above where the updates were provided to the external stakeholders

Improvements contained in WIIM2 (from the original WIIM 1 Methodology) are summarised below:

- Parent Length segments of water mains are now based initially on Road Junction information, resulting in construction of a NIW corporate dataset which better models or represents the distribution network for ease of analysis.
- Feedback from recent customer engagement has been incorporated into the WIIM2 approach, ensuring that methodology is customer focused.
- DG3 interruption to supply data is now captured and scored in alignment with NI Water KPIs.
- Scoring matrix is better defined, containing increased weighting for issues relating to Water Quality and DWI involvement.
- Unit Rates can be more easily programmed.
- Pipeline flushing has been incorporated.
- WIIM 2 has the ability to insert ad-hoc pipeline queries in relation to assessment of high priority customer feedback issues, in conjunction with rescoring of programme elements. Ad hoc schemes can be flagged up and separately identified from those generated through ‘bottom up’ analysis.
- Rather than the static list of outputs created during WIIM1, WIIM2 outputs are captured under a Scheme Management Tool, allowing for dynamic management of the overall programme. This will enable reaction to changes in regulatory environment or public expenditure.
- Schemes outputs are now bound into geographical work packages for delivery rather than leaving this to the Verification stage to allow for analysis of the makeup of the Workpackage at an earlier stage than WIIM 1
- DG2 schemes are dealt with in a separate methodology/process approach .The ongoing DG2 targets are being achieved by this methodology

Maximum WIIM 2 Scoring matrix summarised below:

- Scoring for each category is compiled by accruing scores from multiple drivers, with an indication of **maximum** scores available in each category, shown in the table and diagram below.

WIIM2 category	Maximum Score
Water Quality	2350
Flushing	200
Structural	1100
DG3 interruption to supply	400
DG2 low pressure	450
Complaints	200

Impact of the Balance between WQ and Structural Schemes (Analysed from the WIIM 2.1 Workpackage Schemes)

Length of schemes (km)		
	Water Quality	Structural
>= 150 Points	76	244
	30%	70%

Note: DG2 Workpackages are analysed separately but some DG2 solutions arise out of nearby rehabilitation of the network

NOTE ON SCORING IMPACT: The chosen cut-off score (based on annual Budget and the geographical bundling required for AD integrated capital delivery) may also skew the makeup of the WQ/Structural Split.

WIIM 2.2 Work Package Overview

Works Package	Schemes Count	Sum of Length (m)	Sum of Scheme Cost (£)
Carrickfergus	71	22,363	£2,876,178
Castor Bay Dungannon	50	23,669	£2,332,064
Drumaroad Ards Peninsula	57	31,117	£2,950,220
Drumaroad Bangor	67	21,985	£2,660,555
Foffany South	50	31,216	£2,561,401
Seagahan Armagh	73	29,212	£2,534,986
Total	**368**	**159,562**	**£15,915,404**

WIIM 2.2 Green Work package Overview, Further High-Level Breakdown

Justification	Schemes Count	Length	Cost	% Total Length
Water Quality	**112**	**46,010**	**£4,603,978**	**28.8**
Structural	**248**	**109,005**	**£10,807,745**	**68.4**
Hydraulic (Inc. Operational)	**8**	**4,547**	**£503,680**	**2.8**

Note: DG2 Workpackages are analysed separately but some DG2 solutions arise out of nearby rehabilitation of the network

Improvements contained in WIIM3 (from the WIIM 2 Methodology) are summarised below:

- Some manual interventions have been implemented on the DG3 analysis related to the top DG 3 issues
- Buffering to nearest main was improved by adding a verification process to allocate Water Quality and complaints data to specific mains rather than a global buffering map approach.
- The Watermains Infrastructure Scheme Tracker Layer on Car2map is now used to identify previous schemes and avoid double handling of work
- Other than the above ,the same matrix shown above for WIIM2 was utilised for WIIM 3

Schemes Tool

The Schemes Management Tool, developed under the WIIM project is held by the NIW Strategic Asset Performance Team and is available for analysis on request. The Tool has been developed to hold all vital scheme information and produce outputs as required by the end-user.

DEVELOPMENT OUTPUT

9. Sustainable Catchment Management

Final Determination definition:
The company shall report progress on Sustainable Catchment Management annually. The report shall set out the action the company has taken and its plans for subsequent action.
The report shall identify the benefits in terms of activity, improvements in raw water quality and reduction of peak flows.

PROJECT SUMMARY

- **Catchment Management Studies:**
  Aim is to undertake a scoping and planning study in each drinking water catchment, using the UKWIR framework, identifying future SCaMP projects to sustainably improve raw water quality. In PC15 period 21 Catchment Management Studies have been completed, as follows:
  - 2013/14 - Killylane, Dorisland and Clay Lake WTW's
  - 2014/15 - Derg, Lough Braden, Caugh Hill, Carmoney and Seagahan WTW's
  - 2015/16 - Altnahinch, Drumaroad and Fofanny WTW's
  - 2016/17 - Dunore Point, Castor Bay, Moyola, Ballinrees, L Macrory, L Fea and Glenhordial WTW's
  - 2017/18 - Carran Hill, Rathlin and Dungonnell WTW's

  Catchment studies for Killyhevlin and Belleek have been completed in draft format as part of the 'Source To Tap' INTERREG VA Project and completion is expected in Q1 of 2019/20.

  It had been planned to complete studies for 21 disused catchments. NI Water and DWI have agreed that CMPs for out-of-service catchments are not required. Instead, NI Water proposes removing the out-of-service catchments from the PC15 target and, instead, focus resources on delivering the recommendations of the CMPs already undertaken for 'live' catchments.

- **SCaMP NI Interventions:**
  - Actions to reduce pesticides in raw water; best practice advice at agricultural shows, presenting as The Water Catchment Partnership at rush control events, farm engagement visits, press and social media articles. A farm liaison officer has been temporarily employed and the 'Rush Solution Without Pollution' weed-wiping trial in Seagahan Catchment was conducted with great success between 2016 and 2018. Approx. 911 acres treated preventing 1183 litres of MCPA being applied in the catchment. An approx. 50% reduction in raw water MCPA concentrations was observed in phase 1 (2017) and further reduction in phase 2 (2018). A second weed-wiping project began in Summer 2018 in Glenhordial catchment, which also demonstrated raw water MCPA reductions.
  - College of Agriculture, Food and Rural Enterprise (CAFRE) and NI Water joint trials carried out to research rush control methods with pollution monitoring. These trials are ongoing under CAFRE's Rush Control Technology Project. Results will inform strategy for the Department of Agriculture, Environment and Rural Affairs (DAERA) and NI Water.
  - Wildfire initiatives have been undertaken in the Mournes to carry out effective wildfire control to prevent damage to habitats and raw water quality. Path erosion control works have been ongoing with SCaMP NI providing assistance through provision of NI Water contractor to promote match-funding.

Arrangements ongoing to develop new lease which protects the landscape through effective grazing management.
- A number of riparian planting projects are ongoing to reduce bankside erosion and create wildlife buffer strips along watercourses to reduce diffuse pollution As of Spring 2019 10,000 indigenous trees have been planted in the area upstream of Glenedra raw water abstraction point in the Caugh Hill catchment. Planting is ongoing on 36km strip of riverbanks at Faughan and Burntollet upstream of Carmoney WTW raw water abstraction point.
- Ongoing liaison with Lough Neagh and Lough Erne Partnerships to contribute to improvements in water quality.

- **'Source To Tap' INTERREG VA Project:**
  - EU Interreg VA funding application successful with NI Water being the lead Partner working in collaboration with Irish Water/Uisce Éireann, Agri-Food and Biosciences Institute, East Border Region, Ulster University and The Rivers Trust, to explore measures to improve local water quality
  - Aims to improve water quality in rivers and lakes in the Erne and Derg catchment areas which provide water that serves parts of counties Fermanagh, Tyrone, Donegal, Cavan, Leitrim and Longford.
  - €5.3M Cross-Border Sustainable Water Quality Improvement Project was launched on 8th Dec 2017Outputs are including peatland restoration projects, forestry best practice projects, UKWIR Catchment analysis and a public engagement and education programme promoting community led initiatives to improve raw water quality.
  - Project Manager, Finance Manager and 3 project officers have been appointed
  - Implementation of a €1.4 million Land Incentive Scheme in the Derg river catchment, aiming to encourage water-friendly farming practices

- **'Cooperating Across Borders for Biodiversity' INTERREG VA project:**
  - RSPB are lead partner and NI Water are a partner, along with several others as it is part of a wider project doing work in ROI, NI and Scotland. €175k funding obtained by NI Water
  - By the end of 2021, it will have prepared 8 Conservation Action Plans (CAP) for important Natura 2000 Special Areas of Conservation (SAC) and Special Protection Areas (SPA) sites and delivered works to improve the condition of over 2228 hectares of blanket bog.
  - The project was launched on 11th Dec 2017 with completion planned by 31st Dec 2021. The project will be implemented in NI, ROI and Scotland, with each partner responsible for individual elements.
  - Aims to work on a cross border basis to bring about the recovery of protected habitats (active raised and blanket bog) and priority species (breeding waders and marsh fritillary) at specific key sites.
  - This project implemented on Garron Plateau has involved blocking 38,473 metres of drains to raise water levels using peat, stone and wooden dams.
  - All drain blocking now completed at Garron Plateau in Spring 2019 and target restoration of 444 hectares exceeded.

KEY MILESTONES	Target	Status
1. Completion of Catchment Management Studies as per schedule	March 2019	2 remain in draft under Source to Tap INTERREG VA Project
2. Commencement of programme for completion of SCaMP NI interventions as a result of Catchment Management Studies	March 2019	Met

Line 9 - Sustainable Catchment Management (SCaMP)

The NI Water strategic approach has been shaped around our identification of 8 key customer promises as detailed in the 'Our Strategy' document. The objectives of SCaMP NI are closely connected to these customer promises as follows:

- **We provide you with clean, safe water to drink:**
  The SCaMP NI program seeks to improve the quality of raw water in the environment prior to it being extracted. This results in fewer contaminants entering the WTW's and thus improves water quality compliance and reduces the risks of water quality exceedances in the final water.
- **We seek to give you value for money:**
  The potential benefits of catchment management for improving drinking water quality are widely recognised and evidence is beginning to show that this is a cost-effective way to reduce the costs of treatment.
  By working with others to make environmental enhancements, improve agricultural practices and reduce pollution run-off, we seek to improve the quality of raw water in the environment prior to it being extracted. This in turn helps to reduce the chemical, power and sludge costs associated with water production.
- **We adapt to deal with the effects of climate change:**
  Reduced energy requirements for treating water will contribute to our Climate Change targets and our aims to reduce our carbon footprint and greenhouse gas emissions.
  One of the successful SCaMP NI approaches is the re-wetting of blanket bog. This retains water in the catchment and reduces the effects of the heavier rainfall events and flooding downstream. The restored peat promotes carbon sequestration, preventing the release of CO_2 into the atmosphere.
- **We want to protect and enhance the natural environment:**
  SCaMP NI environmental projects go hand in hand with our environmental objectives to enhance habitats, protect endangered species, meet legislative requirements on designated landholdings and also help achieve good ecological status water quality targets as required under the Water Framework Directive.
  Preservation and restoration of bog features will provide a habitat for a wide variety of plant and animal species, enhancing biodiversity and reversing the decline of species such as hen harrier, merlin and the perennial herb marsh saxifrage.
- **We supply you with the water you need:**
  SCaMP NI environmental projects such as bog restoration, pollution control or habitat restoration help achieve a more stable and reliable water source, which in turn results in a less problematic water treatment and improved compliance.
  NI Water has completed all Catchment Management Studies (with two being completed under the Source to Tap INTERREG VA Project currently in draft) for each of its active water catchments, with a joint catchment plan for 'mothballed' impounding reservoirs pending. These plans have given detail on how the catchment land will be managed going forward to give maximum benefit to NI Water and ensure that legislative requirements are met.

  Diffuse water pollution and insensitive land management may pollute surface and ground water supplies with substances such as nutrients, pesticides and microbial pathogens and increase colour, turbidity and suspended solids in abstracted water. These increase capital and operating costs of water treatment, increase the quantity of effluent and waste produced, and increase the carbon footprint of the industry. The aim of the Catchment Management Studies is to undertake a scoping and planning study of the catchment, using the approach advocated in the UKWIR framework for quantifying the benefits of catchment management, to establish the basis for a programme of catchment management that provides business benefit to NI Water. The outcome of this project will provide a basis for the preparation of business plans

for catchment management in support of drinking water source protection and, in part, for meeting other WFD and corporate obligations for PC21 and beyond.

The Catchment Management Studies were undertaken on a prioritised basis. The prioritisation rationale involved collating a series of details on each catchment and drivers needed to justify SCaMP projects, as follows:

- PRIMARY DRIVER 1 - Protect or improve the raw water quality abstracted by NI Water (Factors considered: DWI CPEO, algae blooms, colour/turbidity, TOC, pesticides)
- PRIMARY DRIVER 2 - Protect or improve the reliability or quantity of raw water abstracted by NI Water (Factors considered: Reliability of source, potential to improve reliability risk, quantity, drought Risk, potential to remedy quantity risk.
- PRIMARY DRIVER 3 - Reduce the risk to the quality, reliability or quantity of raw water abstracted by NI Water (Factors considered: Tourism, livestock agriculture, arable agriculture, forestry, residential dwellings, industrial, hydrocarbons, rubbish / fly tipping, effluent, septic tanks.
- PRIMARY DRIVER 4 - Aid NI Water in managing its land portfolio and deliver its statutory responsibility under national and international obligations to protect and manage the natural environment (Factors Considered: ASSI, AONB, SPA, SAC, RAMSAR, percentage of catchment land owned by NI Water, habitat protection or creation, managing lands as ‘carbon sink’, Biodiversity management, invasive species management).
- SECONDARY DRIVER - NI Water working with other stakeholders to improve the overall quality of the catchments from which it draws water (Non-NI Water Owned Land in Catchment). (Factors considered: Habitat protection or creation, biodiversity management, improved farming practices, recreational activities, revenue creation for NI Water.
-

NI Water is on track to meet the delivery two remaining Catchment Management Plans under Source To Tap INTERREG VA Project as detailed in the programme below:

Category	Priority	Water Treatment Work Name	Catchment Management Study	Target Delivery Date	Comments
Operational WTW's	1	Killyhevlin	2019-20	31/06/2019	Part of Source To Tap INTERREG VA Project - Target Catchment Characterisation Completion Q1 2019/20
Operational WTW's	2	Belleek	2019-20	31/06/2019	Part of Source To Tap INTERREG VA Project - Target Catchment Characterisation Completion Q1 2019/20

Benefits of Catchment Management

NI Water manages 8,615 hectares of land. NI Water has embraced and adopted SCaMP and is seeking to build on the foundations of this put down in PC15. Through the SCaMP NI approach NI Water seeks to:

- Maximise the ecosystem services gained from its land holdings
- Meet its obligations under environmental legislation
- Improve operational efficiency through innovative projects
- Improve raw water consistency and quality

The benefits of the SCaMP project will be realised in the long-term, but the Catchment Management Studies completed to date have recommended a number of key outputs or recommendations, which are now being implemented in the form of the SCaMP projects and resultant benefits listed below:

Benefit 1 - NI Water will, over time, have improved raw water quality arriving at its Water Treatment Works.

Example Project – Seagahan Weed Wiping Trial Project

As a trial project NI Water have been carrying out a weed-wiping project in Seagahan WTW drinking water catchment area in Co Armagh, working in conjunction with The Water Catchment Partnership (WCP) and the farming industry as part of an innovative campaign to help reduce levels of MCPA in the Seagahan Reservoir. It is planned to offer a free weed-wiping service using Glyphosate, as an alternative to spraying MCPA, to demonstrate that an alternative effective rush control method endorsed by CAFRE causes less water pollution.

The overall aim has been to show that pesticide levels can be reduced in the reservoir without the need for more expensive water treatment processes. This can then be used as a test project to demonstrate the benefits of NI Water working together with farmers and possibly doing more of these type of initiatives in future in other areas. The project has had a Farm Liaison Officer working with farmers and land managers to manage the weed-wiping and promote better advice on handling, applying and disposing of grassland sprays, guidance on mechanical control of rushes and improving land condition to addressing the underlying causes of infestations. The project has been beneficial in comparing best techniques with other projects in N Ireland and has been used to inform individual aspects of the INTERREG VA Source To Tap project and other SCaMP NI projects going forward to ensure value for money in effectively reducing MCPA levels in watercourses.

The initial 2-year project in Summer 2017 and 2018 was managed by NI Water but has been carried out in conjunction with the WCP. This involves representatives from Ulster Farmers Union, Northern Ireland Environment Agency, DAERA, CAFRE and the Voluntary Initiative. All of these stakeholders have input knowledge and expertise which were vital to the success of the project and their cooperation and assistance was appreciated and valued by NI Water. The aim of the WCP is to deliver one message incorporating the ethos from all organisations to effectively tackle the problem of pesticides in the water environment, particularly in drinking water catchment areas, communicating with householders and farmers to raise awareness and provide best practice guidance on grassland pesticide use.

The project has brought the following benefits for NI Water:

Water Quality benefits - Ongoing water sampling of the reservoir throughout phase 1 (2017) showed a marked decrease in MCPA found in raw water. Analysis of the results demonstrated a raw water MCPA residual reduction of approximately 58% in the 2017 period, in comparison with the average for the previous 5 years. MCPA raw water residuals demonstrated a further decrease in phase 2 (2018) of 25% but these reductions were confounded by unseasonable anomalous high MCPA levels in November 2018. Over phase

1 and 2 of the Seagahan trial, a total of 991 acres of rush were treated preventing 1183 litres of MCPA being applied in the catchment.

Project development and implementation – The trial demonstrated that NI Water have the capabilities and governance structure to allow this type of work to be carried out.

Project Promotion – The rollout event in April 2017in the local community hall proved to be an effective tool with 60 farmers signing up from which 38 farmers took advantage of the free weed-wiping trial. Promoting the project using the UFU and NI Water web pages, UFU Newsletter articles, a BBC report and targeting Markethill Mart was very successful. Whilst the website was a useful tool, the project would not have been a success without the rollout event and the face-to-face engagement Phase 2 of the trial was promoted again in Spring 2018 by the same parties and encouraged two more farmers to avail of the trial.

Partnership Working – NI Water worked closely with the WCP to ensure its success during project promotion, rollout event, contractor selection, field mapping and the weed-wiping. The partnership opened channels of expertise to be utilised in all areas of the project. Close liaising with the UFU and CAFRE was particularly beneficial to the success of the project.

Contractor selection – The correct contractor selection resulted in rush treatments being carried out in a professional and competent manner demonstrating best practice use of *glyphosate* being applied through a weed-wiper. The decision to use a local contractor situated in the heart of the catchment area was beneficial, as the contractor had a working knowledge of the land and a personal relationship with the farmers.

Rush Reduction – Across the 991 acres of rush treated in the Seagahan catchment there has been a successful rush reduction between 60% and 90%. Feedback from farmers has been very positive. Rush coverage and compromising of viable grazing areas can have a direct effect on farming subsidies based on ‘eligible’ land (currently assessed under the Basic Payment Scheme (BPS)). Rush removal therefore is of great benefit to them.

Pesticide choice – The pesticide *Roundup Energy* was used for the project following trials and advice from CAFRE. This proved very successful for the rush treatment as the pesticide stayed on the leaf of the rush due to the adjuvant (sticking agent). With the adverse weather conditions from July onwards in 2017 and the heavy rain after the hot period in July 2018, the fact that the pesticide was rain-fast in one hour was valuable.

Farm Liaison visits/contractor treatments – It was necessary and constructive for the first visit to be carried out with the farmer present allowing discussions to be carried out about the project and discuss eligibility issues. Delegating responsibility to the farmer for timing of the weed-wiping was successful as treatments were arranged with the contractor when conditions were at an optimum and no livestock were present in the treated area. Feedback from farmers and UFU has been excellent.

Benefit 2 - NI Water will, over time, reduce the risks of raw water quality incidents effecting WTW output capability.

Example Project 1 - Extensive areas of Forest Service lands exist within NI Water drinking water catchment areas. Forest Service felling and replanting activities require careful planning in order to avoid any detrimental impacts on raw water quality which is abstracted for water treatment. In order to minimise risk to water quality guidelines have been agreed between NI Water and Forestry Service in order to protect the raw water quality at each catchment. Work is ongoing with Forestry Service to improve tree felling and replanting techniques resulting in fewer high colour and turbidity incidents when forestry activities are

carried out, particularly at Lough Bradan WTW. This improvement will be particularly evident during times of peak flows and high rainfall events.

Example Project 2 – A pilot project is being developed at Lough Bradan WTW to monitor quality at each of the individual intakes, then install online quality monitors and automatically control flows to the WTW, maximising use of technology to ensure that the best possible water quality is received at the WTW intake point. Improving the raw water quality in the water supply network and monitoring water quality at each abstraction point will allow the best quality water to be abstracted and will assist in reducing treatment costs.

Benefit 3 - NI Water will, over time, see an improvement in the reliability of water quantity from its upland sources.

Example Project - 'Co-operation Across Borders for Biodiversity Project' INTERREG VA Project.
NI Water have been working in partnership with Royal Society for the Protection of Birds Northern Ireland (RSPB NI) and other partners on a project funded by INTERREG VA and managed locally by the Special European Union Programmes Board (SEUPB). The project is called the 'Co-operation Across Borders for Biodiversity' (CABB) Project and began in 2017, with completion in late 2021.

The overall objective of the CABB project is to bring about the recovery of protected habitats (active raised and blanket bog) and priority species (breeding waders and marsh fritillary at key sites) on a cross border and cross country basis. The overall CABB project has been awarded €4.6m of EU funding for projects in Scotland, N Ireland and the Republic of Ireland. CABB will contribute to delivering the EC Birds and Habitats Directives and Biodiversity Strategies in each of the three countries and will also link with strategies for climate change mitigation and adaptation and sustainable development in the three countries, as well as Programme for Government targets.

The NI Water aspect of the project will involve a €1.75k project to restore of the entire Dungonnell WTW catchment area at Garron Plateau on the Antrim Hills, which is in the catchment of Dungonnell WTW. NI Water owns 2000ha of the Garron Plateau SAC and previously 72ha of land has had drain blocking work done. Through CABB, an additional 444ha of blanket bog has been managed by blocking 38.4km of drains. NI Water oversaw the drain blocking and are holding an engagement event in September 2019 to demonstrate the excellent outcomes of the work.

Garron Plateau is the largest expanse of intact blanket bog in Northern Ireland and it is home to protected birds of prey and rare plants such as marsh saxifrage and bog orchid. NI Water, working with the assistance of the RSPB NI and INTERREG VA aim protect and restore the peatland on the plateau, ensuring that the whole catchment is managed sustainably.

The CABB project has initiated the restoration of the natural hydrological conditions by blocking drains using peat, stone and sheet dams to raise the water table. This results in raising the water table and the "re-wetting" of the bog, promoting colonisation by *sphagnum* moss, an essential component of a functioning bog. The creation of these peat dams reduces the water velocity in the drains and allows more settlement time. This reduces runoff and improves raw water quality and reliability by improved regulation of supply through the retention effects of the bog. This will result in cost savings at the treatment works as the requirement for chemical treatment to remove colour from the raw water will be reduced. In Summer 2019 the School of Natural and Built Environment at QUB are finalising cost savings analysis of the Garron project thus far.

Benefit 4 - NI water will work toward meeting its environmental obligations in its catchments

Example Project - There is an annual plan to control invasive species, *rhododendron* and *cotoneaster*, in the Mournes catchment landholding to ensure designated land is managed and environmental obligations are met.

Benefit 5 - NI Water will work with stakeholders to improve the overall condition of its catchments

The Eastern Mournes Wildfire project is carried out to reduce the risk of wildfires damaging wildlife habitats and adversely affecting raw water quality from the catchment. This project was carried out with a range of stakeholders, e.g. NI Fire and Rescue Service (NIFRS), NIEA, Mourne Heritage Trust (MHT), UFU, DAERA, etc.

Benefit 6 - The people of Northern Ireland will benefit from improved biodiversity in Northern Irelands Water's land and, over time, and a reduction in the costs associated with treating raw drinking water

Example Project – Work is ongoing in liaison with the Woodland Trust to plant riparian strips along watercourses to enhance habitats, resulting in enhanced biodiversity and improved raw water quality. This improves raw water quality through buffer zones to protect from pesticide pollution, bankside erosion and livestock encroachment/excretion in the waterway. This improvement will be particularly evident during times of peak flows and high rainfall events. One example is the riparian planting project at the Glenedra River where NI Water, The Woodland Trust and The Loughs Agency co-operated to complete a riparian tree planting project. NI Water abstract water from the Glenedra River, where water quality can frequently be poor due to bankside erosion and instability of the river. In order to improve water quality for abstraction, wildlife habitats and aquatic life, a 3.89 ha site was planted with 10,000 native broadleaf trees along the banks of the river. Trees planted along river banks can provide many water management benefits, acting as a physical barrier, preventing pesticides drift from reaching watercourses and tree roots help stabilise river banks and create structural complexity in the water habitat. There is a resultant reduction in the water discolouration and sediment coming into Water Treatment Works. The cost of this type of project is small to NI Water as the other partners involved contribute significantly through internal and external funding sources.

The following SCaMP projects are planned for 2019/20:

1. Recommendations from Catchment Management Studies – Throughout the PC15 period we have engaged consultants to assess and collate information on all WTW's catchments where raw water is abstracted for treatment. The Catchment Management Plans were completed using the UKWIR approach, "Quantifying the Benefits of Water Quality Catchment Management Initiatives". By the end of the 2018/19 financial year 21 catchment studies have been completed and the 2 remaining studies completed in 2018/19 as part of the INTERREG VA Source To Tap Project are at draft stage. The completion of the Catchment Management Studies has resulted in a wide range of recommendations to improve raw water quality, meet DWI enforcement requirements and enhance ecosystems/habitats, thus helping NI Water meet the environmental and water quality customer promises. It is a requirement as part of the PC15 determination to implement these recommendations, which it is planned to begin in 2019/20. These recommendations firstly need to be investigated to determine if they are feasible, and then implemented, subject to funding and resource availability.
2. Mourne Wildfire Containment - The Silent Valley drinking water catchment area has been subject to wildfires which damaged large areas of upland heath, impacting both the environment and water treatment costs due to the carbon run-off. NI Water, in conjunction with MHT, NIEA and NIFRS, commissioned a report by Wildfire Advisory

Services. This paves the way for a focused and structured approach to managing wildfire outbreaks in the wider Eastern Mournes area, considering practical wildfire management and emergency response within the drinking water catchment. This report has been adopted and NI Water are committed to proceeding with implementation as part of the partnership.

3. Mourne Invasive Species Control - The expansion of invasive species such as *rhododendron* and *cotoneaster* is of concern to upland heath land management as it causes damage to the designated habitats and erosion which impacts on raw water quality. There is a legal obligation for NI Water to control these invasive species on our landholdings. Work has been ongoing in recent years, but the work needs to continue to further control invasive species and prevent re-colonisation. This is particularly important to help ensure that native plants have the opportunity to establish within the catchment.
4. Mournes Heathland Management - NI Water have developed a successful working relationship with MHT and work together to mutual benefit in managing the Silent Valley catchment which is owned by NI Water. MHT have recently been successful in obtaining funding of €100k annually over a 3 year period through an INTERREG VA Northern Periphery and Arctic programme (NPA) EU funding application, which was supported by NI Water. This will involve a project to carry out environmental enhancements work on NI Water owned land in the Mournes, maintenance on paths where works have been done, stitch in time to prevent erosion, some larger erosion work, develop a management plan and use the project to develop knowledge and skills and training. This will bring in a significant value of work on our catchment land at minimal cost to NI Water. It is proposed that NI Water carry out some habitat restoration work under the SCaMP NI project to add value and support the MHT project and to help develop a ‘leverage’ ethos, whereby NI Water can contribute a relatively small amount, allowing NGO’s to attract larger funding sources.
5. Riparian Planting – The SCaMP NI team hope to continue carrying out riparian planting given the success of work in completed catchment areas in recent years. These areas enhance biodiversity and help raw water quality by reducing erosion and livestock encroachment. These projects were carried out alongside NGO’s and were able to avail of match funding. It is proposed to do more of this type of sustainable work in 2019/20 as opportunities arise.
6. Weed-wiping Trials – The innovative weed-wiping that was carried out in Seagahan catchment area in summer 2017 and 2018 has been largely successful, and a similar trial initiated in Glenhordial has also shown promising results despite the abstraction challenges present in that catchment during periods of warm weather or no rainfall.
   After a passive sampling regime within the Ballinrees WTW catchment identified MCPA areas of concern in summer 2018, a third weed-wiping trial was initiated in Spring 2019 in the Eden sub-catchment and will continue into autumn 2020. NI Water’s Farm and Catchment Liaison Officers will continue to work with the farmers in the area by coordinating this project, providing best practice advice and where deemed suitable, provide additional best practice incentives e.g. drip trays to pesticide users.
7. Catchment Staff – The farm liaison officer has been recruited on a temporary basis for the past few years to manage the weed-wiping projects, carry out farm visits to raise the profile of the risks to our drinking water supplies from pesticide use and also to educate farmers and other landowners in best practice and correct methods when using pesticides or spraying. A new full-time Catchment Liaison officer was recruited in April 2019 to help further develop all aspects of SCaMP NI and implement the interventions from the Catchment Management Studies.

DEVELOPMENT OUPUT
10. Minimising the water quality risk from lead pipes
Final Determination: *The company shall provide an annual report detailing how the implementation of its strategic lead policy and lead replacement programme is progressing. This should explain how the company is managing this activity and targeting hotspots to maximise benefits and how it is assessing the improvements delivered by the work undertaken. The report shall also provide details of the activity undertaken by the company, in conjunction with other stakeholders, to develop and implement a strategic risk based approach for addressing compliance issues associated with private supply pipes and domestic distribution systems.*
Additional Details:
The lead replacement programme is 'Business As Usual' with analysis being undertaken by the Strategic Asset Performance Team and briefed for delivery to the AD Integrated Capital Delivery Team. To date the target number of lead replacement pipes per annum is being achieved**.**
PROJECT SUMMARY
• Annual update on the lead pipe replacement programme is provided through the company's AIR Return*: 'AIR 16 Submission -2015-2016 Table 47 - Line 10 – Minimising the Water Quality Risk from Lead Pipes'.* • To better inform DFI Water Policy Unit, as part of the Long Term Water Policy Strategy, a Lead Service Replacement Pilot has taken place at Craigyhill Bungalows, Larne. As part of the pilot the complete service pipes, including the Supply Pipes, were replaced to assess the cost and benefits of such an approach with a view to a grant scheme being established. A Report on the pilot has been produced and issued to DFI for policy consideration.

KEY MILESTONES	Target	Status
1. Annual reporting provided through the AIR Return process.	Annually	BAU
2. Complete pilot study for DfI policy development.	March 16	Complete
3. Develop summary document and recommendations to assist DfI in developing policy.	Sent to DFI April 18	Complete

Line 10 – Minimising the water quality risk from lead pipes

Part 1 – Progress of the Implementation of Strategic Lead Policy and Lead Replacement Programme

The NIW Lead Project comprised a desk top survey (alongside proactive targeted sampling) of available data from NI Water Corporate Systems relevant to lead services and analyse and collate information and data obtained onto Mapinfo layers (In Open Format) to compile a prioritised and costed schedule of lead replacements for PC15.

Work also included Scheme Prioritisation and Site Verification work including visual inspections and sampling work.

The methodology includes: -

- Prioritise by highest exceedances and densest clusters
- Desktop exercise to help focus on the areas required for further sampling verification and review

- If the network distribution pipe is considered unsuitable – pass the scheme over to Engineering Procurement Watermains Rehabilitation Team for replacement of the distribution main and the related communications pipes together.
- On site sampling and inspections to further verify priority areas
- Ensure value for money in delivery of this work by clustering work where possible

Prioritisation

The Strategic Asset Performance Team compiled a Specification for this approach and, following a Tender exercise; Consultants were appointed to deliver the required outputs.

A quantitative, risk-focussed analysis procedure to identify lead "hotspots" across Northern Ireland was then commenced. The focus of this approach was to use available datasets in a transparent and cost effective process, which is easily repeatable or editable in the future using updated datasets or incorporating new data as it becomes available.

Taking cognisance of best industry practise and recent DWI guidance it was agreed between NIW and the Consultant, that greater emphasis be placed on using an evidence based approach, such that once the initial hotspots were prioritised, a second stage involving customer site surveys and a water quality sampling exercise be undertaken to validate the assumptions. This approach facilitates an assessment of risk based on the combination of the likelihood (probability) of occurrence and the consequence (extent and seriousness) of the failure on the quality of water received by NI Water's consumers.
The following staged approach was adopted.

1. Data Gathering and Desktop Analysis,
2. Prioritisation of those hotspots based on probability of lead occurrence,

The various datasets were spatially analysed using MapInfo software to create "hotspot" areas based on combining clusters of unusually high concentrations of point data, such as water quality lead exceedances (>10µg/l) and watermains of a known age (i.e. those installed pre 1920). The digitisation of hotspot polygons allowed the large datasets to be rationalised into a manageable number of areas which contained a high probability of lead occurring. A range of polygons was initially created by spatially querying various lead indicator criteria or where lead piping was confirmed to be present. They were then manually reviewed to validate the information and edited by enlarging or enclosing each, based on similar cohorts

Assignment of a prioritisation score to each dataset was derived based on the significance of each as an indicator of the likelihood of lead occurring or its impact to public health. An iterative sensitivity analysis process was also conducted to test the robustness of each assessment criteria and understand the causal relationships between datasets.
The scoring matrix assigned to each is described below.

Watermains Age

Lead was used throughout Northern Ireland up until ~1975 for connecting a property to the water supply main and for internal plumbing. Lead's availability, inherent strength, malleable nature and corrosion resistance properties meant it was favoured over other metals such as copper and brass.

Accordingly, watermains of a certain age have been assessed as a good indicator of the presence of lead and the criteria in Table 1 below were used to score the age of watermain criteria. To ensure that each polygon was assessed using its predominant watermain age type, those polygons that contained only a small % of a differing age type were discounted, by applying a rule that selected the most common type of watermain age within the polygon.

Criteria Age of watermains	Score
Majority of Mains in Polygon laid after 1975	0
Majority of Mains in Polygon 1970 to 1975	1
Majority of Mains in Polygon laid 1950 to 1970	2
Majority of Mains in Polygon laid 1920 to 1949	3
Majority of Mains in Polygon laid before 1920	4

Table 1: Age of Watermain Score

Historical LIMS Water Quality Data

NI Water LIMS data provided information on 25,800 water quality sample records from 2002 to 2014, which were scored based on the total numbers of samples per polygon (likelihood) and the lead parameter result (severity of impact).

Criteria Lead Result (µg/l)	No of Occurrences within Polygon(1)	Weighting Factor(2) *	Score (3)*
0	x	0	0
0.00 - 9.99 **µg/l**	x	0.1	1
10 -14.99 **µg/l**	x	1.0	2
15 - 49.99 **µg/l**	x	3.0	3
> 50 **µg/l**	x	5.0	4

(*Note The overall score is = (1 x2 x 3)

Table 2: Historical Lead Water Quality Density Score

Weighting factors were used to negate the influence of large numbers of sample data skewing the overall scores.

In order to prioritise the water quality samples based on the severity of identified water quality results the polygons were also assigned a score based on the highest exceedances. Approximately 4% of the total water quality records exceeded the Prescribed Concentration Value (PCV) of 10µg/l, with 1% (approximately 250 samples) exceeding 39µg/l.

Water quality results were also analysed to remove where a new main had been laid since the sample had been taken, (typically under the Watermains Rehabilitation Programme). In this case it has been assumed that the communication pipe was replaced during the process. A more recent sample at the same location superseded the previous sample.

Lead Failures by DMA

In order to apply a holistic approach across the entire water distribution system each DMA was initially scored by the percentage of lead exceedances within its boundary, relative to the total number of water quality samples taken. NI Water has approximately 1,380 DMAs which encompass its distribution network and each DMA with the exception of some trunkmain DMA's, has water quality results with which to compare. Analysis would identify

the worst performing DMA, such that any potential replacement scheme would provide water quality betterment to customers within the entire DMA, and potential neighbouring or cascading DMA. The scoring system is presented in Table 3 below.

Criteria Lead Result (µg/l)	Weighting Factor (2)	Score (3)*
<10 (contains 97% of WQ samples)	0	0
10 – 20.19 (contains 1% of WQ samples)	0.5	1
20.20 - 38.99 (contains 1% of WQ samples)	1.5	2
> 39 (contains 1% of WQ samples)	2.0	3

(* Note The overall score = 2 x 3)

Table 3: Water Quality Results

A thematic illustration of those DMA's ranked by the highest percentage of water quality failure is available on request. The output showed that the largest numbers of DMA with a higher percentage of failures are concentrated in the Greater Belfast area.

Northern Ireland Housing Executive (NIHE) Properties

NIHE has endeavoured to provide an extract from their digital asset dataset which details the ownership of properties in Northern Ireland and the age of the dwelling. Once received this data can be used to verify assumptions regarding the age of watermains and identify additional areas where lead may be present.
NIHE has confirmed that it has no capital works planned in the short-term (2015) to replace kitchen or private supply pipes. Accordingly, there appears to be limited opportunity to coordinate the replacement of customer communication pipes with NIHE private supply pipes where practical, in the short term.

Watermains Rehabilitation Programme

The NI Water Watermains Rehabilitation Programme Team provided detailed information in relation to the numbers of lead communications pipes replaced on each rehabilitation / replacement scheme installed between the years 2005 to 2014. Once cleansed the data provided details on some 8,150 lead pipe replacements undertaken during the Watermains Rehabilitation Programme and following a digitisation exercise the information was spatially mapped to link to the NI Water PC13 Schemes Core MapInfo table.

92% of the WMRP schemes which involved replacement of lead communication pipes occurred in the Greater Belfast area. In contrast to the other data sources which were potential indicators of lead presence, this source confirmed that lead didn't exist and as such it wasn't possible to assign a score to each polygon. In this case the data was used to manually review each lead hotspot to:

- identify hotspots for removal following confirmation of rehabilitation (For the most part the NI Water AIC GIS data confirmed this, though this process captured any recently constructed mains that hadn't yet been returned to the NI Water AIC),
- Identify additional (neighbouring) polygons where lead was likely to be present using similar water main cohorts.

Corporate Asset Register (CAR)

NI Water staff queried the Corporate Asset Register (CAR) to identify those properties which had lead communication pipes replaced or had combined services separated through opportunistic or business as normal services, since 2009.
The information was geo-referenced and analysis was targeted to identify the polygons with the largest remaining numbers of lead communication pipes, such that any potential replacement scheme would provide maximum water quality betterment to customers within the entire DMA. The scoring system is presented in Table 4 below.

Criteria Opportunistic Lead Communication Pipe Replacement	Number of Polygon Properties with Lead Communication Pipes replaced	Score
Polygon Contains confirmed Lead Communication Pipe Replacements	No of Properties	5
Polygon Contains no confirmed Lead Communication Pipe Replacements	No of Properties	0

Table 4: Opportunistic Lead Communication Pipe Replacement Score

Sensitive Customers

Given the well documented increased risk to children from increased levels of lead in drinking water (*Childhood Lead Poisoning, World Health Organisation, 2010*) a list was created of sensitive non-domestic properties from the Pointer NI dataset, which may present increased levels of risk to children. Such non-domestic properties include,

- Primary Schools,
- Nursery Schools / Day Care Centre,
- Sure Start Centre's,
- Children's Activity Centre's,
- Playgroups.

The scoring system is presented in Table 5 below.

Criteria Sensitive Property	Score
Yes	3
No	0

Table 5: Sensitive Property Score

Visible Lead Score

A dataset was then created by combining information obtained from previous NIW water quality customer surveys and Customer Complaints, which details where lead pipe material has been confirmed at either the communication pipe, the service pipe or internal riser (typically at the kitchen or first floor bathroom). Given this was the only data source which confirmed the presence of lead at a particular property (in advance of the site surveys) it received the highest weighted score, where lead was deemed to be present. The scoring is provided in Table 6 below.

Criteria Lead Pipes Visible	Score
Yes	10
No	0
Unknown	0

Table 6: Lead Pipe Visible Score

To date this Project has identified and assessed 1,680 lead hotspot areas which encapsulate some 92,400 properties across Northern Ireland (average of 55 properties per polygon). The hotspots have been prioritised for the next phase of the Lead Pipe Replacement Programme (Water Quality and Customer Site Survey) using the prescribed scoring methodology.

DWI Stakeholder Discussion

This approach was presented in detail, alongside the proposed Work packages, to DWI on 26th March 2015

The "Mapinfo" geographical presentation of the outputs and this associated methodology were very positively received at this session.

Pilot Study "Craigyhill Bungalows"

A Lead Service Pilot has been completed at a small development (40 or so properties)," Craigyhill Bungalows", Larne, to identify the benefits and associated costs of replacing the communications pipe within private property.

As part of the pilot, in addition to replacing the public side communications pipe, NIW replaced the private communications pipe to internal boundary of the properties. It should be noted this did not include the internal pipework. This was carried out at the 18 privately owned houses within the development. The remaining houses within the development are NIHE owned, and NIHE replaced both private communications pipework and the internal pipework. NIW carried out first draw sampling at the properties, both pre and post work.

A draft report following the pilot lead-replacement project at "Craigyhill Bungalows" has been completed and has been reviewed by NI Water Governance mechanisms. As suggested in last year's report the initial outputs suggest there is limited benefit in replacing private communications pipe unless all internal lead within a property is removed. This report was forwarded to DFI in April 18 for further consideration.

These activities and the associated forums will then inform the future review strategy in this area and will help inform the approach in terms of how frequently NIW might re-sample and also the timing and volume of samples that are required, to get a clear picture of the effect that this programme of work has had on Lead reduction.

Planned next steps for delivery-

The company will continue with its Proactive Communications Lead Pipe Replacement Programme at circa £1 million per year.

The 4 year target has been achieved.

See below the initial Work packages which were identified for delivery in PC 15 and subsequent years.

These packages will change in relation to accessibility and practicality of installation following Enablement work on site.

PC15 Proactive Replacement Programme Proposed by Strategic Asset Performance Team for PC15 -See Table 11 for Installation Progress

	Prioritised Hotspot Locations for PC 15	Works Package Issued to AD Capital Delivery Team	Date Issued to AD Capital Delivery Team	Water Quality Survey	Lead Comms Pipes Submitted	Cost @ £500/pipe
YEAR 1	Marina Park	Yes	Feb-15	Jan-15	356	£178,000.00
	Orangefield Crescent	Yes	Jun-15	Jan-15	301	£150,500.00
	Gilnahirk ph1	Yes	Jun-15	Feb-15	437	£218,500.00
	Ulsterville Gardens	Yes	Jun-15	Jan-15	414	£207,000.00
	Ebor Street	Yes	Jun-15	Feb-15	428	£214,000.00
	West Wind Terrace	Yes	PC13 LPRP	PC 13	27	£13,500.00
	Victoria Gardens	Yes	PC13 LPRP	PC 13	16	£8,000.00
	Ransevyn Park	Yes	PC13 LPRP	PC 13	84	£42,000.00
	Derryvolgie Avenue	Yes	PC13 LPRP	PC 13	66	£33,000.00
	Ballycraigy Park	Yes	PC13 LPRP	PC 13	52	£26,000.00
	Victoria Court Donaghadee	Yes	PC13 LPRP	PC 13	79	£39,500.00
TOTAL					**2260**	**£1,130,000.00**
YEAR 2	Roseberry Road (Ph 1)	Yes	Sep-15	Feb-15	603	£301,500.00
	Irwin Avenue	Yes	Sep-15	Mar-15	445	£222,500.00
	Morven Park (ph1)	Yes	Mar-16	Feb-15	199	£99,500.00
	Gilnahirk ph2	Yes	Mar-16	Feb-15	434	£217,000.00
	Grand Parade	Yes	Sep-15	Jan-15	412	£206,000.00
TOTAL					**2093**	**£1,046,500.00**
YEAR 3	York Park	No	Mar-16	Dec-15	301	£150,500.00
	Tates Avenue	No	Mar-16	Feb-15	1391	£695,500.00
	Cregagh Road	No	May-16	Feb-16	449	£224,500.00
TOTAL					**2141**	**£1,070,500.00**
YEAR 4	Deramore Avenue	No	Mar-16	Dec-15	684	£342,000.00
	Roseberry Road (Ph 2)	No	Mar-16	Feb-15	722	£361,000.00
	Willowholme Drive	No	Mar-16	Mar-15	445	£222,500.00
	Myrtlefield Park	No	Mar-16	Jan-16	204	£102,000.00
	Cranmore Gardens	No	Mar-16	Jan-16	128	£64,000.00
TOTAL					2183	**£1,091,500.00**
YEAR 5	Bramcote Street	No	Mar-16	Mar-15	375	£187,500.00
	Beechmount Crescent	No	Mar-16	Dec-15	722	£361,000.00
	Kirkliston Park	No	Mar-16	Jan-16	419	£209,500.00
	Ravenscroft Avenue	No	Mar-16	Jan-15	493	£246,500.00
	Eastleigh Crescent	No	Mar-16	Jan-16	90	£45,000.00
	Breda Gardens	No	Mar-16	Jan-16	50	£25,000.00
TOTAL					**2149**	**£1,074,500.00**
YEAR 6	Ainsworth Street	No	Mar-16	Jan-16	444	£222,000.00
	Dun lambert Park	No	Mar-16	Mar-15	285	£142,500.00
	Hay park Avenue	No	Mar-16	Dec-15	260	£130,000.00
	Windsor Avenue	No	Mar-16	Feb-15	82	£41,000.00
	Birch Drive	No	Mar-16	Feb-15	210	£105,000.00
	Ormiston Crescent	No	Mar-16	Jan-16	151	£75,500.00
	Wandsworth Parade	No	Mar-16	Jan-16	291	£145,500.00
	Cherryvalley Park	No	Mar-16	Jan-16	335	£167,500.00
	Lynnwood Park	No	Mar-16	Jan-16	39	£19,500.00
	Schomberg Park	No	Mar-16	Jan-16	53	£26,500.00
TOTAL					**2150**	**£1,075,000.00**
				Totals	**12,976**	**£6,488,000.00**

	Prioritised Hotspot Locations for PC 15	Works Package Issued to AD Capital Delivery Team	Date Issued to AD Capital Delivery Team	Water Quality Survey	Lead Comms Pipes Submitted	Cost @ £500/pipe
YEAR 7	Orpen Drive	Mar-16	No	To be Surveyed	351	£175,500.00
	Ethel Street	Mar-16	No	To be Surveyed	567	£283,500.00
	Balfour Avenue	Mar-16	No	To be Surveyed	385	£192,500.00
	Thomas Street	Mar-16	No	To be Surveyed	316	£158,000.00
	Wellington Park	Mar-16	No	To be Surveyed	115	£57,500.00
	Milfort Avenue	Mar-16	No	To be Surveyed	167	£83,500.00
	Beechland Drive	Mar-16	No	To be Surveyed	221	£110,500.00
TOTAL					**2122**	**£1,061,000.00**
YEAR 8	Castlereagh Street	Mar-16	No	To be Surveyed	99	£49,500.00
	Montgomery Road	Mar-16	No	To be Surveyed	122	£61,000.00
	Castledona Crescent	Mar-16	No	To be Surveyed	479	£239,500.00
	Portallo Street	Mar-16	No	To be Surveyed	433	£216,500.00
	Avoniel Road	Mar-16	No	To be Surveyed	126	£63,000.00
	Braeside Grove	Mar-16	No	To be Surveyed	448	£224,000.00
	Onslow Gardens	Mar-16	No	To be Surveyed	215	£107,500.00
	Ravenhill Park	Mar-16	No	To be Surveyed	109	£54,500.00
	Hillsborough Drive	Mar-16	No	To be Surveyed	62	£31,000.00
TOTAL					**2093**	**£1,046,500.00**
YEAR 9	Kent Avenue	Mar-16	No	To be Surveyed	73	£36,500.00
	Glenbank Drive	Mar-16	No	To be Surveyed	185	£92,500.00
	Glenbryn Drive	Mar-16	No	To be Surveyed	277	£138,500.00
	Joanmount Park	Mar-16	No	To be Surveyed	583	£291,500.00
	Eastleigh Drive	Mar-16	No	To be Surveyed	106	£53,000.00
	Veryan Gardens	Mar-16	No	To be Surveyed	263	£131,500.00
	Thorndale Avenue	Mar-16	No	To be Surveyed	74	£37,000.00
	Crumlin Road	Mar-16	No	To be Surveyed	177	£88,500.00

	Prioritised Hotspot Locations for PC 15	Works Package Issued to AD Capital Delivery Team	Date Issued to AD Capital Delivery Team	Water Quality Survey	Lead Comms Pipes Submitted	Cost @ £500/pipe
	Somerton road	Mar-16	No	To be Surveyed	93	£46,500.00
	Kelvin Parade	Mar-16	No	To be Surveyed	170	£85,000.00
TOTAL					**2001**	**£1,000,500.00**
YEAR 10	Knockwood Park	Mar-16	No	To be Surveyed	355	£177,500.00
	Northwick Drive	Mar-16	No	To be Surveyed	818	£409,000.00
	Orangefield Avenue	Mar-16	No	To be Surveyed	654	£327,000.00
	Cyprus Avenue	Mar-16	No	To be Surveyed	95	£47,500.00
	Clonlee Drive	Mar-16	No	To be Surveyed	84	£42,000.00
TOTAL					**2006**	**£1,003,000.00**
YEAR 11	Cherryhill Avenue	Mar-16	No	To be Surveyed	346	£173,000.00
	Cabin Hill Gardens	Mar-16	No	To be Surveyed	210	£105,000.00
	Holywood Road	Mar-16	No	To be Surveyed	368	£184,000.00
	Ardcarn Way	Mar-16	No	To be Surveyed	222	£111,000.00
	Knocktern Gardens	Mar-16	No	To be Surveyed	89	£44,500.00
	Victoria Road	Mar-16	No	To be Surveyed	192	£96,000.00
	Kings Road	Mar-16	No	To be Surveyed	424	£212,000.00
	Strandburn Drive	Mar-16	No	To be Surveyed	196	£98,000.00
	Leven Park	Mar-16	No	To be Surveyed	50	£25,000.00
TOTAL					**2097**	**£1,048,500.00**
YEAR 12	Abbey Ring	Mar-16	No	To be Surveyed	535	£267,500.00
	Church Avenue	Mar-16	No	To be Surveyed	97	£48,500.00
	Clifton Road	Mar-16	No	To be Surveyed	301	£150,500.00
	Lancaster Avenue	Mar-16	No	To be Surveyed	143	£71,500.00
	Bloomfield Road	Mar-16	No	To be Surveyed	612	£306,000.00
	Newtownards Road	Mar-16	No	To be Surveyed	315	£157,500.00
TOTAL					**2003**	**£1,001,500.00**
				Totals	**12,322**	**£6,161,000.00**

DEVELOPMENT OUPUT

11. Water Meter Renewal

Final Determination:
The company shall report progress against its programme of water meter renewal, targeted to deliver a uniform rate of replacement to ensure that all revenue meters are no more than 17 years old by the end of PC15.

PROJECT SUMMARY

NIW in accordance with the company policy on Proactive Meter Exchanges (PME) set out its PC15 programme of replacements over a 6 year period,

- The data obtained from the Rapid corporate billing system indicated 29059 water meters would meet the PME criteria during the period 2015-2021. These meters were across all of the billing status.
- It was envisaged that 4843 meter per year would be targeted for replacement over a 6 year period
- During 15/16 NIW due to better than expected success rates decided to increase the pace of replacement and was able to exchange 6,920 meters as opposed to the planned 4843
- During 16/17 NIW was again due to better than expected success rates able to increase the pace of replacement and was able to exchange 7,399 meters as opposed to the planned 4843
- At the start of 17/18 NIW started to target status's other than supplied and issued 75 domestic meters for replacement. As NIW is no longer installing domestic meters senior management determined that proactive replacement of domestic meters should also cease. As a consequence of this NIW were able to replace 272 non-domestic meters based on age profile.
- Due to the accelerated rate of replacements during 15/16 &16/17 NIW plans to scale back replacements for the remainder of PC15. The target of 29,058 meters included all status, PME will now only target supplied billable meters which excludes domestic non-billed customers.

KEY MILESTONES	Target	Status
1. 2015/16	4.843	6,920
2. 2016/17	9,686	14,319
3. 2017/18	14,529	14,591
4. 2018/19	19,372	15,166
5. 2019/20	24,215	
6. 2020/21	29,058	

As part of its PC15 Business Plan submission, NI Water stated that the company has a policy to proactively replace customers' meters which are >17 years old and or have a recorded consumption of >8000m^3.

NI Water is aware having completed research involving extracting and testing sample numbers of customer meters that meters have the propensity to under record consumption as they get older. Wider water industry research also supports this position with many GB companies proactively replacing their meter stock from the age of 10 up to 17+ years.

The numbers of meters matching the NI Water criteria as extracted from the company billing system and quoted to NIAUR are detailed below.

PC15 - PME Numbers							
Due for Replacement	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Install Year	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	Total
Meeting Age Criteria	11,634	1,682	2,105	2,905	3,038	3,712	**23,426***
Meeting Consumption Criteria							**5,633**
Overall Total							**29,059**
Proposed Replacement Programme	4,843	4,843	4,843	4,843	4,843	4,843	

*23,426 total = 25,076 – 1,650 ongoing PME jobs between Oct14-Mar15

Pre-empting the PC15 mid-term review and in response to the regulators T47 query NI Water has to report the following progress.

NI Water based on the above numbers has been more proactive in its PME programme during 2016/17 than originally proposed replacing 7399 meters as reported in AIR17. Up until 17/18 the proposed number of meters has been replaced but since it has been decided that only billable meters are eligible for PME there are only approx. 1000 to be proactively replaced until the end of PC15 – some of these may be replaced reactively on failure.

The reason for completing more replacements is that NI Water was able to secure better contract rates following the amalgamation of two former maintenance contracts used for metering into a single and more competitive meter installation and replacement contract.

The billing system has the entire customer meter stock listed against various fields known as water statuses. Examples of these meter statuses are described in the table below.

NI Water - Corporate Billing System Water Status			
1	Combination meter-low	8	RFR – compensation supply
2	Dom sub meter	9	RFR – no billable name/address
3	Domestic supplied	10	RFR – shared supply
4	DRD supply	11	RFR - unable to locate
5	Free supply	12	Sub meter
6	Not supplied	**13**	**Supplied**
7	Retain For Review (RFR)	14	Trade Effluent

NI Water has to date focused its PME programme on the water status numbers contained within the supplied category. It has now been decided that unless there is a change in legislation NIW will only be replacing billable meters.

Being able to better the original anticipated profile has enabled NIW to address the potential under recording of consumption due to the age of the meter and thus improve the accuracy of its measured consumption.

NI Water will continue to further review its meter data associated with the other water status categories. NI Water will where appropriate issue meter exchange batches to the metering contractor through the remainder of PC15.

DEVELOPMENT OUPUT
12. Targeting sewerage 'hotspots'
Final Determination: *The company shall report on its plans to target sewerage hot-spots of blockage and collapse and the development of its sewerage intervention prioritisation to incorporate the outcome of PC15 consumer engagement. The company shall provide updates on the implementation of the prioritisation annually through PC15.*
Additional Details:
The Sewerage Hotspot tool is now BAU activity.
PROJECT SUMMARY
• **Hot-Spots of Blockages** - Monthly reports generated automatically to inform Asset Performance and CSDD. - Joint AP/CSDD liaison to determine and agree further root cause investigation needs. • **Sewer Collapses** - Sewer collapses are repaired as and when they occur; either through CSDD intervention or through AP for AD ICD delivery of remedial for larger scale repair needs. • **Sewer Infrastructure Investment Model (SIIM)** is operating as a BAU tool to identify and prioritise sewer Structural Grade 4s & 5s sewer lengths for consideration for rehabilitation as one of the Capital Maintenance Planning tools. • The SIIM is refreshed annually using updated corporate datasets (e.g. collapses, blockage, out of sewer flooding, pollution, and customer contacts etc.). Annual updates are used to inform the next year's rehabilitation investment programme. • The rehabilitation programme is risk-based and focused on individual sewer lengths classified as '*High Risk*' and '*High Consequence*'. • Asset Performance undertakes a targeted CCTV programme and then liaises with CSDD to confirm sewer condition and agree the extent of rehabilitation required prior programme submission to AD ICD. • From April '17 the rehabilitation programme will be forwarded to AD ICD on a quarterly basis (as opposed to annually). This will allow improved delivery programming. • Methodology reviewed periodically as BAU to maintain best practice. Review of SIIM has commenced.

KEY MILESTONES	Target	Status
1. Sewer blockage 'Hot-Spot' Reporting	Monthly	BAU
2. Review SIIM methodology.	May 2019	BAU

Planned next steps for delivery

The next steps for delivery include determining whether richer data sets and information are required in order to generate more accurate reports. The purpose being to further reduce the number of blockages across the various catchments in the Province.

DEVELOPMENT OUPUT
13. Polluted Storm Water Overflows
Final Determination: *The company shall report progress on the investigation and remediation of storm-water overflows including enforcement action taken by various authorities and any remediation action undertaken.*
Additional Details:
NIEA identified 47 priority catchments where there appear to be issues with misconnections. To date NI Water has investigated 24 and has been able to resolve a number of pollution issues through "quick wins". However, it has not always been possible to close out issues as there is a gap in the legal powers available to NI Water to remedy misconnections.
PROJECT SUMMARY
• A Working Group has been established comprising DfI's Water and Drainage Policy Division (WDPD), NI Water and NIEA have agreed a new policy for dealing with misconnections. • WDPD, NIEA and NI Water have produced a shortened version of the good practice document titled "Investigation and rectification of drainage misconnections", condensing it to reflect present agreed procedures for dealing with misconnections. • WDPD to liaise with DfI Planning Group to establish how best to promote / educate on the problems associated with misconnections. • Continued development and refinement by NI Water and NIEA has strengthened the investigatory process and working practices. • Where practicable NI Water has dealt with misconnections on a case by case basis. However, the vast majority of misconnections are related to washing machine connections. The Working Group is reviewing policy and legal aspects of correcting misconnections.

KEY MILESTONES	Target	Status
1. Joint Liaison Meetings	Ongoing	Ongoing
2. Prepare draft good practice document	Nov 17	Completed
3. Agree and implement good practice document	Nov 17	Completed

Line 13 – Polluted storm water overflows

Activity completed to date and its outcome

Stage 1 of this project the investigation of 24 catchments using CCTV techniques, dye testing and engaging with the public, has been completed. Following on from these activities NI Water has requested advice from its Shareholder on the next step to take on corrective actions.

The present position on Polluted Storm Water Overflows is detailed below:

- 24 Catchments out of 47 catchments highlighted with NIEA have been surveyed regarding pollution of nearby rivers.
- The surveys highlight that most of the pollution is from private connections e.g. washing machines located in garages which are connected to the roof gully which in turn discharges into a storm water sewer.
- A meeting took place in November 2017 between NIEA, NI Water and DfI with the purpose of developing a policy to address misconnections on private properties. At this meeting NIEA highlighted that they had identified quick wins concerning some of

the misconnections. However, following further investigation by NI Water it was determined that these quick wins were not viable as they involved diverting storm water into foul sewers which did not have the necessary hydraulic capacity.

- The Working Group continue to meet twice a year to establish how best to address private connections.
- Until a policy is developed, NI Water has not conducted any further catchment studies. This decision was made with the agreement of NIEA (2015),
- Misconnections located by NI Water on the public highway are being addressed i.e. they are being redirected to foul sewers.
- NI Water is continuing to investigate and address pollution of storm water overflows where the misconnection is on public property with the help off NIEA.
- Up to now March 2019, NI water has addressed 83 miss-connections.

Planned next steps for delivery

The next step for delivery entails a request for clarification from DfI Water Policy Unit on the way forward: regarding potential enforcement actions.

DEVELOPMENT OUPUT
14. Storm water separation
Final Determination: *The company shall develop a plan for investing the funding allocated for storm-water separation by September 2015 which sets out the target projects and the benefits they deliver.* *The company shall assess the scope for storm-water separation and assess benefits it could deliver to support further investment.*
Additional Details:
This is now Business As Usual
PROJECT SUMMARY
• Stormwater separation is an option considered in all new project appraisals. • A plan has been developed using SudStudio methodology to prioritise storm separation across the Province. • The project considered a phased approach as follows: - Phase 1 – considered schools but this proved to be undeliverable due to issues with Education Authority acceptance and buy-in. - Phase 2 – consisted of major industrial premises and terraced housing. Phase 2 has been forwarded to AD ICD to develop detailed solutions – i.e. A0 (KI605) issued to AD ICD in December '16 for delivery of Phase 2 work. Final output costs will only be known after detailed design has been completed. - Desktop assessment of Phase 2 has the potential area removal identified as circa 1,077,150m^2.

KEY MILESTONES	Target	Status
1. PC15 Plan has been developed		Complete
2. Phase 2 schemes identified to AD ICD for detailed design and delivery	Dec '16	Complete
3. Delivery scheduled by AD ICD, methodology has changed due to buildability and cost issues of named schemes.	Dec '18	Complete
4. Provide input to PC21 asset management plan	Sep-Dec 2019	On target

Line 14 – Storm water separation

During PC15 NI Water has planned to remove 19 hectares of impermeable area develop by implementing a variety of projects which also inform the business of the cost effectiveness of storm water separation in a range of situations and catchments. For example:

- where separate systems have been merged when they join the old combined network
- industrial areas and roofs
- areas of terraced housing
- areas of semi-detached housing
- roads.

NI Water's primary aim is to identify the priority locations across Northern Ireland where the retrofitting of storm water separation / SuDS technologies would remove significant volumes of storm water from the combined sewer system. To facilitate this NI Water has employed an innovative tool: SUDS Studio^{TM},

The SUDS Studio^{TM} tool works by using GIS data to identify sources of runoff (for example roof, roads, carparks, hardstandings, etc.), sinks (locations where SuDS solutions can be

installed or nearby watercourses), and pathways which connect the two. The tool has been designed to incorporate a range of complex relationships that are used to determine what SuDS are considered feasible on any given site, and those which are not. SuDS Studio™ assesses the best solution for each source and site, and outputs its results as GIS layers containing tables that can quickly and easily be summarised in reports and easy to understand figures.

The basis of the Suds Studio™ analysis in Northern Ireland is the OSNI Vector mapping dataset. However, NI Water wishes to emphasise that SuDS Studio™ has been developed based on OS Master Map data which is significantly more detailed and functional than OSNI Vector mapping. A significant amount of pre-processing of the data has therefore been required to supplement the OSNI Vector maps in an attempt to replicate the quality of information contained in OS Master Map. It is our understanding that there is a current project within OSNI to develop a polygon based mapping dataset that is similar to OS Master Map which when finished will enhance the output derived from SuDS Studio in Northern Ireland in the future.

However, based on the current situation significant pre-processing is required due to the GIS data available in Northern Ireland (plus time to acquire and purchase additional data sets) and has extended the time taken to conduct the SUDS Studio™ analyses. This in turn has resulted in the slower identification of storm water / SuDs opportunities in Northern Ireland with which to develop NI Water's Storm Water Separation Programme of work.

Since its launch at the start of PC15 a fundamental goal of NI Water's Storm Water Separation Programme has been to develop a robust approach for identifying priority locations across Northern Ireland. This is essential for the successful retrofitting of SuDS technologies / storm water separation infrastructure for the removal of significant volumes of storm water from the combined sewer system. Time taken in developing the system is considered well spent by NI Water and will drive a successful programme going forwards.

During 2015 and 2016 NI Water's consultant has adapted SUDS Studio™ into a bespoke tool for identifying large surface areas in public ownership across Northern Ireland with potential for storm water separation / SuDS Technologies. This resulted in the identification of a large number of schools as potential pilot project sites with high estimated project costs and unfortunately didn't yield the range of situations and catchments desired by NI Water. The four schools short listed for separation and the recommended solutions summarised from the consultant report are presented below:

- Campbell College: SuDS Studio recommends bioretention, swales and the disconnection of downpipes. Recommendations are likely to be delivered entirely within the existing Campbell College boundary. Further work required to investigate ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings.
- St Louise's: SuDS Studio™ recommends bioretention and potential green roofs / disconnection of downpipes. Recommendations are likely to be delivered entirely within the existing St Louise's boundary. Further work would require investigation into ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings. It is also to be noted about this site that it is adjacent to an extensive area of wetland (Bog Meadows) managed by the Ulster Wildlife Trust.
- Ballycastle, SuDS Studio™ recommends bioretention, potential green roofs / disconnection, of downpipes and swales. Recommendations are likely to be delivered

entirely within the existing Ballycastle High School boundary. Further work is required to investigate ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings. Other considerations include the existing infrastructure in place on this site in that much of the system is already separately drained with only the ultimate connection point combined. As this is already a piped system consideration should be given to continuing the piped network within Moyle Road to a suitable discharge point such as an existing storm sewer or RA culvert. Consideration will need to be given to the impact of this flow on the discharge location. Buildability constraints should be considered when determining any extension to the outfall pipeline route corridor.

- Dromore, SuDS Studio™ does not recommend any feasible option in this instance due to limitations with the input data. In this instance therefore, engineering judgement has recommended that Disconnection of Downpipes is considered. Recommendations are likely to be delivered entirely within the existing Dromore Central Primary School boundary. Further work is required to investigate ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings.

It is important to note that NI Water has already encountered significant stakeholder issues, notably with the Education Board, regarding the safety of SuDs (often used to enable storm water separation) which are yet to be resolved. One of these sites have now been agreed by NI Water at Clandeboye School, Bangor. NI Water is working closely with the Water and Drainage Policy Division of DfI regarding engagement with the Education Board and their legal representatives.

Subsequently NI Water initiated Phase 2 of planning NI Water's Storm Water Separation Programme with the SUDS Studio™ tool. The tool was further modified and the initial SUDS Studio™ run identified a broader range of potential storm water separation opportunities to address the bias which resulted in the identification of a large number of schools in Phase 1:

- 32 high density housing sites
- 61 Industrial estates and
- 28 potential quick win sites

Through the short listing process this was refined down to:

- 14 high density housing sites,
- 14 industrial estates and
- 6 potential quick win sites.

These sites were then packaged into geographically similar study areas and progressed for ground truthing connectivity checks.

Following on from the ground truthing exercise the sites which were assessed as suitable for further consideration were modelled with Infoworks to quantify the benefit that might be achieved from storm water separation / SuDS retrofit. This has allowed us to model and assess the following sites (Table 1) which are now being considered as pilot studies from Phase 2. In total the ***maximum potential*** area which could be removed as a result of the Phase 2 assessment is 1,077,210 m^2.

The Phase 2 opportunities mainly originate in High Density Housing areas and only one Industrial estate. Industrial estates have proven to be, on the whole, already separate

systems. It should be noted that it is unlikely that the 100% separation figure modelled (total area = 1,077,210 m^2) could be achieved in reality. Therefore, these figures should be considered as an initial over estimate which will reduce during the feasibility and implementation phases.

Furthermore, stakeholder issues will be key in determining the viability, likelihood of success and speed at which solutions can be realised. There are a number of other industrial estates and quick win sites which are also suitable for further consideration (having been ground truthed) and these will be brought forward to NI Water in a Report. The sites and potential impermeable area removal (m^2) have been presented in Table 1. It should be noted that consents are yet to be negotiated with a key stakeholder, Rivers Agency, where storm water is being separated and directed into a river or culvert.

Table 1: Phase 2 Sites identified with potential for storm water separation and SUDS solutions, including the associated potential maximum area removal values (m^2).

Location	Potential Area Removal m^2	Potential Percentage Removal Options	
		Storm Water Separation	SuDS Solutions
Alliance Avenue / Brompton Park Area, Belfast	121,000	100%	56%
Lincoln Court, Derry	76,200	100%	60%
Carnhill Area, Derry	95,290	100%	55%
Norglen Parade, Belfast	110,160	100%	64%
Springfield Rd / Cavendish Road Area, Belfast	124,660	100%	49%
St James Road, Belfast	50,860	100%	45%
Tates Avenue / Donegal Rd / Dunluce Avenue Area, Belfast	461,980	100%	52%
Maydown Industrial Estate, Derry	37,060	100%	39%

Significant delays in Phase 2 have been experienced in relation to the ground truthing connectivity checks being undertaken by a CCTV contractor.

After intense surveys and site visits it has been agreed that the locations above are not suitable to take forward due to expense and buildability issues.

As part of Phase 1 Asset Management also engaged within the NI Water Capital Works Programme requesting that stormwater separation should be considered as part of the options analysis regarding drainage solutions i.e. a business as usual process. This has yielded eleven projects in 2016/17, 2017/18 & 2018/19 the impermeable area removal has been presented in Table 2.

Table 2 NI Water Capital Works Programme: storm water separation projects delivered in 2016/17, 2017/18 & 2018/19 and impermeable area removal (m^2) values.

Sub Programme	Scheme	Impermeable Area Removal m^2
24	PC15 Sewer Rehabilitation Unplanned	39
24	Olympia Leisure Centre Windsor Park Belfast	70,500

24	8-20 Sloans Street, Dungannon	16,460
24	Ben Crom Place Kilkeel	3,865
24	Foyle College, Limavady Road, Londonderry	82,000
24	Fitzroy Avenue, Belfast,	1,200
24	College Ave/Shandon Drive Bangor Storm Sewer	24,180
24	McClintock Street, Belfast Storm Sewer	6,750
24	Canal Street, Newry Storm Sewer	1,665
24	The Square, Ballyclare Storm Sewer	1,410
24	Dundrum WWTW	98
	Total Impermeable Area Removed, m^2	**208,167**

NI Water is endeavouring to move the Storm Water Separation Programme forward but in a different process. This process is to look at catchments with high flows reaching WWTW and causing washouts of these works, this process will give a better overall value for money. This process has been taken forward regarding the Ballykelly catchment.

DEVELOPMENT OUPUT
15. Strategic drainage study
Final Determination: *The company shall report progress on its strategic drainage study programme to complete a business case for investment to resolve strategic drainage issues by March 2020.*
Additional Details:
This work is undertaken as Business As Usual
PROJECT SUMMARY
• The PC15 prioritised programme of Drainage Area Studies has been agreed between NI Water and NIEA. (See attached Excel Spreadsheet). A copy was provided to the UR in January 2017. DAP Model Programme PC15.xls • Newry DAS awarded to consultant. • Belfast DAS awarded to consultant.

KEY MILESTONES	Target	Status
1. DAS Prioritisation Programme Agreed with NIEA	Nov '16	Complete
2. Modelling and "Needs & Options" work to be used to inform PC21 asset management plan.	Sep-Dec 2019	On target

Line 15 – Strategic drainage study

Activity completed to date and its outcome

Strategic Drainage Area Studies are under way with agreement of NIEA on the catchments to be taken forward. At present NI Water has twenty seven MBV and N&Os underway to meet the required outputs. Expenditure to date is in the region of £1200k. NI Water is also involved in the Living With Water Programme (LWWP). The LWWP requires the completion of an integrated catchment, hydrodynamic water quality model for Belfast Lough and it seems that this will also require the upgrade / development of several MBVs to provide nodal inputs concerning sewer overflows. The estimate for the overall Belfast DAP is £800k. plus 3rd Party costs.

NI Water has developed a joint prioritisation list of drainage area studies with NIEA. A data-driven approach has been employed to facilitate the integration of both network and wastewater treatment work needs to enable the whole catchments to be addressed.

Planned next steps for delivery

The next step involves completing innovative Risk Based Needs and Options studies for the agreed catchments to enable a programme of work to be taken into the next PC Period i.e. PC21. This is essential as the programme identifies NI Water projects required to address Quality drivers and Base Maintenance issues. Note that under the risk based approach NI Water is developing solutions to address New Development in catchments with hydraulic capacity issues/risks.

DEVELOPMENT OUPUT
16. Sewer flooding report
Final Determination: *The company shall provide an annual report on property flooding alleviation and mitigation providing an update on the DG5 flooding register, progress on feasibility studies to identify solutions and progress in delivery of investment and delivery of outputs.*
Additional Details:
This is Business As Usual through the DG5 panel
PROJECT SUMMARY
• Properties added / removed from DG5 registers reported annually through the AIR submission. • Target of 39 removals for 2015/16, 2016/17, 2017/18 & 2018/19 achieved. • Update on progress on feasibility studies to identify solutions. EP have currently 5 feasibility projects ongoing; - KI 529 - One remaining property feasibility assessment outstanding – Lisnevenagh Rd. - KI 531 - One feasibility reports outstanding: Tullagh Rd, Cookstown. - KI 564 - Feasibility is ongoing, estimated submission date to NIW, August 2017. - KI 515 - One remaining property feasibility assessment outstanding - The Beeches, Portadown. • DG5 properties resulting from the live feasibility projects have been progressed for delivery within the PC15 DG5 delivery programme. • Target for 18/19 projected for 8 removals has been achieved.

KEY MILESTONES	Target	Status
1. DG5 Removals 2015/16, 2016/17, 2017/18 & 2018/19	39	On Target

Line 16 – Sewer flooding report

Activity completed to date and its outcome

The company supports the implementation of the Home Owner Flood Protection Scheme being delivered by NI Executive through the Rivers Agency. NI Water contributes to the Home Owner Flood Protection Scheme process by assessing whether homeowners are on NI Water's DG5 Register and whether there is a capital scheme that will alleviate the flooding over the next 5 years. NI Water retains a register of these enquiries and they are discussed at monthly DG5 Panel meetings. The DG5 Register is updated monthly with additions and removals as approved by the DG5 Panel. DG5 Register movements are recorded and provided in the Annual Information Return by NI Water. The AIR19 summary of register movements is provided in the attached document for the period 1st April 2018 to 31st March 2019.

The solutions to address DG5 Internal Flooding properties are being developed and delivered and the investment is commensurate with the PC15 funding provided.

Planned next steps for delivery

The next step involves amassing a programme of fully appraised, detailed solutions thereby enabling NI Water to implement the removal of properties from the DG5 register as set out in the PC15 Business Plan. This will facilitate the meeting of the PC15 regulatory requirements for DG5 internal flooding property removals. Furthermore this approach will enable NI Water to develop the detailed DG5 programme, populated with accurate costings and numbers of properties to be addressed in the PC21 Business Plan.

DEVELOPMENT OUPUT		
17. Sustainable Urban Drainage Systems (SUDS)		
Final Determination: *The company shall record information on SUDS applications and report annually on:* *- The number of applications received; and* *- The number of schemes adopted.* *The company shall maintain a register of its decisions on SUDs applications, highlighting the reasons any application was refused.*		
PROJECT SUMMARY		
NI Water does not receive stand-alone SuDS applications. However, NI Water receives applications for future adoption of development sewers, some of which may have an integral SuDS system. • The reporting mechanism records the number of applications received and authorised for future adoption of development sewers where SuDS is an integral part of the application. • The number of development sewers adopted with a SuDS element. • Development sewers with SuDS are not refused, rather encouraged, so this value will invariably be 'nil'.		
KEY MILESTONES	Target	Status
1. Report on SUDs applications in AIR	Annually	BAU

Activity completed to date and its outcome

For yearly AIR returns we record the number of Art 161's approved which incorporate SUDS, we also record the number of adopted Art161's which incorporate SUDS systems. Formal recording of SUDS included in adopted sewerage systems has been available since 2016/17.

2018/19 Housing sites adopted, incorporating SUDS utilising hyrobrake/vortex flow control. 36 sites.

2018/19 Housing A161 sites approved, incorporating SUDS utilising hyrobrake/vortex flow control 144 sites.

DEVELOPMENT OUPUT

18. Implementation of the PPC requirements for Odour Management

Final Determination:
The company shall develop a plan for the implementation of PPC requirements for Odour Management by 31 March 2015, which shall be prioritised and agreed with NIEA. The company shall report progress against the delivery of this plan.

GOVERNANCE

Directorate	SRO	Project Lead	Approving Authority
Asset Delivery	Paul Harper	Angela Halpenny	EC

Additional Details:

N/A

PROJECT SUMMARY

NI Water holds 28 Pollution Prevention Control (PPC) permits for WwTW sludge centres for thickening or dewatering wastewater sludges. The permits require odour modelling to be undertaken to assess the impact from the facility on the surrounding sensitive receptors. Recognising the financial impact and resources required to undertake the necessary modelling, a prioritised list was initially agreed with NIEA in June 2015.

NIEA ranked the 28 PPC sites into the following categories:
- Priority 1 (4 sites),
- Priority 2 (8 sites),
- Priority 3 (11 sites) and
- odour modelling not required (5 sites).

The modelling is divided into 2 phases. The first phase is a library data based screening exercise. If this exercise identifies an impact on surrounding sensitive receptors, the site will progress to the second phase, which involves collection of site specific olfactometry data.

Whilst NIEA asked for odour modelling of Priority 1 sites to be completed in 2015/16, delays were incurred due to the time of year for undertaking the site based odour survey during the summer months, when emissions are likely to be at their highest (May/June to September). The odour modelling is now complete for all Priority 1 sites and Priority 2 sites with the exception of Ballymena WwTW which is currently being upgraded.

KEY MILESTONES	Target	Status
1. Develop a plan for the implementation of PPC requirements for Odour Management	31 Mar 15	Complete
2. Completion of 2nd Phase odour models for priority 1 sites: Carrickfergus, New Holland, Dungannon and Whitehouse.	31 Dec 16	Complete
3. 2nd Phase odour model for the upgraded Newcastle WwTW	31 Mar 17	Complete
4. 1st Phase modelling based on library data for Priority 2 and 3 sites	31 Mar 18	Complete
5. Develop list of sites requiring 2nd Phase modelling	31 Mar 18	Complete
6. Undertake 2nd Phase modelling for sites identified in No. 4 above, selecting the priority 2 sites first, followed by the priority 3 sites	31 Mar 19	On Target

7. Using 2nd phase modelling develop and deliver a programme of work required to meet PPC odour requirements	31 Mar 21	On Target

The company shall develop a plan for the implementation of PPC requirements for Odour Management by 31 March 2015 which shall be prioritised and agreed with NIEA. The company shall report progress against the delivery of this plan.

NIW currently operates 28 WWTWs with PPC permits that fall under the regulations.
A collaborative working group, the PPC Compliance Group, has been established between the NI Environment Agency (NIEA) and NIW to agree, progress and monitor the implementation of PPC requirements for Odour Management. This group meets on a quarterly basis to review actions, which have been agreed and prioritised by the group. NIW has been working closely with NIEA over the past 12 months in the development of feasibility studies and identification of outputs. The following spreadsheet details the Odour Modelling Implementation Plan and the programme of work required to meet PPC odour requirements.
The sites, within the spreadsheet, have been prioritised based on:

- whether an appropriate assessment has already been completed in line with the H4 guidance;
- whether an assessment has already been completed, but it was not in accordance with the H4 guidance;
- whether the site is already a priority site;
- whether the site imports sludges from minor works or septic tank etc., as these sites have a greater potential for odour generation; and,
- then further by the calculated throughputs.

Social and Environmental Guidance for Water and Sewerage Services (2015-21)

Drinking Water Quality

Priority	Drinking Water Directive	Update on Delivery (June 2019)
WQ1	Maintain existing water assets and infrastructure and complete any upgrades needed to sustain overall compliance levels.	NI Water maintain assets as a BAU action within our base maintenance programme. The total base maintenance funding being invested has been maintained in line with the PC15 FD to ensure customer service is maintained. This investment includes replacements and repairs to sustain water compliance levels. Whilst this was not a nominated output the UR had set aside funding within the FD for examples like this. Upgrades to achieve new compliance standards are prioritised from the 'Enhancement' investment programmes. This funding envelope has been reduced from the PC15 FD due to PE cuts and this is delaying investment at certain sites.
WQ2	Complete any water infrastructure and treatment upgrades necessary to address enforcement notices and other statutory obligations from the Water Supply (Water Quality) Regulations (NI) 2007 (as amended).	This a Core Business Activity. For the 2018 reporting year NI Water achieved its drinking water quality targets and is on profile to achieve its targets in 2019. Water infrastructure investment (watermains rehab) is prioritised using our WIIM model which includes for a range of issues including water quality. Any enforcement notices relating to watermains infra should they arise will be accommodated as must do investments within the watermains rehab programme which is a blend of Base Maintenance and Enhancement investments. PC15 has to date completed the GAC installations at Dorisland and Killyhelvin WTW's which achieved beneficial use in PC13. The PC15 programme also includes for investment at Derg WTW to fit out existing filters and ensure the chemical arrangements are available to treat the river intake from the Strule. There have been two PEOs ref MCPA at Derg and Ballinrees, and one referencing THMs at Rathlin which have has added projects not funded within the PC15 FD nominated outputs.
WQ3	Identify and program any infrastructure and treatment upgrades necessary to meet new or emerging drinking water quality issues or legislative changes (e.g. Radon).	As BAU we implement a prioritised investment programme to manage drinking water quality risks informed by Drinking Water Safety Plans. NI Water will continue to respond to emerging risk identified in the Drinking Water Safety plans and to respond to issued raised by the Drinking Water Inspectorate in its consideration of provisional enforcement orders or other enforcement action. Any resultant outputs will be agreed with stakeholders via change protocol to prioritise investment not currently funded in PC15 FD.
Priority	**Water Fittings Regulations**	
WQ4	Effectively monitor and regulate compliance with the Water Supply (Water Fittings) Regulations (Northern Ireland) 2009 and manage the risk of contamination or waste of public water supplies through defective water fittings.	NI Water monitor and regulate compliance with Water Supply Regulations as a BAU item. NI Water continues to proactive and reactively inspect customer premises for compliance with the water fittings regulations. NI Water is a fully participating and contributing member of the UK's water industry organisation known as the Water Regulation Advisory Service (WRAS). WRAS acts as one voice for the water industry on a national level and also assists water companies interpret the regulations on a consistent basis. Customers complying with their obligations contained within the regulations will significantly mitigate the risk of waste, undue consumption, waste and contamination of mains water supplies. Customer compliance with the Regulation 4 in the regulations and appropriate EU and BS standards as well as the Regulators (DfI) specification, will significantly reduce the risk of waste, misuse, undue consumption, erroneous measurement and contamination of water through non-compliant water fittings. This is a statutory obligation and as such will be an ongoing activity for NI Water. This activity will not end or change unless DfI amend the current regulations. Information on the companies obligations and powers, guidance to householders and notification forms are available on the companies website. The company supports the national schemes for licensed or approved plumbers.

Priority	Drinking Water Safety Plans and Drinking Water Protected Areas	
WQ5	Continue raw water monitoring programme at abstraction sites to manage drinking water quality risks and work with NIEA to designate Drinking Water Protected Areas to help prevent future deterioration of drinking water sources in line with WFD principles.	Raw water monitoring is in place and ongoing. Sampling frequencies are reviewed in line with regulatory requirements and on risk assessment. The is managed as BAU. DWPAs have been assigned by NIEA for our drinking water catchments in line with WFD principles. NIW worked with NIEA during this process. Catchment Management Plans have been completed for all in service catchment areas, with the exception of Killyhelvin and Belleek; both these catchment management plans will be completed in 2018/19, as per the Source to Tap plan. A number of catchment initiatives are in place, with the aim of protecting drinking water protected areas - Water Catchment Group; DWPA joint NIEA DWI NI Water group. NI Water is the lead partner in the delivery of a Source to Tap Interreg Project, which aims to pilot catchment management initiatives in the cross border Derg and Erne catchment. This project is underway and will run until 2021; a guidance document will be produced for use across Ireland and the UK. The project has 6 strands, love your water, water for forests, water for peatland, water for farming and learning for water.
WQ6	Through the ongoing review of Drinking Water Safety Plans (DWSPs), develop and implement a prioritised programme of mitigation measures to build resilience against contamination risk for all aspects of the water supply chain (from catchment through to tap) to protect public health.	As BAU we implement a prioritised investment programme to manage drinking water quality risks informed by DWSPs. This is a Core Business activity. Subject to appropriate PC15 funding in 19/20 and 20/21.
WQ7	Continue rolling out a prioritised SCAMP NI programme across all drinking water catchments to reduce raw water contaminants through interactive stakeholder working to improve or prevent deterioration of abstracted drinking water quality (e.g. natural organic matter, pesticides) and provide for more cost-effective treatment solutions in the future.	Catchment Management Plans have been completed for all in service catchment areas, with the exception of Killyhelvin and Belleek; both these catchment management plans will be completed in 2018/19, as per the Source to Tap plan. Catchment Management Plans will be completed for all live catchments in the PC15 period. Year 1, 2, 3 & 4 targets delivered. Continued roll out of the WCP and work with organisations such as Rivers Trust. SCAMP NI and the work with NGOs and the WCP is progressing well. Various types of SCAMP projects have been implemented on a prioritised basis and now extend over many of the drinking water catchment areas, for example; riparian planting in Glenedra to reduce sediment run-off. This has been done both with internal NI Water resources and also through externally funded projects which involves a wide range of stakeholders and partners such as the Woodland Trust in the case of Glenedra and RSPB in the INTERREG CABB project to restore Garron Plateau blanket bog. These projects all include a water quality monitoring aspect, relevant to the area and projects being undertaken. In addition, NI Water is the lead partner in the delivery of a Source to Tap INTERREG Project, which aims to pilot catchment management initiatives in the cross border Derg and Erne catchment. This project is underway and will run until 2021; a guidance document will be produced for use across Ireland and the UK. Progress in 2018/2019 has included the launch of a pilot land incentive scheme in the Derg catchment.
WQ8	Implement the recommendation of the Inter-departmental Group on Wildfires to introduce Bye-laws on NI Water's land and work with the proposed Strategic Wildfire Forum and other stakeholders to manage the risk of wildfires within its catchments (and the risks to raw water quality).	Participation with the Inter-departmental Group on Wildfires is ongoing and implementation of recommendations to manage the risk of wildfires within catchments are being carried out on an annual basis as agreed at the group.
Priority	**Managing Quality Risks from the Distribution System**	
WQ9	Continue a maintenance programme to ensure all service reservoirs are cleaned and checked for integrity on a regular basis. The company should also ensure that for the protection of human health microbiological quality is not compromised; residual disinfection is maintained throughout the distribution system, and disinfection by-products are kept to a minimum.	NI Water have a rolling programme of Potable water storage structures cleaning and inspection as a BAU item. The inspection programme informs the Base Maintenance investment at Potable Water storage structures which is progressing as per PC15 FD plans. All Water Quality parameters are monitored and managed within the water network as a BAU item.
WQ10	Work with DRD, DWI and stakeholders through the PC15 planning process to develop and agree a PC15 investment programme and targets to address iron exceedances & drinking water quality complaints, in particular colour, taste & odour.	This action is complete. Stakeholder engagement took place during the development of the plan to inform the PC15 plan.
Priority	**Managing the Quality Risks from Lead Pipes**	
WQ11	Continue implementing its strategic lead policy and lead pipe replacement programme focused on improving compliance with EU Lead standard (10µg/l).	A Prioritisation methodology is in place that identifies a programme of 6 years of work year on year in PC15, of pro-active watermains communication pipes replacement, focused on the aim of a planned ongoing process to remove all lead pipes from the public supply system and improving compliance with the EU Lead standard (10ug/l).
WQ12	Work with DRD, DWI and stakeholders to develop and implement a strategic risk based approach for addressing lead compliance issues associated with private supply pipes and domestic distribution systems	NI Water have completed a pilot replacing both private and public elements of lead service pipes. The Lead Service Pilot Project Report was issued to DfI for comment on the 25th April 2018. There has been some liaison with Housing Executive to prioritise lead service replacement in areas where they have removed the lead within private properties.

Drinking Water Supply		
Priority	**Water Framework Directive**	
WS1	Develop, agree and implement water abstraction monitoring and management plans with NIEA.	Ongoing work with NIEA AIL team to review abstraction licences. Managed as BAU.
WS2	Implement any drinking water resource-related measures set out in the Executive's River Basin Management Plans.	Ongoing work with NIEA. Member of the WFD Strategic Planning and Resources Group (SPAR)
Priority	**Water Resource Management (& Drought) Plan**	
WS3	Prepare a revised Water Resource Management Plan (WRMP) to identify the long-term water resource management and security of supply investment needs. The WRMP should incorporate drought planning requirements, identify adaption measures in response to climate change predictions and take account of the review of water abstraction and impoundment licences. DRD will provide Guidance on this to NI Water.	NI Water have completed a draft Water Resource and Supply Resilience Project which includes for a Water Resource Management Plan, Strategic Drought Plan and a Critical Period Plan, in accordance with the guidance provided by DRD. An initial draft of the plan was signed off by NI Water board in November 2017, however, it was agreed to review the draft plan against the summer 2018 high demand incident. This review has been completed and the updated draft plan was signed off by NI Board on the 1st May 2019.The Draft Plan will be issued for consultation once approval is granted by DfI, with the final plan informing investment in the final PC15 years and PC21.
WS4	Develop and implement a water supply investment programme to ensure long-term security of supply (informed by revised WRMP).	This is included with WS3 above.
Priority	**Water Leakage Detection & Reduction**	
WS5	Continue to focus on leakage detection and reduction with the aim of achieving and maintaining the Sustainable Economic Level of Leakage (SELL), and driving below this if recommended in the 2017 WRMP.	As reported to NIW EC & Board, the draft reported leakage level for September 2018 was above the target level. This is primarily as a result of the challenging winter weather conditions experienced in March (Beast from the East) followed by the heatwave from May to July, leading to pipe/ground movement and increased leakage outbreaks. Leakage reduction continues to be given a high priority and reporting continues on a monthly basis.
WS6	Work with DRD and stakeholders to develop and implement policy on reducing private supply pipe leakage (e.g. in conjunction with lead supply replacement).	NI Water have limited powers to repair private supply pipe leakage. If a leak is identified a waste notice is issued which provide the customer a period of c4weeks to complete a repair. The vast majority of repairs are carried out within this period and reducing the time period would have limited benefit. A draft report following the pilot lead replacement project has been completed and has been submitted to DfI. The initial outputs of this report suggest there is limited benefit in replacing private communications pipe unless all internal lead within a property is removed.
Priority	**Managing Water Consumption**	
WS7	Continue with a programme to install meters for non-domestic water and sewerage customers	NI Water was until December 2017 obligated to fit water meters at all newly connected premises under Article 81 of the Water and Sewerage Services Order (2006). In December 2016 the Minister made regulations removing the part of this obligation relating to Domestic premises. As such NI Water will limit the installation of water meters to non-domestic premises going forward.
WS8	Prepare and implement a Water Demand Management Strategy (WDMS) focussed on moving towards the proposed water strategy's long-term target of 130 l/h/day.	This is a long term water strategy action being led by DfI. NI Water will support the development of this strategy.
WS9	Work with DRD and other stakeholders to develop policies in respect of water efficiency measures in homes and businesses. This includes investigating opportunities to work with other government departments, utility providers or NGOs to find mutually beneficial projects in which water efficiency can be highlighted or implemented (e.g. water efficiency and lower energy bills)	An initial meeting held with DfI and other associated stakeholders on the 23rd May 2017 to discuss this measure in relation to the LTWS. Following this discussion it was agreed that NI Water would highlight the current Education campaigns to assess if there were further opportunities. Primary and Secondary schools are offered an education talk on our key Water Efficiency messages. Also we run an annual schools competition for Primary Schools - every 4th year the competition focuses on Water Efficiency. We attend Events/Exhibitions such as; Balmoral Show and local community events/talks. We communicate to the wider public audience using all available communication channels such as Facebook, Twitter, website, LinkedIn, U-Tube, Print-Press and Radio/TV interviews. In addition work on Demand Management options was carried out as part of the 2017 WR&SRP with a number of actions identified and once the plan has been finalised these measures will be actioned.

Environmental Protection & Improvement		
Priority	**Urban Waste Water Treatment Directive (UWWTD)**	
WW1	Continue improving overall levels of compliance with Water Order Consents(including flow compliance from 2015), the PPC Regulations and the CSO spill requirements of the UWWTD, WFD (including Priority Substances &SWD), MSFD & BWD.	The PC15 plan and FD set targets to continue improving overall levels of compliance. Despite public expenditure cuts within the mid term review period, compliance has been maintained.
Priority	**Urgent Waste Water Priorities**	
WW2	Develop and deliver a prioritised investment programme on wastewater treatment facilities, pumping stations and sewerage systems to meet:	The PC15 plan was developed with stakeholder engagement and all WWTW enhancement projects have been prioritised in conjunction with NIEA. The PC15 plan was constrained within the funding limits set for the plan and this has resulted in a significant number of WWTW's not receiving investment during PC15. The additional PE cuts in 15/16, 16/17, 17/18 and 18/19 are further reducing NI Water's ability to deliver investment at WWTW's and as a result a number of new housing developments are not receiving planning approval as the receiving WWTW has no headroom capacity. The extent of this impact was detailed in the mid term review baseline document compared to the latest plan, illustrating the number of WWTW's where potential investment could have taken place in PC15.
WW2a	- immediate development pressures (& address overloaded works) and compliance with Water Order Consents (WOCs),	Please see WW2 above
WW2b	- flow monitoring requirements (in support of the introduction of flow compliance from 2015); and	Please see WW2 above
WW2c	- any outstanding spill monitoring requirements needed for compliance with the UWWTD, SWD & BWD.	Please see WW2 above
WW2d	And deliver the highest priority schemes during PC15 within the funding constraints.	Please see WW2 above

Priority	Planning & Modelling	
WW3	Work with DRD, NIEA and other statutory partners in response to the Committee for Regional Development's Inquiry into Unadopted Roads and commence a prioritised investment programme to address unsatisfactory private sewerage infrastructure and treatment facilities	This action has not progressed as no funding was included with the PC15 business plan or FD to take this forward. NI Water continue to collaborate with TNI in respect of Article 11 Enforcement sites (pre 2007) where TNI hold a single bond. NI Water has also identified potential Enforcement sites (post 2007) where separate NIW/TNI bonds apply.
WW4	Collect accurate and reliable information on wastewater treatment facilities and sewerage infrastructure to inform development of robust holistic drainage area plans (DAPs).	NI Water has agreed with NIEA a prioritised list of Drainage Area Studies for delivery during PC15. The studies will involve a comprehensive model build and verification of catchment operation for various horizons and will be used to inform both DAP capital works and WwTW upgrades. Flow and Composition studies are selectively undertaken as part of WwTW appraisals.
WW5	Ensure storm separation and sewer infiltration reduction are considered through the DAPs and that these options are adequately explored and costed before being ruled out	As part of catchment model verification anomalies in hydraulic loading will initiate infiltration investigations. DAS catchment investigations, both reactively and proactively, target opportunities for storm water removal (separation & infiltration). Cost benefit analysis of potential capital works are examined through the Needs & Options report. NI Water has included a pilot programme in PC15. Based on the findings of this, NI Water will include an appropriate programme in PC21. 1. Application of SUDS Studio. Identifies initial locations for potential Storm Separation and priorities same. 2. Storm Separation included in all current/future Drainage Area plan work.
WW6	Work with DRD, NIEA and other statutory partners to develop and implement catchment-based solutions (from Simulated Catchment Management Modelling - SIMCAT) for wastewater collection and treatment	The Letter of Offer for SWELL to proceed was received in February 2019. The project is ongoing with expected model build and project completion by December 2022. Living With Water Programme will deliver an ecosystem model for Belfast Lough. NI Water are progressing a model for the Dundrum Catchment.
WW7	Work with DRD, NIEA and other statutory partners to develop a programme and target for installing appropriate spill monitoring systems across the sewerage network.	For PC15 we are commencing a programme of flow measurement at CSO's. Given the time required to plan this type of solution it will not be possible to implement before PC21.
WW8	Undertake work to develop a sustainable economic level of infiltration (SELI) to inform sewerage investment decisions and deliver infiltration reduction works where this is assessed to be cost effective in addressing issues	NI Water have explored sustainable economic level of infiltration (SELI) methodology with other UK sewerage providers. 1. DAS Programme - The assessment of infiltration within a catchment is included in the revised' Risk-Based Drainage Area Plan' Methodology. The potential for infiltration reduction is considered in the outputs of each DAP. The revised methodology is now implemented for all future DAPs. 2. Other Catchment Outside the DAP Programme of Work - A risk based methodology is under development to prioritise catchment / sub catchments for further detailed investigation. 3. Examples where NI Water have reduced infiltration in PC15 include: • Moneyreagh (avoiding capital investment at the WwTW) • Saintfield repair of DfI Roads culverts previously discharging into combined sewer.
WW9	Develop and maintain a long-term investment programme for the implementation of the PPC requirements for Odour Management. In the first part of PC15 NI Water should:	The PPC Compliance Group, a collaborative working group between NIEA and NIW has been established and Odour Modelling prioritisation for 23 WWTWs has been established in addition to a schedule of inspections.
WW9a	- assess the cost of complying with the PPC Regulations for all sites that are determined to be 'qualifying sites' under proposed NIEA guidance.	Project Identifier KI583 - PC15 Implementation of Odour & PPC Strategy has identified a spend of £4.4 to rectify deficiencies as identified by the joint inspections.
WW9b	- develop and agree with NIEA a prioritised programme with the aim of achieving full compliance by the end of the PC15 period (subject to priority & funding constraints).	A prioritised programme has been agreed and this is reviewed quarterly by the PPC Compliance group.
WW9c	In the second part of PC15 NI Water shall commence the delivery of this programme, with the pace determined by the relative priority of this programme, as guided by the WICG.	The delivery of the programme has commenced as per the prioritised programme agreed with the PPC compliance group.

Priority	Longer Term Investment Priorities	
WW10	Continue a prioritised long-term maintenance and enhancement programme on wastewater treatment facilities & pumping stations to maintain serviceability and meet:	The PC15 plan was developed with stakeholder engagement and all WWTW enhancement projects have been prioritised in conjunction with NIEA. The PC15 plan was constrained within the funding limits set for the plan and while this has effectively limited the immediate number of sites for capital intervention it has provided for an extended list of wastewater sites for longer term prioritisation with the option of promoting additional outputs as circumstances prevail. Please see WW2 for additional information.
WW1	- development pressures (& address overloaded works) and	Please see WW10 above
WW1	- reduce pollution incidents;	Please see WW10 above
WW1	- comply with existing/revised Water Order Consents; and	Please see WW10 above
WW1	- meet the PPC requirements.	Please see WW10 above
WW11	Continue to implement a long-term investment programme focused on providing appropriate treatment at small (>250) waste water treatment works	This RWWIP programme is progressing and is planned to achieve the upgrades during PC15 as per the plan targets. Also sustainable ICW solutions at no.2 WwTWs >250PE (Stoneyford & Castlearchdale) included within NI Water's PC15 target.
WW12	Continue to implement a prioritised investment programme on sewage sludge treatment facilities focused on providing appropriate pollution containment and odour abatement.	Capital Maintenance Planning is ongoing at sludge treatment facilities identifying appropriate Base Maintenance on PPC and odour control. For additional information see WW9
WW13	Develop and implement a programme to bring existing wastewater pumping stations and treatment works in to compliance with the Water Supply (Water Fitting) Regulations (Northern Ireland) 2009.	NI Water implemented a programme of work for PC15 - 'KI487 Backsyphonage Risks at NIW Sites'. The initial desktop study for the project estimated the cost of meeting the compliance at approximately £16.2 million and this figure was included in the unconstrained PC15 budget but following the identification of a constrained budget, funding for this element of work was reduced to £1.8m, and subsequently included at this funding level with the Final Determination (FD). As a consequence on a limited number of sites will be addressed in PC15.
WW14	Continue a prioritised long-term programme of Drainage Area Plan work	NI Water has established a long list of Drainage Area Studies. Priority catchments have been agreed with NIEA and will be undertaken during PC15. Ongoing prioritisation from the long list will apply to future Price Control periods. The studies will involve a comprehensive model build and verification of catchment operation for various horizons and will be used to inform both DAP capital works and WwTW upgrades to target essential drivers e.g. flooding, pollution, headroom and serviceability.
WW1	- maintain the serviceability of the sewerage system;	
WW1	- meet development pressures (& address capacity issues);	
WW1	- reduce sewer related flooding; and	
WW1 4d	- reduce UIDs and pollution incidents in line with UWWTD, MSFD, BWD & SWD.	
WW15	Work with DRD and NIEA to develop and implement a policy for addressing crossed connections to storm sewers focussed on the WFD's 'the polluter pays' principle.	A strategy has been put in place to address the misconnections in conjunction with NIEA/DFI. A misconnections leaflet was produced to publicise the issue of misconnections to wherever appropriate.
WW16	Implement any sewerage or potable water related measures set out in the Executive's River Basin Management Plans (RBMPs).	Please see details WS2 for further information
WW17	Continue to reduce the number of pollution incidents through effective investment and operation of the water and sewerage assets.	NI Water has developed some additional management tools now being used in PC15, which will reduce the potential number of pollution incidents. An example is the hotspotting tool which identifies areas where repeat blockages occur enabling full route cause analysis to be completed, allow for corrective action and remove the potential for future events. In addition to ongoing targeted capital maintenance and DAP works NI Water has introduced some supporting management tools which will reduce the potential number of pollution incidents. An example is the sewer hotspotting tool which identifies areas where repeat blockages occur enabling full root cause analysis to be completed, allow for corrective action and remove the potential for future events. Work in progress also includes the development of a DWF capacity mapping tool which will provide an alert of capacity exceedance from new development proposals.

Flood Risk Management & Drainage		
Priority	**The European Floods Directive**	
FRM1	Develop & implement individual sewerage and drainage measures applicable to NI Water as set out in the Executive's FRMPs (2015-21).	Ongoing meetings take place with River Agency when required. Within the new Risk Base approach to Needs and Options and MBVs specification part of this new specification is meetings with Rivers Agency regarding flooding and solution to address this flooding with a joint approach where possible.
FRM2	Implement the inspection and maintenance requirements of the Executive's proposed Reservoirs Bill for controlled reservoirs.	NI Water have historically completed panel engineers inspections and subsequent required investment at our impounding reservoirs, without legislation being in place. The latest round of Section 10 inspections to inform PC21 has been completed. NI Water will continue to implement the other elements of the Reservoirs Act as the commencement orders are enacted, in particular in relation to potable water storage structures larger than 10ML.
Priority	**Drainage Planning & Modelling**	
FRM3	Contribute to the development of integrated drainage models and plans to manage flood risk in urban areas including completing any necessary Pilot Projects (e.g. Ballyclare).	NI Water continue to participate within Living With Water Programme and particularly Work Package 9 which seeks to integrate Rivers Agency and NI Water hydraulic models contributing to the management of flood risk through the identification and provision of protection measures.
FRM4	Work with DRD, NIEA and Rivers Agency through the Stormwater Management Group (and through implementation of PPS 15 – Planning and Flood Risk) to progress and implement the utilisation of SuDS NI, design for exceedance and other policies for sustainable storm water management.	NI Water continue to attend and contribute to the Storm Water Management group to develop approach's to extend the utilisation of SuDS NI. NI Water are finalising a new 'Sewers for Adoption' manual for developers which will include for SuDs design. Sewers for adoption NI 2nd Edition is under final internal review before final issue to WRc for publication. There has been additional internal challenge on the draft document. Expected completion by September 2019.
Priority	**Urban Drainage Provision**	
FRM5	Consider the costs and benefits of widening the scope of Drainage Area Studies Plans to include 'design for exceedance' in high flood risk areas and include an emphasis on improving sewerage records held on the Corporate Asset Register (CAR).	DFI led Storm Water Management Group are progressing a range of initiatives to promote flood mitigation in high risk areas. NI water continue to assess Design for Exceedance within new development drainage proposals.
FRM6	Contribute to the development and implementation of a prioritised Government programme of integrated drainage schemes to manage surface water flooding in urban areas (incorporating storm drains, sewers and watercourses). This includes assisting in the development of integrated flood modelling in specific locations on a case by case basis, where Stakeholders agree that this is necessary, and the apportionment of appraisal, modelling, and survey costs can be agreed in advance.	NI Water is exploring opportunities for integrated / shared solutions for the management of stormwater. Additionally, via the Living With Water Programme a work package is to progress on integrated catchment modelling combining drainage area and receiving waters.
Priority	**Sewer Flooding (DG5)**	
FRM7	Continue to address out-of-sewer flooding problems attributed to NI Water's sewerage and drainage networks	NI Water are continuing to invest, as per the PC15 plan in providing engineering solutions to remove internal flooding of properties attributed to NI Water's sewerage network.
Priority	**Combined Sewer Separation and Infiltration Reduction**	
FRM8	Work with DRD, NIEA, Rivers Agency and other stakeholders to develop and commence a long-term storm water separation and infiltration reduction programme focussed on addressing UIDs, pollution incidents, sewer flooding, surface water flooding and providing capacity for development.	NI Water is developing a programme of storm separation projects using bespoke software to identify opportunities. The objective is to complete a range of projects e.g. urban housing, large commercial, educational campus etc. An examination of cost/benefit relationship will be used to inform a more focussed business case for PC21 projects.
Priority	**Emergency Flood Response**	
FRM9	Contribute to the delivery of an efficient and effective coordinated response from Government during flooding incidents (in line with PEDU).	NI Water has a well-developed Major Incident Plan that provides a fully planned reactive response to all types of emergency incident. The annual audit of NI Water's emergency planning arrangements has been completed by an independent Certifier for 2018/19, and the final Audit Report submitted to the Department for Infrastructure's Water & Drainage Policy Division. NI Water continue to be represented on the Dfl 'Emergency Planning Steering Group' which includes three main drainage agencies; Dfl Rivers, Dfl Roads and NI Water. NI Water continue to participate in the multi-agency 'Flood Strategy Steering Group' (led by Dfl Rivers) and contributes to the related multi-agency 'Regional Community Resilience Group' (i.e. involving 30No. local-community resilience-preparedness groups across Northern Ireland) . NI Water continue to engage with multi-agency partners through, Northern Ireland's three 'Local Emergency Preparedness Groups' (EPGs) (Belfast, Southern, and Northern) and related working groups (e.g. flooding and communications working groups). During 2018/19, NI Water has continued to contribute to the development of EPG Coastal Flood Plans and the Northern Ireland Severe Weather Plan. The Company is also represented on the principal strategic emergency preparedness body for the public sector in Northern Ireland, the 'Civil Contingencies Group (NI), and continues to keep pace with wider developments through involvement with UK water industry emergency planning groups. NI Water have a well-developed Major Incident Plan that provides a fully planned reactive response to all types of emergency incident. The annual audit of NI Water's emergency planning arrangements has been completed by an independent Certifier for 2018/19, and the final Audit Report submitted to the Department for Infrastructure's Water & Drainage Policy Division.

Service Delivery, Improvement and Affordability		
Priority	**Customer Priorities for Customer Service, Information &**	
CS1	Continue to review and improve performance in customer service quality and effectiveness through the development of better data and information systems and customer focussed processes and policies	With regard to customer data, there is a programme of projects being progressed in respect of data accuracy and data validation. In addition, there are data accuracy obligations imposed on the service provider under the CBC contract.
CS2	Improve the accuracy, reliability, security, and consistency of billing information including enabling customers to self serve	With regard to customer data, there is a programme of projects being progressed in respect of data accuracy and data validation. In addition, there are data accuracy obligations imposed on the service provider under the CBC contract. There is an extensive data quality programme on-going through the ACE programme to improve the overall accuracy of the information held on NIW's corporate systems relating to various customer accounts. NIW have deployed a modern meter data management system to collect record meter reads on site and return to the corporate billing system in real-time. We are starting deployment of automatic meter reading equipment and utilising mobile telephone technology to remotely read key meters. A self service website has been launched and this will continue to be developed as part of the future services improvement requirement under the CBC contract. FPOCR (First Point of Contact Resolution) functional targets have been set, these are monitored at monthly customer meetings.
CS3	Adopt any proven technology or systems that provide tangible benefits in terms of improving service performance or reducing operational costs, whilst ensuring the resilience and security of essential control and monitoring networks. (e.g. ICAT programme)	During the current PC15 Price Control period (2015-21), NI Water commenced implementation of its Instrumentation, Automation and Telemetry (ICAT) Strategy. During 2018/19, new technology was installed at 45 service reservoir (potable water storage) sites. Benefits are now being realised in managing supplies using the technology during events, calming the strategic watermain network with early evidence of more efficient pumping regimes.
CS4	Continue improvements in handling customer queries, complaints and billing (DG6-9).	FPCOR (First Point of Contact Resolution) functional targets have been set, these are monitored at monthly meetings to ensure improvements in handling customer queries, complaints and billing.
CS5	Work with stakeholders through the Customer Measures and Satisfaction Group (CM/SAT) to develop more consumer focussed performance measures, including:	We have agreed the following quantitative and qualitative measures with the CM/CAT group : Unwanted Contacts, FPOCR and Customer Advocacy score. The remainder of PC15 will be used to understand trends with a view to having hard performance measures in place for the beginning of PC21
CS5a	i) New consumer satisfaction (CSAT) Key Performance Indicator which gives a measure of customers' overall satisfaction with the service provided by NI Water; and	
CS5b	ii) Adoption of industry best practice measures for performance on handling customer contacts for example:	
CS5bi	- customer contact levels (through all communication channels);	
CS5bii	- first point of contact solutions; and	
CS5bii	- repeat contacts	
Priority	**Customer Priorities for Water Service Levels**	
CS6	Develop quality drivers and measures for the water mains rehabilitation programme informed by drinking water quality monitoring and customer complaints (iro colour, taste & odour).	The WIIM methodology for prioritising replacement pipelines in the distribution network, includes WQ failures as drivers for pipeline replacement. This a Core Business Activity. For the 2018 reporting year NI Water achieved its drinking water quality targets and is on profile to achieve its targets in 2019.
CS7	Continue to reduce the number of properties that experience unplanned and unwarned interruptions to drinking water supply in excess of 3/6/12/24 hrs (DG3).	WIIM process already in place as developed for PC15 but will continue to be refined. Latest WIIM review of the methodology (WIIM3) now includes better informed DG3 analysis. This is one element of the overall Capital Maintenance Planning process. The Water Resource & Supply Resilience Plan includes a number of resilience project proposals.
CS8	Target areas of low pressure to increase the number of customers who benefit from at least the minimum levels of supply.	NI Water continues to invest in watermains rehab and within this sub prog properties on the DG2 register are targeted to ensure that post investment they receive the minimum levels of supply. The PC15 investment is currently on track as per the agreed investment levels.
CS9	Continue to maintain a Register (DG2) of properties at risk of receiving low pressure and reduce the number of properties on the register over the PC15 period	NI Water has by assessing pressure across its water network prepared a the DG2 register of properties at risk of receiving low pressure. Following capital investment verification is completed to determine if properties can be removed from the register.
Priority	**Customer Priorities for Sewerage Service Levels**	
CS10	Establish and maintain a Register (DG5) of properties at risk from internal & external sewer flooding and reduce the number of properties on the register over the PC15 period.	NI Water developed a register of properties at risk of internal sewer flooding during PC10. This confidence in the data originally was low but this has improved significantly over recent years. The DG5 external register has been developing. PC15 investment is focused on removing properties from the internal flooding register.
CS11	Work with Roads Service, Rivers Agency and other relevant drainage providers to develop a register of properties at risk of surface water flooding to be actioned 'jointly' during PC15 and beyond. NI Water should provide the information on out-of-sewer flooding from sewerage and relevant drainage assets.	NI Water maintain its DG5 register of properties at risk of internal flooding. PC15 & FD include targets for the removal of properties from this list. Additionally, NI water hold information on properties at risk of external flooding.

Priority	Customer Priorities for Affordability & Efficiency	
CS12	Explore opportunities to reduce the cost of its existing Public Private Partnership contracts to reduce their long-term running costs.	On going BAU. Current activities include; Project Alpha: A reduction in treated water sampling requirements complete May 2018, as an enabler to cost savings within NIW Alpha Ltd for laboratory services. Project Omega: Ongoing Facilitation process up designed to reduce increased costs/claims exposure to NI Water as well as generate a reduction in NI Water electricity costs associated with Duncrue St Sludge Facility. Kinnegar: No proposals significant activities at this stage as the management focus has been on stabilising operations following Administration of a number of parent companies within the Lagan Group.
CS13	Reduce costs by setting targets and developing and implementing action plans to deliver operational efficiencies.	BAU/Core Business. Significant input was completed during PC13 and this will be continually reviewed as part of BAU to ensure the most efficient operational regime is maintained as the supply network changes during periods of normal operation, drought and winter critical periods. PC15 is implementing the first phase of ICAT on the SR asset base. Dedicated energy efficiency team has been established and is pursuing as BAU. Short and medium term energy efficiency targets for NI Water have been developed for the PC15 period. These are under review as challenges such as grid connections, and closure of incentive schemes, are considered. RDI Strategy has and continues to support the identification and implementation of improved performance and efficiencies through collaborative RDI. Continued membership and participation in UKWIR projects and other water industry focused collaborative projects. NI Water have deployed a modern meter data management system to collect record meter reads on site and return to the corporate billing system in real-time. We are deploying automatic meter reading equipment and utilising mobile telephone technology to remotely read key meters.

Sustainability, Climate Change and Resilience		
Priority	**Project Appraisals**	
SSR1	Revise the project appraisal process to ensure that investment decisions take account of 'whole-life' costs (including the cost of the CRC Energy Efficiency Scheme) and benefits of proposed solutions. Whole life carbon costs should be factored into appraisals for projects costing over £500k (and any other projects where carbon is likely to be a material consideration). Where there is a marginal NPC difference between a solution with the lowest NPC and a solution that offers significantly lower whole life emissions, the lower emission solution should be selected.	These actions are already included as part of the Capital Appraisal process. NI Water are currently completing a full review of the appraisal process, and will refine the process to improve the overall appraisal process.
SSR2	Long-term social, economic & environmental sustainability should be considered in all project appraisals.	NI Water are reviewing the Appraisal Report and Business Case Templates ensuring they align with the NIGEAE 10 Step approach including Step 7 – 'Weigh up non-monetary costs and benefits'
SSR3	Explore opportunities with Forest Service and other partners to offset existing and future energy demands (e.g. carbon offsetting through forestry, green energy production through wind turbines or wood chipping).	NI Water have explored a number of renewable investment types. Due to recent changes in ROC's a number of initiatives have not been deemed economic. Solar installations have been installed across the NI Water estate and other opportunities will be explored as they become known.
SSR4	For every WWTW site on which NI Water needs to carry out an appraisal to inform capital investment, due to base maintenance or enhancement drivers (quality, growth or service levels), the project appraisal shall assess if a more sustainable solution option is feasible, and determine any land acquisition requirements.	PC15 FD includes for sustainable solution targets. Each WWTW appraisal now examines potential sustainable solutions with examples including ICW's, Reed beds and similar technology. During PC15 ICWs have been constructed at Castlearchdale and Stoneyford and an aerated reed bed has been constructed at Clabby.. Further pilot projects are planned with a variety of sustainable solutions to gain confidence in long performance and value for money.
Priority	**Project Planning and Risk**	
SSR5	NI Water should carefully plan the early stages of project development and consider risks to project delivery, which may include progressing trial projects and working with other stakeholders to identify solutions and secure support that these risks be accepted and managed.	Project planning and risk is managed as a BAU item on all projects. Stakeholder engagement is important on key projects and examples demonstrating this in action include the WR&SR plan (see WS3) where a steering group has met circa every 6 weeks during the project development. For WWTW NI uses a process selection matrix, including processes that are endorsed by stakeholders. For new processes e.g. ICW's NI Water engage with stakeholders to ensure acceptance in principle of the process.
Priority	**Research Development and Innovation**	
SSR6	Maintain and implement a Research Development and Innovation (RDI) strategy.	NI Water have an (RDI) strategy in place. The main emphasis within the strategy is that NI Water operates on a fast follower principle.
Priority	**Renewable Energy**	
SSR7	Explore opportunities to invest in renewable energy generation to reduce running costs at existing high-energy facilities.	NI Water has invested in solar panels at 58 sites around the province, availing of incentive schemes at multiples of 4, 3 and 2 ROCS. This includes the recently completed Solar Farm at Dunore point. Private wire and corporate PPA's are also being considered. Dedicated energy efficiency team has been established and is pursuing as BAU.
SSR8	Explore opportunities to generate renewable electricity through innovative management of existing water and sewerage assets such as: generating hydro-power from excess water mains pressure and installing solar panels at facilities.	NI Water has three existing hydro schemes. Business cases for a further 10 hydro schemes have been hampered by the closure of incentive schemes. These business cases are being reviewed to assess viability of hydros without ROCs. Dedicated energy efficiency team has been established and is pursuing as BAU.
SSR9	NI Water shall seek to maintain the level of energy purchased from external renewable sources to that achieved in the PC13 period, whilst increasing the percentage of renewable energy generated by use of its own assets and lands and contribute to achieving the Executive's greenhouse gas emissions reduction target.	Short and medium term energy efficiency targets for NI Water have been developed for the PC15 period. These are under review as challenges associated with grid connections, and closure of incentive schemes, are considered.

Priority	Sustainable Treatment & Regulation	
SSR10	Where NI Water believes that a license, consent, or permit proposed or set by NIEA is unnecessarily stringent or does not adequately consider a catchment based approach, NI Water should seek to challenge and resolve this with NIEA initially, and then if not resolved, by escalating this to the WICG for wider consideration and direction by stakeholders. The objective should be to develop more sustainable treatment solutions	This action is actively challenged for all design standards offered by NIEA under BAU. NIEA are supportive of sustainable solutions, where appropriate, and have supported a deviation from the full RBC approach for small works, below 20pe. Moneyreagh WwTW identification of infiltration and removal from the system is another example where we are working with NIEA to reassess the standards of the discharge from this site, in conjunction with hydrology team in NIEA reassessing the river flows, following rerouting of infiltration directly to the adjacent watercourse, giving a better flow in the watercourse, hence better dilution.
SSR11	Complete a number of sustainable wastewater treatment 'pilots' early in PC15 to compare the costs and performance of various options. Develop & commence a long-term investment programme of sustainable wastewater treatment schemes (including the land requirements) with the core aim that this reduces NI Water's long-term operating costs and emissions.	Castle Archdale Integrated Constructed Wetland has come into operation and along with Stoneyford ICW. A Further sustainable treatment pilots is constructed at Clabby WwTW, Co Fermanagh using a Phragmifilter (aerated) Reed Bed System. NI Water is currently commissioning its first Nerada plant at Dungannon with additional trials are proposed for, 5000PE ICW and Aerofac (naturally aerated lagoon).
SSR12	Identify and secure sufficient land early in the project phase to give the option of the selection of larger footprint process solutions that typically result in lower operating costs. Consider the advanced purchase of land to accommodate future expansion of works using more sustainable solutions.	The project business case will proactively identify land purchase requirements as developed for each Price Control.
SSR13	Aim to gradually deliver year on year increases in the percentage of new WWTW investment (assessed by Population Equivalent served) delivered by 'more sustainable solutions' so that: By 2020/21 33% of all WWTW upgrades to works serving a PE of <2,000 are delivered by more sustainable solutions. Where viable, more sustainable WWTW solutions should also be used for works serving a PE > 2,000.	During PC15 Castle Archdale Integrated Constructed Wetland has come into operation and along with Stoneyford ICW. A Further sustainable treatment pilots is constructed at Clabby WwTW, Co Fermanagh using a Phragmifilter (aerated) Reed Bed System. NI Water is currently commissioning its first Nerada plant at Dungannon with additional trials are proposed for, 5000PE ICW and Aerofac (naturally aerated lagoon).
Priority	**Education & Public Awareness**	
SSR14	NI Water should continue to invest in education and campaigns to promote prioritised key messages such as the importance of insulating (freeze-thaw), using water wisely (water efficiency), bag it and bin it (preventing pollution) and measures to prevent flooding due to other causes through continued work of the water bus and school visits, and other educational means. NI Water should learn from the impact of previous campaigns and demonstrate how future campaigns will reach consumers more effectively.	Through the work of the Waterbus and school visits, all schools (both Primary and Secondary) are offered education talks on our key water efficiency messages as well as being taught about the value of water. Communicating our key Bag it & Bin it messages and Freeze/Thaw protection via Radio/Print/Social Media. Also attending community events and delivering community and school talks. The overall objective of the strategy is to educate and increase public awareness by providing important information via all the communication channels at our disposal. Another action of the strategy was the appointment of Environmental Champions enabling the key messages to be delivered to a wider audience. NI Water delivers our key FOG (Fat, Oil and Grease) messages to schools, community groups and businesses. We have a community outreach programme which focus on delivering education programmes and public awareness campaigns on the importance of correct disposal of FOG and highlight how this can reduce the risk of pollution. NI Water have developed new partnerships with different stakeholders in relation to both our SRD and Winter campaigns enabling us to have a joined-up approach to educate a larger audience and raise awareness about our key messages. The Stakeholders are wide ranging including, Councils, Partners against Pollution Group, SNAP Group, Water UK, to name a few.
SSR15	NI Water should seek to develop effective partnerships with other organisations where there are shared benefits of the campaign (such as with DSD on Lead).	NI Water work with a range of stakeholders to promote our key messages around Water Quality and the benefits of drinking tap water. These Stakeholders include, Community Groups, Schools, Education Board, Media, CCNI, Regulator, DWI, Dfl to name but a few. Water for Health is one of our key campaigns and we deliver it all year round through our Education programme. Water for Health/Water Quality is part of the organisation's CSR, Communications and Education strategy and is a priority for the company.
Priority	**Preservation of Services**	
SSR16	Comply with the requirements of the Preservation of Services and Civil Emergency Measures (Relevant Undertaker) (Northern Ireland) Direction 2010 and any supplementary Guidance issued by DRD. • Provide DRD with an annual audit laying out the requirements in the Direction.	NI Water have a responsibility under Article 295 of the Water and Sewerage Services Order 2006 to meet the requirements of 'The Preservation of Services and Civil Emergency Measures (Relevant Undertaker) (Northern Ireland) Direction 2010' (PSCEMD). The Department requires NI Water to confirm that all requirements of the Direction are being met by annually submitting the following to Dfl: - An Audit Report covering all aspects of emergency planning required under PSCEMD. - An Independent Certifiers Statement from a Defra approved Certifier. - An Assurance Statement signed by the CEO.
SSR17	Ensure:	Please see SSR16 above for information
SSR17	• All CNI sites continue to meet latest security advice; and	Please see SSR16 above for information
SSR17	• Implementation of a prioritised plan for securing other	Please see SSR16 above for information
SSR18	impounding	Please see SSR16 above for information

Priority	Resilience	
SSR19	Commence a programme of investment to improve and maintain the resilience of the wider water and sewerage asset base and systems prioritised as follows:	There have been a number of projects across the asset base to assess resilience in relation to Freeze/Thaw, Drought and Flooding events and this includes the 2019 Water Resource and Supply Resilience Plan which includes critical period plans for both Freeze/Thaw and Drought events. WTWs and WwTWs being upgraded during PC15 to insulate key components against extreme cold. There is also programme of investment in PC15 for DG5 (Internal Flooding) & UIDs (Prevention of pollution).
SSR19	1) Water supply	Please see SSR19 above for information
SSR19b	2) Prevention of internal flooding (e.g. due to a sewer pumping station being flooded)	Please see SSR19 above for information
SSR19c	3) Prevention of pollution (e.g. due to WWTWs or SPS being flooded)	Please see SSR19 above for information

Tourism, Recreation & Biodiversity		
Priority	**Estate Management**	
TRB1	Contribute to the development and implementation of the NI Biodiversity Plan.	NIW have contributed to and helped develop the NI Biodiversity Plan. This is currently being implemented, complied with and reported on to NIEA. NI Water work with the Newry, Mourne and Down Council, MHT and Tourism NI to promote recreation, biodiversity and cultural heritage.
TRB2	Develop & implement an estate management strategy to take account of: the primary water and sewerage functions; protected areas; the need to enhance biodiversity; the need to permit public access to support tourism and healthy lifestyles; and the need to increase opportunities for providing recreational amenities for interest groups.	Project created to improve site security; public safety; and enjoyment of permitted recreational activities at several locations. Work includes construction of steps and handrails; accessible fishing stands; construction of paths and walkways; construction of boardwalks; extension and repair of car parks; construction of slipway; erection of fencing and gates; installation of benches, picnic tables and bins; provision of signage; and provision of life saving equipment. Phases 1, 2, 3 & 4 complete.
TRB3	Continue to develop partnerships (e.g. SCAMP NI) with other public, community & voluntary sector organisations to deliver sustainable catchment initiatives.	Engagement and development of partnerships with key stakeholders is being carried out on an ongoing basis as required to deliver sustainable catchment initiatives.
TRB4	Explore opportunities for leasing NI Water land and assets for leisure, tourism and income generation where appropriate.	No locations identified as suitable.
TRB5	Adopt and implement the 'Protocol for the Care of the Government Historic Estate'. Develop a long term plan to bring assets covered by this, where necessary, up to a suitable standard and maintain them going forward.	Condition Assessment Reports have been completed and approval for early contractor involvement has been given. The contractor will supply accurate costs and a programme of work based on the condition assessments to enable the business case for submission to be refined. The main proposal within the business case will be to complete the urgent and desirable work identified. If the business case is approved construction will be progressed.
TRB6	Explore opportunities to celebrate the local water industries influence on the social, cultural, industrial & natural heritage of Northern Ireland.	NI Water work with a range of stakeholders to promote and celebrate the local water industry's influence on both the natural and built heritage, we do this through a joined-up approach with like minded organisations, such as the MHT, Newry, Mourne and Down Council as well as local 'user groups' . NI Water participate in special designated events to promote the important relationship between Water, Heritage, Social and Culture. These events include-EHOD, WED, WWD, Open Days, Specialised Lecturers etc.
Priority	**Bathing Waters & Clean Beaches**	
TRB7	Contribute to the implementation of the NI Marine Litter Strategy and the protection of Bathing Waters and Shellfish Waters from pollution.	NI Water continues to deliver wastewater education campaigns to highlight education and awareness for appropriate use of sewerage systems. Community engagement projects have been delivered to extend education and awareness for fats, oils and grease and sewage related debris. Compliance with water order standards at coastal works has assisted with protection of protected waters. Ballycastle WwTW being progressed, with provision of secondary treatment. LWWP will contribute to delivery of water quality improvements in Belfast Lough, whilst a capital works upgrade in Dundrum and Carrigs River investigations will contribute to identifying actions and hence assist with driving water quality improvements in Dundrum Bay.
TRB8	Put a programme in place to reduce the risk of pollution from the sewerage system during PC15, informed by the Marine Conservation Society Pollution Policy and Position Statement on CSOs	There is a programme to install CSO monitors at prioritised sites throughout PC15. The technology is at trial stage in the field, to assess suitability. Following the trial and approval to proceed to the next stage, installation will be rolled out to all CSOs within 2km for designated bathing and shellfish waters. In addition, funding has been allocated for installation of monitors at 65 No. inland CSO's and the same technology will be used for these monitors.
Priority	**Reservoirs**	
TRB9	Progress the assessment of 'unused' reservoirs to determine the approach to disposal.	Following an initial high level assessment completed in early PC15 a further detailed assessment is underway, considering a more strategic view of abandonment vs reinstatement costs etc., should the sources be required in the future.

Annual Information Return 2019

Section 3

Level of Service Methodologies

Northern Ireland Water

Level of Service Methodology

DG2 - Pressure of Mains Water

This document has been laid out in accordance with the guidance provided by the Utility Regulator in the Annual Information Return Reporting Requirements 2018: Section 7 – Levels of Service Methodology Appendix

DG2 – Pressure of mains water

1. **Methods and procedures**
2. **Extract from DG2 register**
   - provide an extract from DG2 register
3. **Sources of information**
4. **Scope and coverage**
5. **Assumptions and exclusions**
   - including any assumptions made for surrogate for the reference level.
6. **Other issues**
   - provide any further information on issues that have arisen in the report year that impact on your methodology for reporting in the Annual Information return.

The procedure for the investigation and recommendation for removal and addition of properties to the DG2 Register is based on the 'DG2 NIWL Procedures April 2010' document produced by the Leakage Data Management Unit. The objectives of the investigation are as follows:

i. Removal/Addition of DG2 entries on the register as a result of more robust data being available (Better Information).
ii. Removal/Addition of DG2 entries resulting from capital works and networks improvements (Company Action).
iii. Investigation of customer 'Low Pressure' complaints.

1. Methods and Procedures

DG2 Investigations (excluding Rehab modelling)

The objective of a DG2 site investigation is to acquire the necessary data to allow a more detailed assessment to be carried out. The 2 key elements of this investigation are the logging of the water pressure and the gathering of accurate height data for both the logging point and DG2 property connection point. In keeping with 'DG2 NIWL Procedures April 2010' the following procedures are followed:

- Logging points are identified within the network, which do not exceed 250m in distance from the DG2 stopcock.
- The logging points are within the same DMA/PMA as the DG2 property.
- A unique logger ID is clearly assigned to the logging point.
- An accurate elevation of each logging point is provided using Real Time Kinematics (RTK) GPS. A value of 450mm is subtracted from this elevation to allow for the depth of the FH spindle.
- Logging point boundary polygons around the hydrants are digitised onto MapInfo to allow the associated properties to be assigned to the relevant logger.
- A pressure log and elevation may be taken in adjoining DMAs. This is to assist in identifying any potential for a BV change to improve the pressure at the DG2 property.
- A new ferrule elevation is produced for each property using Digital Elevation Model (DEM) 2008 data. The ferrule point value associated to each property is used to determine the height used for that property within the Total Head calculation.

To assist with the site investigation, a detailed map is produced showing the following information:

- Pointer Property data showing elevation at each property (NIW receives biannual updates from Ordnance Survey Northern Ireland).
- Water pipes, fittings i.e. SVs, Fire Hydrants (FHs) terminating nodes etc.
- DMAs and PMAs (where applicable).
- Background Vector maps.
- Required pressure logging points.

Reporting

Following field testing and site investigation routines, all data is analysed and the findings are included within a Recommendation for Removal Report or alternatively a Recommendation for Inclusion Report.

1. The removal of entries due to robust data being available.
2. The removal of genuine entries resulting from infrastructure changes.
3. The provision of detailed information to support the inclusion of properties in the DG2 Register.

If the data collected verifies that properties that are in receipt of a pressure >15m, then the DG2 properties are recommended to NIW for removal. Properties removed are supported by a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors including the required pressure logging trace/print out.

Where properties are discovered to have been positioned incorrectly within NIW GIS resulting in their inclusion in the original register, and repositioning indicated that these properties were in receipt of pressure > 15m, these DG2 properties are recommended for removal.

Those properties identified as being in receipt of a pressure <15m remain on the Register and a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/PMA. This information is included within the assessment where deemed viable.

Additional properties within logging areas determined to be in receipt of pressure <15m are recommended for inclusion on the register. As above a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/ print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/ PMA. This information is included within the assessment where deemed viable.

The potential removal of properties due to networks improvements is investigated via rationalising adjacent DMA boundaries following pressure loggings as per guidelines set out in the method statement above. All networks amendments follow the removal process and the submission of final reports leads to an update of the DG2 register.

DG2 Investigations by Rehab modelling

In the case of Rehabilitation schemes, PPRA reports associated with the various work packages are submitted to Asset Management Directorate for sign off and Leakage Function for processing in relation to the update of the DG2 Register. Leakage Data Management Unit on receipt of the suite of information including logger positioning site maps, accompanying logged data, PPRA reports and DG2 Investigation Reports align this data to the existing register. Checks are conducted on logged information to ensure compliance in

terms that each logger site is within 250m of actual properties highlighted and that minimum pressures provided correlate to expected total head values. Hyperlinks are created for each set of logged data, map and report. The DG2 register is updated accordingly.

Investigation of customer 'Low Pressure' complaints

Where low pressure complaints have been identified through the contact centre, the process of action is as follows:

- Contact Centre informs customer of known network planned or unplanned events in the area or determines if problem may be with customer supply only.
- Networks' first responder visits property to determine if pressure is a legitimate complaint. If pressure at property is assessed as being a potential DG2 issue, the complaint is passed to Leakage DMU for investigation.

Leakage DMU undertakes an investigation in accordance with 'Methods and Procedures' above. Additions and removals are processed accordingly. The facility has been developed for regular monthly updates of all DG2 properties to be uploaded onto the CARtoMAP system which is utilised by the Contact Centre in relation to low pressure complaints from customers.

UPRN	Status Date	Status	Building Nr	Primary_Thorfare	Town	Postcode	County	DMA	Pressure
187100513	30-Nov-12	In Register	[redacted]	Crew Road	Ardglass	BT30 7HD	Down	Sentry Hill	13.47
185292371	30-Sep-12	In Register	[redacted]	The Ward	Ardglass	BT30 7UP	Down	Loughrans Tower	14.97
185292234	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	13.87
185292230	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	14.12
185290343	30-Sep-12	In Register	[redacted]	Crew Road	Ardglass	BT30 7HD	Down	Sentry Hill	13.07
185778557	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	14.79
185292251	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	13.90
185292239	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	14.01
185292245	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	13.82
185292368	30-Sep-12	In Register	[redacted]	The Ward	Ardglass	BT30 7UP	Down	Loughrans Tower	14.71
185292366	30-Sep-12	In Register	[redacted]	The Ward	Ardglass	BT30 7UP	Down	Loughrans Tower	14.86
185292364	30-Sep-12	In Register	[redacted]	The Ward	Ardglass	BT30 7UP	Down	Loughrans Tower	14.89
185292362	30-Sep-12	In Register	[redacted]	The Ward	Ardglass	BT30 7UP	Down	Loughrans Tower	14.95
185292259	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	14.06
185292258	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	13.82
185292257	30-Sep-12	In Register	[redacted]	Hill Street	Ardglass	BT30 7TX	Down	Loughrans Tower	13.89
185207712	31-Aug-12	In Register	[redacted]	Killaughey Road	Donaghadee	BT21 0BQ	Down	Portavoe Donaghadee	7.94
185207711	31-Aug-12	In Register	[redacted]	Killaughey Road	Donaghadee	BT21 0BQ	Down	Portavoe Donaghadee	8.07
185207710	31-Aug-12	In Register	[redacted]	Killaughey Road	Donaghadee	BT21 0BQ	Down	Portavoe Donaghadee	8.44
185207709	31-Aug-12	In Register	[redacted]	Killaughey Road	Donaghadee	BT21 0BQ	Down	Portavoe Donaghadee	8.65
185207714	31-Aug-12	In Register	[redacted]	Killaughey Road	Donaghadee	BT21 0BQ	Down	Portavoe Donaghadee	7.51
185207715	31-Aug-12	In Register	[redacted]	Killaughey Road	Donaghadee	BT21 0BQ	Down	Portavoe Donaghadee	7.43

3. Sources of information

For AIR19 the following information was used

- Post Project Rehabilitation Assessment reports (PPRAs) and their associated DG2 Investigative Reports (DIRs) are submitted when specific watermain rehabilitation schemes are completed and include the relevant data and reports to merit alterations to the DG2 register.
- Recommendation for Removal reports are produced on conclusion of networks improvements to merit deductions from the DG2 register.
- Recommendation for Inclusion reports are produced to substantiate the addition of properties to the DG2 register based on better information.

4. Scope and coverage

The ongoing maintenance of the existing DG2 register through the removal of properties due to company action via the processing of PPRA reports submitted during the reporting year. These are the direct result of work the majority of which were completed in the previous year. Similarly, additions to the company register were processed where better information became available.

5. Assumptions and exclusions

NI Water does not currently have in place a permanent pressure monitoring network and is not in a position to identify exclusions arising from intermittent network incidents or infrastructure changes. Assumptions for AIR are identified in the methodologies described above. A surrogate pressure of 15m has been used to identify DG2 properties.

Deviation from the conditions laid out by NIW for DG2 property investigations.

Due to the rural nature of some DMAs it is not possible in some exceptional cases, i.e. groups of DG2 entries within individual DMAs, to undertake logging within 250m of the DG2 property as set out in the NIW methodology. In these instances a number of Fire Hydrants are logged to enable an accurate pressure profile of the DMA to be established.

The following alternative procedure is used:

- A desktop study of the DMA containing DG2 entries is undertaken.
- A series of FHs are identified for pressure logging. The locations are selected to ensure that an accurate pressure profile of the DMA is established.
- Data loggers are fitted to log the pressures over a seven day period.
- All logging points are surveyed using RTK GPS; this provides accurate height data for Total Head calculations. A value of 450mm is subtracted from the elevation to allow for the depth of the hydrant spindle.

On compilation of this data, a revised analysis is undertaken to determine the nature of supply and create a pressure profile within the DMA/PMA to determine potential DG2 entries. If the pressure profile shows that the Total Head within the DMA/PMA is sufficient to provide adequate pressure, the results from the field testing and analysis are presented as evidence for removal of the DG2 entries and a Recommendation for Removal Report is issued.

In line with previous procedures, where analysis identifies properties that are in receipt of a surrogate pressure <15m, they will remain, or be added to the Register in accordance with NIW procedure.

Northern Ireland Water

Levels of Service Methodology

DG3 - Supply Interruptions

This document has been laid out as follows:

1.0 OBJECTIVE & AIM

To identify the number of properties affected by planned and unplanned supply interruptions lasting longer than 3 hours, 6 hours, 12 hours and 24 hours.

The aim of the register is to allow verification and audit of the reported information for DG3 and to enable the identification of the properties affected. It should contain information on the timing, duration and cause of each interruption and sufficient information to enable all properties affected by interruptions lasting more than three hours to be identified. Therefore, the register should include:

- properties affected (by name and location or number and street);
- date and time of interruption;
- duration of interruption and time supply restored;
- cause of interruption;
- notice given; and
- the name of person responsible for entering records in the system.

The DG3 Interruptions to Supply Register is compiled and held by CSD Services in Westland House.

2.0 REPORTING REQUIREMENTS

The information to be reported within Table 2 of the Annual Information Return (AIR) is as follows:

2.1 Line Descriptions

Line	Description
5	More than 3 hours unplanned
6	More than 6 hours unplanned
7	More than 12 hours unplanned
8	More than 24 hours unplanned
9	More than 3 hours planned and warned
10	More than 6 hours planned and warned
11	More than 12 hours planned and warned
12	More than 24 hours planned and warned
13	More than 3 hours unplanned caused by third parties
14	More than 6 hours unplanned caused by third parties
15	More than 12 hours unplanned caused by third parties
16	More than 24 hours unplanned caused by third parties
17	More than 6 hours unplanned due to overrun of planned and warned
18	More than 12 hours unplanned due to overrun of planned and warned
19	More than 24 hours unplanned due to overrun of planned and warned

Note: Interruptions should be reported under each relevant time band so that the category for interruptions exceeding:

- 3 hours also includes all interruptions lasting more than 6 hours;
- 6 hours also includes all interruptions lasting more than 12 hours; and
- 12 hours also includes all interruptions lasting more than 24 hours.

Each interruption should be classed as a single interruption event, and should be recorded under only one of the four categories of: unplanned or unwarned, planned and warned, unplanned caused by third parties and, unplanned or unwarned due to overruns of planned and warned interruptions. If there are a significant number of overruns between 3 and 6 hours, the number should be reported in the commentary.

Further guidance, if required may be found in the Annual Information Return Reporting Requirements & Definitions Manual 2015, Issue 1.0 – March 2015.

3.0 DEFINITIONS

3.1 Interruption

An interruption to supply is defined as the actual loss of water supply to a property, whether planned or unplanned, warned or unwarned.

Supplies may be affected by other factors, for example, lower pressure through the flushing of mains, or restrictions on use. These are also covered under the DG2 and DG4 procedures.

3.2 Start Time Determination

The outage commences when the first customer contacts the contact centre (as per current methodology).

3.3 End Time Determination

The outage is deemed to be fully recovered on the turning of the isolation valve. Although it is acknowledged that, on occasions, there will be a slight lag between the valve operation and all properties having their supply restored, in the majority of cases the opening of the main supplying valve will result in the end of an interruption.

Note: The time on the customer's warning card is used to determine whether or not a planned and warned interruption overruns. It is not used to determine the End Time.

3.4 Duration

The duration is the length of time for which customers are without a continuous supply of water. An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply to the last property affected by the interruption is restored to the tap.

3.5 Planned Interruption Duration Determination

When calculating the duration of a planned interruption, the Start Time is taken as the time when the valve is turned off and the End Time is taken as the time when the valve is turned on (plus an allowance for mains charging if this is deemed to be necessary). This ensures that reporting is in line with the regulatory definition below:-

'Duration is defined as the length of time for which customers are without a continuous supply of water. **An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply is restored to the tap.**'

If a planned and warned interruption commences before the Planned Start Time, the interruption is re-categorised as an unplanned interruption.

If a planned and warned interruption commences after the Planned Start Time, the time between the planned start and actual start is not included in the duration.

If a planned and warned interruption finishes before the Planned End Time, the time between the actual end and planned end is not included in the duration.
If a planned and warned interruption finishes after the Planned End Time, the interruption is re-categorised as an unplanned interruption (overrun of a planned interruption).

3.6 Event

Event is the term used by NI Water to describe its involvement in an abnormal occurrence in its services to customers.

3.7 Planned & Warned Interruption

This is where notice of an interruption (> 3 Hours) is provided to properties affected at least 48 hours in advance of the beginning of the interruption.

3.8 Unplanned/Unwarned Interruption

This is when an unplanned or a planned and unwarned interruption to supply occurs. Properties receiving less than 48 hours' notice of a planned interruption (> 3hrs) are to be counted as 'unplanned' and reported under this category. Any planned interruption that is started before the planned date and time contained in the warning notice, whether this occurs within a 48 hour warning period or not, is also to be re-categorised as 'unplanned'.

3.9 Overruns

When a planned and warned interruption continues beyond the end of the warned time, for whatever reason and whether or not a customer has been advised during the shutdown that an overrun is going to occur, the interruption is described as an overrun and is reported separately.

3.10 Third party interruption

A third party is defined as anyone who does not act for, or on behalf of NI Water. This category is intended to cover damage to NI Water's mains or other equipment that directly or indirectly results in an unplanned loss of supply to enable the damage to be repaired. Where a third party interruption is not caused by a third party, but repair may be delayed by a third party, for example when a gas main runs close to a water main and needs to be isolated, the whole of the duration on the interruption must be reported as an unplanned interruption. Companies can describe this event in their commentary.

3.11 Electrical Failures

Interruptions to supply caused by electricity supply failures must be reported as unplanned, unwarned interruptions, and identified in the records as caused by electrical failure to enable the details to be included in the NIAUR Return commentary.

3.12 Properties affected by more than one interruption during report year

Properties, which are affected by more than one interruption during the report year, should be reported separately for each interruption. This means, for example, that a property affected by three supply interruptions would be reported three times, once for each interruption. Where properties are affected by repeat interruptions on the same day, these should only be counted separately where there is a minimum of one hour between the interruptions for the supply to be available (e.g. to refill storage tanks). When shorter gaps occur, the duration is counted from the start of the first interruption until the last restoration of supply.

4.0 PROCEDURE

It should be established before any work is carried out on site, which function is responsible for the collection of information for the interruption record. In general, whichever function operates the valves to cut off supply at the site of an interruption is also responsible for the collection and ownership of the information.

4.1 Planned Interruptions (lasting > 3 Hours)

Planned interruptions to supply arise as a result of work being carried out by different functions within the Customer Service Delivery Directorate or by functions within other NI Water Directorates. These have been identified as follows:

- Planned interruptions carried out by Networks Water,
- Planned interruptions carried out by Leakage Services,
- Planned interruptions carried out by Capital Asset Delivery and,
- Planned interruptions carried out by Customer Field Services.

Regardless of the source of the interruption to supply, all planned interruptions must follow the procedures for giving the appropriate warnings. Each function is responsible for collecting and recording all appropriate information to be included in the DG3 Interruptions to Supply Register.

All affected properties must be notified by letter, or card drop, at least 48 hours before the shutdown, notifying them of the planned times and dates of shutdown and the restoration of supply. A minimum of 48 hours warning must be given for planned interruptions greater than 3 hours. The start of the warning occurs when the last card has been delivered or the last letter sent to the properties affected. If for example, there is estimated to be 500 properties to be warned, the card drop operation starts at 9.00am on 2nd July and finishes at say 2.00pm, then the warning period starts at 2.00pm for 48 hours and work should not start on site on the planned interruption until 2.00pm on the 4th July.

A copy of the letter of notification or the information contained on the card used in the card drop should be sent to the following for information – Customer Relations Centre Front Desk, Work Planning Unit, Telemetry Control Centre, Functional Manager and relevant Northern Ireland Fire and Rescue Service. For contact details see Appendix A.

The number of properties affected by a planned interruption should be determined by the most accurate means available at the time of:

a) planning activity;
b) the interruption; or
c) any subsequent more detailed investigation.

At the time of the initial assessment this is likely to be by property count or an estimate based on local knowledge. For recommendation for estimating numbers of properties, see paragraph 5.3.

4.2 Planned interruptions carried out by Networks Water or Leakage Services

Field staff on site are to record all information on a paper pro forma, known as an Interruption Record Sheet (see Appendix D). The pro forma contains the raw data associated with the interruption and is retained for audit purposes. The information is also communicated to the Work Control Centre (during normal working hours) and the Telemetry Control Centre (outside normal working hours) where staff will already have opened an event on iNform - the Company's Incident Management System (IMS) and will use the information to update/populate the remaining fields associated with the event.

During the course of an interruption, field staff will continue to provide the WCC or TCC with regular updates on progress and the IMS event details will be updated accordingly. When the interruption has ended, the IMS event record will be closed with a status of 'Closed – DG3 Record Required' and the Field Manager responsible will review the details with the Field Technician and amend the information as necessary.

The following fields of information are required to enable a IMS Planned Interruption Event to be created:

- Cause
- Warning details
- Planned start / finish
- Public narrative
- Incident location / areas affected

The following IMS fields should be updated during the course of a planned interruption event:

- Estimated restoration time / date
- Actual restoration time / date
- Water sampler contacted
- Public narrative

4.3 Planned interruptions carried out by Capital Asset Delivery or Customer Field Services

Capital Asset Delivery and Customer Field Services use a combination of a paper pro forma (Appendix D) and an MS Excel spreadsheet template, known as a Contractor Return Sheet, to record the details of interruptions as the contractors that carry out the work for these departments do not have access to IMS. Each month, an appropriate member of Capital Asset Delivery or Customer Field Services will sign off the information to be recorded retrospectively on IMS. Details of the spreadsheet template can currently be obtained from CSD Services in Westland House.

IMS planned interruption events relating to Capital Asset Delivery should be created by Capital Asset Delivery staff in advance of planned interruptions taking place on site. The Warning Issued Date and Time, Planned Start Date and Time, Planned Restoration Date and Time, cause of interruption and properties affected are the only details that can be input in advance. This information will be used by staff in the CRC when providing updates to customers.

During the interruption, the contractor will record the details of the interruption, including the Actual Start Date and Time and Actual Restoration Date and Time, on an Interruption Record Sheet. The contractor will also summarise the information from the Interruption Record Sheets for each month in a Contractor Return Sheet. Contractor Return Sheets will be forwarded to Capital Asset Delivery staff who will use the details to update the IMS interruption event records. This task will be completed both monthly and retrospectively. A copy of the Contractor Return Sheets is also to be forwarded to CSD Services for incorporation in the monthly DG3 Composite Report.

4.4 Procedure for Ensuring that Customers Receive Adequate Notification in the Event of Planned and Warned Interruptions

Reference: The Water Mains Rehabilitation Framework Northern Ireland Guidance Note (GN07) - DG3 Interruptions Reporting for IMS October 2016

For a planned interruption to be classed as planned and warned, customers must be provided with at least 48 hours' notice in advance of the interruption to the water supply at their property. Therefore, if it is the Company's intention to interrupt the supply at 12 Main Street from 8am to 6pm on 8th June, the warning must be communicated no later than 8am on 6th June.

Contractors have a contractual requirement to provide customers with 48 hours' notice in advance of supply interruptions.

Guidance Note *GN7* provides detailed and comprehensive guidance on the required action to be taken by contractors in relation to the notification of customers of the planned intent to interrupt the water supply. The guidance note defines the roles, responsibilities, notification periods and procedures for planned and unplanned interruptions during and after normal working hours.

Contractors should ensure familiarity and compliance with the guidance note at all times.

Formal on-site verification process to ensure customers are receiving the minimum 48 hour notification

Each month, NI Water's WMRF Clerk of Works (CoW) will attend two notification card drops for each contractor, to witness the start of the notification period, i.e. when the last card/letter has been delivered.

The CoW will provide formal confirmation to NI Water's Asset Delivery DG3 Compliance Team of when the last notification was delivered prior to the start of the planned interruption.

The monthly audits carried out by the CoW will be collated into a report to be reviewed at quarterly WMRF Project Board meetings.

Any instances of failure to provide the minimum 48 hours' written notification will result in the following:

- the interruption will be designated and reported as 'unplanned'
- the contractor concerned will receive a formal written warning and a non-conformance report (NCR) will be issued which could impact on reduced work allocation going forward
- NI Water's Executive Committee will be advised of any failures.

4.5 Unplanned Interruptions carried out by Networks Water or Leakage Services

The event trigger for a IMS unplanned interruption event to be created is 4 ‘no water’ complaints in a single DMA within an hour, or when the WCC/TCC is informed by the Field Technician that the water is being turned off.

As defined above, unpredicted events such as mains bursts, or interruptions that are planned but where customers are not warned at least 48 hours in advance, are classified as unplanned interruptions.

Unplanned interruptions are mainly the responsibility of the Networks Water function and information should be recorded using IMS.

Following receipt of a ‘No water/Burst main’ complaint the Field Manager will investigate as soon as possible and provide ‘status updates’ to the Work Control Centre on the progress of remedial works. The Field Technicians on site will record all information on a paper pro forma (Appendix D) and the pro forma will be retained for audit purposes. The Field Technicians will also provide regular timely updates on the progress of such events to the Work Controllers, Duty Managers and Telemetry Operators. Details including the cause of interruption, the time the repair is commenced, the estimated restoration time and the time the repair is complete are to be recorded on IMS.

Area Managers may be made aware of interruptions other than as a result of customer calls. In such cases, the Field Managers should ensure that relevant details are passed to the WCC for processing.

Details input to IMS are to include the Interruption Start Time, as noted by the first affected customer, the time at which the supply was restored and whether or not a third party or an electrical supply failure was the cause.

The following fields of information are required to enable a IMS Unplanned Interruption Event to be created:

- Time of first call
- Estimated restoration time
- Public narrative
- Incident location / areas affected

The following IMS fields should be updated during the course of an unplanned interruption event:

- Public narrative
- Cause
- Mains type / material
- Repair commenced date / time
- Supply restored date / time
- All properties restored date / time
- Water sampler

Note: A record should be created for every burst main, even if the properties affected are zero as there is a requirement to record all bursts on DG3.

4.6 Unplanned interruptions carried out by Capital Asset Delivery or Customer Field Services

IMS unplanned interruption events relating to Capital Asset Delivery are created by WCC and TCC staff in the same way that other IMS unplanned interruption events are created. Sometimes, the contractor may be unaware that an unplanned interruption has occurred, for example, if the contractor forgets to open a valve. The IMS process ensures that such interruptions are captured by the Company. In cases where the contractor is aware of having caused an unplanned interruption, for example, a burst main, the contractor will provide details of the interruption in the Contractor Return Sheet.

4.7 Number of properties affected

An estimation using practical evaluation and contouring from NIW's GIS system will be used to give a more accurate estimate of drawdown of the system.

5.0 RECORDS

Overall responsibility for DG3 records lies with the Head of Networks Water. However, the DG3 Register is compiled and held by CSD Services in Westland House.

Interruption records relating to the Networks Water and Leakage Services functions are recorded on IMS. Interruption records relating to Capital Asset Delivery and Customer Field Services are also recorded on IMS but on a retrospective basis. As Capital Asset Delivery and CFS contractors do not have access to IMS, their details are initially recorded on an MS Excel spreadsheet template before being entered onto IMS by NI Water staff.

5.1 Interruption Recording using IMS

When an event is created on IMS, the event can be one of the following:

- Unplanned Interruption
- Planned Interruption
- Flooding
- Water Quality

IMS can be used to specify whether or not:

- an Unplanned Interruption event was caused by a third party
- a warning was issued for a Planned Interruption event
- the amount of warning was sufficient for a Planned Interruption event
- a Planned interruption event occurred during the planned time

In this way, IMS can be used to report on all four regulatory categories of interruption.

When all information has been entered onto IMS, the information is then extracted in the form of a report. A number of reports are available for selection including:

- RPT1151 – Historical DG3 Event Records Report,
- RPT1152 – Historical DG3 Property Records Report,
- RPT1155 – 'Live' DG3 Unplanned Interruption Records Report,
- RPT1156 – 'Live' DG3 Planned Interruption Records Report,
- RPT1183 – 'Live' DG3 Property Records Report,
- RPT1184 – 'Live' DG3 Event Records Report.

When a IMS interruption event record has been created and closed with the status of 'Closed – DG3 Record Required', it is then the responsibility of the Field Manager to review the record and to amend the details according to the information provided by the Field Technician and information obtained through the GIS polygon process. Once the Field Manager is satisfied that all amendments have been made, the record should be approved and passed to the Customer Field Manager for review and approval. The record should then be passed to the Area Manager for review and approval, to the DG3 Customer Services Coordinator for review and approval and finally, to the Head of Networks Water for review and approval. If the CFM, AM, DG3 CS Coordinator or HoF find any issues with the information, they have the option to reject the record.

Most of the information required will be able to be input directly onto the input screen and will probably not be altered. Some information e.g. house numbers and addresses will be initially estimated by the Field Technicians or the Field Manager. However more investigative work may be required to give an accurate number of houses. The interruption record can then be updated when this information becomes available. For procedures for obtaining house numbers and address see paragraph 5.3 below.

Area Managers and Field Managers are to ensure that all relevant details are recorded and input to the system as soon as possible, and any paper records or notification cards are retained for general audit purposes.
On-call staff are to gather all relevant information and report to the Networks Water Area Manager as soon as possible the next working day.
The following Audit Process is aimed at ensuring the timely completion of audit tasks and approval ahead of monthly reporting on DG3 to the Board.

DG3 / IMS Reporting / Audit Process (3rd Draft – 21 Oct 14)

Action No.	Action	Date
IMS Report from the Field		
1	• WC opens a New Event in IMS when an event trigger is reached. • The IMS Event is updated by WC throughout the incident with information from Field Staff. • WC Save the event when the incident is closed in the field.	
2	• DG3 CS Coordinator sends the ***Weekly Rapid No Water Complaints Report*** to the FM's on a Monday morning for the previous week.	Every Monday morning.
3	• The weekly ***Rapid No Water Complaints Report***, lists all NIW No Water calls for the week. • FM filters the report for his own area, sorts by date and DMA which then group calls. • The FM opens the IMS / Reports / ***RPT1151 – Historical Report – DG3 Interruption Records.*** o Enter Start Date. o Remove tick from Null box. o Enter End Date o View Report. o Click Export Drop Down Menu	Ongoing throughout the week/month.

	○ Export to Excel ○ Filter Report to own area. • The call groups are then checked against an ***appropriate DG3 Interruption Record*** and the Technicians, ***Interruption to Supply – Site Record***. • From the three reports the FM then adjusts, if required, and **Save** the IMS Report. • At this stage **don't Approve** to allow the event to remain with the FM until all audit checks are completed at the end of the month.	
4	• The above process will be completed for each week of the month. • L4 will also check the IMS Event Report throughout the Month and raise queries as appropriate.	Ongoing throughout the week/month.
DG3 Reporting and Audit Process		
5	• DG3 CS Coordinator produces Draft DG3 KIP Report, ***DG3 Reporting – 081014.*** • Two tabs; ○ ***Unplanned >6hr Summary*** ○ ***AIR & KPI Reporting***	By 1st working day of the new month.
6	• Level 4 uses the above monthly ***Unplanned >6hrs Summary*** Report to identify a number of L4 Monthly Audit checks. • L4 meets with the Customer Field Manager to arrange the Audit Checks.	1st working day + 1 day. 1st working day + 1 day
7	• Level 5 checks the monthly ***Unplanned >6hr Summary*** report for his area against IMS Events and adjusts as necessary.	1st working day + 1 day
8	• Customer FM discusses the IMS Events highlighted for audit in action 6. • Adjusts as required.	1st working day + 3 days
9	• Customer FM reports back to Level 4. • L4 approves/saves the Audit Events in the IMS system.	1st working day + 5 days
Monthly Sign Off		
10	• L4 emails L3 & DG3 CS Coordinator that Monthly Audit checks have been completed.	1st working day + 7 days
11	• DG3 CS Coordinator produces ***DG3 Rapid Comparison Checks*** report. • This Zip file contains an number of reports; ○ Individual FM folders with DG3 ID Events checks. ○ Comparison Checks Summary.	1st working day + 8 days

	▪ Red/Amber/Green against start/finish/No. prop o Properties not recorded on IMS. ▪ Used to check No. of prop queries.	
12	• L4 discusses above report with Customer FM. • Customer FM discussed above report with FM's. • Customer FM to the Level 4. • L4 reports back to DG3 CS Coordinator.	1st working day + 10 days
13	Level 3 sings off the monthly DG3 Report for the Board.	2nd Tuesday of the new month.

The reports above can be found at G:\NetWat\DG3\Monthly Audit Process

5.2 MS Excel Spreadsheet Template – Contractor Return Sheet

Planned interruptions undertaken by Capital Asset Delivery and Customer Field Services will most likely be carried out by a number of contractors. The Contractor's Representative should gather all appropriate information on a paper pro forma (Appendix D) and then transfer this information to the Contractor Return Sheet. The Contractor Return Sheets should be collated at the end of each week/month and signed off by an appropriate member of Capital Asset Delivery or Customer Field Services staff and sent to CSD Services for inclusion into the DG3 Register. All pro forma should be stored by Capital Asset Delivery and Customer Field Services for Audit purposes.

Details of the Contractor Return Sheet can currently be obtained from CSD Services in Westland House.

5.3 Property numbers and Addresses

It is a requirement of NIAUR that the numbers of properties and address details of properties affected by interruptions to supply exceeding 3 hours are recorded. The numbers of properties and address details should be determined by the most accurate means available at the time. This is likely to be by one of two methods.

a. Visual Property Counts

In the case of small-scale interruptions, a Field Technician may have sufficient knowledge to determine the number of properties affected by carrying out a visual property count. Details should initially be recorded by hand on a paper pro forma including location, type and cause of interruption, and 'valve off'/'valve on' times. Each week, the Field Manager should review the Interruption Record Sheets with his Field Technicians and the details provided should be used to update the IMS records.

b. GIS Polygons

In the case of large-scale interruptions, the number of properties affected by an interruption should be determined using a GIS polygon. A Map Redline Request should be submitted using the IMS DG3 Interruption Details page. Then in CARtomap (the Company's Corporate Asset Register/GIS intranet facility), a redline polygon should be drawn around the affected area and assigned to the IMS request which should appear in the dropdown list associated with the DG3 Areas Layer of the Water workspace (see Editing Menu). Back in IMS, the Map Redline Request should be updated to retrieve the address details of the properties within the polygon and hence, the number of properties affected.

Field Managers should base the redline polygons on the details provided by the Field Technicians.

In the case of interruptions where rezoning is carried out, it may be necessary to obtain address details from within more than one polygon.

5.4 Records of Interruptions

In general all interruptions to supply should be recorded. However there are large numbers of very short interruptions to supply carried out by Leakage Services and Customer Field Services. These interruptions are routine, inconsequential and last no longer than 30 minutes. Information about these interruptions is held by managers in Leakage Services and Customer Field Services and is therefore not required for the DG3 Interruptions to Supply Register. Discretion should however be used in all cases. If difficulties arise or there happens to be an exception to the type of routine interruption referred to above that gives rise to an interruption that lasts for more than 1 hour then, this interruption should be recorded. Guidance on which interruptions should be recorded is to be given by Leakage Services and Customer Field Services managers.

In general: Routine interruptions lasting less than 1 hour need not be recorded as part of the DG3 Interruptions to Supply Register except at the discretion of the Field Technician or Field Manager.

All interruption records entered onto IMS are to be approved by at least the Area Manager responsible by the 1st working day + 5 days, as per the Audit Process described earlier in the document. Interruption records belonging to Capital Asset Delivery and Customer Field Services should be sent to CSD Services by the same date.

- When a Field Manager approves a IMS DG3 record, an e-mail reminder is automatically forwarded to the Customer Field Manager.
- When a CFM approves a IMS DG3 record, an e-mail reminder is automatically forwarded to the Area Manager.
- When an Area Manager approves a IMS DG3 record, an e-mail reminder is automatically forwarded to the DG3 Customer Services Coordinator.

Automatic e-mail reminders to approve the DG3 records are sent to the DG3 Customer Services Coordinator, Head of Networks Water, Head of Networks Leakage and Capital Asset Delivery L3 on a monthly basis.

5.5 Historical records

All associated documentation is to be kept for seven years.

5.6 Audit Trail

The maintenance of audit trails is very important. During AIR audits the Reporter would more than likely want to investigate several interruptions and the associated documentation. It is therefore imperative that all records corresponding to individual interruption records, including pro forma, are stored locally for audit purposes.

5.7 Amendments to Information

It is recognised that the details entered at the time a IMS event record is created are estimates and that it may be necessary to update the details following the GIS polygon process. The IMS Internal Narrative should be used to record the details of any amendments, over and above those that occur as a result of the normal process of updating records. All amendments to the base data contained in IMS or information changed during the course of the development of the DG3 Composite Report File, must be supported by a detailed explanation.

6.0 REPORTING

6.1 NI Water Reports

IMS can be updated on a continuous basis, as and when interruption events occur, throughout the life of an 'Active' event, and after an event has been closed on the system and a corresponding DG3 interruption record has been registered. Monthly reports can be generated following the completion of quality assurance checks carried out by Area Managers and Customer Field Managers and the release of data by the Head of Function. These reports are used by the CSD Services function to compile a DG3 Register for each month and corresponding KPIs.

The following reports are generated by CSD Services for Management Information:

- Monthly DG3 Composite Report including monthly DG3 Register
- Monthly DG3 KPI Report
- Annual DG3 AIR Table 2 Lines 5 to 19 Report (as defined by the Annual Information Return Reporting Requirements and Definitions Manual).

6.2 Development of the DG3 Register and KPI Report

As described above, interruption data for each month is extracted from the various data sources (IMS and Contractor Return Sheets) used by the various work streams (Networks Water, Leakage Services, Capital Asset Delivery and Customer Field Services) and copied to a DG3 Composite Report File held by CSD Services in Westland House.

Copies of the original records are retained in their unaltered state. The records are then sorted according to the four regulatory categories of interruption:

- Unplanned Interruptions
- Planned and Warned Interruptions
- Unplanned Interruptions Caused by Third Parties
- Unplanned Interruptions due to Overruns of Planned and warned Interruptions

further sorted according to the four regulatory time bands:

- More than 3 hours
- More than 6 hours
- More than 12hours
- More than 24 hours

The interruption records are subject to a series of audit checks to ensure that the details of interruptions have been captured in accordance to the regulatory guidance. For further information on the development of the DG3 Register, please refer to the Line Methodology for AIR Table 2 Lines 5 to 19.

6.3 Regulatory Report

The Finance & Regulation Directorate will report to Northern Ireland Authority for the Utility Regulation (NIAUR) on an annual basis.

7.0 VOID PROPERTIES

Within NI Water, Asset Information Development (AID) is primarily responsible for ensuring the databases, systems, standards and processes are in place to support the Corporate Asset Register (GIS/Ellipse).

According to the definition, a void property is a type of connected property. The GIS picks up the following twelve property types, including void properties:

- Approved Built
- Approved Derelict
- Approved Under Construction
- Candidate Built
- Candidate None
- Candidate Under Construction
- Historical Built
- Historical Derelict
- Historical None
- Historical Under Construction
- Provisional Built
- Provisional Under Construction

Unless AID is specifically asked to exclude void properties when running queries, their GIS address lists will include any of the property types listed above.

There is a delay in updating the GIS with property status information.

Relevant extracts from the Pointer 2.1 Specification can be found in Appendix E at the back of this document (Pages 22 to 26 of 31).

8.0 'NO WATER/LOW PRESSURE' COMPLAINTS

Within NI Water, CRC call agents adopt a specific line of questioning with the customer to establish the cause of complaint including complaints relating to low pressure and no water.

A copy of the latest CRC call scripts for handling low pressure/no water complaints can be found in Appendix F at the back of this document (Pages 27 & 28 of 31). Provided the customer provides an accurate response to the questions asked by the call agent, the risk of wrong classification should be negated.

Appendices to the DG3 LoS Methodology can be found in the follow section

Appendix A – DG3 Interruption to Supply - Roles & Responsibilities

Customer Relations Centre (Normal Hours)

- Log 'no water'/ 'burst main' complaints into RapidXtra system;
- Use IMS system to provide up to date information to customers;
- Use 'Operational Announcements' functionality to share information;
- Adhere to agreed communication routes.

Bretland Work Control Centre (Normal Hours)

- Create IMS interruption event records and close with either a status of 'Closed – DG3 Record Required' or 'Closed – DG3 Record Nor Required'.

Work Planning Unit

- Normal hours – create a Work Order and inform area supervisor immediately;
- Update the Ellipse System following 'status calls';
- Ensure Work Orders are closed out.

Contact details:-
Bretland WCC – [redacted]

Customer Service Delivery Directorate - Networks Water

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Networks Water function.

Customer Service Delivery Directorate - Leakage Services

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Leakage Services function.

Customer Field Services

- Customer Field Services is responsible for reactive meter maintenance, proactive meter exchange and the installation of new meters. An interruption to supply to the property arises during the course of the installation.

Field Technicians

- Proactively provide regular timely updates on the progress of events (bursts, repairs etc.) to Work Control / Duty Managers / Telemetry operators:
  - Nature of the problem and any relevant details
  - Time repair commenced
  - Estimated restoration time
  - Repair complete;

Field Technicians (continued)

- Provide any additional information to Field Managers to allow completion of the corresponding DG3 record e.g.
  - Polygon details
  - Rezoned properties.

Field Managers

- Inform Customer Services and Work Planners of planned interruptions providing details of area & number of properties affected and proposed duration of interruption;
- Assess extent of unplanned interruptions and organise remedial work;
- Inform Work Planners on completion of remedial work;
- Provide supporting information on number of properties affected and reasons for interruption.
- Ensure Field staff are adhering to agreed processes and communication routes;
- Review records created by Work Controllers:
  - Ensure start / finish times are accurate
  - Ensure property data is accurate & required fields complete;
- Review corresponding DG3 record for each event;
- Draw polygons, where required, and automatically link to IMS record;

- Sign off DG3 record for submission for approval by Customer Field Manager;
- Update Major Incident records.

Customer Field Managers
- Ensure Field Managers are adhering to the agreed process / timescales;
- Check / query records signed off by Field Managers;
- Sign off DG3 Record for approval by Area Manager.

Area Managers
- Ensure Customer Field Managers are adhering to the agreed process / timescales;
- Check / query records signed off by Customer Field Managers;
- Sign off DG3 Record for approval by Area Manager.

Telemetry Control Centres (Out of Hours)
- Log ‘no water’/‘burst main’ complaints into Work Planning (Ellipse) system;
- Create IMS interruption event records;
- Inform on call supervisor immediately.

Bretland Telemetry Control Centre
TCC E-mail Addresses and Telephone Extensions:-

E-mail	Ext.
[redacted]	[redacted]
	[redacted]

Work Controllers / Telemetry Operators
- Create and maintain event records based on the information provided by Field Staff:
  - Interruptions to Supply (planned and unplanned)
  - Water Quality;
- Create and maintain event records for planned work;
- Close records at completion of events and apply appropriate DG3 status (required or not required);
- Monitor open incidents for records requiring action;
- Provide advice and guidance, if required, to Bronze users during Major Incidents.

DG3 Customer Services Coordinator
- Processes interruption information from Networks Water, Leakage Services, Capital Asset Delivery and Customer Field Services;
- Checks, audits and queries records signed off by Customer Field Managers;
- Compiles DG3 Interruptions to Supply Register based on data derived from IMS;
- Signs off IMS records and DG3 Interruptions to Supply Register for approval by Head of Networks Water;
- Produces KPI reports for Management and AIR for Regulator.

Capital Asset Delivery

- Capital Asset Delivery is responsible for the rehabilitation of existing water mains and the installation of new water mains. Interruptions to supply arise as a result of connecting properties to the refurbished and new water mains.

Capital Asset Delivery Planned Works Coordinator

- Ensure that planned works affected > x properties / lasting > x time are entered on the system in advance;
- Ensure that planned works are updated if necessary (e.g. overruns, early starts);
- Close records at completion of events and apply appropriate DG3 status (required or not required);
- Ensure that planned works affecting < x properties / lasting < x time are entered on the system retrospectively and submitted for approval.

Networks - On-call Staff

- Assess extent of unplanned interruptions, update Duty Officer (if required) and organise remedial work
- Inform Networks Water Area Manager of actions taken and interruption details

Head of Networks Water

- Final signoff of amalgamated approved IMS interruption records on a monthly basis and release of data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Information Return to NIAUR.

Emergency Planning Team

- Declare Major Incidents on the IMS system;
- Interrogate reports to provide status updates as incidents develop;
- Complete Upwards Reports based on data provided in IMS;
- Close Major Incidents on IMS system.

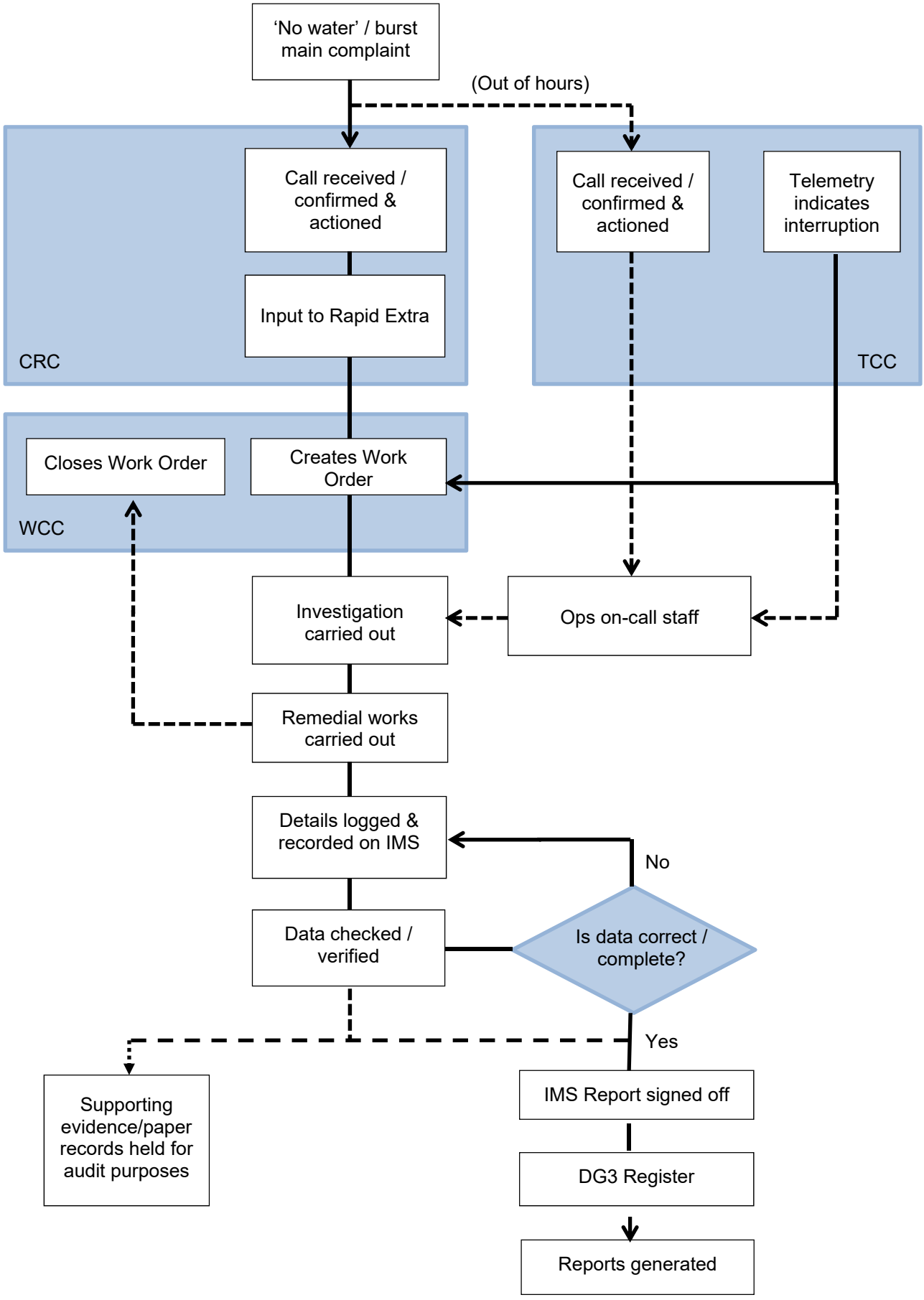
Bronze Team – MIP Only

- Create and maintain event records based on the information provided by Field Staff:
  - Interruptions to Supply (planned and unplanned)
  - Water Quality
  - Flooding;
- Close records at completion of events and apply appropriate DG3 status (required or not required);
- Monitor open incidents for records requiring action;
- Interrogate reports to provide status updates as incidents develop within their Bronze area.

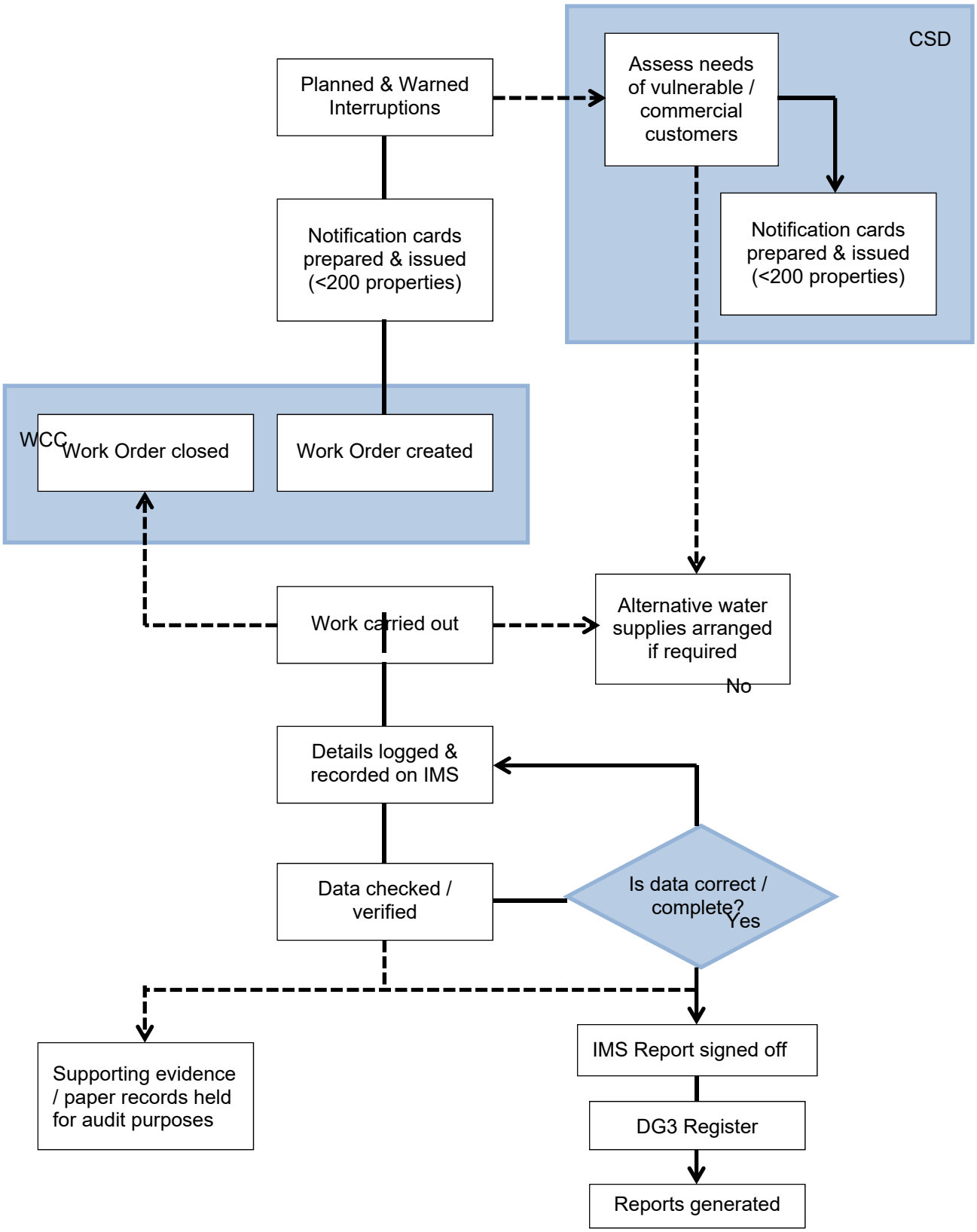
Silver Team

- Interrogate reports to provide status updates as incidents develop.

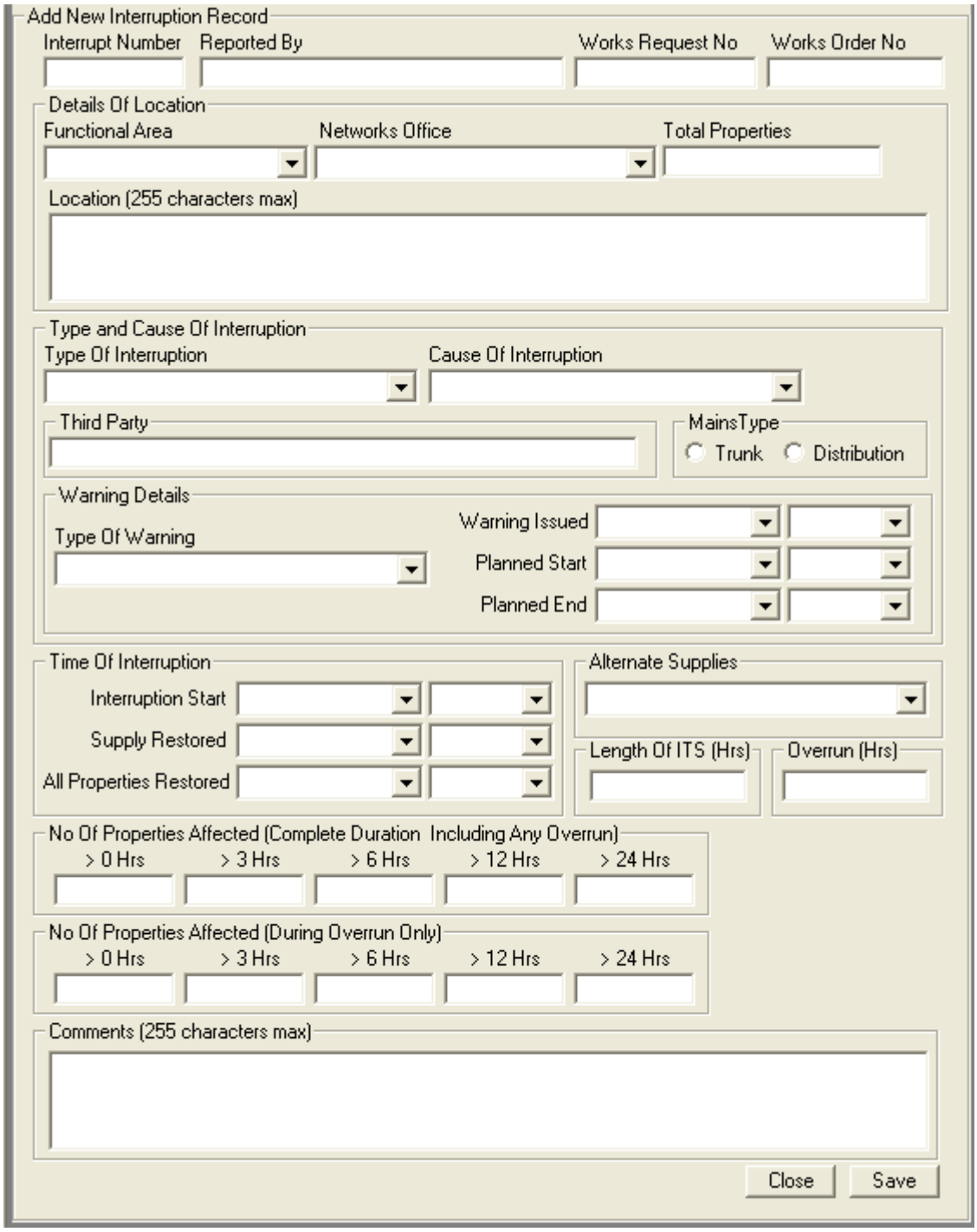
Appendix B – DG3 Process Flow Diagram – Unplanned or Unwarned Interruptions



Appendix B – DG3 Process Flow Diagram – Planned and Warned Interruptions



Appendix D – Pro forma - Interruption Record Sheet



Appendix E – Pointer 2.1 Specification Extract (Page 12)

4.21 BUILDING_STATUS

Definition
The current physical status of the building.

Constraints
Population of this field is mandatory.

Permitted PAO Status values are:

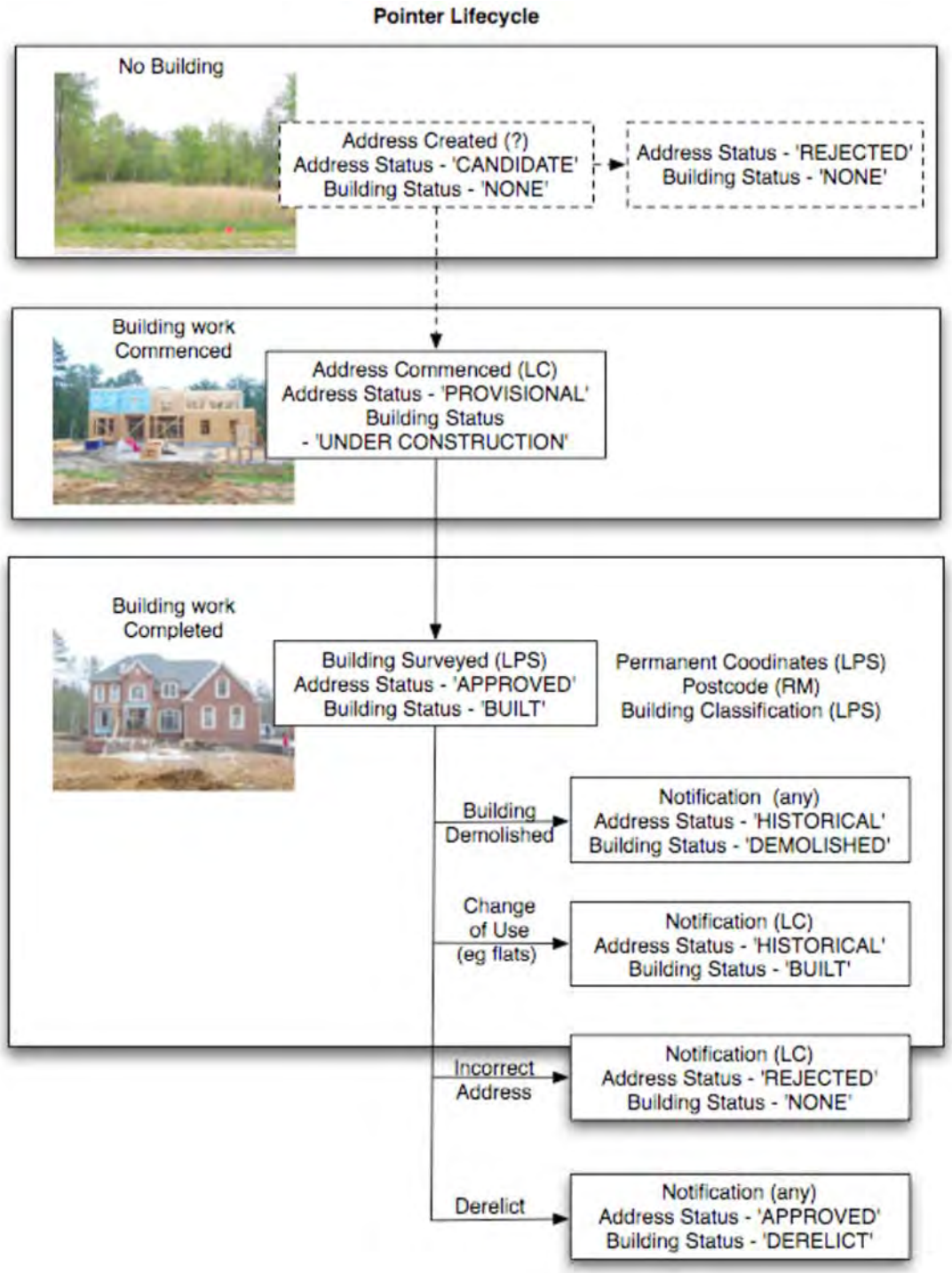
None, Under Construction, Built, Derelict and Demolished

Details
This field reflects changes to the Building_Status.

The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to ‘None’ and the Address_Status set to ‘Candidate’. When the council sends notification that building has commenced, the Building_Status is set to ‘Under Construction’ and the Address_Status set to ‘Provisional’. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to ‘Built’ and the Address_Status set to ‘Approved’. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to ‘Historical’.

Please note that depending on the purpose for which the data is being used, the user may need to filter out certain categories of Building _Status. For example, addresses for ‘Demolished’ buildings would not be required where a mail shot is planned.

Appendix E – Pointer 2.1 Specification Extract (Page 13)



Appendix E – Pointer 2.1 Specification Extract (Page 14)

4.22 ADDRESS_STATUS

Definition
The current logical status of the address.

Constraints
Permitted ADDRESS_STATUS values are: (See diagram above)

- Candidate - before building starts. Planning permission has been granted but building has not commenced. Created by the Local Council before building has begun.
- Provisional – The Local Council has confirmed that the building is under construction.
- Approved – LPS add permanent co-ordinates and/or a building classification. A Postcode may also be added however this does not affect the ADDRESS_STATUS
- Historical - addresses that are no longer in use due to dereliction, demolition etc.
- Rejected – used to indicate the deletion of an incorrect address. Population of this field is mandatory, and is system generated.

Details
The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to ‘None’ and the Address_Status set to ‘Candidate’. When the council sends notification that building has commenced, the Building_Status is set to ‘Under Construction’ and the Address_Status set to ‘Provisional’. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to ‘Built’ and the Address_Status set to ‘Approved’. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to ‘Historical’.

Please note that depending on the purpose for which the data is being used, the data should be filtered on the categories of Address _Status. For example, addresses set to ‘Historical’ would not be required where a mail shot is planned.

4.23 CLASSIFICATION

Definition
The current use of the building, derived from the LPS classification.

Constraints
Data in this field is system generated.

Permitted CLASSIFICATION values are shown below. These are derived from the detailed LPS list of valuation classifications.

Details
There are three main classification groups:

- NULL – Where the record has not yet been updated with an LPS classification.
- Non Domestic (formerly Commercial) – these records are prefixed with 'ND'
- Domestic (formerly Residential) – these records are prefixed with 'DO'. Where an individual is operating a business from a room within their home, LPS still classify this as a Residential property.

These are subdivided into a further classification as detailed above.

When the building use of an addressable object changes, the CLASSIFICATION field will be updated to reflect this change.

Appendix E – Pointer 2.1 Specification Extract (Page 15)

CODE	CLASSIFICATION DESCRIPTION
ND_agriculture	Agriculture (incl farms, market gardens)
ND_agriculture_other	Miscellaneous Agriculture
ND_comm_other	Commercial other
ND_culture	Cultural (incl museums, libraries)
ND_culture_other	Miscellaneous Culture
ND_education	Education (incl school, further ed)
ND_entertainment	Leisure and tourism(non-sporting - cinemas etc)
ND_ents_other	Miscellaneous Entertainment
ND_freight_other	Freight (canal, dock, railway undertaking)
ND_health	Health(incl hospital, care home, clinics)
ND_hospitality	Hospitality (incl hotels, b&b)
ND_indust_other	Miscellaneous Industry
ND_industry	Industry (incl factory, quarries)
ND_legal	Law and Order
ND_office	Commercial office - banks, post offices, offices
ND_religious	Religious establishment (incl places of worship)
ND_retail	Retail (shops, showrooms etc)
ND_sporting	Recreation (sports facilities)
ND_utilities	Public utilities
ND_utilities_other	Miscellaneous Utilities
DO_apart	Domestic - Apartments/flats
DO_detached	Domestic - detached
DO_semi	Domestic - Semi
DO_terrace	Domestic - Terrace
DO_other	Domestic other (incl Lock-up garages)

4.24 CREATION_DATE

Definition
The date when an address is first entered into the system by the Local Council.

Constraints
This field will only be populated for records created after the Pointer application went live in 2005. The field is automatically populated when records are entered into the database. It does not necessarily relate to the date of building, but rather when the information was provided.

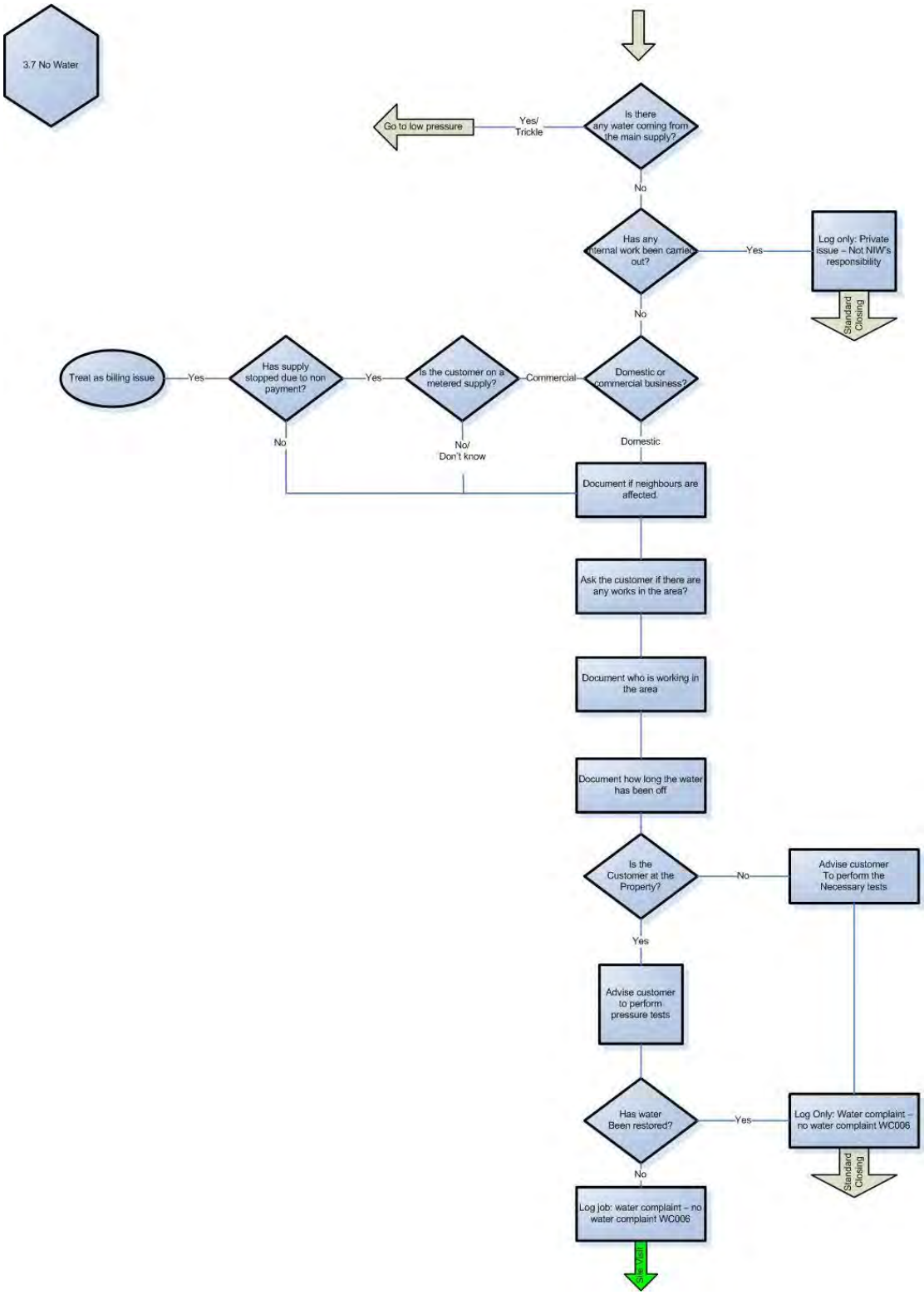
4.25 COMMENCEMENT_DATE

Definition
This is the date when construction on the property has begun.

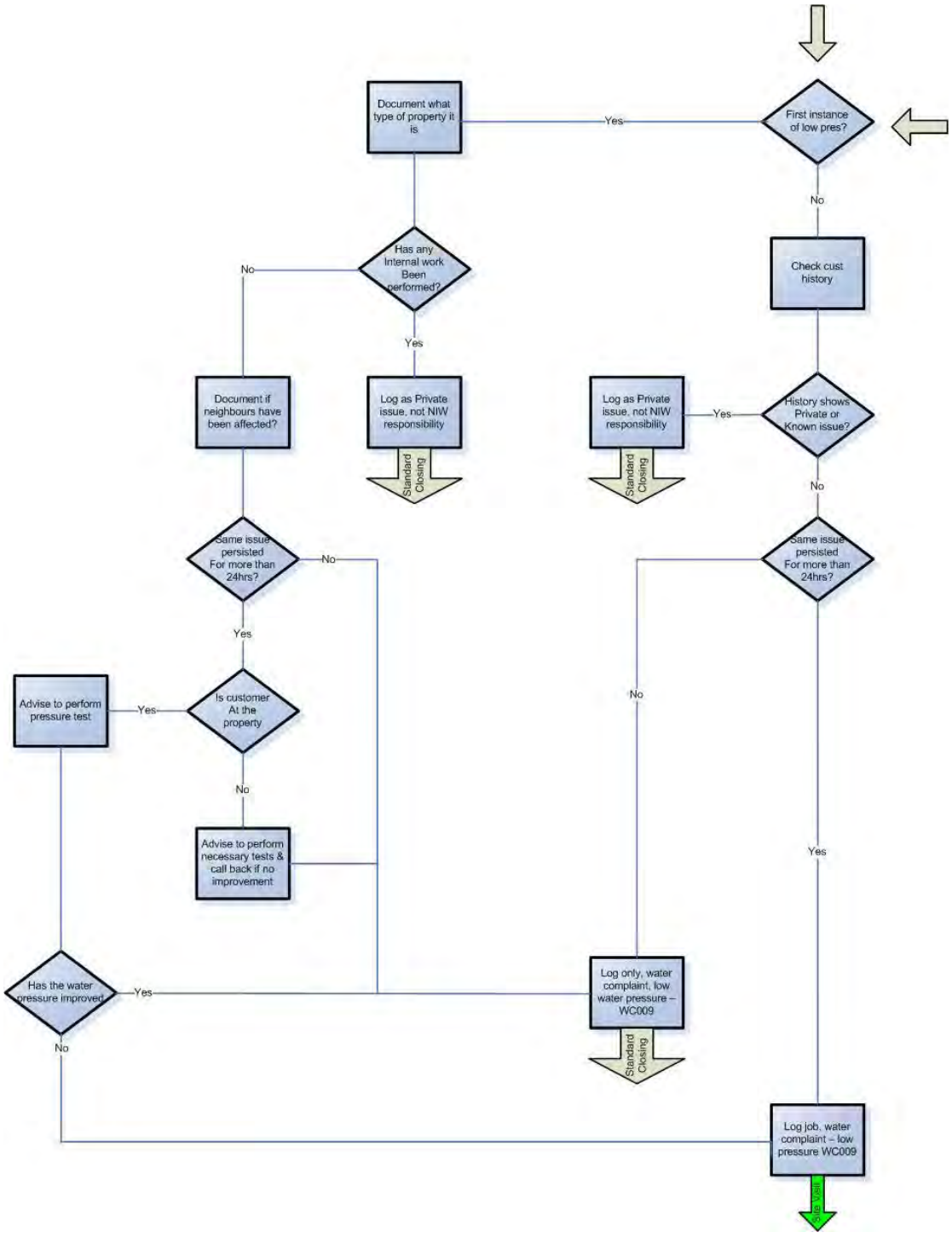
Constraints
This field will be populated for records created after the release of the new Pointer Product and when Local Council informs Pointer of the fact.

Details
This indicates when the BUILDING_STATUS changes from ‘NONE’ to ‘UNDER CONSTRUCTION’

Appendix F – CRC Call Script for 'No Water' Complaints



Appendix F – CRC Call Script for 'Low Pressure' Complaints



Appendix G – DG3 Register Extract *(Unplanned Interruption Events – IMS Report RPT1184)*

LastRun
01/05/2018 15:21

Unplanned, Unwarned Interruptions

More than 3 hrs **No of Properties** **4,159**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
257271	183962	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			06/03/2019 18:23	06/03/2019 21:30	163	72	72	0	0	0	3 Hrs 7 Mins 0 Secs	3	7	0	(UPRN: 185962711) - [redacted] Rashee Road, Ballyclare, Ballyclare, Antrim, BT39 9JB	FALSE			Burst Main/Main Repair
257224	183931	Submitted to Customer Field Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			03/03/2019 08:32	03/03/2019 11:40	16	16	16	0	0	0	3 Hrs 8 Mins 0 Secs	3	8	0	(UPRN: 185486931) - [redacted] Garmoney Road, Mobuoy, Londonderry, BT47 3JH	FALSE			Other
257341	184007	Registered	Networks Water	NW53A	[redacted]		Unplanned Interruption		N/A			13/03/2019 09:30	13/03/2019 12:40	8	8	8	0	0	0	3 Hrs 10 Mins 0 Secs	3	10	0	(UPRN: 185890160) - [redacted] Lack Road, Drumduff, Irvinestown, Fermanagh, BT94 1BQ	FALSE			Burst Main/Main Repair
257298	183974	Registered	Networks Water	NW03D	[redacted]		Unplanned Interruption		N/A			09/03/2019 09:00	09/03/2019 12:15	29	29	29	0	0	0	3 Hrs 15 Mins 0 Secs	3	15	0	(UPRN: 185343151) - [redacted] Roslyn House Drumalane Road, Lisdrumliska, Newry, Down, BT35 8AP	FALSE			Service Pipe Repair
257378	184037	Registered	Networks Water	NW53A	[redacted]		Unplanned Interruption		N/A			19/03/2019 12:15	19/03/2019 15:30	15	15	15	0	0	0	3 Hrs 15 Mins 0 Secs	3	15	0	(UPRN: 185791671) - [redacted] Faugher Road, Gillyhoime (Ely), Enniskillen, Fermanagh, BT74 8AT	FALSE			Burst Main/Main Repair
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 10:04	26/03/2019 13:30	354	34	34	0	0	0	3 Hrs 26 Mins 0 Secs	3	26	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257271	183962	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			06/03/2019 18:25	06/03/2019 21:55	163	91	91	0	0	0	3 Hrs 30 Mins 0 Secs	3	30	0	(UPRN: 185962711) - [redacted] Rashee Road, Ballyclare, Ballyclare, Antrim, BT39 9JB	FALSE			Burst Main/Main Repair
257311	183985	Registered	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			11/03/2019 12:00	11/03/2019 15:30	7	7	7	0	0	0	3 Hrs 30 Mins 0 Secs	3	30	0	(UPRN: 185240863) - [redacted] Linden Close, Saintfield Parks, Saintfield, Down, BT24 7BH	FALSE			Burst Main/Main Repair
257398	184051	Registered	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			21/03/2019 09:00	21/03/2019 12:30	81	81	81	0	0	0	3 Hrs 30 Mins 0 Secs	3	30	0	(UPRN: 185240470) - [redacted] Ballynahinch Road, Saintfield Parks, Saintfield, Down, BT24 7AE	FALSE			Burst Main/Main Repair
257216	183924	Submitted to Customer Field Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			01/03/2019 10:55	01/03/2019 14:30	17	17	17	0	0	0	3 Hrs 35 Mins 0 Secs	3	35	0	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	FALSE			Burst Main/Main Repair
257269	183961	Submitted to Customer Field Manager	Networks Water	NW52B	[redacted]		Unplanned Interruption		N/A			06/03/2019 12:00	06/03/2019 15:40	24	24	24	0	0	0	3 Hrs 40 Mins 0 Secs	3	40	0	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Magherafelt, Londonder	FALSE			Burst Main/Main Repair
257467	184102	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 01:38	30/03/2019 05:25	49	5	5	0	0	0	3 Hrs 47 Mins 0 Secs	3	47	0	(UPRN: 185982340) - [redacted] Springfarm Mews, STEEPLE, ANTRIM, ANTRIM, BT41 4JL	FALSE			Burst Main/Main Repair
257462	184100	Submitted to Customer Field Manager	Networks Water	NW51B	[redacted]		Unplanned Interruption		N/A			29/03/2019 20:07	30/03/2019 00:00	201	201	201	0	0	0	3 Hrs 53 Mins 0 Secs	3	53	0	(UPRN: 185680296) - [redacted] Queens Parade, CAMPSIE, OMAGH, TYRONE, BT79 0DJ	FALSE			Burst Main/Main Repair
257466	184101	Submitted to Customer Field Manager	Networks Water	NW53A	[redacted]		Unplanned Interruption		N/A			29/03/2019 18:18	29/03/2019 22:15	28	28	28	0	0	0	3 Hrs 57 Mins 0 Secs	3	57	0	(UPRN: 185792721) - [redacted] Geaglum Road, DERRYCHREE, DERRYLIN, FERMANAGH, BT92 9BX	FALSE			Other
257401	184053	Submitted to Area Manager	Networks Water	NW51B	[redacted]		Unplanned Interruption		N/A			21/03/2019 12:00	21/03/2019 16:00	62	5	5	0	0	0	4 Hrs 0 Mins 0 Secs	4	0	0	(UPRN: 185842107) - [redacted] Glenelly Road, Glencoppogagh (Main Portion), Plumbridge, Tyrone, BT79 8BG	FALSE			Burst Main/Main Repair
257362	184025	Submitted to Area Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			15/03/2019 06:56	15/03/2019 11:00	83	83	83	0	0	0	4 Hrs 4 Mins 0 Secs	4	4	0	(UPRN: 185487204) - [redacted] Kilnappy Road, Gortnessy, Londonderry, Londonderry, BT47 3LQ	FALSE			Burst Main/Main Repair
257470	184104	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 10:26	30/03/2019 14:30	77	67	67	0	0	0	4 Hrs 4 Mins 0 Secs	4	4	0	(UPRN: 185458740) - [redacted] Glasmullen Road, BARAGHILLY, BALLYMENA, ANTRIM, BT44 0QZ	FALSE			Other
257314	183988	Registered	Networks Water	NW01A	[redacted]		Unplanned Interruption		N/A			11/03/2019 15:15	11/03/2019 19:20	54	54	54	0	0	0	4 Hrs 5 Mins 0 Secs	4	5	0	(UPRN: 185042661) - [redacted] Ravenhill Avenue, Ballynafoy, Belfast, Down, BT6 8LD	FALSE			Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			05/03/2019 11:01	05/03/2019 15:10	75	29	29	0	0	0	4 Hrs 9 Mins 0 Secs	4	9	0	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	FALSE			Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			05/03/2019 11:00	05/03/2019 15:10	75	46	46	0	0	0	4 Hrs 10 Mins 0 Secs	4	10	0	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	FALSE			Burst Main/Main Repair
257337	184000	Submitted to Customer Field Manager	Networks Water	NW52B	[redacted]		Unplanned Interruption		N/A			12/03/2019 20:00	13/03/2019 00:10	240	240	240	0	0	0	4 Hrs 10 Mins 0 Secs	4	10	0	(UPRN: 185471761) - [redacted] Moydamlaght Road, Moneyneany, Draperstown, Londonderry, BT45 7ES	FALSE			Burst Main/Main Repair
257301	183977	Submitted to Area Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			09/03/2019 23:40	10/03/2019 03:51	35	35	35	0	0	0	4 Hrs 11 Mins 0 Secs	4	11	0	(UPRN: 185490776) - [redacted] Learmount Road, Tireighter, Londonderry, Londonderry, BT47 4BA	FALSE			Burst Main/Main Repair
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 09:18	26/03/2019 13:30	354	58	58	0	0	0	4 Hrs 12 Mins 0 Secs	4	12	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257395	184048	Registered	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			20/03/2019 16:46	20/03/2019 21:00	55	55	55	0	0	0	4 Hrs 14 Mins 0 Secs	4	14	0	(UPRN: 185241143) - [redacted] Meadowvale, Saintfield Parks, Saintfield, Down, BT24 7DW	FALSE			Burst Main/Main Repair
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 09:16	26/03/2019 13:30	354	10	10	0	0	0	4 Hrs 14 Mins 0 Secs	4	14	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257437	184078	Submitted to Customer Field Manager	Networks Water	NW03A	[redacted]		Unplanned Interruption		N/A			26/03/2019 05:41	26/03/2019 10:00	520	343	343	0	0	0	4 Hrs 19 Mins 0 Secs	4	19	0	(UPRN: 185577439) - [redacted] Ardmore Drive, Ballynahone More, Armagh, Armagh, BT60 1JB	FALSE			Burst Main/Main Repair
257418	184064	Submitted to Area Manager	Networks Water	NW51B	[redacted]		Unplanned Interruption		N/A			23/03/2019 07:00	23/03/2019 11:30	127	127	127	0	0	0	4 Hrs 30 Mins 0 Secs	4	30	0	(UPRN: 185685344) - [redacted] Crockanboy Road, Fallagh Lower, Gortin, Tyrone, BT79 7RW	FALSE			Burst Main/Main Repair
257361	184021	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			14/03/2019 21:25	15/03/2019 02:00	25	25	25	0	0	0	4 Hrs 35 Mins 0 Secs	4	35	0	(UPRN: 185441640) - [redacted] Moorfields Road, Cross, Ballymena, Antrim, BT42 3EA	FALSE			Burst Main/Main Repair
257407	184058	Registered	Networks Water	NW51B	[redacted]		Unplanned Interruption		N/A			21/03/2019 16:10	21/03/2019 20:45	11	11	11	0	0	0	4 Hrs 35 Mins 0 Secs	4	35	0	(UPRN: 185688630) - [redacted] Termon Road, Aghnanereagh, Carrickmore, Tyrone, BT79 9HW	FALSE			Burst Main/Main Repair
257459	184098	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			29/03/2019 16:25	29/03/2019 21:05	162	162	162	0	0	0	4 Hrs 40 Mins 0 Secs	4	40	0	(UPRN: 185859315) - [redacted] Birch Hill Road South, PARK HALL, ANTRIM, ANTRIM, BT41 1DD	FALSE			Burst Main/Main Repair
257467	184102	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 00:42	30/03/2019 05:25	49	44	44	0	0	0	4 Hrs 43 Mins 0 Secs	4	43	0	(UPRN: 185982340) - [redacted] Springfarm Mews, STEEPLE, ANTRIM, ANTRIM, BT41 4JL	FALSE			Burst Main/Main Repair
257437	184078	Submitted to Customer Field Manager	Networks Water	NW03A	[redacted]		Unplanned Interruption		N/A			26/03/2019 07:16	26/03/2019 12:00	520	48	48	0	0	0	4 Hrs 44 Mins 0 Secs	4	44	0	(UPRN: 185577439) - [redacted] Ardmore Drive, Ballynahone More, Armagh, Armagh, BT60 1JB	FALSE			Burst Main/Main Repair
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 08:42	26/03/2019 13:30	354	7	7	0	0	0	4 Hrs 48 Mins 0 Secs	4	48	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257460	184097	Submitted to Customer Field Manager	Networks Water	NW03B	[redacted]		Unplanned Interruption		N/A			29/03/2019 09:30	29/03/2019 14:30	765	765	765	0	0	0	5 Hrs 0 Mins 0 Secs	5	0	0	(UPRN: 185330467) - [redacted] School Road, BALLYMARTIN, BALLYMARTIN, DOWN, BT34 4PQ	FALSE			Burst Main/Main Repair
257375	184035	Registered	Networks Water	NW03D	[redacted]		Unplanned Interruption		N/A			19/03/2019 07:40	19/03/2019 12:45	13	13	13	0	0	0	5 Hrs 5 Mins 0 Secs	5	5	0	(UPRN: 185342300) - [redacted] Keggall Road, Cross, Camlough, Armagh, BT35 7LB	FALSE			Burst Main/Main Repair
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 08:24	26/03/2019 13:30	354	57	57	0	0	0	5 Hrs 6 Mins 0 Secs	5	6	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257283	183967	Registered	Networks Water	NW03B	[redacted]		Unplanned Interruption		N/A			07/03/2019 13:45	07/03/2019 19:00	96	96	96	0	0	0	5 Hrs 15 Mins 0 Secs	5	15	0	(UPRN: 185248023) - [redacted] Hillsborough Road, Ballymacormick, Dromore, Down, BT25 1DE	FALSE			Burst Main/Main Repair
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 08:14	26/03/2019 13:30	354	72	72	0	0	0	5 Hrs 16 Mins 0 Secs	5	16	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257277	183966	Registered	Networks Water	NW01A	[redacted]		Unplanned Interruption		N/A			07/03/2019 10:00	07/03/2019 15:30	65	65	65	0	0	0	5 Hrs 30 Mins 0 Secs	5	30	0	(UPRN: 185161926) - [redacted] Work Unit 1 Dairy Farm Centre Stewartstown Road, Poleglass, Belfast, Antrim, BT17 0A	FALSE			Burst Main/Main Repair
257296	184010	Submitted to Area Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			09/03/2019 07:28	09/03/2019 13:01	117	117	117	0	0	0	5 Hrs 33 Mins 0 Secs	5	33	0	(UPRN: 185490824) - [redacted] Tireighter Road, Tireighter, Londonderry, Londonderry, BT47 4BD	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 07:57	26/03/2019 13:30	354	3	3	0	0	0	5 Hrs 33 Mins 0 Secs	5	33	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257353	184020	Submitted to Customer Field Manager	Networks Water	NW03A	[redacted]		Unplanned Interruption		N/A			14/03/2019 10:56	14/03/2019 16:30	26	26	26	0	0	0	5 Hrs 34 Mins 0 Secs	5	34	0	(UPRN: 185897408) - [redacted] Eagralougher Road, Eagralougher, Loughgall, Armagh, BT61 8LA	FALSE			Burst Main/Main Repair
257288	183972	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]		Unplanned Interruption		N/A			08/03/2019 16:15	08/03/2019 21:50	22	22	22	0	0	0	5 Hrs 35 Mins 0 Secs	5	35	0	(UPRN: 185338866) - [redacted] Shepherds Drive, Carnbane, Newry, Armagh, BT35 6EF	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 07:49	26/03/2019 13:30	354	85	85	0	0	0	5 Hrs 41 Mins 0 Secs	5	41	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257448	184086	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]		Unplanned Interruption		N/A			27/03/2019 14:45	27/03/2019 20:30	16	16	16	0	0	0	5 Hrs 45 Mins 0 Secs	5	45	0	(UPRN: 185336543) - [redacted] Sheetrim Road, Sheetrim, Cullyhanna, Armagh, BT35 0LP	FALSE			Burst Main/Main Repair
257450	184092	Registered	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			28/03/2019 09:00	28/03/2019 14:45	129	129	129	0	0	0	5 Hrs 45 Mins 0 Secs	5	45	0	(UPRN: 187100887) - [redacted] Tareesh Lane, Seavaghan, Downpatrick, Down, BT30 8JN	FALSE			Burst Main/Main Repair
257300	183976	Registered	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			09/03/2019 21:42	10/03/2019 03:30	29	29	29	0	0	0	5 Hrs 48 Mins 0 Secs	5	48	0	(UPRN: 185300095) - [redacted] Ballywillwill Road, Ballywillwill, Castlewellan, Down, BT31 9LF	FALSE			Burst Main/Main Repair
257334	184002	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]		Unplanned Interruption		N/A			12/03/2019 16:27	12/03/2019 22:20	134	134	134	0	0	0	5 Hrs 53 Mins 0 Secs	5	53	0	(UPRN: 187346243) - [redacted] Bernish Road, Ballymacdermot, Newry, Armagh, BT35 8PZ	FALSE			Electricity Supply Failure
257474	184107	Submitted to Customer Field Manager	Networks Water	NW53A	[redacted]		Unplanned Interruption		N/A			31/03/2019 07:22	31/03/2019 13:20	269	269	269	0	0	0	5 Hrs 58 Mins 0 Secs	5	58	0	(UPRN: 185902349) - [redacted] Tattygare Road, MOUNTDRUM, LISBELLAW, FERMANAGH, BT94 5GJ	FALSE			Burst Main/Main Repair
257437	184078	Submitted to Customer Field Manager	Networks Water	NW03A	[redacted]		Unplanned Interruption		N/A			26/03/2019 07:51	26/03/2019 13:50	520	129	129	0	0	0	5 Hrs 59 Mins 0 Secs	5	59	0	(UPRN: 185577439) - [redacted] Ardmore Drive, Ballynahone More, Armagh, Armagh, BT60 1JB	FALSE			Burst Main/Main Repair
257470	184104	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 10:27	30/03/2019 16:30	77	10	10	10	0	0	6 Hrs 3 Mins 0 Secs	6	3	0	(UPRN: 185458740) - [redacted] Glasmullen Road, BARAGHILLY, BALLYMENA, ANTRIM, BT44 0QZ	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 06:47	26/03/2019 14:00	354	10	10	10	0	0	7 Hrs 13 Mins 0 Secs	7	13	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 06:14	26/03/2019 14:00	354	15	15	15	0	0	7 Hrs 46 Mins 0 Secs	7	46	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 06:14	26/03/2019 14:00	354	3	3	3	0	0	7 Hrs 46 Mins 0 Secs	7	46	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257472	184106	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 18:40	31/03/2019 02:40	16	11	11	11	0	0	8 Hrs 0 Mins 0 Secs	8	0	0	(UPRN: 185407326) - [redacted] Recreation Road, BLACKCAVE SOUTH, LARNE, ANTRIM, BT40 1EW	FALSE			Burst Main/Main Repair
257343	184006	Submitted to Customer Field Manager	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			13/03/2019 01:38	13/03/2019 10:20	6	6	6	6	0	0	8 Hrs 42 Mins 0 Secs	8	42	0	(UPRN: 185230996) - [redacted] Carrickmannon Road, Carrickmannan, Ballygowan, Down, BT23 6JR	TRUE	NIE		Electricity Supply Failure

Unplanned, Unwarned Interruptions

More than 6 hrs **No of Properties** **55**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
257470	184104	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 10:27	30/03/2019 16:30	77	10	10	10	0	0	6 Hrs 3 Mins 0 Secs	6	3	0	(UPRN: 185458740) - [redacted] Glasmullen Road, BARAGHILLY, BALLYMENA, ANTRIM, BT44 0QZ	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 06:47	26/03/2019 14:00	354	10	10	10	0	0	7 Hrs 13 Mins 0 Secs	7	13	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 06:14	26/03/2019 14:00	354	15	15	15	0	0	7 Hrs 46 Mins 0 Secs	7	46	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257436	184079	Submitted to Area Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			26/03/2019 06:14	26/03/2019 14:00	354	3	3	3	0	0	7 Hrs 46 Mins 0 Secs	7	46	0	(UPRN: 185443104) - [redacted] Lislunnan Road, Lislunnan, Kells, Antrim, BT42 3NR	FALSE			Other
257472	184106	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			30/03/2019 18:40	31/03/2019 02:40	16	11	11	11	0	0	8 Hrs 0 Mins 0 Secs	8	0	0	(UPRN: 185407326) - [redacted] Recreation Road, BLACKCAVE SOUTH, LARNE, ANTRIM, BT40 1EW	FALSE			Burst Main/Main Repair
257343	184006	Submitted to Customer Field Manager	Networks Water	NW02B	[redacted]		Unplanned Interruption		N/A			13/03/2019 01:38	13/03/2019 10:20	6	6	6	6	0	0	8 Hrs 42 Mins 0 Secs	8	42	0	(UPRN: 185230996) - [redacted] Carrickmannon Road, Carrickmannan, Ballygowan, Down, BT23 6JR	TRUE	NIE		Electricity Supply Failure

Unplanned, Unwarned Interruptions

More than 12 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned, Unwarned Interruptions

More than 24 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Appendix G – DG3 Register Extract *(Planned & Warned Interruption, Third Party Interruption & Overrun Events – IMS Report RPT1184)*

Planned and Warned Interruptions

More than 3 hrs **No of Properties** **685**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
257237	183939	Registered	Networks Water	NW53A	[redacted]		Planned Interruption	01/03/2019 12:00	Card drop	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10	05/03/2019 14:40	22	22	22	0	0	0	3 Hrs 30 Mins 0 Secs	3	30	0	(UPRN: 185664032) - [redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	FALSE				Burst Main/Main Repair
257440	184084	Submitted to Customer Field Manager	Networks Water	NW01A	[redacted]		Planned Interruption	22/03/2019 16:00	Card drop	27/03/2019 09:00	27/03/2019 15:00	27/03/2019 09:45	27/03/2019 13:15	176	176	176	0	0	0	3 Hrs 30 Mins 0 Secs	3	30	0	(UPRN: 185099254) - [redacted] Carrigart Avenue, Englishtown, Belfast, Antrim, BT11 9PX	FALSE				Burst Main/Main Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]		Planned Interruption	11/03/2019 12:30	Card drop	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45	14/03/2019 13:20	18	18	18	0	0	0	3 Hrs 35 Mins 0 Secs	3	35	0	(UPRN: 185311727) - [redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	FALSE				Service Pipe Repair
257289	183980	Registered	Networks Water	NW03A	[redacted]		Planned Interruption	06/03/2019 09:00	Card drop	11/03/2019 09:00	11/03/2019 16:00	11/03/2019 09:30	11/03/2019 13:25	417	417	417	0	0	0	3 Hrs 55 Mins 0 Secs	3	55	0	(UPRN: 185593966) - [redacted] Obins Street, Corcrain, Portadown, Armagh, BT62 1BN	FALSE				Install New Fitting (e.g. SV, FH)
257342	184009	Registered	Networks Water	NW01B	[redacted]		Planned Interruption	07/03/2019 15:00	Card drop	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00	13/03/2019 14:30	16	16	16	0	0	0	4 Hrs 30 Mins 0 Secs	4	30	0	(UPRN: 185391377) - [redacted] Unit 6a&B Fortfield Farm Shore Road, West Division, Antrim, BT38 8TT	FALSE				New Mains Tie In
257439	184080	Registered	Networks Water	NW51A	[redacted]		Planned Interruption	22/03/2019 14:00	Card drop	26/03/2019 09:00	26/03/2019 16:00	26/03/2019 09:15	26/03/2019 15:50	36	36	36	36	0	0	6 Hrs 35 Mins 0 Secs	6	35	0	Treated Water Pumping Station - S03757 - Umrycam - Umrycam Road, Altinure Upper, Claudy, Londonderry, BT	FALSE				Other

Planned and Warned Interruptions

More than 6 hrs **No of Properties** **36**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
257439	184080	Registered	Networks Water	NW51A	[redacted]		Planned Interruption	22/03/2019 14:00	Card drop	26/03/2019 09:00	26/03/2019 16:00	26/03/2019 09:15	26/03/2019 15:50	36	36	36	36	0	0	6 Hrs 35 Mins 0 Secs	6	35	0	Treated Water Pumping Station - S03757 - Umrycam - Umrycam Road, Altinure Upper, Claudy, Londonderry, BT	FALSE				Other

Planned and Warned Interruptions

More than 12 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Planned and Warned Interruptions

More than 24 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Interruptions caused by third parties

More than 3 hrs **No of Properties** **88**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
257451	184091	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			28/03/2019 10:16	28/03/2019 14:00	26	26	26	0	0	0	3 Hrs 44 Mins 0 Secs	3	44	0	(UPRN: 185419642) - [redacted] Brantwood Gardens, Stiles, Antrim, Antrim, BT41 1HR	TRUE	Other	[redacted]	Burst Main/Main Repair
257385	184040	Submitted to Customer Field Manager	Networks Water	NW52B	[redacted]		Unplanned Interruption		N/A			19/03/2019 16:26	19/03/2019 20:50	48	48	48	0	0	0	4 Hrs 24 Mins 0 Secs	4	24	0	(UPRN: 185647817) - [redacted] Derryloughan Avenue, Derryloughan, Coalisland, Tyrone, BT71 4QX	TRUE	Building Con	[redacted]	Burst Main/Main Repair
257453	184093	Submitted to Customer Field Manager	Networks Water	NW52A	[redacted]		Unplanned Interruption		N/A			28/03/2019 14:43	28/03/2019 19:20	14	14	14	0	0	0	4 Hrs 37 Mins 0 Secs	4	37	0	(UPRN: 185723526) - [redacted] Ballyrobin Road, Killealy, Antrim, Antrim, BT41 4TF	TRUE	BT	[redacted]	Burst Main/Main Repair

Interruptions caused by third parties

More than 6 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Interruptions caused by third parties

More than 12 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Interruptions caused by third parties

More than 24 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned Interruptions (Overruns of Planned Interruptions)

More than 3 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned Interruptions (Overruns of Planned Interruptions)

More than 6 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned Interruptions (Overruns of Planned Interruptions)

More than 12 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned Interruptions (Overruns of Planned Interruptions)

More than 24 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Appendix G – DG3 Register Extract *(Unplanned Interruption Property Records – IMS Report RPT1183)*

LastRun
02/05/2018 09:52

Event Id	Interruption Id User Friendly	Interruption Status	Managing Function	Field Manager Area	Event Creator	DG3 Creator	Interruption Name	Planned Warning Type	Planned Warning Date Time	Duration Hours	Duration Minutes	Duration Seconds	Planned Start Date Time	Planned Restoration Date Time	Actual Start Date Time	Unplanned Estimated Restoration Date	Unplanned Repair Commenced Start Date Time	Actual Supply Restored Date Time	Water Sampler Contacted Date Time	Unplanned Estimated All Properties	UPRN	PRIMARY THORFARE	BUILDING NUMBER	BUILDING NAME	SUB BUILDING NAME	SECONDARY THORFARE	TOWN	POSTCODE	DTM HEIGHT M	Affected Area Property	Affected Area Property	Affected Area Property	Total Affected Propertie	Location	Property DMA	Third Party Caused Interruption	Third Party	Description
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	92.65	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	151.04	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL		153.6	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	47.83	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3BL	92.65	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	49.99	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	53.5	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	56.29	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	63.75	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3BL	55.97	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	85.31	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	90.94	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3BL	115.89	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3BL	88.37	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	51.86	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	92.65	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257216	183924	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	35	0			01/03/2019 10:55	01/03/2019 17:00	01/03/2019 10:55	01/03/2019 14:30	01/03/2019 14:31	01/03/2019 14:31	#########	VALE ROAD	[redacted]				GREYSTEEL	BT47 3EE	50.91	11	0	6	17	(UPRN: 185486282) - [redacted] Vale Road, Glebe, Greysteel, Londonderry, BT47 3EE	C0916	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]				DUNGIVEN	BT47 4SH	176.36	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]	[redacted]			DUNGIVEN	BT47 4SH	122.93	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]				DUNGIVEN	BT47 4SH	185.15	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]				DUNGIVEN	BT47 4SH	152.31	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]				DUNGIVEN	BT47 4SH	143.47	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]				DUNGIVEN	BT47 4SH	184.02	64	1	10	75	(UPRN: 185494121) [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BIRREN ROAD	[redacted]				DUNGIVEN	BT47 4SH	199.4	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	166.15	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	143.11	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	135.16	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	151.48	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	180.59	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	152.27	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	172.23	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	175.96	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	184.97	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	190.19	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	181.74	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	189.65	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	189.64	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	173.95	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	196.36	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	151.99	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	191.07	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	195.06	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	199.19	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	194.91	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	186.09	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	192.99	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	198.21	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	175.11	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	178.71	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	172.65	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	166.27	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SG	184.09	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	CORICK ROAD	[redacted]				DUNGIVEN	BT47 4SF	168.34	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	199.04	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	201.94	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	202.84	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	202.64	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	204	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]	[redacted]			DUNGIVEN	BT47 4SQ	202.14	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	206.16	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	209.85	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	207.05	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			05/03/2019 11:00	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	KILLEW ROAD	[redacted]				DUNGIVEN	BT47 4SQ	212.07	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	187.27	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	207.93	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	244.87	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	214.9	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	220.15	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	224.76	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	192.42	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	241.52	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	246.59	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	194.36	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	200.9	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	198.13	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	200.9	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	200.54	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	BOVIEL ROAD	[redacted]				DUNGIVEN	BT47 4RY	204	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	166.01	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	195.15	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	169.1	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	168.62	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	168.61	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	171.14	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	176.22	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	188.3	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	165.97	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	165.25	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	165.34	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	COOLNASALLAGH ROAD	[redacted]				DUNGIVEN	BT47 4RX	168.64	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	GLENSHANE ROAD	[redacted]				DUNGIVEN	BT47 4SB	176.18	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257238	183940	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		4	9	0			05/03/2019 11:01	05/03/2019 17:00	05/03/2019 11:55	05/03/2019 15:10	05/03/2019 15:15	05/03/2019 15:15	#########	GLENSHANE ROAD	[redacted]				DUNGIVEN	BT47 4SB	186.01	64	1	10	75	(UPRN: 185494121) - [redacted] Corick Road, Cashel, Dungiven, Londonderry, BT47 4SF	C0645	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			06/03/2019 12:00	06/03/2019 16:00	06/03/2019 14:00	06/03/2019 15:40	06/03/2019 15:45	06/03/2019 15:45	#########	ARDMONEEN COURT	[redacted]				MAGHERAFELT	BT45 5NX	70.86	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			06/03/2019 12:00	06/03/2019 16:00	06/03/2019 14:00	06/03/2019 15:40	06/03/2019 15:45	06/03/2019 15:45	#########	ARDMONEEN COURT	[redacted]				MAGHERAFELT	BT45 5NX	71.08	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			06/03/2019 12:00	06/03/2019 16:00	06/03/2019 14:00	06/03/2019 15:40	06/03/2019 15:45	06/03/2019 15:45	#########	ARDMONEEN COURT	[redacted]				MAGHERAFELT	BT45 5NX	70.19	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466974	ARDMONEEN COURT	[redacted]				MAGHERAFELT	BT45 5NX	70.15	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466975	ARDMONEEN COURT	[redacted]				MAGHERAFELT	BT45 5NX	67.63	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	187122804	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	65.26	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185977669	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	71.53	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466014	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	71.43	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466015	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	72.31	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	187564991	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	72.01	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466022	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	70.33	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466021	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	72.56	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466023	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	69.28	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466016	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	72.02	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466024	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	64.75	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466017	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	71.13	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466018	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	62.97	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	187584247	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	62.78	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	187560238	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	61.28	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466032	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	70.87	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466025	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	61.07	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466019	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	70.19	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466033	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	60.28	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair
257269	183961	Submitted to Area Manager	Networks Water	NW52B	[redacted]	[redacted]	Unplanned Interruption	N/A		3	40	0			43530.5	43530.66667	43530.58333	43530.65278	43530.65625	43530.65625	185466026	HOSPITAL ROAD	[redacted]				MAGHERAFELT	BT45 5EG	69.45	20	3	1	24	(UPRN: 185466124) - [redacted] Mid Ulster Hospital Hospital Road, Town Parks Of Magherafelt, Ma	C0995	FALSE		Burst Main/Main Repair

Appendix G – DG3 Register Extract *(Planned Interruption Property Records – IMS Report RPT1183)*

LastRun
02/05/2018 09:52

Event Id	Interruption Id User Friendly	Interruption Status	Managing Function	Field Manager Area	Event Creator	DG3 Creator	Interruption Name	Planned Warning Type	Planned Warning Date Time	Duration Hours	Duration Minutes	Duration Seconds	Planned Start Date Time	Planned Restoration Date Time	Actual Start Date Time	Unplanned Estimated Restoration Date	Unplanned Repair Commenced Start Date Time	Actual Supply Restored Date Time	Water Sampler Contacted Date Time	Unplanned Estimated All Properties	UPRN	PRIMARY THORFARE	BUILDING NUMBER	BUILDING NAME	SUB BUILDING NAME	SECONDARY THORFARE	TOWN	POSTCODE	DTM HEIGHT M	Affected Area Property	Affected Area Property	Affected Area Property	Total Affected Propertie	Location	Property DMA	Third Party Caused Interruption	Third Party	Description
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]		Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664033	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	72.39	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664034	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	76.32	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664035	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	71.42	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664036	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	76.36	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664037	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	69.13	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664038	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	75.62	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664040	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	67.68	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664041	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	74.36	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664042	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	66.8	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664043	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	72.71	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664044	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	64.57	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664045	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	71.4	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664046	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	63.81	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664047	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	70.29	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664048	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	67.81	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664049	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	67.86	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664051	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	69.18	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664052	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	67.19	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664062	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	71.35	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664053	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	65.88	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664054	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	68.05	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	01/03/2019 12:00	3	30	0	05/03/2019 10:00	05/03/2019 16:00	05/03/2019 11:10			05/03/2019 14:40	05/03/2019 15:00		185664055	OLD ROSSORRY PARK					ENNISKILLEN	BT74 7LH	70.9	22	0	0	22	(UPRN: 185664032)	C0875	FALSE		Burst Main/Main Repair
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391431	SHORE ROAD					CARRICKFERGU	BT38 8TZ	4.72	15	0	1	16	(UPRN: 185391377)	[redacted]	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391432	SHORE ROAD					CARRICKFERGU	BT38 8TZ	8.53	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391433	SHORE ROAD					CARRICKFERGU	BT38 8TZ	12.3	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185761973	SHORE ROAD	[redacted]				CARRICKFERGU	BT38 8TZ	11.93	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391434	SHORE ROAD					CARRICKFERGU	BT38 8TZ	13.07	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391467	SHORE ROAD	[redacted]				CARRICKFERGU	BT38 8TZ	9.4	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391435	SHORE ROAD					CARRICKFERGU	BT38 8TZ	6.04	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391436	SHORE ROAD					CARRICKFERGU	BT38 8TZ	8.05	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185864838	SHORE ROAD	[redacted]				CARRICKFERGU	BT38 8TZ	13.52	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391437	SHORE ROAD					CARRICKFERGU	BT38 8TZ	12.58	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		187706965	SHORE ROAD	[redacted]				CARRICKFERGU	BT38 8TZ	8.61	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391438	SHORE ROAD					CARRICKFERGU	BT38 8TZ	11.17	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391456	SHORE ROAD	[redacted]				CARRICKFERGU	BT38 8TZ	11.72	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391439	SHORE ROAD					CARRICKFERGU	BT38 8TZ	11.57	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391440	SHORE ROAD					CARRICKFERGU	BT38 8TZ	11.5	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B			Planned Interruption	Card drop	07/03/2019 15:00	4	30	0	13/03/2019 09:00	13/03/2019 15:00	13/03/2019 10:00			13/03/2019 14:30	13/03/2019 14:50		185391441	SHORE ROAD					CARRICKFERGU	BT38 8TZ	11.36	15	0	1	16	(UPRN: 185391377)	Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311724	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.18	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311725	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.4	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311726	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.06	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311727	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.24	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311728	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.95	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311729	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.19	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311730	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.84	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311731	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.03	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311732	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.72	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311733	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.97	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311734	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.37	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311735	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.86	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311736	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.95	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311737	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.87	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311741	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.4	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311738	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.65	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311739	SHIMNA VALE					NEWCASTLE	BT33 0EF	3.87	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B			Planned Interruption	Card drop	11/03/2019 12:30	3	35	0	14/03/2019 09:00	14/03/2019 16:00	14/03/2019 09:45			14/03/2019 13:20	14/03/2019 13:45		185311740	SHIMNA VALE					NEWCASTLE	BT33 0EF	4.46	18	0	0	18	(UPRN: 185311727)	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair

Northern Ireland Water

Level of Service Methodology

DG5 - Internal Flooding

Contents

1. Introduction

Objective and Aim

NI Water must maintain verifiable records for DG5. The aim of the records is to provide an auditable method for identifying the specific, properties which are affected by flooding, or are at risk of experiencing flooding.

As part of these records companies must maintain a DG5 register which should form a database of all properties which are at risk of experiencing sewer flooding more than once in twenty years. It will enable the identification by address of individual properties which are below the reference level and should also contain information on (for example) complaints and the results of their investigation, problems which are attributable to customers apparatus and properties which experience sewer flooding but are covered by one of the allowable exclusions.

The register must clearly identify those properties below the reference level, distinguish them from those which have flooded but are not below the reference level and provide a verifiable reason for the exclusion (e.g. flooding was a result of a blockage).

The records should include:

- date of incident;
- properties affected identified by address;
- cause of flooding (including source and reason, where known);
- action taken;
- name of persons completing the records; and
- the 'Flooding' category for reporting under DG5.

Reporting Requirements

Two main outputs are required to be produced relating to internal flooding for AIR 19:

- DG5 Annual Flooding Summary – properties internally flooded as a result of overloaded sewers and other causes.
- DG5 Properties on the ‘Flooding’ register – properties at risk of flooding due to overloaded sewers, more frequently than once in twenty years and once or twice in ten years, requiring further investigation, problem status of properties on the register, annual changes to the register.

The information relating to the above is contained in Table 3 of AIR19.

2. DG5 Internal Flooding incidents – Methodology and Procedures

Internal

Data gathering and calculation is as described below.

Calculation Process - Lines 2 to 11,15a & 17

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3: Lines 2 to 11,15a & 17.

Sources/Primary Process

Lines 2 – 11, 15a & 17 Properties and flooding incidents

A download of internal flooding records was obtained from the Ellipse system for the period April 2018 to March 2019 on a month by month basis.

Investigations were carried out for each reported incident and those properties found not to be flooded after investigation, using information from the Sewer Maintenance Contractor, Flood Incident Report (FIR) Forms, Field Manager reports, modelling provided by Drainage Area Plan consultant and contacting the Customers directly, are removed. The remaining properties were recorded as Flooding Incidents.

Assumption

For the purpose of AIR19, NI Water has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

'Three days' was chosen on the basis that a noticeable volume of repeat calls tends to be received within three days of an incident occurring. There is then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

An incident of internal flooding is assumed to be where a property has been flooded internally. If two adjacent properties are flooded at the same time they are classed as two properties and two incidents.

Where a single property floods internally on two separate occasions then this is recorded as one property and two incidents.

Sources/Secondary Process

1. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of every internal flooding incident.
2. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence and closure details provided by the contractor.
3. WWBU determine if the cause of the flooding incident was hydraulic incapacity or flooding other cause, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, Customer Field Manager reports, modelling provided by Drainage Area Plan consultant, customer interviews, field manager interviews and review of existing incident information.
4. If hydraulic incapacity is confirmed a Met Office Weather report is used to determine if the incident is as a result of severe weather (Line 4).
5. These properties were then recorded on a spread sheet under the appropriate categories for lines 2, 3, 4, 4a, 5, 6, 8, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly. A folder of evidence was created for all confirmed cases and this was brought to the monthly DG5 panel for approval and addition to the appropriate section of the register. At the end of the reporting year this was the data used for AIR returns.
6. The figure for line 7 was obtained by having a report run in the DG5 Oracle Database which holds the information as a DG5 layer in the GIS system.
7. The required information to populate Line 17 is extracted directly from the monthly spread sheet completed by the contractor.

3. Internal Flooding Register

Internal Flooding Process

All internal flooding incidents are subjected to a robust investigation (See Appendix A – NI Water DG5 Internal Flooding Register Methodology). An expert panel (the DG5 Panel) examines the evidence for each incident and governs the addition of properties to, and the

removal of properties from, the register. Those records that do not meet the DG5 Criteria are recorded in the 'excluded' section of the Database. All new incidents of external flooding are being investigated in a similar manner as the Internal flooding incidents.

The register is held as an Oracle database within the Corporate Asset Register – specifically as a GIS layer on CARtomap.

Methodology applied to the completion of Table 3

Lines 12-15: the numbers have been extracted from the DG5 Oracle database

Line 16: the number has been extracted from the DG5 Oracle database

Lines 22-25 and 30-33: A folder is created (within the Asset Management section of the company network) for each addition, removal or transfer of a property. The lines were populated from an analysis of these folders; the analysis was cross-checked against the minutes of the monthly DG5 Panel meetings.

Lines 26 and 34: The 'Enhanced Service Levels' element of the capex cost was obtained from the CAPTRAX system for each relevant project and aggregated. This total cost was then divided by the number of properties removed.

Mitigation

Properties protected from the risk of flooding by mitigation measures, such as non-return valves have been added to the 1 in 20 Register (unless evidence existed to allow addition to the 1 in 10 or 2 in 10 register).

All such properties are currently the subject of four Engineering Procurement appraisal projects – which seek to identify permanent solutions at the locations.

Additions to the Register and Transfers within the Register

A folder of evidence was created for all confirmed DG5 flooding properties and this was brought to the monthly DG5 panel meetings for their approval and addition to the appropriate section of the register.
Similarly transfers between the register categories (**2 in 10, 1 in 10 and 1 in 20)** are brought to the attention of the DG5 Panel at the monthly meetings for approval.

Prioritisation of capital schemes

No formal prioritisation process is applied.

All capital works projects are submitted to the NI Water Capital Investment Panel for approval before implementation.

Properties which have not flooded in the last 10 years

Properties remain on the Register which have not flooded in the past 10 years (excluding severe weather).

Appendix A NI Water DG5 Internal Flooding Register - Methodology

DG5 Internal Flooding Register - Methodology

Final v1.1

08 June 2015

1 Main Contributors	2 Aspect/Section	3 Notes
[redacted]	Draft	
[redacted]	Final	

4 Bid/Project Code: 41514657	5 Document No: 0.6	Controlled Copy No: *(in COLOUR – not black)*

Revision No	Date	Description/Amendment	Checked	Reviewed	6 Authorised for Issue
0.8	26 Feb 11	Revise to include improved approach	AM	KM	
1.0	31 Mar 12	Finalised ahead of sign-off by DG5 Panel	AM	KM	MMcI
1.1	08 Jun 15	Minor revisions and new FIR form inserted	SB	DW	MMcI

7 ONLY CONTROLLED COPY HOLDERS WILL BE ISSUED WITH AMENDMENTS TO THIS DOCUMENT.

8 PLEASE DESTROY ALL SUPERSEDED COPIES OR

9 CLEARLY MARK THEM AS "SUPERSEDED".

10 Introduction

10.1 Background

This document provides guidance on how the successful management of the DG5 Internal Flooding Register, within Northern Ireland (NI) Water, should be carried out. Where possible, this document complies with Ofwat and Northern Ireland Authority for Utility Regulation (NIAUR) Guidance.

10.2 Scope and Objectives

This document is owned by NI Water and describes the end-to-end business process by which a property that has experienced internal flooding is added to, and removed from the DG5 Internal Flooding Register. It will support NI Water in the development and implementation of its DG5 reporting processes and long-term management of the Register.

The purpose of this methodology is to ensure that a fully transparent, auditable process is in place for the management and maintenance of the DG5 Internal Flooding Register for NI Water in order to report to NIAUR.

11 Definitions

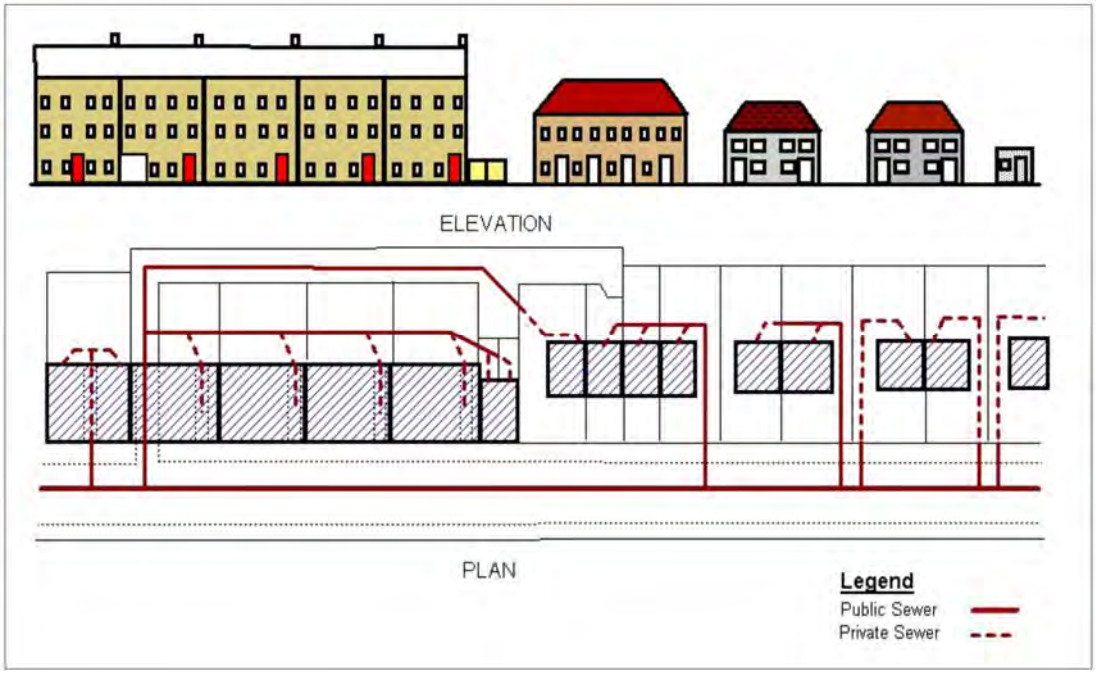
The following definitions are to be applied when recording and reporting properties and incidents held on NI Water's DG5 Internal Flooding Register.

Northern Ireland Water is only responsible for internal flooding caused by failure of the public sewerage system. This excludes private sewers, highway drainage, gullies, land drainage, and watercourses.

11.1 Legal Definitions

11.1.1 Public and Private

Northern Ireland Water is responsible for internal flooding caused by failure of the public sewerage system. The status of a sewer (i.e. whether public or private) is depicted below.



Drains; are defined as a pipe which carries waste water (sinks, baths, toilets etc.,) and trade wastes from one property to a sewer. Northern Ireland Water has responsibility for a drain up until the point of the property boundary. The length of drain within the boundary of the property lies with the property/landowner.

Public sewers; are defined as sewers serving more than a single property or, if serving a single property, sewers outside the property boundary and has been adopted, only then does responsibility lie with Northern Ireland Water.

11.1.2 Adopted and Unadopted Sewers

An adopted sewer is a sewer that is vested by NI Water and maintained at its expense. An unadopted sewer is a sewer that is either privately owned or has not yet been adopted by NI Water.

11.1.3 Third Party Responsibility

A third party incident is one where Northern Ireland Water could take action to recover costs from those responsible. Incidents due to third party attributed to hydraulic overload of the public sewerage system are significant unconsented discharges e.g. industry, leisure, domestic (swimming pool).

Where NI Water has gathered evidence that flooding of a property has occurred due to the actions of a third party, the company will attempt to recover the costs of implementing a the temporary or permanent solution.

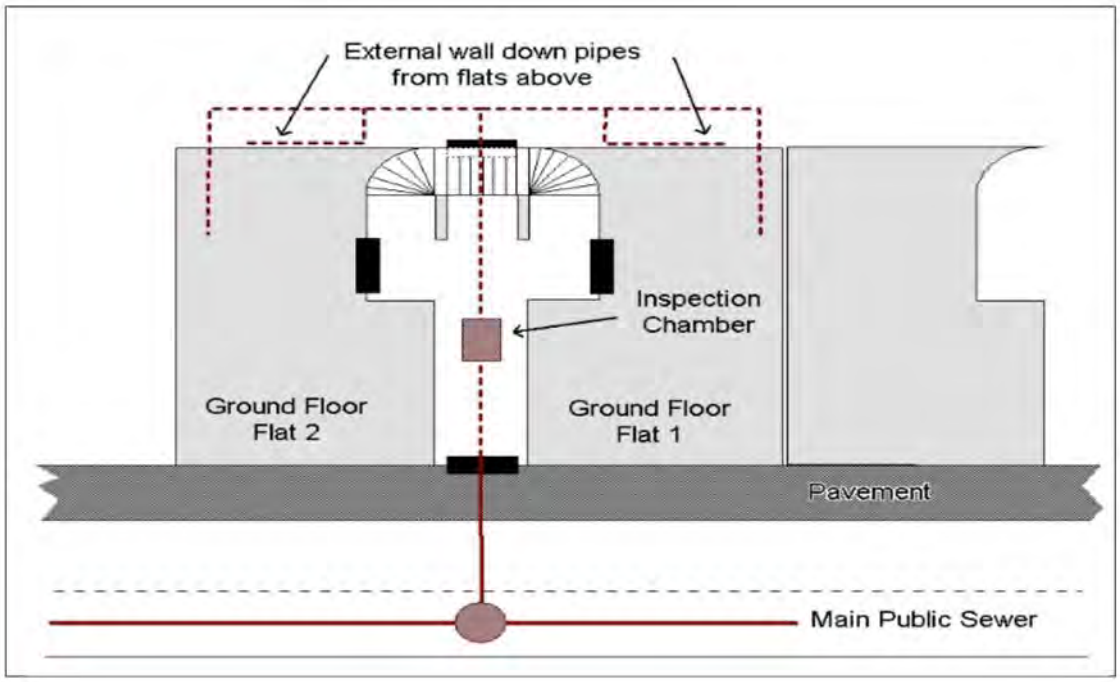
11.1.4 Basement Flooding

Customers do not have a right to connect wastewater discharges from a basement directly into the public sewerage. If a customer wishes to connect, then Northern Ireland Water will carry out investigations to confirm that by connecting the basement discharge to the public system it does not put the property at risk, because of existing conditions within the sewerage system. Written confirmation of the investigations will be given to the customer.

If a customer connects without obtaining the necessary planning permissions, then they do so at their own risk. Northern Ireland Water does not accept any responsibility for any resultant flooding incident. If basement flooding occurs due to hydraulic overload (and the customer has the right to connect) then this property will be identified as impacted by internal flooding and will be added to the appropriate register.

11.1.5 Apartment / High Rise Responsibilities

Incidents, which occur on the private drain, i.e. within the apartment block, are the responsibility of the residents. Should a flooding incident occur on the ground floor then those properties affected can be classed as internal flooding if appropriate. All other properties would be classed as external access flooding.



11.1.6 Sensitive Areas

Sensitive areas include, schools, hospitals, children play areas, nursing homes and properties of vulnerable customers. A property's sensitivity may have an impact on the prioritisation of when the solution to the internal flooding is implemented.

11.1.7 Property Classification

For reporting purposes, the following statements relate to property classification:

- Buildings that are normally occupied and used for residential, commercial, public, business or industrial purposes are included. This also includes garages that form an integral part of the property and are classed as part of the building even if the main purpose is storage.
- Buildings whose prime purpose is storage or installation of domestic appliances are not classed as occupied.
- Detached or 'linked-detached' garages i.e. those attached to a property but separated from it by an external passageway are excluded.

- A cellar forms an integral part of a building that is at least partly below ground level. Where a cellar is in regular use as part of normal living accommodation, it is termed a basement and any flooding should be reported as a normal flooding incident. Where an uninhabited cellar, i.e. one that is not used for habitation, is affected by water entering it directly (as opposed to via another part of the building) this has to be separately enumerated.

In order to ensure that the correct assessments on properties are made the following diagrams and pictures show the definitions for internal flooding against various property types;

- **Property with integral garage**
- Therefore either area flooded will be classed as internal flooding
- Flow entering the solum or living area would be classed as internal flooding and only that property recorded.

Villa – Ground Floor and 1st floor properties
Flooding to the solum of the ground floor flat will mean that only that property will be identified as suffering from internal flooding.
If the 1st floor flat is accessed via a door which enters immediately into the property and is also affected by flood water, then this will also constitute internal flooding and both will be identified as an internal flooding incident

- **Basement Property**
- A cellar that is in regular use as part of normal living accommodation is termed a basement and any flooding should be reported as a normal flooding incident.
-
-

Apartment Block
Internal Flooding would normally be contained to the ground floor flats. Individual properties affected by internal flooding will be identified and recorded. Flooding of the internal access will not be classed as internal property flooding for the remaining tenants. These will be classed as external flooding (access).

- **Semi-detached** properties with **detached** garage.
- Flooding of the garage would not be classed as internal flooding.

- **Detached** or **'linked-detached'** garages i.e. those attached to a property but separated from it by an external passageway.
- Flooding of the garage would not be classed as internal flooding.

11.1.8 Temporary and Permanent Solution

A temporary solution is defined as one which does not permanently remove the risk of flooding but reduces the risk of internal flooding happening.

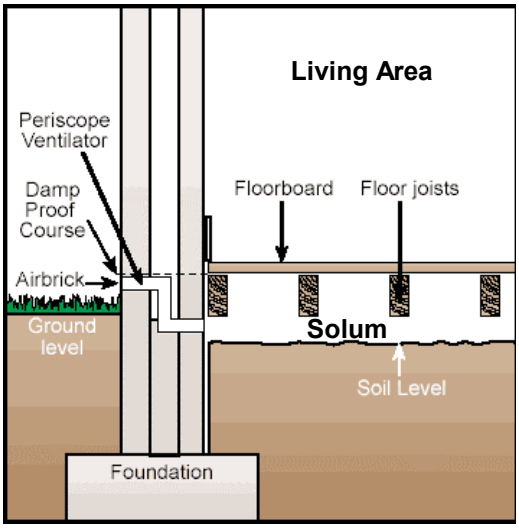
A permanent solution is defined as one that permanently addresses the cause of the hydraulic overload. Permanent works would enable a property to be removed from the DG5 Internal Flooding Register.

Examples of temporary and permanent solutions include;

Temporary Solutions	Permanent Solution
Fitting of anti-flood devices e.g. Non-Return Valve (NRV)	Land re-profiling
Air brick protection	Disconnect basement
Raising of Thresholds	Divert private drainage or public sewer
Bolt down inspection chambers	Isolate with private pumping station
Seal / bolt down manholes	Fill in hollow floors and cellars
Stop Logs	Flow attenuation
Issue of sandbags	Outfall protection e.g. flap valve
uPVC doors	Sewer Upsizing
Flood guards	'Right to purchase'

11.2 Internal Flooding Definition

A property can be deemed affected by an internal flooding incident when foul, combined or surface water escapes from the public sewerage system into a property and enters a building or passes below a suspended floor. The diagram below shows a cross section through a suspended floor.



For DG5 reporting purposes, internal flooding refers to buildings which are normally occupied and used for residential, public, commercial, business or industrial purposes. Buildings whose prime purpose is storage or installation of domestic appliances are excluded. Refer to Section 2.1.7 for Property Classification.

11.2.1 Restricted Toilet Use

Restricted Toilet Use (RTU) occurs where there is no internal flooding but where the customer us unable to flush their toilet without a risk of causing internal flooding of the property.

11.3 Flooding Cause Definition

11.3.1 Introduction

Flooding generally occurs through a combination of events and responsibility can lie with a number of different parties. Possible reasons for flooding can include:

- Blocked or overloaded drainage ditches, drains and sewers overflow across roads, gardens and into property.
- Hydraulic incapacity can on occasion cause sewers to backflow into a property.
- Rain can be so heavy that run-off flows overland down hills and slopes.
- Rain soaks into the ground causing groundwater levels to rise and flood.
- Broken or burst water mains (normally leading to basement flooding rather than property flooding above ground level).

Customers do not always distinguish between the various causes of flooding. In order to deal with an incident efficiently, it is imperative that call centre staff ascertain the cause and mechanism of the flooding. This ensures that appropriate action can be taken and the risks to the company minimised.
The cause of flooding will be determined by call centre staff asking the customer a set of pre-set questions from a call centre script.

11.3.2 Flooding due to Hydraulic Incapacity

A sewer can be classed as hydraulically incapable when the flow from a storm is unable to pass through it due to a permanent problem. Permanent problems are due to limitations in the physical characteristics of the network, generally the size of the sewer relative to flow and gradient. Properties affected by internal flooding due to hydraulic incapacity shall be placed within relevant flooding severity category unless there is evidence to prove that the flooding was due to 'Other Causes' or severe weather. Temporary problems are excluded and comprise of: Blockages, Collapses, Equipment Failure.

11.3.3 Other Causes Flooding

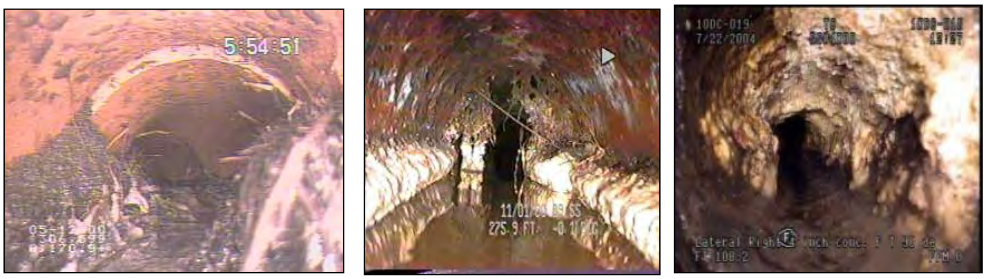
'Other Causes' are related to localised deficiencies and transient characteristics of the network. The main causes are:

- blockages
- collapses
- equipment or operational failure

These incidents are reported separately to NIAUR, but stored within the excluded section of DG5 Internal Flooding Register.

11.3.4 Blockages

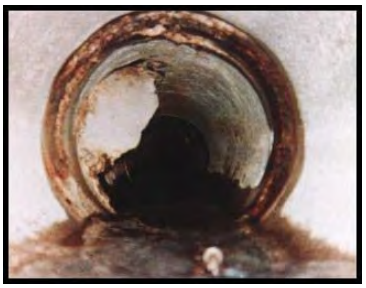
A sewer blockage can be attributed to a number of factors, including siltation, fat, roots, and debris, as shown below.



For regulatory reporting, silt, fat, roots debris are all classed as a blockage. However, it is important that the actual cause of the blockage is recorded within the incident record. The response to each of these might require a different solution. For example, a persistent fat problem may require trade effluent control or persistent siltation problems may need to be added to the de-siltation programme for that area.

11.3.5 Collapsed Sewer

In the context of the indicator a collapsed sewer, is a sewer that creates a restriction or induces a blockage, e.g. fracture, deformation, intruding junction. A rising main burst is also classified as a collapse. An example of a collapse is shown below.



11.3.6 Equipment Failure

Equipment and operational failures can be attributed to power outages, inadequate maintenance regimes, a change to operating regime other than that designed for, mechanical or electrical failure.
Where a pumping station has failed then distinction must be made between network and terminal stations, as well as the criticality or size band of the station indicated.

Where a pumping station can be seen to be overrun by the incoming flows and can be shown to be operating within its design parameters then this may be an indication of severe weather or inflow from another source e.g. watercourse, tidal, ground water infiltration etc.

If the pumping station can be seen to be beaten by in coming flows in non-severe weather conditions and can be shown to be operating within its design parameters consideration should also be given to the possibility that the capacity of the pumping station has been exceeded, i.e. the sewer network now suffers hydraulic incapacity. Properties flooded internally as a result of such situations shall be classed as DG5 reportable.

Flooding caused by failure of an anti-flood device on a private connection, e.g. NRV, should be ascribed back to the underlying cause, hydraulic incapacity, and recorded as an internal flooding incident.

11.3.7 Third Party Causes

A third party incident is one where Northern Ireland Water could take action to recover costs from those responsible. These can include the discharge of material into the public system causing a blockage, or equipment failure, vandalism, network impacted by a third party e.g. a builder or other statutory utility.

It is important that causes beyond the reasonable control of the company are identified and described especially where a claim might be pursued against a third party. If permanent improvement or temporary operational works for Northern Ireland Water causes internal flooding then this must also be recorded and the reasons given as to why it happened.

The Flood Investment Planning Group is made up of Northern Ireland Water, Rivers Agency, Roads Service and Local Councils could provide a useful forum in which to establish responsibility for disputed third party flooding.

11.3.8 Increase in Demand

Increase in demand is defined by Northern Ireland Water as predicted growth, which exceeds the available headroom within the network on the trigger event.

Verified hydraulic models shall be used to identify properties at risk of flooding as a direct result of development/ growth based on the Local Area Plan. This analysis is generally an output from a Drainage Area Study (DAS). No other analysis on demand is carried out.

11.4 Flooding Class Definition

- 1 in 10; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period between 5 and 10 years.
- 2 in 10; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period of 2 in 10 years i.e. <5 years, or has actually flooded twice within a 10 year period.
- 1 in 20; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period between 10 and 20 years.
- Severe Weather; locations refer to a reported flooding incident with a return period greater than 20 years.
- Flooding Other Causes; is applied to reported flooding locations where the cause of flooding has been found not to be hydraulic incapacity i.e. blockages, collapses, third party or equipment failure causes.
- Removed due to Company Action; is applied to reported flooding locations where NI Water has constructed a permanent solution to remove the risk of flooding
- Removed due to Better Information; is applied to reported flooding locations where information has been obtained which proves that the cause of flooding was not due to incapacity in the sewer system.

Internal Flooding Register – Governance

11.5 General

The NI Water DG5 Internal Flooding Register contains information on internal flooding incidents caused by the hydraulic incapacity of sewers, and properties at risk of experiencing internal flooding. NI Water's Asset Management section (AMS) is the owner of the DG5 Internal Flooding Register.

The information recorded on properties affected by internal flooding or those at risk of experiencing flooding constitutes a legal register for reporting to the NIAUR. The information contained within must be verifiable and available for audit.

NIAUR requires NI Water to produce an annual DG5 Report summarising the required DG5 information. NI Water is also required to maintain a DG5 Internal Flooding Register which holds information on properties at risk of flooding, once in twenty years and once or twice in ten years due to the hydraulic incapacity of sewers. NI Water must also report on each flooding category status of each property on the register and all annual changes to the register.

The DG5 Internal Flooding Register will contain the information required to prepare Table 3, of the Annual Information Returns (AIR). This information can be accessed via the reporting function on the DG5 incident and property database.

The DG5 Internal Flooding Register has been developed from records that date back to 1990 and the increasingly robust investigation of 'live' incidents from 2008 onwards.

11.6 Governance

Maintenance of the DG5 Internal Flooding Register and AIR reporting is the responsibility of AMS and the Network Sewerage Business Unit (NSBU). Clear definition of responsibility for actions, analysis and records within the DG5 Internal Flooding Register has been entrusted to the appropriate sections within NI Water. The stakeholders and their responsibilities have been defined within this methodology.

This end-to-end DG5 business process outlined in this document, and attached in Appendix A, will ensure that responsibilities and performance measures are in place to ensure the quality of information captured and maintained is consistent at all levels through the process.

The DG5 Panel has responsibility for approval of additions to and removals from the register, while also ensuring that the reporting processes and outputs remain robust enough to meet the reporting requirements of NIAUR. Responsibilities for the internal DG5 flooding reporting process will be reviewed on an annual basis and updated accordingly.

12 Internal Flooding Register – Business Process

12.1 Notification of Internal Flooding Incident to Call Centre

All flooding incidents are recorded through a series of different source collection methods in NI Water's asset inventory management system. This happens by customers reporting flooding incidents via our Customer Call Centre. The call handlers will establish if the incident is the responsibility of NI Water and then confirm with the customer that the incident was indeed internal flooding and record it on NI Water's call management system. A Caller Log is created with the incident information then passing to NI Water's Work Control Centre staff who distributes the relevant work order to the appropriate contractor for action. This step takes no longer than one week to complete.

12.2 Initial Investigation by Network Sewerage Business Unit

The NSBU will initiate the first phase of investigations once an internal flooding incident has been reported. Evidence gathered at this initial stage is passed to Asset Performance (AP) for further investigation/verification. The process that NSBU follow is outlined below;

- Reported Internal Flooding Incidents are downloaded from the company's asset inventory management systems and interrogated, with duplicates removed.
- Information held on Customer Reports and Flooding Incident Reports are assessed along with photographic evidence and previous flooding records to ascertain if the reported incident is internal flooding.
- NSBU to carry out further investigations to determine if the cause of flooding incident was hydraulic incapacity or due to other causes, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, customer interviews and review of existing incident information. If flooding is due to other causes, the property is placed in the excluded section of the DG5 Internal Flooding Register. (Investigation methods are outlined in Section 4.2)
- If hydraulic incapacity is confirmed NSBU use a weather report to determine if the incident is as a result of severe weather. If severe weather is confirmed the property is excluded. The same weather report, along with historic records (if applicable), is used to categorise non-severe weather incidents into one of three storm return categories – 1:20, 1:10 and 2:10. In addition properties that suffer from RTU, due to hydraulic incapacity, are also recorded. (Storm Return Categories and RTU explained in Section 4.2.10 and 4.2.11).
- Once NSBU have completed the above stages a folder of evidence is compiled and forwarded to AP for further investigation/verification.

12.3 Identification of additional properties by Engineering and Procurement

In addition to the weekly flooding incident download by NSBU, Engineering and Procurement (EP) will forward a monthly report detailing any newly identified DG5 properties to NSBU for investigation. These potential DG5 properties will be identified from on-going Capital Works Programme (CWP) Schemes. This step is completed on a monthly basis.

12.4 Further Investigation by Asset Performance

AP receives all fully investigated and categorised DG5 Properties from NSBU on a monthly basis. AP carryout further detailed investigations to verify the investigations undertaken by NSBU. Detailed investigations can include modelling, DAS, customer questionnaires, Geographical Information System (GIS) assessments and topographical surveys.

AP carryout the following investigative process;

- Assess the history of flooding incidents at each property to confirm the NSBU flooding report. Historic assessments may include investigations of reported external incidents, extreme weather event records and incidents confirmed at adjacent properties.
- Interview the Operational Area Field Manager (FM) to confirm that the property has a history of internal flooding. AP also seeks advice from the relevant FM as to the cause of the internal flooding to aid in further investigations.
- Use GIS to assess the position of the sewer network.
- Carryout site topographical surveys of the sewer network and surrounding area.
- Interview the property owner with pre-set questions in DG5 Internal Flooding Questionnaire.

- Assess existing network model, i.e. DAS, for predicted flooding to verify if property floods under specific flooding scenarios.

Once AP has completed the above stages a report will be compiled summarising the evidence gathered including recommendations. If hydraulic incapacity is confirmed the evidence will be presented to the DG5 Panel to propose adding the property to the DG5 Register.

Note; if the cause is still unknown after the course of investigations and the internal flooding is major and frequent enough to warrant a thorough investigation, then a Project Consideration Form (PCF) will be raised to propose a feasibility study.

12.5 Approval of Additions by DG5 Panel

The DG5 Panel review the evidence brought before them and decide whether to add the property to the DG5 Internal Flooding Register. If the Panel members need more evidence, the property will be returned to AP for further investigation, and then re-submitted to the Panel for consideration. This step is completed once every month.

12.6 Update of Asset Information Records

The DG5 Panel Secretary will digitise all flooding incidents approved by the DG5 Panel onto the DG5 Layer of the company's GIS System, and update the DG5 incident and property database with the associated incident.

12.7 Initiation CWP Project by Asset Performance

The DG5 Panel forward all new additions to the DG5 Internal Flooding Register to AP to initiate the CWP process. Asset Performance cross-check existing CWP Schemes to ensure the property is not included in an on-going project. A PCF will be created to begin the CWP process.

Once the relevant section of the scheme is complete a DG5 Beneficial Use Form is sent from EP to AP, where a check against drainage area studies carried out to establish if the reported flooding has been resolved. If a resolution to the flooding is confirmed AP prepare supporting evidence to present at DG5 Panel for removal from the DG5 Internal Flooding Register

12.8 Approval of Removal by DG5 Panel

If a property is to be removed from the DG5 Internal Flooding Register due to 'Company Action', a Beneficial Use Form must be presented as evidence. If a property is to be removed due to 'Better Information' a folder of evidence must be presented outlining the reasons. This is completed once every month.

This clear and strictly controlled process will govern the movement of each property as it is investigated. Each stage described above can be seen in Appendix A.

13 Internal Flooding Register – Administration, Additions and Format

This section provides guidance on how properties at risk of flooding due to the hydraulic incapacity of sewers are categorised within the DG5 Internal Flooding Register.

13.1 Rules Governing Internal Flooding Register

The following rules govern the DG5 Internal Flooding Register and describe how a property is added and removed from the register. Property additions and transfers must follow the appropriate procedure as described below. (Property removals are discussed in section 7).

13.1.1 Additions to Internal Flooding Register

This procedure must be followed for all new flooding incidents received through the weekly NSBU download (see Section 3.2). These incidents will usually have occurred recently, although it is possible new information may cause a historic event to be reclassified.

- All properties that have been affected by internal flooding, caused by hydraulic incapacity, must be reported in the DG5 Internal Flooding Register. Properties flooded due to Other Causes (Blockage, Collapse or Equipment Failure) will be placed in the 'excluded' section of the same register and reported in Table 3 of the AIR.
- First time flooding where hydraulic Incapacity is confirmed shall be supported by weather reports and any supporting DAS data.
- A property affected by internal flooding as a result of hydraulic incapacity is categorised by the severity of the rainfall event and how often flooding has been recorded.
- All properties affected by flooding due to hydraulic incapacity will be investigated to ensure that each property or area flooded is accounted for within the appropriate category.
- For repeat incidents, supporting meteorological data will be required only if there is significant difference in the number of properties affected within the same location or if an event is deemed to be severe. An increase in frequency will affect the prioritisation and in some instances the register category of some or all properties affected.
- If the event was due to 'Severe Weather' the properties are placed in the 'excluded' section of the DG5 Internal Flooding Register.
- Where a property has flooded as a result of failure of a mitigation device, it should be reported as an equipment failure.
- Only if a basement has a 'right to connect' to the public sewerage system and has flooded can it be identified as being affected by internal flooding and categorised appropriately.
- If the flooding is shown to be outside Northern Ireland Water's responsibility (Third Party), it is excluded from the DG5 Internal Flooding Register and flagged appropriately within the exclusion register.
- Properties added due to better information are placed in the DG5 Internal Flooding Register when flooding has been identified for the first time, usually as a result of network analysis, greater local knowledge or following customer contact.

13.1.2 Sources of Information

Historic information can be used with discretion in order to support or understand the full extent of a flooding incident.

If properties are found to have historically flooded when carrying out a study within a catchment (e.g. DAS) then details should be captured and the appropriate information passed to NSBU. Supporting information would include:

- The use of verified hydraulic models.
- Site and level Information.
- Customer interviews.
- Shared information between other relevant bodies e.g. Local Authorities.

Information can also include the following:

- Flooding at a property being caused by blockages/ equipment failure rather than hydraulic incapacity. Acceptable supporting data would be date stamped CCTV, or static photographic evidence.
- Severe weather classification – data provided by weather reports
- Customer Interviews
- Flooding shown to be caused by a Third Party.

13.1.3 Investigations where Hydraulic Overload is suspected

After a flooding incident has occurred it is recorded and passed to NSBU who will carry out further investigative work to ensure that the cause, mechanism and impact of flooding is identified and analysed as soon after the event as is practicable.

This process will ensure that:

- The most appropriate action is taken.
- Where necessary a cost-effective solution proposed.
- Flooding regulatory registers are maintained with accurate and up to date information.

13.1.4 Incident Investigations

Initial site investigations will be carried out by the Contractor, co-ordinated by Networks Sewerage Section. The number of properties affected by the incident and the extent of the other external areas will be recorded regardless of the cause.

If the cause cannot be attributed to 'other causes' i.e. through CCTV, visual inspections, jetting, customer liaison or third party, then a request for further investigation will be submitted via the work order. This request will be submitted to the Contractor, by Networks Sewerage for action.

13.1.5 Network Review

This is primarily a desktop exercise to review all available information on the site and relevant assets. This will include information on the catchment through existing asset management plans, DAS, hydraulic modelling, feasibility studies, MET office data analysis, and previous cluster data if a repeat incident.

If there are known operational hot spot areas then further work on capacity checks, assessment of hydraulic model predictions and historic information will be needed. A network review will only be carried out in detail where the mechanism of flooding is unclear or where the rainfall data and impact is inconsistent with other evidence.

13.1.6 Sites Investigations

These are carried out as soon as is practicable after the incident happening. This is to ensure that the necessary evidence is gathered as close to the event as is practicable.

Site investigations may also show that there is evidence to prove that unreported flooding has occurred. Investigations are carried out using the concentric circle methodology, where investigations will start at the property affected by internal flooding and work outwards to adjacent properties in all directions. This will ensure that all affected properties are captured and recorded, allowing the full scale of the internal flooding to be realised. This approach will be repeated for every property identified for each incident.

13.1.7 Customer Questionnaires

Customers can provide useful information on the events leading up to, during and after an incident has occurred. Where appropriate a customer questionnaire should be completed.

13.1.8 Weather Reports

Weather reports will only be requested if:

- It is a first time flooding incident.
- There is low confidence in understanding the problem.
- It is a repeat incident and there is a significant disparity between the numbers of properties recorded by recurring incidents.
- Severe weather is suspected

Use of weather reports to categorise properties

- Properties will be categorised as 'excluded due to severe rainfall' if the weather report identifies the storm during which the internal flooding occurred as having a return period of greater than 1 in 20 years.
- Properties will be placed in the 1 in 20 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 20 years or less and greater than 1 in 10
- Properties will be placed in the 1 in 10 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 10 years or less and greater than 1 in 5

- Properties will be placed in the 2 in 10 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 5 years or less.

13.1.9 New Hydraulic Model Builds

If a hydraulic model does not exist and the extent of the problem cannot be determined from site investigations then a model may need to be commissioned.

Note: Prior to any major capital investment a verified hydraulic model should be used for solution development.

13.1.10 Localised Enhancements to Existing Models

Where a hydraulic model exists, then it may be necessary to carry out some localised enhancements. This process may include manhole survey, and / or dis-aggregation of the network prior to any solution development. The validity of the enhancements to the model must be checked in that area against the original verified model.

13.1.11 Conversion Factors

There are a number of situations where conversion factors must be applied when calculating the DG5 value of larger premises and buildings. Normally a single property or house is considered to constitute one DG5 property. This approach assumes the single property is of typical size, with a typical number of appliances discharging into the sewer network.

For larger premises and buildings that are likely to have more appliances a conversion factor needs to be applied for the full DG5 value of the property to be realised and prioritised accordingly. Properties that are classed as large commercial premises should have the conversion factor applied.

The DG5 value will be calculated by adding together all the loading units for all the appliances in the building and dividing this figure by 24 to produce the DG5 equivalent.

Water Fitting (See note 1)	Loading Units
WC Flushing Cistern	2
Wash Basin in a house	1.5
Wash Basin elsewhere	3
Bath (Tap nominal size 20mm)	10
Bath (Tap nominal size lager than 20mm)	22
Shower	3
Sink (Tap nominal size 15mm)	3
Sink (Tap nominal size larger than 15mm)	5
Spray Tap	0.5
Bidet	1.5
Domestic Appliance (subject to a minimum of 6 LU's per house) (See note 2)	3
Communal or commercial appliance	10
Any other water fitting or outlet (including a tap – but excluding a urinal or water softener)	3

Note 1; Reference to any fitting includes reference to any plumbing, outlet, dedicated space or planning or other provision for that fitting

Worked Example – 1 Alanbrook Road, Belfast (Thales Factory)

Water Fitting	No. per property	Loading Unit	Total
WC flushing cistern	46	2	92
Wash basin in a house	0	1.5	0
Wash basin elsewhere	0	3	0

Bath (tap nominal size 20 mm)	0	10	0
Bath (tap nominal size larger than 20 mm)	0	22	0
Shower	4	3	12
Sink (tap nominal size 15 mm)	70	3	210
Sink (tap nominal size larger than 15 mm)	0	5	0
Spray tap	0	0.5	0
Bidet	0	1.5	0
Domestic appliance	0	3	0
Communal or commercial appliance	0	10	84
Any other water fitting or outlet (including a tap – but excluding a urinal or water softener)	10	3	30
			428

DG5 Equivalent;

428 / 24 = 17.83 (rounded up to 18 units)

13.1.12 At Risk Categories

Properties are placed under one of the following three categories in the DG5 Internal Flooding Register:

1 in 10 – Frequency of flooding once in 10 years; Properties are classified here if either:

- The property has flooded once in 10 years from non-severe rainfall events
- The property has flooded from a single event shown to be less than a 10-year return period storm but more than a 5-year return period storm. (weather report required)

2 in 10 – Frequency of flooding twice in 10 years; Properties are classified here if either:

- The property has flooded more than once in 10 years from non-severe rainfall events
- The property has flooded from an event shown to be less than 5-year return period (weather report required)

1 in 20 – Frequency of flooding once in 20 years; Properties are classified here if either:

- This is the default category for all historical flooding properties coming into the register.
- The property has flooded from an event shown to be less than 20 year return period but more than 10 years. (weather report required)

Properties that have previously flooded and are included in the DG5 Internal Flooding Register but which have since not flooded in the last 10 years during a non-severe rainfall event, will be placed into the 1 in 20 category.

13.1.13 Timing Out

Properties can move between the different DG5 Internal Flooding Register categories, if they have not had a repeat flooding incident over a certain period of time.

Properties at risk of flooding internally due to hydraulic incapacity will move between the flooding register categories on a 'timing out' basis, as follows:

- If a '2 in 10' property does not suffer repeat flooding, caused by hydraulic overload, within 6 years it will be downgraded to '1 in 10'.
- If a '1 in 10' property does not suffer repeat flooding, caused by hydraulic overload, within 11 years it will be downgraded to a '1 in 20'.
-

13.1.14 Restricted Toilet Use

RTU is an NIAUR AIR reporting requirement. Properties suffering from RTU are placed in one of the three categories discussed in Section 4.1.12, and recorded in the AIR.

13.2 Format of Internal Flooding Register

13.2.1 Record Data held on each Property

The records held on each property on GIS will include at least;

- Date of Incident
- Property Address – Property Number, Street Name, Town and Postcode
- Grid Reference
- Sewer Type
- Asset causing flooding incident
- Library of Documented Evidence for addition
    - Field Manager Report, GIS Map, Incident Report, Ellipse Report, Met Office Report (if applicable) and Confirmation of CCTV
- Library of Documented Evidence for removal
    - DG5 Beneficial Use Form

13.2.2 Property and Incident Unique Identifiers

A DG5 incident number is used within the DG5 Internal Flooding Register and all related registers as a unique identifier to distinguish one incident from another.

Structure of DG5 Property and Incident Numbers

- DG5P – corporate indicator that the record is a DG5 Property
- 0000001 – unique seven figure number for each DG5 Property
- DG5I – corporate indicator that the record is a DG5 Incident
- 0000002 – unique seven figure number for each DG5 Incident

The generated seven figure number is unique for both DG5 Properties and Incidents and no two DG5 Properties or Incidents can have the same seven figure combination.

All historic and new DG5 properties will be assigned a DG5 incident number, using the above format. DG5 Property and Incident numbers will be allocated in order of date added to the register.

14 Internal Flooding Register – Periodic Maintenance

Periodically the register should be assessed to check for the following:

- Properties that have been recorded as flooding but have not had a repeat flooding after 10 years will be demoted to the 1in 20 category within the register but they are not automatically removed from the register.
- Comprehensive audits of the DG5 Internal Flooding Register must be carried-out annually (or when necessary) to ensure the information held within is accurate and reflects what has happened throughout the year.

15 Internal Flooding Register – Solutions

15.1 Permanent Solutions

A permanent solution to flooding risk is dependent on the cause. Where the problem can be isolated, a quicker and cheaper permanent solution could be implemented. However, this is not always the case and a permanent solution can take several years to construct due to the solution development, design, and tendering and construction process.

In some cases the cost involved to rectify a problem will far exceed the benefits. This means that where the solution cost exceeds a certain level per property then other action may need to be considered i.e. 'Right to purchase', 'Mitigation' or 'Do nothing' alternative.

A permanent solution will enable a property to be removed from the register.

Permanent solutions can fall into one of the following categories:

- Sewer upsizing and flow attenuation; these types of solutions require a hydraulic model and extensive data collection and analysis to understand the extent of the problem and therefore identify the appropriate cost effective solution.
- Property isolation; if a single or small number of properties are shown to be affected then where the cost of other more traditional solutions far exceed the benefit then isolation may be seen as the most appropriate long term solution.
- Right to Purchase; it is not NI Water's normal policy to purchase a customer's property. However, where there is extreme and persistent flooding the most cost-effective solution may be seek to purchase the at risk property.

15.2 Mitigation and Contingency

Mitigation will be considered where the costs of capital schemes are high or where permanent works are not planned in the short term. Where it is appropriate to do so, mitigation measures can offer customers some degree of protection against internal flooding from the public sewerage system i.e. reduce the frequency of incidents.

Mitigation measures can be applied to either persistent internal flooding or where there is severe flooding to sensitive areas. However, mitigation measures will not enable a property to be removed from the register. Where a property has flooded as a result of failure of a mitigation device it should be reported as equipment failure.

Properties with mitigating measures installed to prevent internal flooding will be defaulted into the 1:20 category of the DG5 Internal Flooding Register and will be prioritised accordingly for solution.

15.3 Prioritisation and Cost Benefit Analysis

The company does not at present carry out cost benefit analysis on DG5 projects. However to allow prioritisation of schemes the process set out below is proposed.

- Review of existing CWP to ensure DG5 related programmes of work are captured.
- Assessment of DG5 Register to develop prioritisation methodology relative to frequency and impact.
- Receipt and analysis of feasibility studies to compliment prioritisation matrix including cost details.
- Review to ensure alignment with Regulatory Reporting on AIR and CIM returns.

16 Internal Flooding Register – Removals

A DG5 Property can be removed from the DG5 Internal Flooding Register when one of the solutions described below has been implemented. This will usually be triggered by construction of a CWP Scheme, or new information on the causes of historic events. Removal of a property from the register can only be done through a formal business process and where there is a justifiable reason, supported by sound evidence.

These properties will have supporting documentation to demonstrate that the grounds for removal have been met. This evidence will be presented to the DG5 Panel for formal removal of a property. Solutions to be considered before property removal from the register can be approved include;

- Permanent Solution; where a permanent solution has been constructed and is in beneficial use, the Capital Programme Team will present a DG5 Beneficial Use Form to the DG5 Panel as a record of confirmation of the flooding scheme completion. This will include the properties to be removed and cost of solution apportioned to flood prevention. The Beneficial Use Form will be approved by the DG5 panel members, and the identified properties removed from the DG5 Internal Flooding Register. They will in turn be re-categorised as removed due to 'company action'. The property will remain in this category of the register indefinitely or until such a time as the property floods again.
- Minor Works; where there has been evidence of asset deterioration, e.g. subsidence or through third party interference and a minor asset improvement project has been completed to rectify the flooding issues. Evidence that the flooding has been resolved will come from the appropriate FM and signed off by the DG5 Panel members.
- Better information - Severe weather; the event causing the property to be on the DG5 Internal Flooding Register is confirmed to have > 20 year return period (i.e. severe) and supported by appropriate meteorological or DAS investigation data.
- Better information - Flooding due to Third party; where investment on the sewer network would not prevent a repeat internal flooding incident and NI Water does not have responsibility for the problematic sewer the properties should be removed from the DG5 Internal Flooding Register. The details should be recorded in the AIR commentary. However, if the responsibility for the problematic sewer is shared with NI Water, then the property remains on the Register.
- Better information - Flooding is due to other causes; where it can be confirmed that flooding has occurred due blockage, collapse or equipment failure details will be recorded as 'other causes' within the excluded section of DG5 Internal Flooding Register.

Note: Mitigation will not enable a property to be removed from the register.

Finally, errors can happen;

- Error, identified by Audit or Investigation. Where an error can be clearly shown to have occurred, then the property can be removed.
- Operational improvements are an unlikely explanation for justifying removal of properties from the register. Therefore any supporting data must be robust, for example, CCTV data. In the case of permanent solution then the property would be removed.

17 Annual Information Returns

The DG5 Internal Flooding Register will contain the information required to prepare Table 3, of AIR. The information required for the AIR will be retrieved from DG5 Internal Flooding Register.

- AMS will report on internal flooding incidents due to hydraulic incapacity held in the DG5 Internal Flooding Register.
- NSBU will report on internal flooding incidents due to other causes held in the 'excluded' section of the register
- AMS and NSBU will collaborate closely when compiling the AIR for internal flooding.

Appendix 1 – **Asset Performance Customer Questionnaire**

Northern Ireland Water
Asset Performance
Asset Management
Westland House
Old Westland Road
BELFAST
BT14 6TE

Tel: 08458 770002
Fax: 028 2566 3131
Email: [redacted]
www.NI Waterater.com

Owner/Occupier

Email

Your Ref

Our Ref

Date

Dear Sir/Madam

SEWER FLOODING AT THE ABOVE ADDRESS

I refer to your complaint of sewer flooding on, and would be very grateful if you could help me with the following pieces of information:

- Was the flooding internal (e.g. in the house or attached garage) or external?
- What was the cause of the flooding?
- Has it been resolved by Northern Ireland Water or others?
- What way was it resolved (if known)?
- If it is still occurring, when did it last happen?

Could you please respond by calling me on my mobile (xxx) or emailing me. Your assistance in this matter will be much appreciated.

Yours faithfully,

[redacted]
Asset Performance

Appendix 2– **Asset Performance DG5 Determination Report**

	ASSET PERFORMANCE DG5 DETERMINATION REPORT
Name and Address (Add BT Code)	

Incident Date	
Flood Type	
Rainfall Report	
Ellipse Notes	
CEMS Notes	
Customer Comments	
F.M. Comments	
Restricted Toilet Use	

Other Information Sources e.g. Pollution Reports, WWPS alarms, Captrax, Flooding Incident Reports, CCU etc.;	

GIS Assessment	
Existing Sewer Details	
Type of sewer	
Diameter (mm)	
Material Type	
Year Laid	
Sewer Location	
CCTV Carried Out	
Sewer Desilted	
Comments	
Topographical Assessment	

Possible Number of Other Properties Involved	

Flooding Mitigation (NRV's etc. ;)	
Drainage Area Catchment	
D.A.S.is Network Model Available	
DAS is there Predicted Flooding	

Summary	

Determination	

Signed	

Date	

Appendix 3– **DG5 Flooding Incident Report**

Northern Ireland Water – Flooding Incident Report

Work Order Ref No: ___ Name: _____

Location: _____

Date: _____ Arrival time: _____

1) Internal Flooding: ☐

Main Sewer	☐	Lateral Sewer	☐
Adjacent properties flooded	☐	Attached garages flooded	☐
Basements/Cellar flooded	☐	Restricted Toilet use	☐
Kitchen	☐	Hallway	☐
Living room	☐	Dining room	☐
Shop/integral store	☐	Downstairs bathroom	☐

2) External Flooding: ☒

Main Sewer	☒	Lateral Sewer	☐
Public road/footpath	☐	Public area	☐
Agricultural land	☐	Curtilage	☒
Detached garage flooded	☐	Detached shed or store flooded	☐

3) Comments on cause of reported incident: (Select only one category below)

Blockage	☒	Collapsed sewer	☐
Defective road gulley	☐	Defective private drain	☐
M&E equipment failure	☐	Other:	

4) Clean up operations:

Not Required ☐ Further Action Required ☐ Completed ☒

5) Previous History:

Yes ☐ No ☒ Not Aware ☐

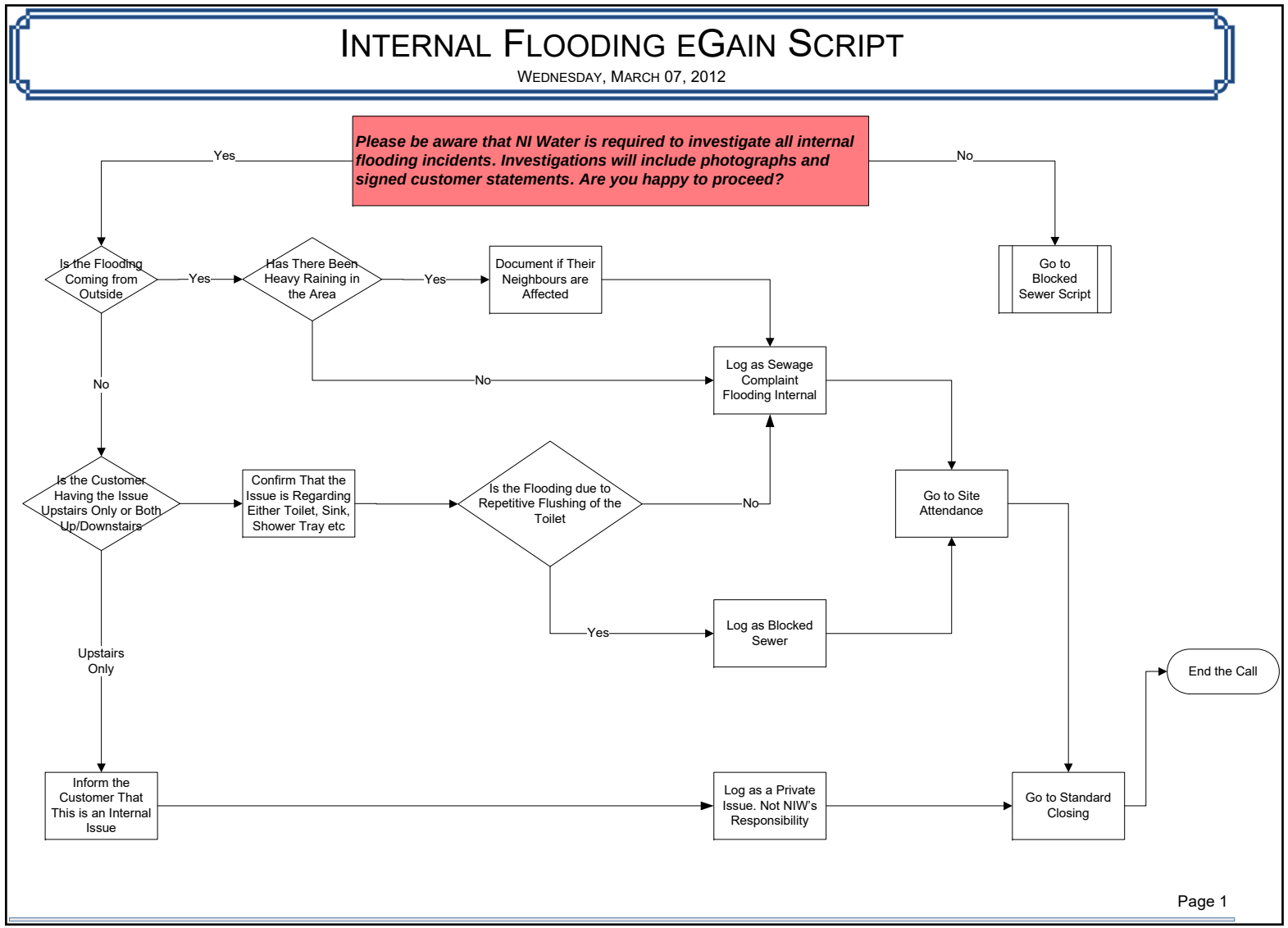
6) Weather Conditions:

Dry ☐ OR Wet ☒: Heavy ☐ Medium ☐ Light ☒

Comments: Especially for Flooded jobs or Follow on jobs

PHOTO FOR FLOODED JOBS:

Appendix 4– **Call Centre DG5 Caller Script**


INTERNAL FLOODING EGAIN SCRIPT
WEDNESDAY, MARCH 07, 2012
Please be aware that NI Water is required to investigate all internal flooding incidents. Investigations will include photographs and signed customer statements. Are you happy to proceed?
Yes
No
Is the Flooding Coming from Outside
Yes
Has There Been Heavy Raining in the Area
Yes
Document if Their Neighbours are Affected
Go to Blocked Sewer Script
No
No
Log as Sewage Complaint Flooding Internal
Is the Customer Having the Issue Upstairs Only or Both Up/Downstairs
Confirm That the Issue is Regarding Either Toilet, Sink, Shower Tray etc
Is the Flooding due to Repetitive Flushing of the Toilet
No
Go to Site Attendance
Yes
Log as Blocked Sewer
Upstairs Only
End the Call
Inform the Customer That This is an Internal Issue
Log as a Private Issue. Not NIW's Responsibility
Go to Standard Closing
Page 1

Copy of DG5 Register

Project No	Scheme Title	GIS CODE	Address	Post Code	Register	Scope of Work	Feasibility Da	PC Year
KR444	Sydenham Upgrade (Interceptor Sewer)					Major Scheme regarding building a tunnel in East Belfast and also side works. Feasibilty on going.		PC21
		DG5P0002528	[redacted]	BT6 0AR	1 in 20			
		DG5P0002529		BT6 0AR	2 in 10			
		DG5P0003700		BT6 0EW	2 in 10			
		DG5P0003663		BT6 9FH	2 in 10			
		DG5P0003664		BT6 9FH	2 in 10			
		DG5P0003665		BT6 9FH	2 in 10			
		DG5P0002667		BT6 0FP	2 in 10			
		DG5P0003784		BT6 0FP	2 in 10			
		DG5P0003781		BT6 0FR	2 in 10			
		DG5P0003782		BT6 0FR	2 in 10			
		DG5P0003701		BT6 0LR	2 in 10			
		DG5P0003702		BT6 0LR	2 in 10			
		DG5P0003559		BT6 0ED	2 in 10			
		DG5P0003014		BT6 0ED	2 in 10			
		DG5P0003699		BT6 0JH	2 in 10			
		DG5P0003789		BT6 0EE	2 in 10			
		DG5P0003666		BT5 5FL	2 in 10			
		DG5P0003667		BT5 5FL	2 in 10			
		DG5P0000045		BT5 6DL	1 in 20			
		DG5P0003668	[redacted]	BT5 6AB	2 in 10			
KR444	Stand Alone Scheme.	DG5P0000131	[redacted]	BT4 2DU	1 in 20			
		DG5P0000191		BT4 2GJ	1 in 20			
KR442	Glenmachan Street, Belfast					Feasibility Study being carried out.	29/08/2014	PC21
		DG5P0000629	[redacted]	BT9 7FJ	1 in 20			
		DG5P0000630		BT9 7FJ	1 in 20			
		DG5P0003763		BT10 0JH	2 in 10			
		DG5P0002659		BT9 7GH	2 in 10			
KR500	Glenmachan Greystown Ave/Upper Malone Road, Belfast					Feasibility Study being carried out.	30/05/2014	PC15
		DG5P0000004	[redacted]	BT9 6UG	2 in 10			
		DG5P0000634		BT9 6UG	2 in 10			
		DG5P0000635		BT9 6UG	1 in 20			
		DG5P0003762		BT9 6UG	1 in 20			
		DG5P0000640		BT9 6UF	2 in 10			

Sheet2

Northern Ireland Water

Level of Service Methodology

DG6 - Response to Billing Contacts

DG6 RESPONSE TO BILLING CONTACTS

Methodology and Procedures

Northern Ireland Water (NIW) has contracted out the provision of Customer Billing and Contacts (CBC) to Echo Managed Services (Echo). Echo is the provider of CBC services to NIW.

DG6 response to billing contacts (Process Summary):

1. Telephone Contact (go to step 4) or Documentation received (in Capital House)
2. Documentation opened by the Echo Payment Processing Team and passed to the NIW Customer Support Team
3. Scan and Index (documentation only which is archived after scanning)
4. Raise and allocate CMS contact type
5. Assess and Investigate
6. Update and compose response

All customer response letters are printed by NIW Contacts Team and dispatched locally. Exceptions to this include correspondence generated through DSTI which are bills (including recalculated bills) and automated recovery letters / correspondence. The process for printing and distribution of bills and other stationery on a daily basis is detailed below:

Items generated in Rapid:
Information received and updated by the agent, (which automatically updates the system), may trigger the system to create an item of stationery. The agent can also take a course of action (which will manually update the system) and may also trigger an item of stationery. This may include receipt of a leakage form from the customer, Data Protection Letter, Transfer of Responsibility etc. All such contacts are recorded as closed as at the date of dispatch.

The BSA team, within Echo, reconciles numbers of bills, letters and forms and sends all relevant items of stationery created the previous day through to DSTI for printing. These are signed-off, printed, enclosed and prepared for pick-up by TNT. Currently only bills, recovery notices and letters are handled this way. For DG6 reporting purposes the date of resolution of the item or date of the substantive response is used as the closure date.

Definitions

A billing contact covers any communication from a customer or their representative (on receipt of written permission from the customer as per data protection) regarding a customer account which requires a response or an action by NIW and does not constitute a written complaint. A customer's representative may be a solicitor, Citizens Advice Bureau, local MLA, or stakeholder representative, e.g. Ulster Farmers Union or CCNI.

Billing contacts can be received by telephone, in writing, by e-mail, by fax, by personal visit or written on a piece of company correspondence, for example a bill which is returned to NIW. Offensive or abusive written contacts are not included.

A billing contact not received in writing is a DG6 event. A written communication however, may be classified as a DG6 or DG7 event. Where the content or tone of written communication indicates an element of dissatisfaction, however mildly worded or unjustified, it should be classified as a written complaint and reported under DG7.

Billing contacts include calls that are made to pay a bill as this will result in an action being taken on the customer's account.

Email / Faxes: When an e-mailed, faxed or hand delivered contact is received after 16:30 it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

Emails and faxes, which can be sent at any time, that are received outside or normal operating hours shall record the receipt date as the date it was delivered to the company. For example, if an email is received on a Saturday this is recorded as day 0. The next working day (Monday) would be counted as day 1. If an email is received on a Sunday then this is recorded as date of receipt – day 0 and Monday as day 1.

Exclusions

A query relating to billing for domestic customers, including the provision of meters is not a DG6 contact, as domestic customers are not billed by NIW.

For reporting purposes, other exclusions are:

- Written complaints (these are handled as DG7);
- Correspondence from banks re direct debits (clarified with NIAUR as excludable);
- Contacts logged in error;
- Freedom of Information requests;
- Calls relating to septic tanks and septic tank payments (these are non-appointed);
- Calls relating to new connections, not yet completed; and
- Copy correspondence from and to NIW personnel.
- Correspondence relating to payment processing, e.g. BACS notifications, payment giros and remittance advice notes.

Multiple Accounts

NIW received clarification from the Regulator as to how contacts from customers with multiple accounts should be logged, so as not to over or understate the DG6 position.

Therefore, for reporting purposes, a DG6 contact received; by a customer holding multiple accounts with NIW that is requesting an update to their standing account details will be recorded as 1 DG6 event on 1 account and as a non-reportable event on the remaining accounts.

End of year (contacts not dealt with at end of year)

As per NIAUR guidance, if a billing contact is not resolved by the time the year end report is run, the contact is included in the total number of billing contacts received for the year in which it is received.

The contacts which are open at end of year are included in the reported figures for the number dealt with within 5 working days. This is based on the assumption that a holding response has been issued within 5 working days and that the reported date of closure will, at the point of final resolution, be backdated to the date on which the holding response was issued.

It was later verified that, per the assumption above, each of those contacts still open at yearend were closed in line with the aforementioned methodology with a reported closure date within 5 working days of receipt.

Further, the response time for any open billing contacts received within the reporting year is reported to be within 5 working days based on the assumption that a substantive holding

response has been issued for each by working day 5. On resolution of the billing contact, these billing contacts will be closed back to the date of the holding response. A sample of 32 of the 161 open DG6 contacts were checked to see if they had a holding letter issued on or before working day 5 and 100% of the 32 sampled did.

Auditing

Internal Audits – This process falls within Echo's Quality Management system and is audited several times a year under ISO9001/2000.

Performance and the achievement of Billing enquiries are recorded as per the Contact Handling Expected Service Levels which are measured monthly in accordance with *Contract Schedule 2.2*. Detailed monthly monitoring reports of actual performance are generated by Echo within CorVu and presented in the Monthly Business Review Pack (MBRP) to NIW within 5 working days of the end of each month covering lines 1.1.1 to 1.1.9 in accordance with schedule 8.4.

Validation of DG6 figures provided by Echo are carried out monthly by NIW in accordance with *Contract Schedule 2.2* and recorded in the "NIW Response to the Monthly Business Review Pack" document which is published for comment and review. Any discrepancies on monthly DG6 performance are raised with Echo and escalated.

Echo regularly performs quality reviews against contacts received to ensure contacts are dealt with correctly. Although no documentation is made available to NIW, regular reviews are carried out by Team Managers within Echo, including:

- Weekly call listening;
- Monthly scoring based on call listening and feedback to individual agents;
- Coaching and feedback; and
- Daily monitoring of all billing contacts with team feedback when necessary.

NIW conduct monthly bill accuracy checks and report their findings to Echo by randomly selecting 100 bills issued each month and analysing them for accuracy, including:

- Accuracy of standing charges, sewerage and water charges;
- Bill total agrees with supporting pages;
- Correct application of VAT;
- Customer details are correct; and
- Correct bill type is used.

Any discrepancies are logged and sent to Echo for review.

CSD Services MI and Data Team performs a call listening exercise on a monthly basis. Each month a random selection from the total calls received is made. This selection includes both billing and operational calls. Billing calls are assessed for:

- For accuracy;
- To determine if memo contents are clear and precise;
- To ensure the conversation is accurately recorded on Rapid; and
- To ensure correct use of CMS code.

Any findings are reported back to Echo management through the Response to the MBRP.

An end to end process review is carried out by internal audit.

Sources of information

System used

The telephony system comprises of a suite of Avaya products and a Call Media ACD. The Avaya switch is tightly integrated with the Call Media platform which provides CTI (Computer Telephony Integration) and ACD (Automatic Call Distribution). Calls can be automatically routed to appropriately skilled agents ensuring a quality response to the customer, at first point of contact. NICE is the call logging system.

The software comprises of Call Media Enterprise Console with an integral reporting suite which distributes calls based on skills sets and SLA's.

Written correspondence is date stamped at point of receipt by Echo (unless received after 16:30), scanned on a (Kodak i 620 scanner) and indexed. This safeguards security and minimises administration. Once correspondence is scanned it is indexed and batched with an allocated batch number. The scanned image is then available to Rapid Users.

All contacts received should be recorded on Rapid. Reports from CorVu are generated by Echo, validated by NIW, and are used to report on DG6 performance.

Actual data

Actual data is extracted from the billing system RapidXtra using CorVu. CorVu 'DG6 Received QRY (Live)' is used to calculate the total number of DG6 contacts received (table 4, line 1) and to calculate the DG6 closed performance (table 4, lines 2-5). DG6 data analysis is produced monthly and re-run for the entire reporting year, providing the necessary information essential for the Director General's reporting requirements.

Sampling

Actual data is used to report DG6 performance (table 4, lines 1-5). Sampling is only used by NIW for data quality purposes and to provide comfort around the assumption that DG6 contacts open at year end will be closed back to a holding letter issued on or before working day 5.

Reliability

All data is taken from the main billing system to ensure it is reliable and accurate.

Responses

This is defined as a response to a billing contact which may be by telephone, written correspondence or personal visit. Responses will provide the following:

An explanation of NIW's relevant policy or procedure and indicates why, in NIW's opinion, no further action on the customers billing contact is required; or

Informs the customer when action on his/her account will be taken if action cannot be taken immediately due to circumstances beyond NIW's control, for example customer needs to obtain clearance from third party, such as a landlord.

Whichever type of response is dispatched it must substantively answer all points raised by the customer and be recorded and date stamped.

Use of telephone

The telephone is the company's preferred method of responding to a billing enquiry. All DG6 related telephone calls should result in a CMS memo being raised and coded by the agent

according to the individual enquiry. An audit trail of the response will be recorded on the billing system (Rapid) as a memo with a CMS type. A full record of the actual conversation and its outcomes is held on Call Media. A CMS is created on Rapid and contains information including:

- CMS type;
- Customer name;
- Customer address;
- Telephone contact;
- Query details; and
- Action required.

Use of letters

Letters are only used when it is not possible to deal with the customer by telephone, when a written reply has been requested by the customer and when it is deemed more appropriate by the agent. Telephone calls not dealt with at first point of contact are dealt with by the Echo CRC Workflow department. A CMS is created on Rapid and contains information including:

- CMS type;
- Customer name;
- Customer address;
- Telephone contact;
- Query details; and
- Action required.

Holding letters are sometimes used but are customised by the agent. They are held within Rapid and are posted directly to the customer and not through DSTI.

Use of personal visit

If a DG6 telephone contact requires a personal visit, (e.g. a meter query team site visit), the agent will raise a CMS contact. This will be transferred to the Echo CRC Workflow Team who takes ownership for resolution and closure of the contact. The Echo CRC Workflow Team agent will send a holding letter to the customer once the visit request has been raised. It is this date/time of this letter that is used for closure.

Response time

This is the number of working days between receipt of a contact by NIW up to and including the day of despatch of a response. For the purpose of this calculation, the day of receipt; provided it is a working day; is counted as day zero and the next working day as day one.

Emails and faxes, which can be sent at any time, that are received outside or normal operating hours shall record the receipt date as the date it was delivered to the company. For example, if an email is received on a Saturday this is recorded as day 0. The next working day (Monday) would be counted as day 1. If an email is received on a Sunday then this is recorded as date of receipt – day 0 and Monday as day 1.

CCNI

Written billing contacts received via the Consumer Council for Northern Ireland (CCNI) office on a customer's behalf are included.

Holding reply

This is defined as a response to a billing contact which advises the customer that NIW will need to undertake additional research or other actions before being able to respond to the customer's contact. A holding reply is counted as a substantive response if it informs the customer what further action needs to be taken to respond to the query and includes a date by which investigations or further actions will be complete and by when the customer will receive a further communication from NIW.

A holding reply will close a contact for DG6 reporting purposes but not for NIW until all actions have been taken. NIW provides a reply within 5 working days of the customer contact and a further holding letter is sent, if there is a delay in finding a resolution. The company will include the number of days in which they will contact the customer again. Enquiries and follow up questions will not be counted as a DG6 contact.

Other Issues

Please refer to DG6 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG7 - Response to Written Complaints

DG7 METHODOLOGY 2018/19

Methodology and Procedures

Northern Ireland Water (NIW) has contracted out the provision of Customer Billing and Contacts (CBC) to Echo Managed Services. Echo Managed Services (Echo) are the provider of CBC services to NIW. Written complaints are dealt with in-house by the NIW Customer Services Centre function. The Customer Support Agents within the Complaints & Executive Mail Team scan, log & index documentation whilst Agents within the Complaints & Exec Mail Team case-manage and respond to the DG7 complaints.

The following high level process steps are followed:

- documentation received (in Capital House);
- documentation opened by Payment Processing (Echo) who separate payments & non-customer documentation before passing the remainder to the Customer Support;
- documentation sifted into DG6, DG7 and non-reportable categories;
- documentation date stamped, scanned, logged & indexed by Customer Support;
- CMS contact raised to the NAS Account Services inbox in RapidXtra (Customer Billing & Contact Management System) and case raised in Savvion (BPM solution);
- contacts allocated to Complaints & Exec Mail Team members;
- Complaints & Exec Mail Team Agent assesses, investigates and case-manages complaint as appropriate;
- request for information and/or action sent to relevant part of the business then;
- review information provided by business, update accounts, draft & issue response.

Allocation to DG7

Written complaints are recognised from all other correspondence by following the definition of a written complaint as set out in the Reporting Requirements and Definitions Manual. All incoming written correspondence is passed to Customer Support. It is then sifted and categorised as DG6, DG7 or non-reportable according to the Utility Regulator's definitions. Following that, it is date-stamped, scanned, logged and indexed by Customer Support.

The reported response times for all written complaints are derived from the Rapid database. All written complaints, with the exception of exclusion categories detailed herein, are included in this total.

Definitions

A DG7 complaint is defined as any written communication from a customer or customers' representative (e.g. Citizens' Advice Bureau, solicitor), alleging action or inaction, or service or lack of a service on the company's part or that of its agent or contractor has fallen below the expectation of the customer – even if written in mild and friendly terms. This includes any expression of annoyance or dissatisfaction by the customer, or disagreement with the company.

Written complaints include letters, e-mails and faxes.

Also included are:

- second or subsequent complaints;
- general complaints;
- complaints that may seem unfair or frivolous;
- complaints received by Consumer Council for Northern Ireland and;
- complaints written on returned Company letters or stationery (e.g. bills).

Should the Company receive a petition, it is classed as a DG7 contact and the Company will respond only to the customer who has sent in the petition. This will be classed as one complaint although the complaint and the response letter will be archived against the account of each customer that has signed the petition where practical.

Exclusions

The following are excluded from DG7:

- cheques and stubs;
- written DG6 billing queries;
- all other Company mail;
- complaints that are sent anonymously;
- complaints that are offensive or abusive;
- complaints referring to non-appointed activities;
- complaints returned alongside customer satisfaction surveys;
- complaints not about the services and functions of the Company (e.g. complaints about executive salaries, advertising campaigns);
- complaints about the activities of other utilities (for example signage around trenches);
- complaints about recreational and amenity activities not defined as duties imposed by the Water and Sewerage Order 2006 and;
- Public liability claims (although any related complaint should be included as normal).

End of Year (contacts not dealt with by end of year)

As per UR guidance, if a complaint is not resolved by the time the year-end report is run, the complaint is included in the total number of complaints received for the year in which it is received.

Further, the response time for any open complaints received within the reporting year is reported to be within 10 working days based on the assumption that a substantive holding response has been issued for each by working day 10. On resolution of the complaint, these complaints will be closed back to the date of the holding response.

Auditing

This process falls under the remit of NIW Internal Audit (IA). A “Customer Contacts and Complaints Handling” audit was undertaken in April 2019 based on the previous reporting year (2018/19). The outcome is still pending.

Each complaint also undergoes a series of quality assurance checks. The first is carried out by the Complaints & Exec Mail Team member who has the item allocated to them. They check that the item has been:

- correctly categorised as DG7;
- coded using an appropriate CMS code; and
- Logged to the correct account(s).

The Complaints & Exec Mail Team member verifies that the information received from within the business is suitable to use in response to the complaint before the response is drafted.

Once the response has been drafted, it is subject to a self-assessed Quality Assurance check during which adherence to an agreed Letter Writing Checklist is tested.

The Complaints & Exec Mail Team Manager/Supervisor performs further monthly sampling of contact categorisation to ensure accuracy. These additional monitoring systems check:

- DG7 categorisation;
- CMS code; and
- Advice code for closed complaints (existence of and; accuracy of).

Sources of Information

Complaints are sorted into the relevant categories, date-stamped, scanned, logged then indexed, thus ensuring security and minimising administration.

Each complaint received is scanned using the Fujitsu FI 6670. At the end of each “batch” of correspondence scanned, a batch number is allocated. The images can then be seen by staff on their PC and indexing can begin. During indexing the following details are input by the operator:

- property and/or customer reference;
- date of receipt;
- CMS group;
- CMS description;
- document type

The operator id is automatically populated based on which member of the customer support team is logging the correspondence. It is at the indexing stage that the scanned items are categorised, thus allowing the description to be input above.

Changes in system during the reporting year

There were no changes in system during the reporting year.

Actual Data

Actual data is extracted from the billing system RapidXtra using CorVu. CorVu ‘DG7 Received QRY (Live)’ is used to calculate the total number of DG7 contacts received and to calculate the DG7 closed performance. DG7 data analysis is produced monthly and re-run for the entire reporting year, providing the necessary information essential for the Director General’s reporting requirements.

Sampling

Sampling is not used in compiling received data for DG7. Sampling is only used by NIW for data quality purposes.

Reliability

All data is taken from the main billing system to ensure that it is reliable and accurate.

Responses

Upon receipt of a complaint, we ensure that relevant action is undertaken, provide a substantive response and ensure the contact is closed on the Customer Contact Management System (Rapid).

NIW endeavours to answer all written complaints, regardless of the sensitivity of the issue or subject raised by the customer.

Our responses do one or more of the following:

- provide an explanation of our policy or procedure and indicate why no further action is required;

- inform the customer that action to resolve the complaint has been taken and identifies when this action occurred;
- informs the customer when the action to resolve his/her complaint will be taken if it cannot be done immediately e.g. capital works scheduled for completion months sometime in the future;
- answer all issues or questions raised by the customer.

Use of Telephone

Where appropriate, telephone calls are used to respond to written complaints. Telephone calls are also used to update customers as the progress of complaints under investigation. The customer account is annotated with details of the call in these cases.

Use of Standard Letters

Standard letters are not used to respond to complaints - all responses are personalised and customised.

Use of Personal Visit

When a personal visit is used to respond to a written complaint, a letter confirming the content of the visit is provided to the customer. The date of the visit is used as the date of response.

NI Direct

Complaints received through NI Direct are not reported.

Telephone Complaints

Complaints received via telephone are reported as DG9 telephone complaints, not DG7. Billing telephone complaints are reported as DG6.

Date of Receipt

Written complaints are date-stamped per the date of receipt.

Date of Dispatch

The date of dispatch refers to the date on which a response is sent to the customer. The date of dispatch is recorded as the date closed.

Response Time

This is the number of working days between receipt of a contact by NIW up to and including the day of dispatch of a response. For the purpose of this calculation, the day of receipt (provided it is a working day) is counted as day zero and the next working day as day one.

When an email or fax is received after 16:00 it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

The reported date of receipt for emails/faxes received outside of normal operating hours is the actual date on which the complaint was delivered to the company. For example, if an email is received on a Saturday, this is recorded as day zero. The next working day (normally the Monday) would be counted as day one. If an email is received on a Sunday then this is recorded as date of receipt (day zero) and (normally) Monday as day one.

Substantive Holding Reply

This defined as a response to a written complaint which advises the customer that NIW needs to undertake additional investigations or other actions before being able to provide a

full response. A holding response is considered substantive if it advises the customer what further action needs to be taken in order to fully respond, when this will be done and when they will receive a further communication from NIW.

Items remain open until all actions have been completed but will be closed back to the date of the holding response for reporting purposes when said actions have been completed.

When a date by which investigations or further actions will be complete cannot be given, we will give the date by which we will contact the customer again.

Holding responses can be issued in writing or provided verbally by telephone.

Repeat Contact

Where a complaint has been responded to and results in a period of correspondence each written contact is treated as, and reported as, a separate complaint.

This is done even if NIW consider the complaint has been dealt with as far as we are able.

Consumer Council for Northern Ireland (CCNI)

Complaints received in writing via CCNI will be logged as complaints and recorded in DG7 figures. All complaints from CCNI are received in writing.

CCNI enquiries and follow-up questions are not recorded as complaints.

Complaints to or about Contractors

Complaints made directly to contractors about work carried out on our behalf are recorded following notification to NIW through agreed process. Such complaints will be recorded even they are handled directly by the contractor.

Complaints about contractors received directly by NIW are reported even if they are referred to the contractor to deal with.

Holding Response & Frequency

Monitoring systems have been in place throughout the reporting period to support recording on the number holding responses issued throughout 18/19.

System-based report data was used to derive the number of holding responses issued between 01/04/18 and 31/03/19.

In cases where the investigations were on-going by the expiry date of the initial holding response, a further holding response will have been issued.

Based on the recorded data, we can say that one (or more) holding response was sent in relation to 245 DG7 contacts which were received in 18/19. Therefore, it can be concluded that one or more holding response was issued in relation to 11.50% of the DG7 contacts received during 18/19.

Other Issues

Please refer to the DG7 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG8 - Bills for Metered Customers

DG8 - Bills for Metered Customers

Definitions

Every time a metered account is billed a reading type is updated onto the Rapid billing system (Rapid) to identify the type of reading.

The reading types and estimated indicator are used to distinguish the meter reading status of each metered account, which is subsequently analysed in Rapid to create the 'DG8 Meter Summary Analysis' report.

DG8 Reporting

The Rapid 'DG8 Meter Summary Analysis' report ensures we correctly identify each of the reporting requirements in the sequence shown.

The reading indicators are extracted from Rapid RPU005 meter consumption update screen. The 'DG8 Meter Summary Analysis' report extracts this information and compiles this in line with the requirements.

The report is run annually at the end of the financial year, covering the period 1 April to 31 March and includes all categories requested by the Director General for the June Return reporting.

A bill is only counted as issued if it is sent to the customer within the reporting year. Any bills that are sent after this date will be included in the following reporting year's figures.

Total Metered Accounts

The report confirms the number of active accounts with either water or water and sewerage consumption which are metered.

Company Reading and Billed

If a Company reading has been taken during the within the defined annual cycle period, and a bill created against that reading, it will be included under the 'Meters read by Company' indicator. The exception to this is those meters that are billed outside of Rapid (trade effluent meters).

Company readings are recorded by the Meter Reader (MR) via a PDA. Each day the MR will upload those accounts that have had a reading and or an abnormal reading from the PDA to Routestar/Temetra, for transfer to Rapid. The Temetra system was introduced on 26th August 2014 to replace Routestar.

No Bills Received During Reporting Year

Bill status is scanned for no bills issued during the reporting year and is reported under the 'Not Billed this year' indicator.

Meters included in this category are identified as having a reading entered but the 'bill sent' flag set to 'No'

Customer Readings

Reading types are scanned for not receiving a bill based on a Company Reading but at least one bill based on a 'Customer Reading' and will be included in the 'Meters read by Customers' indicator.

'Meters Read By Customer' represents the number and percentage of the meters read by the customer within the DG reporting year that are identified as either 'Customer read' or 'Customer web reading'

The Company encourages our customers to take readings themselves so that they are aware of their usage. Customer reads can be registered for billing purposes by using the On-line facility available on our website or by calling our billing line.

Customer readings are recorded via a correspondence management system. A team member will then update the account and issue a revised bill. A customer reading type indicator will be displayed on the system. The estimated read will also be visible on the system

Estimated Only

Any meters that have not satisfied any of the preceding indicators will be recorded under the 'Meters Estimated Only' indicator.

'Meters Estimated Only' represents the number and percentage of meters only estimated within the DG reporting year. The following read types are identified as estimates: Estimate Exchange Final, System Estimate, and Manual Estimate.

Unread for Two Years

If no Company reading exists during a two year period, it will be reported under the 'No Company Reading for 2 Years' indicator.

Specifically two years back from the end date of the DG report.

Exclusions

The following are excluded from the indicators:

- Charged on another basis (not metered consumption)
- Test meters
- Trade-effluent meters
- DRD or NIW meters
- Fire supplies
- Properties occupied continuously for less than six months
- Complex accounts – Including combination meters i.e. the 'low-flow' element is excluded.
- Void properties

Reading and Billing Frequency

Frequency of reading:

- Non-household properties are scheduled to be read twice a year. The reading schedule for each read is completed over a six month period, the 1st read cycle is April to September and the 2nd read is October to March.
- Non-household – large volume users are read and billed monthly.
- There are a number of meters that have been assigned a reading frequency of Annual Read within the Rapid system. However, these meters are either DRD Supply or Test Meters which fall under the permitted exclusions and will only be read to assist business requirements, as neither category generates a customer bill.

Frequency of Bill Issue:

- Household properties – the Company do not currently bill domestic properties
- Non-household – the Company aim to read at twice a year and bill twice yearly.

- Large non-household users – the Company aim to read and bill monthly.

Method of Meter Reading

Before the start of each reading period, whether monthly or six monthly, details of metered accounts scheduled for reading were transferred from Rapid to Routestar between April and 25th August, and from Rapid to the Temetra system for 26th August onwards.

The accounts are then downloaded on to an electronic data storage unit (PDA) to facilitate the actual reading of the accounts by a MR in the field.

The meter reading information obtained by the MR is then transferred back to Rapid from Routestar/Temetra, which is subsequently updated upon the meter being read.

The data transfer from Routestar/Temetra to Rapid is not solely automatic and currently requires manual assistance by the MAM team.

Abnormal Readings

An abnormal reading can be identified by one of two factors:

- A meter reading that gives a usage that does not fall in line with previous usage patterns, identified by the MR, billing system or customer.
- A meter reading that does not correlate with previous readings taken.

The PDA unit automatically calculates the usage between a new reading and the previous reading. The MR checks the usage against the previous readings that are displayed on the PDA. If the usage appears to be abnormal the MR will enter a report onto the PDA and or use a pre-set indicator to explain why (trouble codes).

A daily ‘Rejected Readings’ report is produced through the Rapid billing system that also identifies any abnormal usage that require further investigation. Each account on the report is checked and if accepted the reading will be utilised and a bill issued. If the rejected read cannot be added, a site visit request is raised to instruct a Meter Query Technician (MQT) to investigate and provide further information.

Previous Misreads

Accounts that are identified as having previously been misread are subject to re-calculation based on the most recent meter reading.

Access Denied / Meter Reading Unobtainable

In such instances that the Company is unable to gain access to the meter, a skip code is entered which identifies that access was denied. If the customer does not provide a reading before the billing run a system estimate is used.

Faulty Meters

Where a faulty meter is identified and a MR or MQT replaces the meter, it is recorded on an MRD (Meter Replacement Docket) which their Field Manager (FM) signs off and sends to the MAM team, and “First Read New Meter” is logged on the handheld.

If a MR or MQT cannot replace the meter, a MMR (Meter Maintenance Request) is completed which their FM signs off and sends to the Meter Maintenance (MM) team, MM then forwards the MMR to the Contactor. When the meter has been replaced, the Contractor advises MM of the replacement details. The old and new details will then be returned by MM on a MRD to MAM for updating on the billing system

Updating, Post Bill Issue

If the Company has any disputed readings, the account will be suspended while further investigations are being made. Once the investigations are finalised, a revised bill will be issued if necessary.

Assumptions

Those accounts excluded from the analysis are categorised using the definitions provided by the reporting requirements, as noted above.

Additional Information

Echo, on behalf of Northern Ireland Water, are responsible for the billing activity.

Some meters are billed on a sundry schedule rather than the normal billing schedule within Rapid. These are Trade Effluent bills. Trade Effluent bills are excluded from DG8.

Sewerage only customers, if not TE customers, are charged on an unmeasured basis.

Northern Ireland Water

Level of Service Methodology

DG9 - Telephone Contact

Definitions:

Principle Advertised Customer Contact (PACC) Points

For the purposes of the indicator, Principal means the main contact point(s) which customers are encouraged or directed to phone. Advertised refers to Customer Contact Points which are available in telephone directories, newspaper advertisements, Northern Ireland Water (NIW) website and NIW literature. It does not include temporary contact points which have been established to handle a specific topic.

NIW PACC points include:

- **Billing Enquiries:** 0345 877 0030
- **Debtline:** 0345 8770 050
- **Waterline:** 0345 744 0088
- **Leakline:** 0800 028 2011
- **Text Relay (for customers with hearing difficulties):** Registered users are provided with a prefix for any NIW number they wish to ring.

An MLA/ER Hotline [redacted] was initiated on 21st August 2007 to provide a direct means of contact for elected representatives and council members telephoning to enquire about specific issues in their constituencies.

In addition, the following dedicated campaign lines are in operation for certain sections of the community to aid NIW's response:

- Developers Line: 0345 877 0002
- Emergency Services: 0345 877 0008
- Telecare Quick Check: 0345 877 0080
- Closed Communities: 0345 877 0007
- Aged Debt: 0345 877 0003

Telephone Contact

The indicator is intended to monitor incoming telephone traffic which can be regarded as originating from NIW's customer base. All calls received to telephone lines other than principle advertised customer contact points are excluded for reporting purposes (i.e. all other business lines).

Company Agent

NIW has contracted out the provision of Customer Billing and Contacts (CBC) to a 3rd party provider known as Echo Managed Services (Echo). Echo is the provider of CBC services and is based in Capital House, Belfast.

A company agent is defined as an employee of Echo (operating from a principle customer contact point), who operate the contact on behalf of NIW. All calls are answered directly by Customer Service Advisors who are direct employees of Echo.

Office Hours

The indicator covers office hours only. Office hours are defined as the hours which NIW's PACC points are open. These are detailed below:

- **Billing Enquiries:** Monday to Friday - 08.00 to 20.00
  Saturday - 08.00 to 18.00
  Sunday - 12.00 to 18.00

- **Debtline & Aged Debt:** Monday to Friday - 08.00 to 17.00
- **Waterline:** 24 hours a day, 7 days a week, 365 days a year
- **Leakline:** 24 hours a day, 7 days a week, 365 days a year
- **MLA and dedicated lines:** 24 hours a day, 7 days a week, 365 days a year

Telephone Complaints

Calls received about the following water service issues are expected by NIAUR to be included as a complaint:

- no water;
- lack of pressure;
- leaks;
- taste and odour;
- discolouration; and
- hard water (except for simple enquiries, e.g., dishwasher settings).

In addition, calls received about the following wastewater service issues are also expected to be included as a complaint:

- sewer flooding other than those received through NI Direct/ blockages; collapsed sewers / manholes;
- smells from sewage treatment works / pumping stations; and flies from sewage treatment works.

NIW have created a series of CMS logging codes, within the RapidXtra system, to cover these issues. All telephone contacts logged by the agent using one of these codes will be included in the reported volume of telephone complaints. In addition, where a customer expresses dissatisfaction during their call, the agent has the ability to select the complaint flag which will identify the log for inclusion in the reported figures.

NIW excludes from the reported figures, those telephone complaints which are:

- Anonymous;
- About the activities of other utilities;
- Received through NI Direct Incident Line; and
- Received on telephone lines other than principle advertised customer contact points (i.e. all other business lines).

Complaints to/about contractors

Telephone complaints to contractors or other agents about work being undertaken on behalf of NIW are reported only where NIW are informed. Complaints about contractors or other agents are also reported, even if the complaint is referred to the contractor to resolve.

Telephony Structure:

Telephone Providers Network

The supplier during the reporting year was Cable & Wireless, however all physical lines in Capital House were switched from C&W to BT on 6th March 2014, with remaining non-geographic services moved to BT on Tuesday 10th of March 2015. No issues were experienced during these switches.

Cable and Wireless Network IVR

NIW introduced a High Volume Call Answering (HVCA) solution to assist answering large volumes of unexpected trouble calls in December 2012. In order to facilitate the solution, the Cable and Wireless Network IVR was activated on the 'Waterline'. Customers calling this line will hear the following message and be presented with further options:

High Volume Call Answering (HVCA) System

The HVCA system is aimed at ensuring NIW can handle large volume of calls during periods where calls can increase very quickly e.g. Major Incidents, heavy rainfall incidents, etc. This ensures that all calls are logged and customers given specific information resulting in higher levels of customer satisfaction during service interruptions. The HVCA system will recognise customers using the telephone number we hold on their customer record or it can use Voice Recognition to allow customers to speak their Post Code.

Calls will be delivered to HVCA direct from the C&W IVR menu structure when a caller selects option '2'. Calls delivered to this campaign will be offered to agents first in Call Media, however if an agent is not available the call will automatically divert to the HVCA Platform. The divert is controlled by the Cable and Wireless intelligent network, calls will divert on busy tone, route failure and no reply.

As each caller hangs up in the HVCA application, a Call Data Record (CDR) is created which details the caller's activity during the call. A portion of the CDR is passed to NIW in the customer contact file for the creation of work requests through Rapid to Ellipse.

Call Media

Calls received on all other PACC lines and the majority of calls received on Waterline are delivered to the Call Media system for allocation to an appropriately skilled agent. If there is more than one Customer Service Agent available, the system allocates the call to the one who has been available the longest period of time.

If no skilled agent is available immediately then the call will be queued until a skilled agent becomes available. The Call Media Telephony System provides an internal queuing system where callers will hear a ring tone and then a comfort message and music on hold.

The use of Call Media's skill based routing ensures that incoming calls are distributed in a way that will ensure a quality response to the customer.

Call Recording

All calls received in the call centre via Call Media are recorded via NICE call recording software. This software records the time of the call and the telephone number that called the centre if available.

Reporting:

Reporting the DG9 Position (telephony schematic attached in Appendix 1)
DG9 performance is reported by the CSD Services MI and Data Team on a monthly basis using the MI reports from both HVCA and Call Media systems.

Reporting of Telephone Complaints

CSD Services MI and Data team use Corvu to report on the volume of telephone complaints received, on a monthly basis, using the agreed Operational Original CMS transaction codes and any other call logged where a complaint flag has been selected by an agent if the

customer has expressed dissatisfaction.

Call Listening

CSD Services MI and Data Team listen to 10 randomly selected calls per month, check that they have been logged on Rapid correctly and feedback any quality issues highlighted to ECHO through the monthly response to the MBRP.

Call Handling:

Practices and Procedures

All calls received are managed by either HVCA call routing system or Call Media and routed directly to an appropriately skilled agent based on the first available call handler.

Wherever possible, an agent will deal and action a customer's enquiry at point of contact. Where this is not possible, a message will be raised on the system for further investigation or where appropriate the customer will be transferred.

All enquires are logged on RapidXtra automatically by HVCA or manually via an agent, covering the reason for the contact (contact type) and the advice given or action taken. This is the case whether or not further work is required ensuring all calls are recorded, even if they remain open for further action.

Calls which require further action are logged on RapidXtra and work flowed to teams or individuals as required or passed to Ellipse for issue to mobile work management operational teams. This includes instances where further actions or NIW investigation is required in order to provide a full response to the customer.

Transfers between PACC Points

Agents are multi-skilled, so transfers are not generally made. Transferred calls are reported as one call.

Direct Measurement/Interpolation/Extrapolation

NIW measures statistics for all telephone calls received on PACC points which are delivered directly to the Call Media telephony system and to the HVCA system. Sampling, interpolation or extrapolation is not used in compiling totals.

Messaging:

Use and activation of IVRs (Interactive Voice Response)

During business as usual an introductory message is set up and assigned to each queue, e.g. Billing Enquires Line. The message greets the customer and thanks them for calling the relevant number. It explains that an agent with be with them shortly and to note that calls are recorded to help provide quality assurance and training.

If a customer telephones out of hours, the customer will receive an out of hour's message. In the event of disaster recovery and building evacuation, a recorded message is activated which explains to customers that calls cannot be answered at the moment, please call back later.

As noted above, the Cable and Wireless Network IVR tool is now being utilised on Waterline to direct customers calling in relation to New Connections, Trouble Calls, Septic Tank requests and other operational issues. This allows NIW to transfer Trouble Calls to the

HVCA system in situations where calls exceed the volume of agents available in the CRC.

Use and activation of message manager systems

No message manager systems were used during the reporting year.

Use and activation of answering machines

Answering machines were not used during the reporting year.

Company Systems:

Telephony

Systems comprise of a suite of Avaya products and a Call Media Automatic Call Distribution (ACD). The Avaya switch is tightly integrated with the Call Media platform which provides Computer Telephony Integration (CTI), ACD and outbound dialler functionality through three main components:

- Avaya S8710 providing core telephony switching
- Call Media Contact Centre software providing ACD, CTI and dialler functionality
- NICE Call Recording; and
- High Volume Call Answering (HVCA), hosted service provided by Twenty First Century Communications.

Calls that arrive at the Avaya switch are routed by the Call Media ACD to appropriately skilled agents via desktop phones.

Location

All systems are located at Capital House, Belfast. There is currently a 240 line capacity dedicated inbound calls from NIW customers, 30 dedicated lines for outbound calls and 30 dedicated lines ring-fenced for priority lines e.g. ER Hotline, Emergency Services, etc.). The scale of the current capacity was implemented in preparation for domestic billing which was deferred in April 2007.

Software

Software comprises of Call Media Enterprise Console, the integral reporting suite supplied with Call Media ACD and NICE call recoding.

Other Issues:

Text Relay Service and Text Phone

NIW has provided for a Text Relay and Textphone service to support customers with hearing difficulties.

Text Relay Service is a third-party service whereby the customer rings a Text Relay operator, who in turn contacts the Customer Relations Centre via the normal customer line (Waterline/Leakline/Billing, etc.) on behalf of the customer. This is recorded as a call received on the appropriate line.

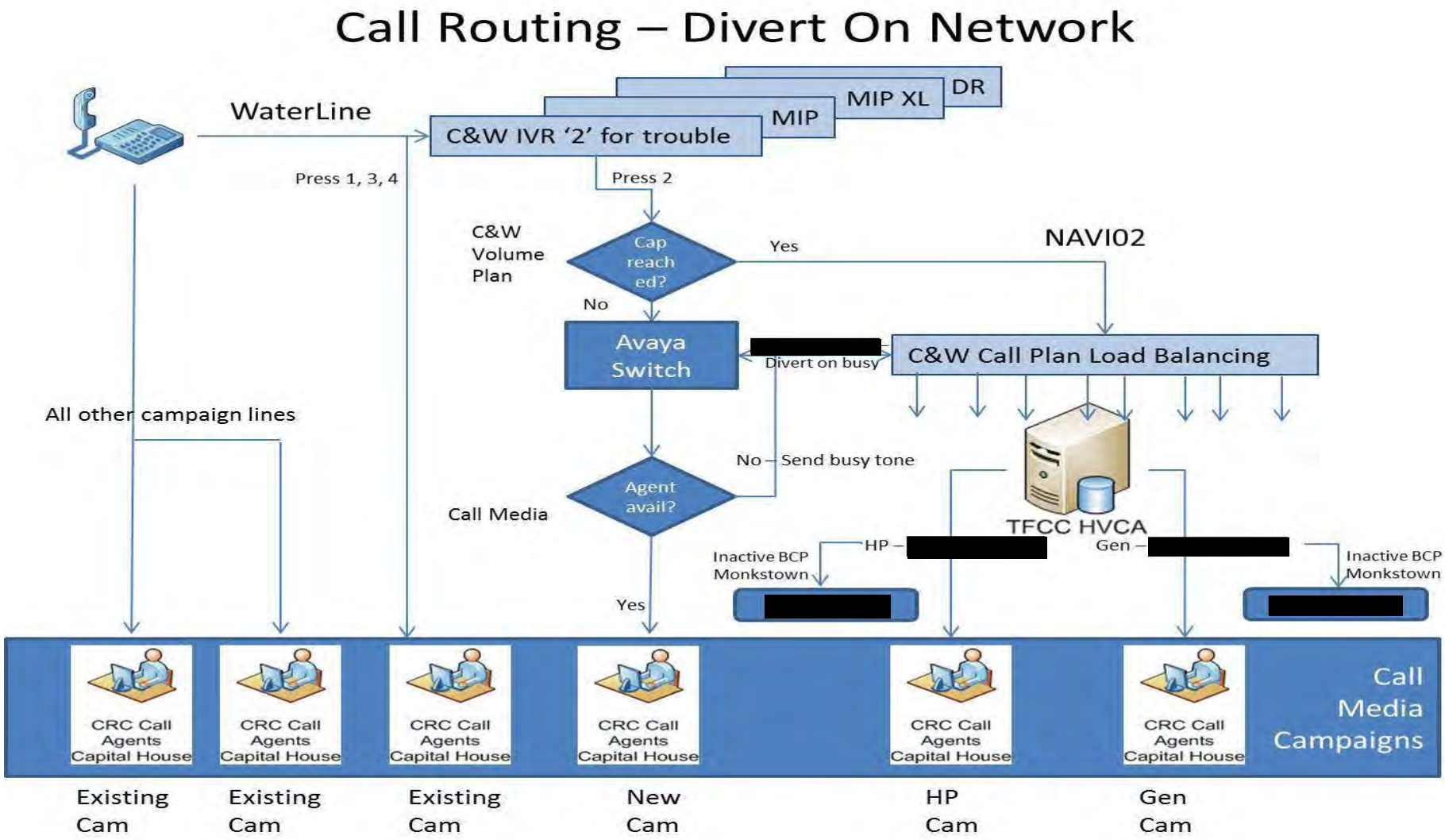
Rejected Calls

During the reported year calls currently rejected for any of the following reasons are not included in total calls received:

- The time being out of working hours

- The queue is too full and cannot accept any more tasks. Each queue holds 500 calls at any one time.
- The task queued for the ‘Max Queue Time’ and was returned to the connector.

Appendix 1


Call Routing – Divert On Network
WaterLine
DR
MIP XL
MIP
C&W IVR '2' for trouble
Press 1, 3, 4
Press 2
C&W Volume Plan
Cap reach ed?
Yes
NAVI02
No
Avaya Switch
Divert on busy
C&W Call Plan Load Balancing
All other campaign lines
No – Send busy tone
Agent avail?
Call Media
TFCC HVCA
Inactive BCP Monkstown
HP –
Gen –
Inactive BCP Monkstown
Yes
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
Call Media Campaigns
Existing Cam
Existing Cam
Existing Cam
New Cam
HP Cam
Gen Cam

Annual Information Return 2019

Section 4

Customer Research Appendix

Annual Information Return 2019

Customer Research Appendix

Customer Satisfaction

One of the fundamental measures concerning the level of service received by customers is their level of customer satisfaction. NI Water measures customer satisfaction through several different surveys.

- Customer Advocacy Measure (CAM), where an updated Question 71 from the 'Consumer Experience Survey' (CES-SIM) is used.
- Omnibus Survey - Question 1 & Question 2.
- SIM, where Question 60 is used.
- Voice of the Customer (VoC)

Listening to our customers' views and building these into our plans is essential for us to ensure that our customers' needs are at the heart of our service delivery.

Customer Services has been working extensively on providing an improved customer experience. Under the auspices of the Customer Engagement Oversight Group (CEOG), Customer Services has been actively engaging with NIAUR, CCNI and DRD to develop a range of new quantitative and qualitative customer measures which are most relevant to us and our customers, including the merits (or otherwise) of the current (OPA/DG) regulatory measures.

These new measures include the development of targets and methodologies more meaningful and timely customer satisfaction feedback to highlight, as close to real time as possible, those areas and activities which cause dissatisfaction for customers.

In 2018/19 NI Water introduced Voice of the Customer (VoC); although this is still in development and not included in/used for Regulatory Reporting, we are monitoring and looking for any correlation in results between the current CES-SIM and VoC. There are a significantly greater number of VoC surveys undertaken each month/year compared to CES-SIM (10,000 vs 800 annually); details on VoC are included in the Development Table 47 commentary.

For regulatory reporting purposes in 2018/19, only the satisfaction scores from the Customer Advocacy Measure (SIM Question 71) and the Omnibus Survey are used/reported in Table 5.

E	CUSTOMER SATISFACTION MEASURES
23	Customer advocacy measure
24	Omnibus survey question 1
25	Omnibus survey question 2

Customer Advocacy Measure (CAM) – Methodology & Sampling.

The Customer Advocacy measure is an annual satisfaction score measured through the completion of the SIM 'Consumer Experience Survey' based on the responses to survey question 71 ("Likelihood of recommending Northern Ireland Water 1-10?") for their customer advocacy.

The Customer Experience Survey is undertaken by Allto, an independent market research company, who carry out quarterly surveys (waves) of customers who have contacted the company for any reason. The score is based on an annual sample of 800 consumers, split into a minimum of 200 consumers per Quarter, carried out four times a year.

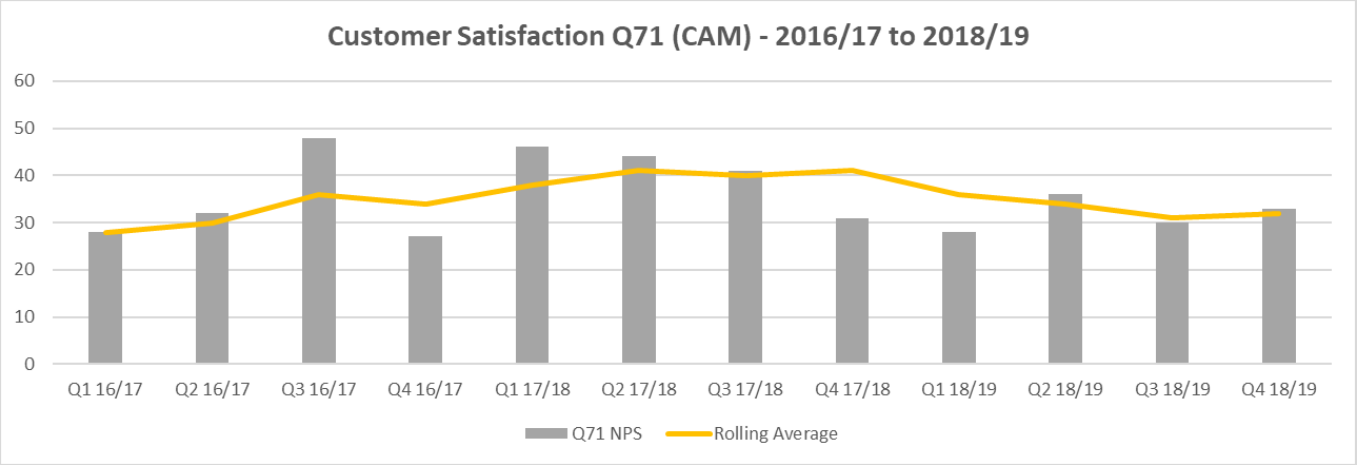
Allto will issue an email on the Monday after the designated 'un-notified' week requesting the previous week's data. The data set should include 'Resolved and Unresolved' contacts only (from telephone and written channels) in relation to both billing and operational areas.

This data is then supplied to Allto (password protected for data protection purposes) based on an Excel spreadsheet containing the telephone number and date of contact (date call made to NIW).

The score is calculated using Net Promoter Score methodology based on results from the following statement;

'If people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is 'not at all likely to recommend' and 10 is 'extremely likely to recommend'.

NIW achieved an overall score of 32 for the reporting year 18/19.



Omnibus Survey

The Omnibus survey is different from CES-SIM and VoC, in that it also includes customers who have not contacted us during the year. As in previous years, Kantar Millward Brown (Cognisense) undertook the research on behalf of NI Water, with the standard Questions 1 & 2 included in a series of questions being asked of domestic and non-domestic customers.

- 1000 residential customers adults aged 16+ were interviewed face-to-face in home, weighted to be representative of the NI population in terms of gender, age and social class
- 200 business customers were surveyed by means of Computer Assisted Telephone Interviewing (CATI), conducted by telephone from the Cognisense Telephone Research Centre in Belfast. Quota controlled by industry type and size.

A summary of the key findings is as follows;

- 4 in every 5 domestic consumer surveyed was satisfied with the services provided by NI Water.
- Older respondents and those from outside Greater Belfast tend to be most inclined
- toward being satisfied.
- Amongst domestic consumers, the five year trend on satisfaction is an upward one (+8 percentage points since benchmark wave conducted in 2014).
- The level of satisfaction is greater again amongst non-domestic customers, with well in excess of 9 in 10 consumers expressing satisfaction.

- The five year trend is similarly an upward one (+2%), but has been more changeable during this period. Net satisfaction has increased markedly since 2016, after two consecutive periods of decline.
- Non-domestic customers (more inclined to express satisfaction) were more likely to recommend NI Water (NPS score: +35%) compared with domestic consumers (NPS score: -8%), making the latter cohort the greater challenge in terms of creating greater positive advocacy. That said, the mean scores for likelihood to recommend are broadly similar for both (8.54 out of 10 amongst non-domestic consumers / 8.23 out of 10 amongst domestic consumers), suggesting a strong sense of positivity relating to the NIW brand across both markets.

	Sample Size	Score	Total
Domestic	1035	80	82800
Non-domestic	200	90	18000
Total	1235		100800
Average			**81.62**

Service Incentive Mechanism (SIM)

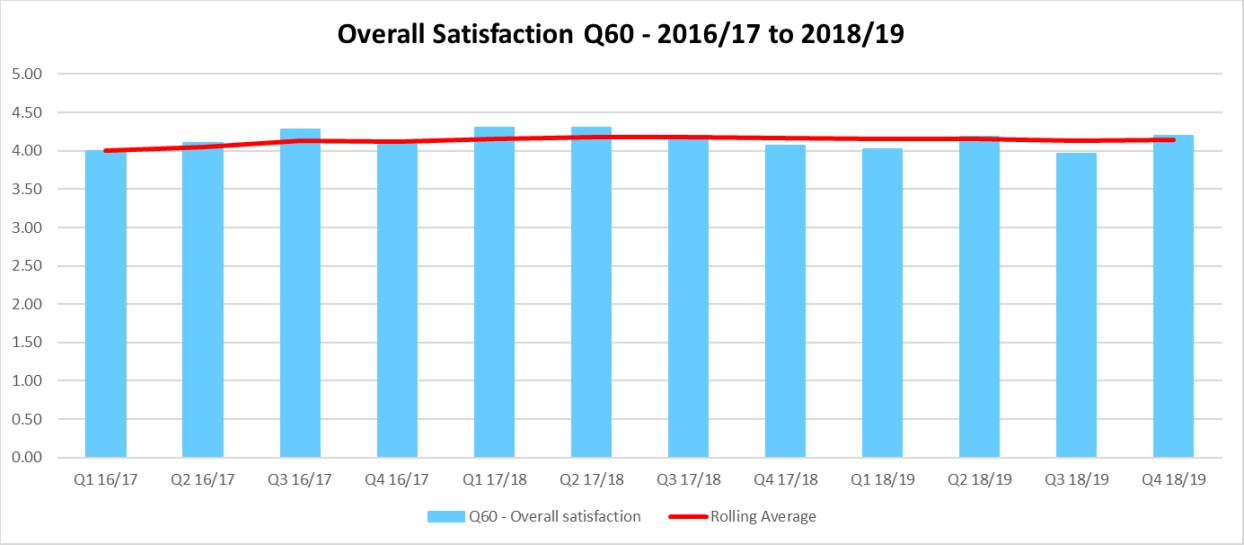
We measure the SIM score via Question 60, which asks the customer to rate their 'Level of Satisfaction taking everything into account.'

Like the Customer Advocacy Measure, Question 60 is also within the Consumer Experience Survey (CES-SIM), which is based on a sample of 800 consumers that have had direct contact with the company to request a service or make a complaint. The sample will be split into a minimum of 200 consumers per Quarter and carried out four times a year.

Allto will issue an email on the Monday after the designated 'un-notified' week requesting the previous week's data. The data set should include 'Resolved and Unresolved' contacts only (from telephone and written channels) in relation to both billing and operational areas.

This data is then supplied to Allto and is password protected for data protection purposes. Data is provided based on an Excel spreadsheet containing the following fields:

- Telephone Number;
- Date of contact (date call made to NIW);



Development of new measures

As mentioned in the introduction, Customer Services has been working extensively on providing an improved customer experience through the development of new quantitative and qualitative customer measures which are most relevant to us and our customers.

These new measures include the development of targets and methodologies for:

- Reducing unwanted contacts,
- Resolving customer queries at first point of contact (FPOCR), industry trends show that Customer Satisfaction increases in line with FPOCR increase,
- Reducing repeat contacts, by analysing and understanding the reasons for these contacts, and
- Developing a solution to obtain more meaningful and timely customer satisfaction feedback to highlight, as close to real time as possible, those areas and activities, which cause dissatisfaction for customers.

The measures above were trialled and reported on for the first time in AIR16, to establish reporting baselines and trends over the remainder of the PC15 period (up to March 2021) which will support the setting of targets for each in the PC21 period.

PC21 Customer Research

In preparation for the PC21 business plan, NI Water engaged the marketplace in to appoint a strategic customer research partner to undertake all research surveys over the next 5 years; from January 2019 to March 2024. This covers the PC21 main and interim customer research, Omnibus surveys and further annual support.

The main PC21 research is ongoing, using deliberative research techniques, with the draft report due in June 2019; final report in August 2019. To ensure consistency with previous years, the Omnibus will be undertaken in September 2019.