northern ireland water

Delivering what matters

Annual Information Return 2020

for Public Domain

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Annual Information Return 2020

Section 1

Board's Overview

Board's Statement

Northern Ireland Water's board of directors is required by the Utility Regulator to prepare a statement on the compilation of the Annual Information Return (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 2019/20. 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 NI Water's 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 AIR contributors;
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 AIR reporting requirements and was approved by 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 tables and commentaries where appropriate.

The complete AIR was endorsed by NI Water's Executive Committee and Board on 11th and 25th June 2020 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 2020;
- 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.

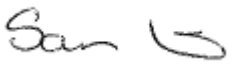
Directors' Endorsement

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. O. O'Hagan CBE
Chairman, Northern Ireland Water

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	115	
2	DG2 Properties receiving pressure below the reference level at end of year	nr	0	1420	1257	1082	900	862	711	719	626	
3	DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	2	0.32	0.14	3.10	0.10	0.06	0.10	0.04	0.09	
4	DG3 Supply interruptions (overall performance score)	nr	2	1.98	0.97	11.72	1.14	0.66	0.81	0.44	0.79	
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	99.97	
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	99.95	
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	99.53	
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	99.50	
10	DG9 % calls not receiving the engaged tone	%	2	100.00	100.00	99.99	99.92	99.97	99.99	99.99	99.98	
11	Overall Performance Assessment (OPA) score (11 Measures)	nr	0	198	216	206	230	228	236	245	246	
12	Total Leakage	Ml/d	0	162	167	166	162	163	162	160	161	
13	Security of supply index	nr	0	100	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	44.3	
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	99.90	
15b	% compliance at consumers tap	%	2	99.63	99.74	99.78	99.74	99.77	99.81	99.83	99.84	
16	% iron compliance at consumers tap	%	2	97.25	98.08	98.95	98.40	98.66	98.85	98.94	98.89	
17	% Service Reservoirs with coliforms in >5% samples	nr	2	0.00	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	149	
19	Completion of nominated trunk main schemes	nr	0	2	0	1	2	1	0	0	0	
20	Completion of nominated water treatment works schemes	nr	0	0	0	3	1	0	0	0	1	
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	1	
D	**Serviceability**											
22	Water infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	
23	Water non-infrastructure serviceability	Text		Stable	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	2	
25	Number of lead communication pipes replaced under the proactive lead replacement programme	nr	0		0	401	1922	1867	1767	2070	1781	
26	Number of school visits	nr	0	138	150	209	277	257	219	246	229	
27	Number of other education events	nr	0	35	38	59	65	64	62	66	143	
28	% Service Reservoirs where sample taps have been assessed and are to required	%	1				0.0	0.0	72.9	98.3	100.0	

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	1	
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	119	
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	94.9	
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	99.5	
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	89.29	
6	Number of high and medium pollution incidents attributable to NI Water	nr	0	18	26	25	21	22	20	16	13	
C	**Sewerage Outputs**											
7	Sewerage activity - Length of sewers replaced or renovated	km	0	24	25	21	17	9	15	11	19	
8	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	38	11	17	26	11	11	8	3	
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	nr	0	12	17	16	3	2	1	6	2	
10	programme	nr	0	14	7	18	4	8	3	8	9	
D	**Serviceability**											
11	Sewerage infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	
12	Sewerage non-infrastructure serviceability	Text		Stable	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	37	
14	WwTWs upgraded to comply with PPC Regulations	nr	0				0	0	1	6	7	
15	Impermeable surface water collection area removed from the combined sewerage network	m^2	0				28,560	54,864	119,200	34,103	59,586	
16	Number of sustainable WwTW solutions delivered (p.e. ≥ 250)	nr	0				1	1	1	2	0	
17	Number of sustainable WwTW solutions delivered (p.e. < 250)	nr	0				0	1	0	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	80.971	
1a	Total operating expenditure (PPP) - water service	£m	3	1.845	8.234	8.431	8.225	9.062	9.323	9.721	9.549	
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	75.556	
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	74.216	
3a	Total operating expenditure (PPP) - sewerage service	£m	3	26.488	24.896	24.323	25.096	25.377	25.693	10.908	12.722	
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	96.699	
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	422.314	
	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	2,672.40	
9	Total net debt	£m	3	868.158	909.323	946.748	980.545	1010.647	1079.329	1330.886	1370.422	
10a	Post tax return on capital	%	2	1.12	1.05	2.96	2.57	2.60		5.72	5.48	
10b	Pre tax return on capital	%	2	1.12	1.05	2.96	2.57	2.60		5.72	5.48	
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	3.31	
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	1.70	
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	1.97	
14	Funds from operations: debt	ratio	2	0.15	0.13	0.13	0.12	0.12	0.12	0.10	0.10	
15	Retained cash flow: debt	ratio	2	0.12	0.12	0.12	0.09	0.10	0.07	0.08	0.09	
16	Gearing: D/RCV	%	2	47.89	46.66	46.74	46.24	47.46	45.86	53.61	52.64	
17	Gearing: D/RCV (adjusted for PPP liability)	%	2		49.12	49.09	48.47	49.45	47.78	56.96	55.84	

Chapter 1
PC15 Outputs
Tables A and B

1.1 Improvements to Drinking Water and Environmental Quality

Drinking Water

Every day we produce almost 600 million litres of clean safe drinking water in order to supply more than 800,000 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 maintained our best ever drinking water quality in 2019.

In 2019/20 we introduced a new treatment plant to enhance the new borehole on Rathlin Island. The borehole has been the only source of drinking water on Rathlin for the last 15 years. The new treatment process removes organic matter, leaving no opportunity for trihalomethanes to form, thereby improving the taste and quality of the water and protecting this vital water source.

We are committed to restoring peatlands and harnessing their natural water filtering capabilities instead of building more carbon-intensive treatment works. In 2019/20 we completed the restoration of the largest expanse of intact blanket bog in Northern Ireland, the Garron Bog, which has improved the quality and reliability of the water received at NI Water's Dungonnell treatment works. Drains were deliberately blocked to recreate bog to filter rain water and reduce the amount of chemicals NI Water needs to clean the raw water. The success of the work undertaken at Dungonnell means it will serve as a demonstration site for best practice and as a model for future bog restoration projects in Northern Ireland and beyond.

In 2020/21 we are trialling a number of pilot studies at Derg water treatment works to remove heavy metals, suspended solids (turbidity) and pesticides including using a form of volcanic crushed rock and recycled brown and green glass to filter the water.

In 2020/21 we are investing more than £4m to improve the Erne and Derg cross-border river catchments that are a source of our drinking water. This includes piloting changes in land management techniques, such as fencing to exclude livestock and replacing boom spraying of the herbicide MCPA for rush control with weed wipers, which helps to reduce the amount of herbicide running off into our rivers and streams. It is hoped these initiatives will help improve raw water quality before it reaches our works.

Water Supply

We look after a water supply network extending to approximately 27,000km in length. Ensuring that customers receive a near-uninterrupted supply of clean and safe drinking water is paramount.

Our changing climate has the potential to bring more frequent and severe weather events, such as heavy rainfall, heatwaves and extreme cold. One way we mitigate the risks associated with more severe weather is by ensuring appropriate storage is available in our service reservoirs.

We started a project in 2019/20 to inform capital investment to further strengthen water storage levels. The project has involved the development of a bespoke model, which allows us to predict areas that need increased water storage for enhanced resilience.

During 2019/20, we competed a new service reservoir at Lough Fea water treatment works. This reservoir has the capacity to hold 12 million litres of drinking water for supply to our customers in Pomeroy and Cookstown.

Over 2020/21, we are investing in additional drinking water storage for Enniskillen in County Fermanagh and at Drumaroad water treatment works in County Down.

Reducing leakage is a top priority for NI Water. In 2019/20 we tested a number of initiatives to detect leakage, including listening devices known as acoustic loggers. We have also improved our ability to understand water consumption by analysing water usage on a minute-by-minute basis. In 2020/21 we will be trialling the use of satellite technologies to locate leaks.

Every minute counts when it comes to fixing water supply problems so we are looking at a range of areas to fix problems before customer are affected. One area we have been looking at over 2019/20 is valves. Research has suggested that a proportion of supply interruptions can be traced back to work on valves, which create surges in water pressure. To ensure work on the underground pipe network does not disrupt the water supply, we have upskilled colleagues and contractors and engaged with external stakeholders who operate our water hydrants including Northern Ireland Fire and Rescue Service (NIFRS), DWI and local councils to keep our network CALM. Other approaches adopted over 2019/20 include the use of temporary overland pipes and water tankers.

We are also learning the lessons from previous interruptions. A review of a supply interruption at Tullywhisker in County Tyrone has led to the introduction of SMART network modelling to more accurately predict the impact of work undertaken on our network.

In 2020/21 we will develop our SMART network to provide information in real time and help predict interruptions to supply and identify leaks. This SMART technology will provide early event warnings, reduce costs by fixing problems before they escalate and improve the customer experience.

Wastewater

In 2019/20 we invested around £3 million to construct a new wastewater treatment works in Ballintoy, County Antrim to improve the water quality in the surrounding coastal areas and support growth in local tourism and development. The first phase of a major upgrade to Dungannon wastewater treatment works was also completed.

Traditional treatment works require a lot of energy, carbon, concrete and chemicals to ensure wastewater can be safely released back to the environment. In 2019/20 we constructed a wetland in Clabby, County Fermanagh, which requires less energy, carbon, concrete and chemicals. We plan to upgrade the existing wastewater treatment works in Ballykelly, County Londonderry, in 2020/21 by constructing a sustainable integrated constructed wetland.

In 2019/20 we completed a £5 million investment to upgrade the sewers at Ormeau Avenue in Belfast, some of which dated back to the late 1800's and were in very poor condition. This investment has reduced the risk of out of sewer flooding by separating the rainwater from the sewer system, and minimising the amount of 'fats, oils and greases' by using a non-stick solution on the new wastewater pumping station walls. This has improved the quality of the water in the River Lagan and facilitates further development within the area.

In 2020/21 we will continue our work with developers to ensure new developments are sustainable and do not increase the flood risk to the site or surrounding area by looking at more sustainable ways of taking storm water out of the combined sewer system. Where this is not achievable we will work with developers to design the storm sewers to reduce the storm flow within the development and release back into our network at a reduced rate over a longer period. This will reduce shock loading to the existing sewer network during extreme rainfall events and reduce the pressures on our combined sewer overflows.

1.2 Delivering Service to Customers

Providing a great service to our customers is core to our business, so it is important that we continue to look for opportunities to help us adapt to changing customer expectations. Advancements in technology and innovation have helped us make great strides in this area. We have set ourselves a challenge to achieve higher Net Promoter Scores, which is an internationally recognised benchmark that spans all sectors, not just utilities. We will achieve this by reducing service failures and resolving issues on first point of contact.

In our ambition to deliver an exceptional customer experience, we are embracing new ways to meet rising customer expectations. In 2019/20, we enhanced our social media platform, to keep our customers informed with live updates on planned and unplanned interruptions. By keeping customers informed of interruptions to their water supply in real-time, they can be assured that we are working on getting their supply problems fixed as quickly as possible, avoiding the need to contact our call centres for updates.

We liaise closely with the National Cyber Security Centre and the Centre for the Protection of National Infrastructure to ensure all our environments are 'Cyber Watertight'. Over 2019/20 we ran a number of phishing-awareness campaigns to highlight cyber risks and will continue this over 2020/21.

In 2019/20 we have continued to promote Quick Check 101. The Quick Check scheme provides reassurance to members of the public about callers to their door claiming to be from utility companies. Anyone who wishes to check the identity of someone who says they are calling on the pretext of inspecting water, gas or electricity can call the police non-emergency 101 number to verify their identity.

We continued to grow and raise awareness of our Customer Care Register to ensure that our services are inclusive, available and accessible to all our customers, regardless of their personal circumstances. Our Customer Care Register offers a range of free additional services for those customers who need extra help, such as an alternative water supply when supplies have been interrupted for a prolonged period. In 2020/21 we will seek to engage with a range of community groups to further promote this service.

In an environment of increasing customer expectations and reducing budgets, we are continually looking for ways to provide a better customer experience. One way we are succeeding in this, is through using software robots. These robots help us to automate repetitive tasks at digital speeds and at any time of the day or night, providing staff with the ability to focus on tasks which require human intervention, judgement or experience. The robot can be programmed to perform repetitive tasks and free up our staff to spend more time helping customers on more complex tasks.

In 2019/20, we developed software robots for our Treasury Team who manage large volumes of financial transactions and our Work Control Centre who manage the allocation of our repair crews in response to issues in our water and sewerage networks. The use of robots has particularly strong customer benefits. Our Treasury Team now spends less time manually uploading bank statements and more time on optimising the cash needs for operating and investing activities. Our Work Control Centre can now spend more time on repeat network blockages. We are looking to identify further opportunities to implement software robots in other areas of the business.

In 2020/21 we are investing around £3 million in a new digital services platform, which will enable us to replace existing manual and paper based processes with a modern web-based self-service. This will allow customers to interact with our business at a time that is convenient to them to make applications for new connections to our network, track progress and make payments.

1.3 Delivering Sustainable Services

As Northern Ireland's single largest electricity consumer, our goal is to fully exploit innovative approaches to energy and new technology to reduce our carbon footprint and ultimately become carbon neutral by 2050. We are already taking significant steps. In 2019/20 we successfully achieved the ISO 50001 certification, the international standard for energy management systems which will allow us to achieve continual improvement in energy performance. In 2020/21, we are aiming to increase our electricity consumption from renewable sources such as solar and hydro power, ultimately reaching 100% by 2027.

We are proud of our unique education programme, which includes the Waterbus mobile classroom initiative. Within the last 12 years we have educated over 216,000 school children about the value of water for health, the economy and nature, visiting more than 200 schools in 2019/20 alone. We were delighted to have our contribution to society recognised in 2019/20 by winning the International Corporate Social Responsibility Excellence Award.

Carbon Footprint [awaiting final figures]

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 12%, decreasing from 90,364 t/CO2e in 2018/19 to 79,328 t/CO2e in 2019/20. This equates to 0.118 tonnes of carbon dioxide equivalent per million litres of treated water in 2019/20 (2018/19: 0.139 tCO2e/Ml) and 0.386 tonnes of carbon dioxide equivalent per million litres of treated wastewater in 2019/20 (2018/19: 0.432 tCO2e/Ml).

The annual carbon emissions resulting from the purchase of electricity have decreased by 8.27%, decreasing from 81,876 t/CO2e in 2018/19 to 75,111 t/CO2e in 2019/20.

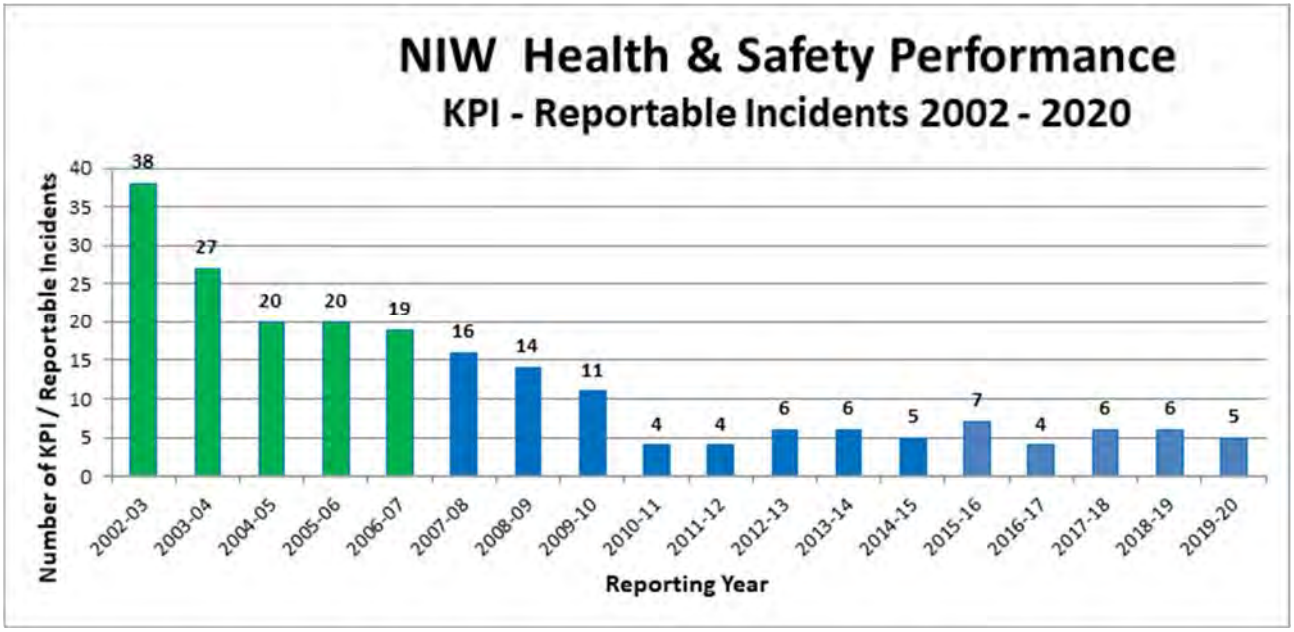
1.4 Health and Safety

NI Water continues to work closely with all our contractor partners and staff in order to seek to ensure that we always provide a safe, healthy work environment for all.

A new Corporate Health and Safety Strategy and Action Plan has recently been developed focusing on four key areas: Facilities' Management, Health and Safety Management System, Safety Health and Environment Software, and Cultural/Behavioural Development.

NI Water had five reportable workplace incidents during 2019/20, each of which resulted in more than three days' absence from work. This was well within our corporate H&S target of not more than seven work related incidents and was a reduction from six incidents in the previous reporting year. Each lost time incident at NI Water is reviewed by both our SHE Team and our Health & Safety Focus Group seeking to learn from and further improve safety.

The table below shows 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 2019/20 NI Water has received approximately £64m less Capital DEL funding (excluding £29m for the acquisition of Alpha PPP) than was assumed in the Utility Regulator's PC15 final determination. We have benefited from lower inflation, meaning that this funding 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.

In advance of the commencement of 2019/20, NI Water 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 did not exceed the total anticipated funding envelope for PC15, it necessitated a capital budget in 2019/20 of c. £171m and c. £123m in 2020/21.

Ultimately, this level of funding was not available in 2019/20 and, as a consequence of the resulting late start of multiple projects, several nominated outputs will not achieve beneficial use in the PC15 period. The biggest impact will be on the delivery of wastewater treatment and UID outputs.

1.6 PC15 Targets for 2019/20

Tables 1.1 and 1.2 below provide a tabular summary of NI Water's delivery of services and outputs in 2019/20 compared to 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 following targets have not been achieved:

1. **Leakage:**
   Despite the implementation of the new technology to improve leakage detection we did not meet our leakage target of 155 million litres per day in 2019/20, with an actual level of leakage of 161 million litres per day.

   We have struggled with leakage over PC15. Our PC21 Business Plan sets out how we can achieve the sustainable economic level of leakage of 150 million litres per day, which is the point at which the cost of fixing a leak outweighs the benefit. To succeed we need to find more innovative ways to track down leaks and save water. In 2020/21 we are trialling the use of satellite technologies, which use various wavelengths of the visible and invisible light spectrum to locate leaks.

   Leakage detection technology has a key role to play in detecting leakage quickly and with minimal interruption to our customers. In 2019/20 we tested a number of initiatives to detect leakage including, listening devices known as acoustic loggers, which can reduce the time taken to detect leaks, record potential leakage previously undetectable using current tools and improve the accuracy of the location of the leak. Acoustic loggers pinpoint leaks by measuring the noise of escaping water that follows a leak or burst, and then send an alert together with details of its location, allowing

us to focus effort in that area. The rapid detection and pinpointing of leaks means that the job is carried out faster and more precisely, meaning less digging, less water lost, less cost and less disruption for our customers.

We have improved monitoring of domestic consumption habits with the installation of 'fast-logging' at various sites throughout our network providing us with the ability to analyse water usage on a minute-by-minute basis. Over the last number of years we have noted a change in consumption habits during the night, which is the period of time that leakage is assessed. This refinement in understanding consumption patterns will enable us to more accurately calculate the level of leakage.

2. **Properties receiving pressure below reference level (DG2):**
   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, gathered through a variety of non-capital activities. These include:
   - pre/post-rehabilitation logging and analysis,
   - routine pressure logging,
   - operational changes (e.g. rezoning, etc.),
   - RAPID property updates (e.g. new/unknown properties, etc.)
   - customer contact (e.g. low pressure complaints, etc.).

3. **Properties removed from the flood risk register (DG5)**
   Re-phasing of construction as a consequence of the engineering complexity and traffic management constraints of the Ravenhill Avenue sewerage scheme meant that the DG5 target for 2019/20 was not achieved and that the final PC15 target is unlikely to be achieved by the end of 2020/21.

4. **UIDs**
   In advance of the commencement of 2019/20, NI Water 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 did not exceed the total anticipated funding envelope for PC15, it necessitated a capital budget in 2019/20 of c. £171m and c. £123m in 2020/21.

   Ultimately, this level of funding was not available in 2019/20 and, as a consequence of the resulting late start of multiple projects, several UID projects did not achieve beneficial use in 2019/20 and will not achieve beneficial use in the PC15 period.

5. **Small WwTW Compliance:**
   Small WwTW compliance can be influenced and improved both through operational and/or capital interventions. The Rural Wastewater Investment Programme (RWwIP) will deliver capital improvements to 44 small works during the PC15 period. The programme is largely prioritised by compliance.

   Delivery of capital improvements at some of the small WwTW sites is dependent on the successful acquisition of land. In order to maintain progress, capital improvements have been completed at some lower priority sites (with operational or asset condition drivers) that may not contribute to the small WwTW compliance target.

When a WwTW is upgraded through RWwIP it must successfully pass a 14 day sampling trial before it can be classified as in 'beneficial use'. It must then pass a further three month proving period before it will be accepted as compliant by NIEA.

NI Water's available sampling capacity, combined with the need to repeat some sample trials, has meant that the rate of successful sample trials has been outpaced by the rate of construction. As noted below, some small works were constructed in 2019/20 without the subsequent completion of sampling trials and NIEA sign-off. This has negatively impacted the outturn compliance figure for small WwTW.

6. **Small wastewater treatment works delivered as part of the rural wastewater investment programme**
   By the end of 2019/20 a total of 32 small WwTW have been declared to be in "beneficial use" (compared to a target of 36). Construction was complete at a further four sites, awaiting final trial sampling before beneficial use is confirmed. We anticipate achieving the PC15 target by the end of 2020/21.

7. **CSO and EO event and duration monitoring equipment:**
   By the end of 2019/20 we had installed 152 monitors, compared to a target of 289. The PC15 final determination includes a target for the installation of 347 CSO/EO monitors by the end of 2020/21. Following initial investigation of the sewerage network to determine the specific requirements at each CSO/EO, a number of sites were found to have been decommissioned or to lie outside the intended monitoring area. Consequently, we anticipate the installation of 279 monitors in the PC15 period.

   Although the planned number of monitors in PC15 has reduced, the investment required per monitor has increased due to enhanced functionality at each site. For example, for health and safety reasons it has been necessary to move instrumentation into kiosks. In addition, pilot trials indicated that the new monitor design should be mains powered in order to deliver consistent information via telemweb.

8. **Number of sustainable WwTW solutions delivered (p.e. < 250)**
   A sustainable wastewater treatment solution at Lisnagunogue (near Dunseverick, Co Antrim) was not completed in 2019/20 due to a delay in obtaining planning permission for the proposed solar panels that will power the plant.

Table 1.1 – 2019/20 Targets and Outputs: Customer Service and Water

	Units	19/20 FD Target #	2019/20 Outturn
DG2 Properties at risk of low pressure removed from the risk register by company action *	nr	676	677
DG2 Properties receiving pressure below reference level at end of year	nr	456	626
DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	0.15	0.09
DG3 Supply interruptions (overall performance score)	nr	0.98	0.79
DG6 % billing contacts dealt with within 5 working days	%	99.90	99.97
DG7 % written complaints dealt with within 10 working days	%	99.50	99.95
DG8 % metered customers received bill based on a meter reading	%	99.00	99.53
DG9 % Calls not abandoned	%	99.00	99.50
DG9 % calls not receiving the engaged tone	%	99.90	99.98
Overall Performance Assessment (OPA) score (11 Measures)	nr	232	246
Total Leakage	Ml/d	155	161
Security of supply index	nr	100	100
Percentage of NI Water's power usage derived from renewable sources	%	40.0	44.3
% overall compliance with drinking water regulations	%	99.79	99.90
% compliance at consumers tap	%	99.69	99.84
% iron compliance at consumers tap	%	97.10	98.89
% Service Reservoirs with coliforms in >5% samples	%	0.00	0.00
Water mains activity - Length of new, renewed or relined mains *	km	717	731
Completion of nominated trunk main schemes *	nr	3 [1]	3
Completion of nominated water treatment works schemes *	nr	2	2
Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks *	nr	2	2
Water infrastructure serviceability	Text	Stable	Stable
Water non-infrastructure serviceability	Text	Stable	Stable
Number of Catchment Management Plans *	nr	15 [2]	15 [2]
Number of lead communication pipes replaced under the proactive lead replacement programme *	nr	9,220	9,407
Number of school visits *	nr	880	1,228
Number of other education events *	nr	285	400
% Service Reservoirs where sample taps have been assessed and are to required standard *	%	100	100

* PC15 cumulative target / outturn
# Final Determination targets for 2019/20 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
[2] Includes 2 funded by EU INTERREG VA and excludes all out-of-service catchments.

Table 1.2 – 2019/20 Targets and Outputs: Sewerage

	Units	19/20 FD Target #	2019/20 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	54	41
DG5 Properties on the 2 in 10, 1 in 10 and 1 in 20 risk register at the end of the year	nr	126	119
% of WwTWs discharges compliant with numeric consents	%	94.5	94.9
% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	99.2	99.5
Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	94.5	89.3
Number of high and medium pollution incidents attributable to NI Water	nr	24	13
Sewerage activity - Length of sewers replaced or renovated *	km	60	71
Delivery of improvements to nominated UIDs as part of a defined programme of work *	nr	78 [1]	59 [2]
Delivery of improvements to nominated WwTWs as part of a defined programme of work *	nr	14 [3]	14 [4]
Small wastewater treatment works delivered as part of the rural wastewater investment programme *	nr	36 [5]	32
Sewerage infrastructure serviceability	Text	Stable	Stable
Sewerage non-infrastructure serviceability	Text	Stable	Stable
CSO and EO discharges at which event and duration monitoring equipment has been installed *	nr	289	152
WwTWs upgraded to comply with PPC Regulations *	nr	n/a [6]	14
Impermeable surface water collection area removed from the combined sewerage network *	m^2	150,000	296,313
Number of sustainable WwTW solutions delivered (p.e. ≥ 250) *	nr	2	4
Number of sustainable WwTW solutions delivered (p.e. < 250) *	nr	2	1

* PC15 cumulative target / outturn
# Final Determination targets for 2019/20 amended to reflect PC15 change controls and PC13 carry-over.

[1] Includes UIDs added to 2018/19 Final Determination target via Change Control
[2] Excludes PC15 UIDs completed in PC13
[3] Includes 3 WwTW added to Final Determination target: 2 PC13 carry-over (Artigarvan, Castle Archdale) + Loup (via Change Control). Excludes Maghaberry, which is currently treated as an additional output.
[4] Excludes Annacloy WwTW: delivered in PC13
[5] Excludes 1 WwTW (Loup) removed from Final Determination target via Change Control
[6] No target set in Final Determination

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

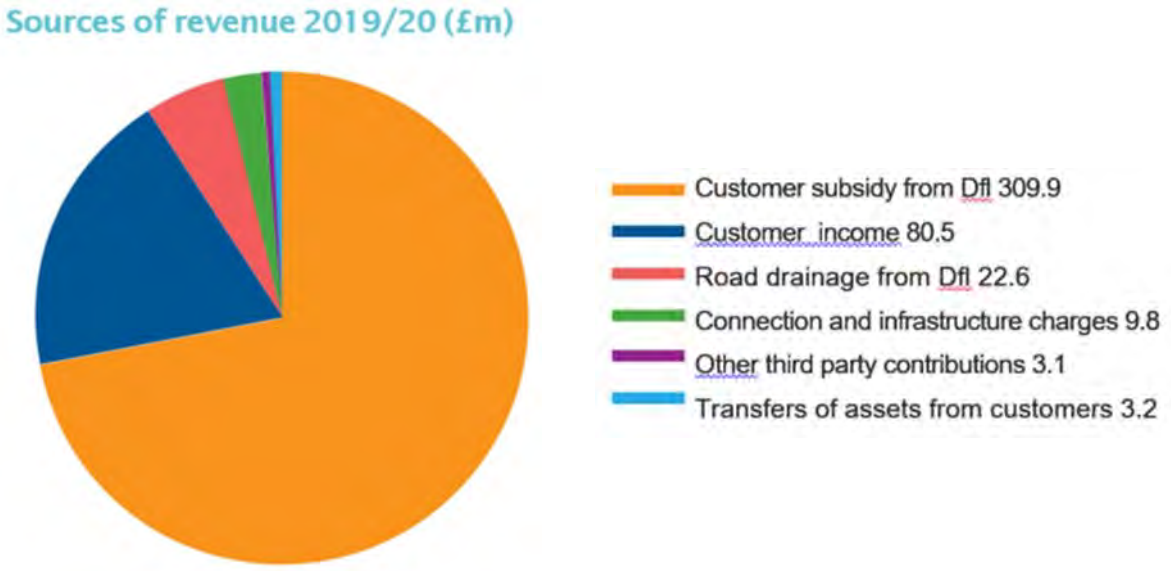
	Year to 31 March 2020 £m	Year to 31 March 2019 £m (restated)
Revenue	**429.1**	416.4
Results from operating activities	**147.3**	141.7
Net finance charges	**(62.8)**	(61.1)
Profit before tax	**84.5**	80.7
Income tax expense	**(36.1)**	(14.5)
Profit for the year	**48.4**	66.2
Other comprehensive (income) / expenditure, net of income tax	**(0.3)**	(9.4)
Total comprehensive income for the period	**48.1**	56.8

Revenue

Domestic consumers are not charged directly for water and wastewater services. As a result, NI Water is dependent on Government subsidy for more than 70% of its total revenue.

Revenue has been stated excluding the value of adopted assets (£46.7m) (2018/19: £34.3m) following the adoption of IFRS 15 "Revenue from Contracts with Customers" in 2018/19. It is considered that the adoption of assets creates a long term obligation to maintain the related assets and therefore the revenue should be spread over the life of the assets through a deferred credit release (£3.3m) (2018/19: £3.1m).

Revenue was £429.1m for the year to 31 March 2020 (2019: £416.4m). Included in revenue was £332.5m (2019: £321.8m) received from DfI, being subsidy of £309.9m (2019: £299.9m) and road drainage charges of £22.6m (2019: £21.9m). All the revenue was in relation to NI Water Limited as subsidiary revenue was all within the Group.

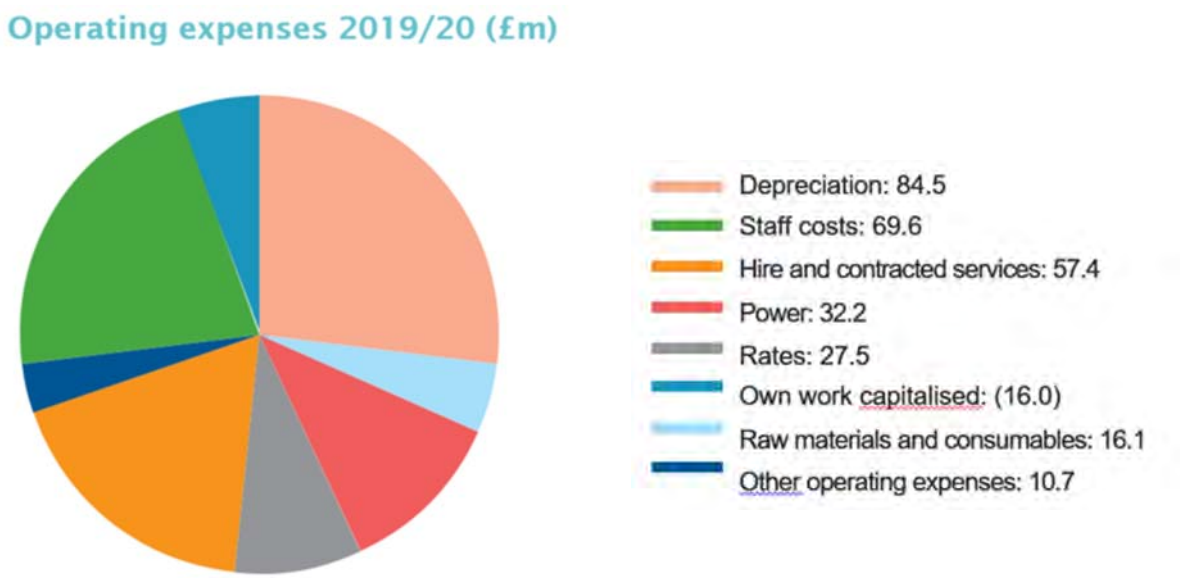


A reduction of £0.8m (2019: nil) to Revenue was made to take account of the estimated impact of Covid-19 on our billed customers towards the end of the financial year. It is expected that there will be a more significant impact in 2020/21.

2.2 Costs (capital and operating) against expectations

Operating activities

Operating expenses in 2019/20 of £282.0m (2019: £275.5m) increased from last year. The increase primarily resulted from higher staff costs relating to the pension scheme (provision for McCloud case (see Statutory Accounts Note D4 for further information)) and depreciation costs as a result of the increased asset base. This was partially offset by lower power costs in the year. Results from operating activities before interest for the year was £147.3m (2019: £141.7m).



Finance income and costs

The net finance costs are primarily due to interest on our borrowings of £50.0m (2019: £49.3m); our Public Private Partnership (PPP) liabilities of £12.2m (2019: £12.6m) and net finance costs on the pension fund of £0.7m (2019: £0.5m). This was partly offset by £0.1m (2019: £1.1m) fair value amortisation in the value of financial liabilities and fair value impairment of senior loan debt and bank interest received of £0.1m (2019: £0.2m).

Taxation

The tax charge for the year was £36.1m (2019: £14.5m). The effective tax rate for the year to 31 March 2020 was (42.6%) (2019: 18%). The increase from 2019 is largely due to the increase in the rate of corporation tax by 2% to 19%.

Distributions

The Board will consider a proposal to declare a dividend of £31.5m in August 2020 (2019: £28.3m).

Capital Structure

The Consolidated Statement of Financial Position (SOFP) at 31 March 2020 is summarised below. In 2019/20 we adopted IFRS 16 Leases. The Group has a limited number of lease contracts and the value added to the asset base at the start of the year

was £2.6m with an equivalent amount added to lease liability. See Statutory Accounts Note A10 for further information.

- Total assets increased by 4.5% to £3,359.1m (2019: £3,210.5m).
- Our net debt figure was £1,367.8m at 31 March 2020 (2019: £1,333.1m).
- Gearing (the ratio of net debt to equity and net debt) was 55.0% (2019: 54.7%).

Summary Consolidated Statement of Financial Position

	At 31 March 2020 £m	At 31 March 2019 £m
Total non-current assets	**3,298.1**	3,152.1
Total current assets	**61.0**	58.4
Total Assets	**3,359.1**	3,210.5
Equity	**1,122.3**	1,102.5
Total non-current liabilities	**2,106.2**	1,975.0
Total current liabilities	**130.6**	132.2
Total liabilities	**2,236.8**	2,108.0
Total equity and liabilities at 31 March	**3,359.1**	3,210.5

Liquidity

Operating activities generated a net cash inflow of £236.3m (2019: £222.7m). Net cash outflows of £179.7m (2019: £185.6m) related to investing activities. Net financing activities created a cash outflow of £60.5m (2019: £30.8m). 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 £186.1m (2019: £187.9m), proceeds from the sale of property, plant and equipment of £1.5m (2019: £0.6m), interest received of £0.1m (2019: £0.2m) and grants received of £4.8m (2019: £1.5m).

Pension funding

The pension scheme was valued at a liability of £42.5m at 31 March 2020 (2019: liability of £35.6m). This was made up of a total market value of assets of £234.0m (2019: £238.3m) less actuarial value of liabilities £276.5m (2019: £273.9m). The increase in the net liability arises primarily due to the lower than expected return on the Scheme's assets and the impact of COVID 19.

Capital

We have invested £2.4 billion in Northern Ireland's water and sewerage infrastructure since our formation in 2007/08.

Around £174m of capital investment was delivered during 2019/20. £94m was invested in maintaining the current assets and a further £80m was invested to deliver quality enhancements, improve service and accommodate growth. Investment of £157m is planned for 2020/21.

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 2020 is £12.35m and £5.22m respectively (2019: £12.0m and £5.23m). The amount included in PPP Creditors at 31 March 2020 is £1.87m (2019: £2.53m).

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 2020 is £125.16m and £84.35m respectively (2019: £123.45m and £86.53m). The amount included in PPP Creditors at 31 March 2020 is £82.41m (2019: £85.35m). 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 2020 is £149.07m and £102.28m respectively (2019: £146.95m and £104.50m). The amount included in PPP Creditors at 31 March 2020 is £107.03 (2019: £110.12m).

On Balance Sheet	**Alpha £k**	**Omega £k**	**Kinnegar £k**
Opex	9,549	12,084	638
Interest	6,037	11,590	588
Total P&L Impact	**15,586**	**23,674**	**1,226**
Capital Repayment	2,947	3,092	658
Life Cycle Maintenance	1,516	2,018	124
Total Balance Sheet Impact	**4,463**	**5,110**	**782**
Total PPP Payments	**20,049**	**28,784**	**2,008**
Effective Interest Rate used to calculate 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 2019/20 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 2020 £'m	At 31st March 2019 £'m
Prior Year Closing RCV	**2,537.9**	2,396.1
Indexation and other adjustments	**65.7**	73.2
Opening RCV	**2,603.6**	2,469.3
Capital expenditure	**137.7**	135.9
Infrastructure renewals expenditure	**26.9**	26.4
Infrastructure renewals charge	**-26.9**	-26.4
Grants & contributions	**-6.6**	-6.5
Depreciation (including capital grants)	**-60.9**	-59.5
Disposal of assets	**-1.4**	-1.3
Closing RCV (pre regulatory adjustments)	**2,672.4**	2,537.9
Regulatory adjustments	**-**	-
Closing RCV	**2,672.4**	2,537.9
Average RCV	**2,605.1**	2,467.0

The PC15 Final Determination includes a number of regulatory adjustments within the roll forward of the PC13 RCV at 31st March 2015. These adjustments are set out in the Utility Regulator's PC15 Final Determination Annex A 'Financing Investment'. Similar adjustments for the PC15 period will be included at 31st March 2021.

Chapter 3

Efficiencies

Using new efficiency models developed with the Utility Regulator, we estimate the gap to the upper quartile company in England and Wales is reduced to 7% in 2018/19 from 49% in 2007/08. We recognise it is progressively harder to deliver efficiencies when quick wins have already been captured but our plan sets out that we will continue our efficiency journey. By the end of PC21 we are proposing to close 80% of the gap to the upper quartile company in England and Wales through 'Planning for the Future' projects.

We have identified ten opportunities to become more efficient and still deliver a high level of service to our customers. We have created a plan called 'Planning for the Future', which we believe will allow NI Water to continue to deliver sustainable efficiencies.

Some of the measures undertaken in 2019/20 to deliver a reduction in day to day running costs are set out below.

Energy

As the biggest user of energy in Northern Ireland, the second largest landowner and with over 3,000 network-connected sites, we recognise our responsibility to reduce use, harness more renewable energy and drive income opportunities.

Dunore solar farm continues generating significant savings as well as enabling the organisation to export spare capacity back to the grid.

Energy use is reducing by continuing to work within water and wastewater production lines. This has been supported by the rollout of real time control technology and process improvements at wastewater sites, undertaking pump optimisation and air bleeding work.

We are also exploring purchasing renewable energy, energy storage and wind generation opportunities.

Production Lines

The implementation of the water production line operating model is delivering an enhanced customer experience whilst focus also remains on building resilience, capability and developing analytics to further drive "end to end" efficiencies.

With a business focus on leakage detection, training and development opportunities are underway.

The Water Asset Performance team is now fully resourced and formation of the Wastewater Asset Performance team will follow with the introduction of the new Wastewater Production Line Operating Model.

Recycling grit material captured at wastewater treatment works is being diverted from landfill disposal.

Capital Efficiency

Developing our integrated partnerships is enabling a more collaborative approach with our supply chain. The integrated partnerships tender process is well underway and transition planning is ongoing for both internal staff and the supply chain.

The software management programme 'Primavera P6' is being piloted on a number of projects helping to improve efficiency and collaboration in programme planning.

Customer Experience / Digital

We are building on the strong foundation provided by our existing self-service portal and developing a digital platform that will enable both domestic and non-domestic customers to access a wide range of NI Water services on demand and on a self-service basis.

The digital services tender has been awarded, with design development underway with stakeholders.

The metering and billing project continues to benefit from data quality improvements.

Robotic process automation (RPA) has been successfully implemented in our work control centre blocked sewer process and treasury bank statement uploads. Other potential business areas are being explored to rollout further RPA.

Commercial Excellence

Following the development of a new Commercial Operating Model, the new commercial contract management team are in place and will be responsible for all strategic and key operational contracts.

The new Commercial contract management system is up and running. The system is enabling us to build greater capability and drive value from our supply chain.

Business Analytics

We are growing our analytics capability to drive new value through identifying opportunities and solving business problems.

With respect to water source optimisation, work is underway in various supply zones to produce and supply water at the lowest cost, while maintaining the highest quality.

The energy management system (rolled out and in operation to approximately100 users) has brought greater transparency to electricity data and valuable insight for operational staff.

SBRI funding has been secured for machine learning and artificial intelligence projects in water and wastewater treatment.

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.

Annual Information Return 2020

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:-

- Antrim Probus Group, April 2019
- One Mind One Day, May 2019
- Balmoral Agricultural Show, May 2019
- Environment Day-HMRC, June 2019
- Northern Ireland Civil Service Event, June 2019
- Institute of Civil Engineers Event, June 2019
- Music on the Park, June 2019
- Good Morning Ballymena, June 2019
- Myola Precision Engineering, August 2019
- Moira Friendship Group, August 2019
- Crumlin Men's Shed, August 2019
- Girdwood Men's Health Day, October 2019
- Antrim Castle Event, November 2019
- Glen Community Winter Event, November 2019
- Royal Victoria Hospital, January 2020
- Newtownabbey Senior Citizens Forum, January 2020

- 50Plus Event, February 2020
- Ballygowan Seniors Event, February 2020
- Harbour Community Group, Larne, February 2020
- Moira Friendship Group, March 2020

Events that were attended on request:

- Concentrix, April 2019
- Giants Causeway Sportive Event, June 2019
- Impact Training, June & September 2019
- Belfast Culture Night, September 2019
- Lisburn & Castlereagh Council Winter Event, December 2019
- Springvale Training Centre, January 2020
- Northwest Regional College, January 2020

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.

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

Demand for Key Stage 3 classroom and assembly visits have continued to grow through the introduction of our new 'Refill' campaign along with our already established delivery mechanisms such as Home Economics, Geography and Science subjects. 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:

- Waterwise Leaflet
- Promotional and educational leaflets
- School water audits
- Water efficiency bookmakers
- Interactive games encouraging conservation
- Save-a-Flush
- Shower timers (4mins)
- Water cycle poster (teacher's aide)

Water efficiency leaflets are also 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 2019/20 NI Water has distributed 422 CDD's at school visits, community talks, shows and at the request of organisations. All teachers were also issued with a sample pack. Community Groups receiving presentations on water conservation also received save-a-flush.

The calculation for the water savings achieved in 2019/20 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*(422*0.7) = 41,453.125 l/per day = 0.00923125 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 108.

The calculation for the water savings achieved in 2019/20 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*108 = 123,120 l per year:
123,120/365 days = 337.315068 l per day = 0.00033732 Ml/day

3. Household Water Audits

During 2019/20 the self-water audit for domestic households, which can be accessed through the company's website, have been 396 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, 396 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, 3832 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 2019-20 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: 3832* 0.23* 5 = 4,406.80 l/per day = 0.0044068 Ml/d

D*I *S= Savings in litres

5. Trigger Guns

There were 13 trigger guns were distributed through allotment talks and at 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.

The calculation for the savings achieved in 2019/20 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 13*1* 2 = 26 l/per day= 0.000026 Ml/d

6. Water Audits Completed by Company

No audits were completed in the homes of customers 2019/20

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.

7. Water Audits

During 2019/20 reporting period, 227 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: 227*0.20*10 = 454 l/per day = 0.000454 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 143 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 have been designed for Key Stage 2 (P5-P7) and we work closely within the revised NI curriculum. This service has been well received by the Education Authority (EA) and we have reached 53,709 KS2 and KS3 pupils during 2019-20 school year with our key messages on water efficiency.

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 wastewater along with the importance of why we should not waste water. We consider educational interaction 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 continuous increase in delivery with demand for visits reaching an all-time high third year running, so much so that we are struggling to meet this demand and have had to draw up a waiting list for delivery in the new 2020-21 school year. One previous recommendation from 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 to meet the ever increasing demand on this service.

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 water efficient in the future. During this past year, NI Water's education site which includes water efficiency tips has had 3627 views and we have also seen 2458 views on our water saving site.

www.niwater.com/education-and-the-community/

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 it**
  www.niwater.com/bag-it-and-bin-it-interactive/

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?**
  www.niwater.com/why-save-water/

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

- **Silent Valley**
  www.niwater.com/silent-valley/

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 this past financial 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 **51** media (print, broadcast and online) items with an overall financial value of **£25k** and has reached a potential audience of over **1m**.

NI Water has also highlighted throughout the year the issue of water efficiency and in particular the potential for frozen pipes as part of its “Winter Preparation Campaign”. The campaign generated **74** articles (58 print, 3 radio, and 13 online) media items relating to NI Water's Winter Preparation between November 2019 and January 2020, generating **£67k** financial PR value reaching approximately **2.5m** people.

This specific message of preparing your property for winter was a strong one as it was a call to action by property owners to protect their properties from the freeze. A number of winter meetings were attended, targeting specifically aimed at the vulnerable and elderly in preparation for winter, through organised council and stakeholder events. There was also distribution of winter information to school children, to estate agents and commercial businesses, with instructions of what to do to prevent frozen pipes and what to do if they got a burst. It was positively received. Some of the campaigns are as follows:-

- Frozen Pipes Can Flood Homes / Insulate Your Pipes
- Winter Campaign Launch Water continues to ‘flo’ freely through our pipes all winter long
- ‘Wrap up your home
- Utilities Winter Readiness Campaign
- Two step pipe check
- Watersafe promotion

On reaching the end of this financial year (March 2020) the situation around the COVID-19 Virus Pandemic has resulted in a lockdown whereby most of the population have been spending more time at home, resulting in higher domestic water usage. The NI Water Communications Team have been busy planning on media campaigns (including social media) around promoting water efficiency whilst at home, including tips on how best to

conserve water when using household appliances. We have also seen during this time how water has become an important component in combating this virus through the Public Health Agency's guidelines on hand washing etc. Also as a result of COVID-19 we had to cancel 24 school visits during March 2020. These schools have been placed back onto the waiting list and will be allocated dates in the new school year 2020/21.

Efficiency Method	**Total**	**Cost £**	**Savings per Ml/ day**
Household			
Measurable Methods			
Cistern Devices (0.57p each)	422	240.54	0.00923125
Water butts (£38.16 each)	108	2,521.80	0.00033732
Self-audit (On Line)	396		0.000396
Total		**2,762.34**	**0.00996457**
Other Measurable Methods			
Shower timers (£1.10 each)	3832	4,176.88	0.0044068
Gel Bags (£4.75 each)	0	0	0.0000000
Trigger Guns (£4.83 each)	13	62.79	0.000026
Shower Heads (£27.90 each)	0	0	0.0000000
Education Depart (UKWIR)		57,326.75	1.303476.3
Total		**61,566.42**	**1.3079091**
Leaflets			
How water wise are you (0.10peach)	6,709	670.90	
Freezing Pipe (0.17p each)	4,510	766.70	
Total leaflets	**11,219**	**1,437.60**	
PR items			
Bookmark- "Flo" kids (0.07p each)	6,689	468.23	
Game: Snakes and Ladders (0.18p each)	547	98.46	
Stop Tags (0.43p each)	6,442	2,770.06	
Tap cover (£4.66 each)	0	0.00	
Ice scraper (0.73p each)	65	47.45	
Thermometer (0.76p each)	221	167.96	
Total PR	**13,964**	**3,552.16**	
Non Household			
School Audits(0.19p each)	227	43.13	0.000454
Total		**69,361.65**	**1.31832767**

NI Water has a large range of leaflets that p `1romote 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 £1,437.60

Assumed Savings

Household-Water Efficiency Methods = 0.00996457
Other Water Efficiency Methods = 1.3079091
Non Household-Water Efficiency Methods = 0.000454
The total recorded savings are **= 1.31832767**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	0.419
Medium	0.411
Totals	**0.830**

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 Ml/day
2012/13	0.227 Ml/day
2013/14	0.219 Ml/day
2014/15	0.304 Ml/day
2015/16	0.299 Ml/day
2016/17	0.517 Ml/day
2017/18	0.502 Ml/day
2018/19	0.782 Ml/day
2019/20	0.830 Ml/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	883.4	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	719	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	626	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	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	129	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	115	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	4.7	B2	18.7	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	49,181	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	6,157	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	751	A3		
8	More than 24 hours	nr	0	1,554	B3	12	B3	13,788	B3	32	A3	0	A3	0	A3	0	A3	23	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	28,245	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	11,463	A3		
11	More than 12 hours	nr	0	0	B3	0	B3	44	B3	0	A3	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	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	2,712	A3		
14	More than 6 hours	nr	0	561	B3	121	B3	974	B3	476	A3	842	A3	1,145	A3	2,780	A3	166	A3		
15	More than 12 hours	nr	0	1	B3	33	B3	1	B3	0	A3	30	A3	193	A3	0	A3	0	A3		
16	More than 24 hours	nr	0	0	B3	0	B3	0	B3	0	A3	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	222	A3		
18	More than 12 hours	nr	0	60	B3	20	B3	16	B3	159	A3	417	A3	1,107	A3	0	A3	0	A3		
19	More than 24 hours	nr	0	0	B3	5	B3	0	B3	140	A3	0	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	1,914.49	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	0.0	A1		
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	0.0	A1		
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	0.0	A1		

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 AIR20 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 alone does not support in the explanation of gross movements within the data. With this is mind, during the 19/20 reporting year the CSD Services MI & Data Team explored the use of Power BI to re-create the RPS with a drill down function to display the gross movement. The Power BI property models developed take their direct feed from the Diamond Warehouse in order to refresh. These models provide us with information on gross movements and allow us to 'slice and dice' the data from various angles, providing invaluable insights. The plan is to further enhance and incorporate these models across the business during 2020/21.

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 AIR19 and the AIR20 figures is 9116. The breakdown can be explained as follows:

1. New Connections during the 2019/20 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.
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 chair 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 2019/20, the continued 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

The PIG Strategy for 2020/21 will include the following:

- New Connections - A push to move to on-system reporting following the Business Improvement New Connections Review
- Further use of PowerBI – We currently use Power BI to create and issue the monthly Rapid Property Summary (RPS) and will continue to explore the use of Power BI in other aspects of our property work throughout 2020/21
- 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.

- Continued monitoring of data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – Ongoing data sharing project that commenced in August 19
- 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. 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 – monitor numbers of '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 719, as reported in line 3 of the AIR19 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 53 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 626.

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 7 DG2 Investigation Reports (DIR) resulting in 115 properties being removed from the DG2 register due to company action in AIR20, 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
South_SouthEast	2
Tully	7
Tardree	5
Dungonnell	3
Ballyholme_Portstewart	50
Crosshill Raloo	42
Divernagh	6
Total	**115**

South_SouthEast DIR – South Phase 1 Work Package covered a total area of 1103 km2 to the North and West of Enniskillen Town and the surrounding area in Co. Fermanagh. The area supplies an estimated 23,368 properties and contains approximately 1644 km of mains. As a result of this package a total of 8 properties were removed from the register – 8 due to Better Information and 2 due to company action.

Tully DIR – Tully Work Package predominately covers the rural area to the North of Randalstown, a small settlement east of Ballymena covering a total area of 138km2. The area supplies an estimated 3783 properties and contains approximately 200km of mains. There were 7 properties removed from the register following the completion of this work.

Tardree DIR – Tardree Phase 1 Work Package mainly consists of rural zones and is on the outskirts of the town of Ballymena covering a total area of 116.9 km². The area supplies an estimated 3628 properties and contains approximately 240km of mains and 10 DG2 properties. As a result of this work Package 4 properties were removed due to improved information and 5 due to company action.

Dungonnell DIR - Dungonnell Work Package (JB680) is a predominately rural area between Ballymena and Maghera, covering a total area of 141.6km2. The area supplies an estimated 5247 properties and contains 285km of mains and 3 DG2 Properties. All 3 properties were removed as a result of the work here.

Ballyholme Portstewart DIR – The Ballyholme South and Portstewart Work Package covered an area outside the seaside resort of Portrush, including 2 DMA's; Maddybenny Portstewart HighLevel and Scudion Craig with total mains length of 112km. Analysis identified 50 properties on the DG2 register which were receiving pressures in excess of 15m at their boundary, owing to works delivered by the JC401 Royal Portrush Rehabilitation Programme Works Package.

Crosshill Raloo DIR - WSP undertook a review of the DG2 register, analysis identified 43 properties on the DG2 register which may have been receiving pressures in excess of 15m at their boundary, owing to works delivered by the Carrickfergus, Killylane North and South and Carrickfergus, Larne Works Packages. Logged locations were selected within Portavoe Donaghadee and Trunk Ballyboley Crosshill DMA's covering an area of 7km2 and containing mains of 42.9km in length. Following this 42 properties were removed from the register due to company action.

Divernagh DIR – This was made up of Ballintemple work package and Carran Hill Crossmaglen work package covering DMA's Ballintemple to Jonesborough DMA and

Divernagh District DMA. This covers an area of 27.8km2 with mains length of 73.7km in total. Following analysis of logged data it was possible to remove 6 properties from the register due to company action.

During AIR20 there were 10 instances of DG2 Properties being removed as a result of Better Information following investigation and logging, which would result in an overall removal of 125 properties over the reporting period.

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 9 different DMA's across the country. A selection of the DMAs affected included Altnaglushan, Dungorn, Knockavannon and Trunk Ballydougan Gilford Road. Following logging procedure a total of 32 properties were added to the register.

The total DG2 movements during the year are summarised in Table 2 below.

Table 2

Year Start	**719**
Additions due to Better Information	32
Removals due to Company Action	115
Removals due to Better Information	10
DG2 Properties Remaining	**626**

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 129 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 3

Removals Due to Company Action	**Number**
Rehabilitation Schemes	115
Infrastructure Improvements	0
Total	**115**

The final number of properties removed due to Company Action is recorded in Table 3 above as 115. This number alongside an exceedance of 46 on the AIR19 target means that NIW has surpassed the cumulative PC15 Target of 675 by 2.

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 2020/21 using predicted pressure from Hydraulic Modelling. The actual pressure will be confirmed by logging before formal removal of properties from the register. Table 4 below lists the Work Packages and the predicted number of properties identified for removal.

Table 4

Work Package Name	No. of Props to be Removed
Brootally/Killyleagh	64
Carran Hill Crossmaglen	21
Blacklough Omagh	8
Kilcoole Gardens Belfast	4
Dairy Lane and Ballymoyer Road N'townhamilton	7
Clonvaraghan Road Castlewellan	1
Meenacloy Road Castlederg	12
Baron Road Loughan Hill	3
Parkgate Road Craigstown DMA	6
Tullaghans area Finvoy/Dunloy	23
Beltany	6
Bannagher Glen	5
Total	**160**

Removals Pending

The total number of properties planned for removal during the 20/21 reporting year from work packages awaiting PPRA is 160.

Work Packages Outstanding

Table 5

Work Packages Outstanding	No. of Props to be Removed
Ballycastle	11
Foy Lane Portadown	5
Total	**16**

There are currently outstanding Work Packages to be completed with the possibility of removal in the upcoming reporting year. This includes the areas detailed in table 5. The completion of these packages would bring the total removals during the 20/21 year to 176.

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 the new reporting year is 835; minus the 2 which has surpassed that target to date meaning a 20/21 removal target of 158 for the year.

Line 4c - Average Capex Cost of Permanent Solutions to Removing DG2 Properties from the Register

The Utility Regulator issued guidance in April 2011 for AIR11 Table 2 which included additional reporting lines for average cost of removing DG2 properties from the Register as a result of Company Action.

This is the fifth year of PC15 that the company has reported this figure and it will allow the benchmarking of NI Water costs. The UR Final Determination Document indicated an average cost per property removed, which appears to be based on historic figures from England and Wales, but the appropriateness of this comparison without a factor to account for the much longer length of main per property in Northern Ireland needs further discussion. The variability of cost per property removed as outlined in the table below is reflective of the current method of delivery of the Water Mains Rehabilitation Programme. Work packages have multiple drivers and assignment of costs to DG2 removal relies on the use of the Enhancement part of the CIDA allocation for the schemes below rather than directly attributable costs. (And includes individual schemes for clusters of properties rather than arising from individual projects designed solely to remove DG2 properties.) NIW will continue to develop these reporting lines to deliver a more robust process for attributing costs to DG2 properties.

The scheme costs and number of properties removed from the register are reported for each WP where a PPRA report was produced. The costs included are for mains, with the primary justification for rehabilitation listed as “Hydraulic”, which were generally replaced with a larger size of main. These mains may have a secondary structural or water quality driver also but there was no cost reduction for asset maintenance or quality enhancement applied. This matches the approach used for CIDA allocation at CIP A1 stage.

Output 2019/20

PPRA reports covering Ballyholme and Portstewart, Divernagh and Slieve Gullion, Crosshill Ralloo and Portavoe, South Phase 1, Dungonnell, Tully and Tardree were produced during 2019-20 which removed a total of 115 properties from the register. These are detailed in the Table below.

Table 7

WP Title	DG2 Properties Removed	Total Cost	Cost Per Removal
Ballyholme and Portstewart	50	£503,700	£10074
Divernagh and Slieve Gullion	6	£181,757	£30292
Crosshill Ralloo and Portavoe	42	£1,018,625	£24252
South Phase 1	2	£245,468	£122734
Dungonnell	3	£38,876	£12958
Tully	7	£124,197	£17742
Tardree	5	£57,026	£11405
Carried Forward Surplus from 2018-2019	46		

WP Title	DG2 Properties Removed	Total Cost	Cost Per Removal
TOTAL Pro Active NIW DG2 Removals 2019-2020	**161 against 160 target**	**£2,169,649**	
Average Cost per DG2 Removal		**£ 18,866**	

The average overall cost of removing a DG2 property from the register is obtained by dividing the total cost £2169649 by the total number of properties removed (115 for this year) utilising the EP Budget. **Average cost per DG2 removal = £18,866**

Workpackage Descriptions

Ballyholme and Portstewart

Through its Water Mains Rehabilitation Programme (WMRP) Northern Ireland Water (NI Water) is replacing and rehabilitating its network assets to improve serviceability levels to its customers. As part of its regulatory undertakings, NI Water is also required to target and monitor the removal of properties at risk of receiving low pressure, which it maintains on the DG2 register.

NI Water commissioned consultants to investigate properties on the current DG2 register which may be removed or added to the register following the completion of the water mains rehabilitation works packages.

A desktop review of the current DG2 register, incorporating hydraulic model analysis on the register was undertaken to identify properties that were potentially receiving pressures in excess of the serviceability standard. The analysis identified 51 properties on the DG2 register which may have been receiving pressures in excess of 15m at their boundary, owing to works which were delivered by the JC401 Royal Portrush Rehabilitation Programme Works Package. These properties were all within the Maddybenny Portstewart HL DMA and Scudion Craig DMA.

Divernagh and Slieve Gullion

Our consultants undertook a desktop review of NI Water's current DG2 register, incorporating hydraulic model analysis on the register to identify properties that were potentially receiving pressures in excess of the serviceability standard. The analysis identified 6 properties on the DG2 register which may have been receiving pressures in excess of 15m at their boundary, owing to works delivered by the JV 024 Ballintemple Watermains, and JV881 Carran Hill Crossmaglen Rehabilitation Programme Works Packages.

Crosshill Ralloo and Portavoe

Again with these two areas our consultants undertook a desktop review of the current DG2 register, incorporating hydraulic model analysis on register to identify properties that were potentially receiving pressures in excess of the serviceability standard. The analysis identified 43 properties on the DG2 register which may have been receiving pressures in excess of 15m at their boundary, owing to works delivered by the JI093 Carrickfergus, JI089 Killylane North and South and JA306 Carrickfergus, Larne Watermains Rehabilitation Programme Works Packages.

South Phase 1

South Phase 1 WP (JP680) encompasses a total area of 1103 km2 to the North and West of Enniskillen Town and its surrounding environs in Co. Fermanagh. The area supplies an estimated 23,368 properties and contains approximately 1644 km of mains.

Dungonnell

Dungonnell WP (JB680) is a predominately rural area between Ballymena and Maghera, covering a total area of 141.6km2. The area supplies an estimated 5247 properties and contains 285km of mains.

Tully

Tully WP (JB694) is a predominately rural area to the North of Randalstown, east of Ballymena covering a total area of 138km2. The area supplies an estimated 3783 properties and contains approximately 200km of mains.

Tardree

Tardree Phase 1 WP (JA210) mainly consists of rural zones and is on the outskirts of the town of Ballymena covering a total area of 116.9 km². The area supplies an estimated 3628 properties and contains approximately 240km of mains.

Further Work Packages to be reviewed next year 2020/21

A spreadsheet listing the Work Packages awaiting completion of PPRA reports was produced and it identifies the estimated number of DG2 properties to be removed during 2020/21 using predicted pressure from Hydraulic Modelling. The actual pressure will be confirmed by logging before formal removal of properties from the register. The table below lists the Work Packages and the predicted number of properties identified to date for removal. (This may rise or fall with further investigation or some omissions throughout the year)

Table 8

Work Package Name	No of properties to be removed
Brootally/Killylea	64
Carran Hill Crossmaglen	21
Blacklough Omagh	8
Kilcoole Gardens Belfast	4
Dairy Lane and Ballymoyer Road N'townhamilton	7
Foy Lane Portadown	5
Clonvaraghan Road Castlewellan	1
Ballycastle	11
Meenacloy Road Castlederg	12
Baron Road Loughan Hill	3
Parkgate Road Craigstown DMA	6
Tullaghans area Finvoy	23
Beltany	6
Bannagher Glen	5
TOTAL	**176 against 159 target**

Removals Pending

It should be noted that there are currently 176 properties identified for removal from the register in 2020/21 to a target of 160 in the plan following the submission of PPRA Reports.

The 2019/20 target was for the removal of 160 DG2 properties and the actual achieved removals was 1 over this figure. And so in reality the totals are 176 planned for next year against a 159 (i.e. 160-1) target to get NI Water up to the planned cumulative target for end of next year.

These removals are subject to the completion of rehabilitation work, collation of pressure data and submission of completed reports. In previous years, more detailed work throughout the year resulted in more DG2s being delivered than planned .These reviews are ongoing.

Note: - Due to the current countrywide lockdown because of the coronavirus pandemic there has been a delay on construction work and therefore this target may prove difficult to achieve with some construction scheme unable to be completed in time. In an effort to try an alleviate this there have been some additional removals planned (i.e. 176 against 159) which will allow for any potential slippage.

Confidence Grade Line 4c

The confidence grade for this line has remained at B2 this year this has been achieved by the Asset Delivery Team ,and the Asset Performance Team working together to analyse the granularity of the returns and to improve the accuracy of the methodology and figures.

This was done by analysing the scheme approval analysis that presents the contribution from each of the investment drivers (structural improvements, water quality, operational issues (leakage) and hydraulic drivers (DG2).

Individual scheme outputs are provided separately to show how each calculation was carried out.

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 **883,423** as confirmed by CSD Services in AIR20 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	**2017/18** (inc. Aug severe flooding)	**2017/18** (exc. Aug severe flooding)	**2018/19**	**2019/20**
Table 2: Line 5	More than 3 hours	108,386	104,696	58,816	**49,181**
Table 2: Line 6	More than 6 hours	6,097	4,643	3,509	**6,157**
Table 2: Line 7	More than 12 hours	861	190	308	**751**
Table 2: Line 8	More than 24 hours	0	0	0	**23**

The AIR20 outturn number of properties affected by unplanned, unwarned interruptions that lasted **more than 3 hours** was the lowest since the AIR14 outturn of 41,412 and the third lowest since regulatory reporting commenced in 2007/08. As previously stated in the AIR19 commentary, the main reason for this significant reduction is a change in methodology. Prior to 2018/19, 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. Detailed reviews have continued throughout 2019/20 but on a day-to-day basis as opposed to retrospectively.

As the 2019/20 outturn of 49,181 was less than the previous year's outturn of 58,816, the Company has examined its records of 'no water' complaints for the same period to see if there was any correlation. The results in the following table confirm that the number of 'no water' complaints received in 2019/20 as a percentage of the total complaints received in the last two years *(46.3%)* was consistent with the 2019/20 Table 2 Line 5 outturn as a percentage of the combined outturns for the last two years *(45.5%)*. As these two percentages are similar and the data sources are different, this is good evidence that the 2019/20 outturn number of properties is consistent with expectations and not unduly lower.

	2018/19	2019/20	2018/19 + 2019/20	2019/20 Percentage
'No Water' Complaints	20,153	17,361	37,514	46.3%
Table 2 Line 5 Outturn	58,816	49,181	107,997	45.5%

Progress continues to be made as proposals and initiatives identified under the ITS Strategy are implemented across the business. The Company has commenced a Post Interruption Review (PIR) process, the aim of which is to establish learning points from ITS events. Significant engagement work has been undertaken with the implementation of the new 'Working Differently' process aimed at reducing the Company's lost minutes per property outturn from planned work. Additional equipment has been purchased to assist colleagues and the benefits of such initiatives are already being realised, for example, tanker operations during the Dungonnell to Parkmore incident.

In 2019/20, 6,157 properties experienced an unplanned, unwarned interruption that lasted **more than 6 hours**. Despite being 75% more than the previous year's outturn, it was still the fourth lowest since regulatory reporting commenced in 2007/08.

751 properties experienced an unplanned, unwarned interruption that lasted **more than 12 hours**. Despite being more than double that of the previous year's outturn, it was still the third lowest since regulatory reporting commenced in 2007/08.

23 properties experienced an unplanned, unwarned interruption that lasted **more than 24 hours**. It was the first year since 2015/16 that any properties experienced an interruption to supply of more than 24 hours.

In 2019/20, there were no atypical events as such but six events had a greater negative impact on performance than any others. The following table provides a summary of the six events, all of which were considered by the Company to be major incidents.

Event	>6hrs		>12hrs		>24hrs	
	Props	%	Props	%	Props	%
Multiple bursts on trunk main between Tullywhisker and Rakelly SRs	1,824	0.206	233	0.026	23	0.003
Burst main, Craigstown Road, Kells	626	0.071	463	0.052	0	0.000
Burst main, Jacksons Road, Holywood	400	0.045	33	0.004	0	0.000
Pump equipment failure, Aghalislone TWPS, Oldpark Road, Lisburn *(Boomers Hill SR)*	386	0.044	0	0.000	0	0.000
Burst main, Lettermire North SR, Foreglen Road, Londonderry	49	0.006	22	0.002	0	0.000
Burst main, Stewartstown Road, Dunmurry	437	0.049	0	0.000	0	0.000
Total for all six events	**3,722**	**0.421**	**751**	**0.085**	**23**	**0.003**

The combined >6hrs impact of the six events was 3,722 properties *(0.421% of total connected properties)* and accounted for 60% of the total outturn for the year. The most significant was the Ardstraw event when multiple bursts occurred on the trunk main between Tullywhisker and Rakelly Service Reservoirs at Ardstraw, Newtownstewart. Learnings from this particular event are to be implemented through the ITS Project Board, including the maintaining of supply trailers to increase NI Water's response capability in relation to ITS events. For a detailed explanation of the six events and their impact, please refer to the section of the commentary on Major Incidents during the Report Year.

The quest to determine accurate times and property counts associated with the six events prompted NI Water to take a different approach than it had done previously.

For the first time, the Company used network modelling to assess the impact of complex unplanned interruptions involving multiple off/on times throughout. This involved working with colleagues in other parts of the business with an expertise in the field of network modelling and the results obtained not only serve as evidence of the Company's commitment to ensuring data accuracy but they also form an important element of the overall audit trail.

NI Water plans to continue to use network modelling in the future and it has become apparent that a solution is needed that will enable the results of these exercises to be more easily uploaded to the IMS system used to capture the details of supply interruptions. It has therefore been proposed that in 2020/21, the IMS system *(now approaching the start of its seventh year in operation)* is rebuilt to facilitate this and other such proposals.

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

DG3 Interruption Events	2017/18	2018/19	2019/20
More than 3 hours	354	269	**279**
More than 6 hours	108	33	**59**
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 2019/20, 279 planned and warned interruptions lasted more than 3 hours of which 124 *(44%)* were related to the Water Mains Rehabilitation Programme *(WMRP)*. During the same period, 59 planned and warned interruptions lasted more than 6 hours of which 42 *(71%)* were associated with mains rehabilitation.

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

AIR	DG3 Properties Affected	2017/18	2018/19	2019/20
Table 2: Line 9	More than 3 hours	38,225	38,289	**28,245**
Table 2: Line 10	More than 6 hours	14,809	7,313	**11,463**
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 2019/20, 28,245 properties were affected by planned and warned interruptions that lasted **more than 3 hours** of which 15,600 *(55%)* were related to the Water Mains Rehabilitation Programme (WMRP). The Line 9 outturn was the second lowest since regulatory reporting commenced in 2007/08. During the same period, 11,463 properties were affected by planned and warned interruptions that lasted **more than 6 hours** of which 8,255 *(72%)* were associated with mains rehabilitation. The Line 10 outturn was the third lowest since regulatory reporting commenced.

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

Time Band		2017/18	2018/19	2019/20
More than 3 hours	Properties	14,863	25,721	**15,600**
	Events	168	124	**125**
	Properties per Event	88	207	**125**
More than 6 hours	Properties	7,076	6,059	**8,255**
	Events	81	24	**42**
	Properties per Event	87	252	**197**

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

The Company's commitment to minimise disruption to its customers' water supply has resulted in a reduction in the number of properties affected per event and a decrease in the annual number of properties affected for more than 3 hours from the previous year. In addition, it is also consistent with a decrease in overall meterage installed under the Water Mains Rehabilitation Programme from the previous year, i.e. water main distribution meterage installed in 2019/20 was 149km, compared to 167km in 2018/19, 126km in 2017/18, 163km in 2016/17 and 112km in 2015/16.

Increases in events and the number of properties affected more than 6 hours were related to interruptions associated with the completion of work packages in densely populated urban areas and in light of this increase, consideration should be given that the table does not portray that 114 planned and warned interruptions were carried out in less than 3 hours within 2019/20.

For the fifth 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	2017/18	2018/19	2019/20
Table 2: Line 13	More than 3 hours	4,078	12,089	**2,712**
Table 2: Line 14	More than 6 hours	1,145	2,780	**166**
Table 2: Line 15	More than 12 hours	193	0	**0**
Table 2: Line 16	More than 24 hours	0	0	**0**

In 2019/20, 2,712 properties experienced an unplanned interruption caused by a third party that lasted **more than 3 hours**. It was the seventh lowest since regulatory reporting commenced in 2007/08 and the lowest since the AIR14 outturn of 2,452. 31 events lasted more than 3 hours, the most significant of which occurred on 25th February 2020 when a gas contractor damaged a main at Upper Road, Carrickfergus. 925 properties were affected by the incident, 34% of the outturn.

In 2019/20, 166 properties experienced an unplanned interruption caused by a third party that lasted **more than 6 hours**. It was the fourth lowest since regulating reporting commenced in 2007/08 and the lowest since the AIR14 outturn of 121. 3 events lasted more than 6 hours, the most significant of which occurred on 9th February 2020 when a road contractor damaged a main at Lismacarol Road, Drumahoe. 73 properties were affected by the incident, 44% of the outturn.

For the second year in succession, no properties experienced an unplanned interruption caused by a third party than lasted **more than 12 hours**. And for the ninth 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	2017/18	2018/19	2019/20
Table 2: Line 17	More than 6 hours	1,630	159	**222**
Table 2: Line 18	More than 12 hours	1,107	0	**0**
Table 2: Line 19	More than 24 hours	0	0	**0**

In 2019/20, the number of properties that experienced an overrun of a planned and warned interruption that lasted **more than 6 hours** *(222)* was the second 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.

	2017/18			2018/19			2019/20		
	Planned >6hrs	Planned Which Overran	%	Planned >6hrs	Planned Which Overran	%	**Planned >6hrs**	**Planned Which Overran**	**%**
Events	38	11	28.95	38	5	13.16	**62**	**4**	**6.45**
Properties	16,439	1,630	9.92	7,472	159	2.13	**11,685**	**222**	**1.90**

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. Although the number of planned and warned interruption events that lasted more than 6 hours increased from 38 to 62 in 2019/20, the percentage of interruptions that overran decreased from 13.16% to 6.45%.

For the second year in succession, no properties experienced an overrun of a planned and warned interruption that lasted **more than 12 hours**. And for the fourth 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	17/18 Outturn		17/18 KPI Target		18/19 Outturn		18/19 KPI Target		**19/20 Outturn**		**19/20 KPI Target**	
	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	**(Props)**	**(%)**	**(Props)**	**(%)**
>6 hrs	6,097	0.706	7,073	0.820	3,509	0.401	6,973	0.798	**6,157**	**0.697**	**6,873**	**0.778**
>12 hrs	861	0.100	1,400	0.162	308	0.035	1,350	0.154	**751**	**0.085**	**1,300**	**0.147**
>24 hrs	0	0.000	80	0.009	0	0.000	80	0.009	**23**	**0.003**	**80**	**0.009**

Note: Percentage outturns in above table are based on total connected properties as follows: 862,988 (AIR18); 874,307 (AIR19); 883,423 (AIR20)

The 2019/20 outturns for properties affected by unplanned, unwarned interruptions confirm that for the fourth year in succession, NI Water has achieved all three DG3 KPI targets. The >6hrs outturn of 6,157 was the fourth lowest since regulating reporting commenced in 2007/08 whilst the >12hrs outturn of 308 was the third lowest. It was the first year since 2015/16 that any properties experienced an unplanned interruption to supply of more than 24 hours. All 23 properties were associated with the Ardstraw event when multiple bursts occurred on the trunk main between Tullywhisker and Rakelly Service Reservoirs at Ardstraw, Newtownstewart. *(For further details, see section of commentary on Major Incidents during the Report Year)*

2018/19 was an unexceptional year in terms of major incidents involving supply interruptions. 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 the year remained insignificant in terms of atypical performance.

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 2019/20 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	Planned	185093	21/08/19	00:05	21/08/19	05:00	4 Hrs 55 Mins	1,384	1,384	0
2	Unplanned	185310	20/09/19	00:00	20/09/19	04:15	4 Hrs 15 Mins	94	94	0
3	Planned	185518	18/10/19	00:45	18/10/19	05:00	4 Hrs 15 Mins	32	32	0
4	Unplanned	185878	27/11/19	01:46	27/11/19	06:14	4 Hrs 28 Mins	14	14	0
5	Unplanned	186028	18/12/19	01:00	18/12/19	06:30	5 Hrs 30 Mins	71	71	0
6	Unplanned	196353	08/02/20	00:40	08/02/20	04:50	4 Hrs 10 Mins	61	61	0
7	Unplanned	196528	01/03/20	00:45	01/03/20	05:30	4 Hrs 45 Mins	45	45	0
8	Planned	196665	16/03/20	00:00	16/03/20	03:30	3 Hrs 30 Mins	181	181	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.

5 unplanned interruption records and 3 planned and warned interruption records have been identified where customers would not have noticed the loss of service because it occurred at night. All 8 of the interruptions lasted 6 hours or less. The number of properties affected by the unplanned interruptions was 285 representing 0.58% of the total number of properties that experienced an unplanned interruption lasting more than 3 hours in 2019/20. The number of properties affected by planned and warned interruptions was 1,597 representing 5.65% of the total number of properties that experienced a planned and warned interruption lasting more than 3 hours in 2019/20.

Unplanned: (285 / 49,181) x 100 = **0.58%**
Planned and Warned: (1,597 / 28,245) x 100 = **5.65%**

NI Water reported in its AIR19 commentary that there were 10 unplanned interruptions and 2 planned and warned interruptions where customers would not have noticed the loss of service because it occurred at night. The number of properties affected by unplanned interruptions was 550 representing 0.94% of the total number of properties experiencing unplanned interruptions 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 experiencing planned and warned interruptions lasting more than 3 hours in 2018/19.

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

The following table provides a summary of the **10** overruns of planned and warned interruptions lasting between 3 and 6 hours in 2019/20.

	Interrupt. No.	Month	Duration	Properties Affected		Duration Of Overrun
				> 0 hrs	> 3 hrs	
1	184339	May-19	4 Hrs 10 Mins	60	60	0 Hrs 10 Mins
2	184704	Jun-19	4 Hrs 30 Mins	94	94	0 Hrs 45 Mins
3	184940	Jul-19	3 Hrs 50 Mins	22	22	0 Hrs 50 Mins
4	185229	Sep-19	4 Hrs 15 Mins	42	42	1 Hr 15 Mins
5	185435	Oct-19	4 Hrs 30 Mins	34	34	1 Hr 45 Mins
6	185519	Oct-19	5 Hrs 20 Mins	1	1	0 Hrs 20 Mins
			5 Hrs 10 Mins	14	14	0 Hrs 10 Mins
7	185864	Nov-19	4 Hrs 5 Mins	262	262	1 Hr 5 Mins
8	186130	Jan-20	3 Hrs 55 Mins	284	284	0 Hrs 55 Mins
9	186186	Jan-20	4 Hrs 15 Mins	16	16	0 Hrs 15 Mins
10	196747	Mar-20	5 Hrs 38 Mins	17	17	0 Hrs 53 Mins

The number of properties affected by the 10 overruns was:

60 + 94 + 22 + 42 + 34 + 15 + 262 + 284 + 16 + 17 = **846**

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours *(16,782)*.

T2: L9 = 28,245; T2: L10 = 11,463; 28,245 - 11,463 = **16,782**

NI Water reported in its AIR19 commentary that there were 2 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 40.

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

Interrupt. No.	Date of Incident	Duration	Properties Affected					Interrupt. Type	Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs		
184235	16/04/19	4 Hrs 15 Mins	27	27	0	0	0	Unplanned	Electricity supply failure
184786	08/07/19	8 Hrs 40 Mins	119	119	119	0	0	Unplanned	Planned power outage
185483	14/10/19	8 Hrs 0 Mins	15	15	15	0	0	Planned	Planned power outage
185484	14/10/19	4 Hrs 55 Mins	598	598	0	0	0	Unplanned	Electricity supply failure
185536	21/10/19	4 Hrs 36 Mins	35	35	0	0	0	Unplanned	Planned power outage
185989	11/12/19	3 Hrs 15 Mins	98	98	0	0	0	Unplanned	Electricity supply failure
196297	31/01/20	5 Hrs 30 Mins	26	26	0	0	0	Planned	Planned power outage
196315	04/02/20	3 Hrs 5 Mins	2	2	0	0	0	Unplanned	Electricity supply failure
196373	11/02/20	4 Hrs 24 Mins	51	51	0	0	0	Unplanned	Electricity supply failure
196400	13/02/20	5 Hrs 59 Mins	395	395	0	0	0	Planned	Planned power outage
196416	16/02/20	5 Hrs 48 Mins	16	16	0	0	0	Unplanned	Electricity supply failure
196728	26/03/20	4 Hrs 34 Mins	91	91	0	0	0	Unplanned	Electricity supply failure

The table above provides a summary of the 7 records in 2019/20 relating to unplanned, unwarned water supply interruptions caused by electricity supply failures lasting more than 3 hours. Also included are 5 records relating to planned power outages, 3 of which resulted in planned and warned water supply interruptions and 2 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 event in terms of numbers of affected properties occurred on 14th October 2019 when an electricity supply failure prevented water from being pumped to Mullaghanagh Service Reservoir at Old Eglish Road, Dungannon. 598 properties lost their water supply for 4 hours 55 minutes as a result of the incident.

The most significant event in terms of duration occurred on 8th July 2019 when a planned power outage prevented water from being pumped to Mullaghdrin Service Reservoir, Mullaghdrin Road East, Dromore. 119 properties lost their water supply for 8 hours 40 minutes as a result of the incident.

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	883	0	0	0
Number of Properties Affected by Unplanned, Unwarned Interruptions	49,085	6,157	751	23
Percentage Impact	1.80%	0.00%	0.00%	0.00%

The impact of the electricity supply failures was greatest on the >3hr outturn, accounting for 1.80% of the total number of properties affected by unplanned interruptions. The 2018/19 percentage was 1.17%.

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

	>6 Hrs	**>12 Hrs**	**>24 Hrs**
Percentage Connected Properties Affected by Electricity Supply Failures	0.000%	0.000%	0.000%
KPI Target	0.778%	0.147%	0.009%
Percentage Annual Target	0.00%	0.00%	0.00%

The impact of the electricity supply failures on KPI target compliance was negligible. The 2018/19 impact was insignificant, accounting for only 0.006% of the >6hrs outturn.

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

The following table provides a summary of the **22** supply interruption incidents during 2019/20 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 257688; DG3 184260	20/04/19	Burst main, Sheetrim Road, Cullyhanna	5 Hrs 4 Mins	490	490	0	0	0	3
002	**DG3 184473**	**04/05/19**	**Multiple Bursts on Trunk Main between Tullywhisker and Rakelly Service Reservoirs, Ardstraw, Newtownstewart** ***Note: The longest duration of interruption is stated in each instance.***	**9 Hrs 50 Mins**	**252**	**252**	**187**	**0**	**0**	**3**
	DG3 184489	**04/05/19**		**10 Hrs 50 Mins**	**622**	**507**	**467**	**0**	**0**	
	DG3 184870	**04/05/19**		**10 Hrs 37 Mins**	**592**	**213**	**199**	**0**	**0**	
	DG3 184872	**04/05/19**		**14 Hrs 58 Mins**	**353**	**242**	**208**	**110**	**0**	
	DG3 184873	**04/05/19**		**10 Hrs 31 Mins**	**211**	**149**	**149**	**0**	**0**	
	DG3 184874	**05/05/19**		**6 Hrs 17 Mins**	**353**	**167**	**167**	**0**	**0**	
	DG3 184875	**05/05/19**		**4 Hrs 21 Mins**	**291**	**65**	**0**	**0**	**0**	
	DG3 184916	**05/05/19**		**8 Hrs 38 Mins**	**528**	**265**	**186**	**0**	**0**	
	DG3 184917	**05/05/19**		**4 Hrs 18 Mins**	**211**	**107**	**0**	**0**	**0**	
	DG3 184481	**08/05/19**		**5 Hrs 59 Mins**	**1,501**	**310**	**0**	**0**	**0**	
	DG3 184485	**09/05/19**		**29 Hrs 54 Mins**	**150**	**150**	**26**	**23**	**23**	
	DG3 184918	**08/05/19**		**14 Hrs 22 Mins**	**353**	**133**	**123**	**100**	**0**	
	DG3 184919	**09/05/19**		**10 Hrs 25 Mins**	**353**	**149**	**112**	**0**	**0**	
003	**Event 257887; DG3 184397**	**15/05/19**	**Burst main, Craigstown Road, Kells**	**18 Hrs 32 Mins**	**629**	**629**	**626**	**463**	**0**	**3**
004	Event 258054; DG3 184521	30/05/19	Burst main, Church Street, Belfast	9 Hrs 51 Mins	85	85	85	0	0	3
005	Event 258222; DG3 184639	14/06/19	Burst main, Knock Road, Portadown	5 Hrs 30 Mins	7	7	0	0	0	3
006	Event 258246; DG3 184658	18/06/19	Burst on Ballyknock-Glenshesk Trunk Main	Varies	172	158	42	0	0	3
007	Event 258567; DG3 184860	19/07/19	Water Supply Failure, Lough Fea WTW, Lough Fea Road, Cookstown	5 Hrs 42 Mins	25	25	0	0	0	Precautionary
008	Event 259062; DG3 185168	15/08/19	Broken/Jammed/Misaligned Fitting, Churchtown Road, Downpatrick	10 Hrs 45 Mins	11	11	11	0	0	Precautionary

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
	Event 259063; DG3 185170	16/08/19	Burst main, Crew Road, Downpatrick	7 Hrs 0 Mins	31	31	31	0	0	
009	**Event 259001; DG3 196731**	**25/08/19**	**Burst main, Jacksons Road, Holywood**	**9 Hrs 8 Mins**	**927**	**613**	**400**	**33**	**0**	**3**
010	Event 259173; DG3 185240	11/09/19	Burst main, Loughgall Road, Armagh	5 Hrs 30 Mins	863	863	0	0	0	3
011	Event 259409; DG3 185417	05/10/19	Burst main, Tirbracken Road, Londonderry	5 Hrs 1 Min	78	78	0	0	0	Precautionary
012	Event 2807064; DG3 ID 185560	10/10/19	Burst main, Eden Road, Londonderry	11 Hrs 31 Mins	13	13	13	0	0	3
				7 Hrs 8 Mins	66	66	66	0	0	
	Event 1661008; DG3 185497	10/10/19	TWPS, Tireighter Road, Londonderry	10 Hrs 56 Mins	20	20	20	0	0	
	Event 1659437; DG3 185496	10/10/19		9 Hrs 44 Mins	35	35	35	0	0	
	Event 259519; DG3 185461	10/10/19		9 Hrs 21 Mins	47	47	47	0	0	
	259587; DG3 185511	10/10/19		7 Hrs 55 Mins	47	47	47	0	0	
	259585; DG3 185510	10/10/19		7 Hrs 29 Mins	29	29	29	0	0	
013	Event 259884; DG3 ID 185642	01/11/19	Burst main, University Road, Belfast	4 Hrs 50 Mins	10	10	0	0	0	Precautionary
014	Event 259880; DG3 ID 185645	01/11/19	Pump equipment failure, Cashty Road East Treated Water Pumping Station, Gortnacreagh, Omagh	6 Hrs 3 Mins	1	1	1	0	0	3
				5 Hrs 53 Mins	179	179	0	0	0	
015	Event 260169; DG3 ID 185810	20/11/19	Burst main, Belmont Crescent, Londonderry	6 Hrs 32 Mins	9	9	9	0	0	3
016	**Event 260244; DG3 ID 196910**	**24/11/19**	**Burst main, Lettermire North Service Reservoir, Foreglen Road, Londonderry**	**16 Hrs 20 Mins**	**61**	**49**	**49**	**22**	**0**	**3**

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
017	**Event 260495; DG3 ID 196739**	**15/12/19**	**Pump equipment failure, Aghalislone Treated Water Pumping Station, Oldpark Road, Lisburn *(Boomers Hill SR)***	**Varies**	**1,635**	**1,247**	**386**	**0**	**0**	**3**
018	Event 260631; DG3 ID 186082	02/01/20	Burst main, Ballytrim Road, Killyleagh	4 Hrs 55 Mins	30	30	0	0	0	3
019	Event 261125; DG3 ID 196353	08/02/20	Burst main, Castle Street, Antrim	4 Hrs 10 Mins	61	61	0	0	0	Precautionary
020	Event 261282; DG3 ID 196451	20/02/20	Burst main, Magheramore Road, Ballycastle	6 Hrs 45 Mins	15	15	15	0	0	3
021	Event 261455; DG3 ID 196576	05/03/20	Burst main, Ardoyne Road, Belfast,	5 Hrs 41 Mins	43	43	0	0	0	3
022	**Event 261607; DG3 ID 196663**	**17/03/20**	**Burst main, Stewartstown Road, Dunmurry**	**10 Hrs 25 Mins**	**437**	**437**	**437**	**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 historical 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 2019/20.

The 2019/20 KPI targets are listed below as percentages and numbers of total connected properties, together with the corresponding monthly target allowances.

KPI	2019/20 Target		Monthly Target Allowance Apr to Mar	
	%	Properties	%	Properties
>6hrs	0.778	6,873	0.065	573
>12hrs	0.147	1,300	0.012	108
>24hrs	0.009	80	0.001	7

In order to determine the unplanned interruption events that had the greatest negative impact on performance in 2019/20, the Company compared the monthly actuals with the three KPI target profiles and identified **4** instances where a target was exceeded. These instances are highlighted in bold text in the table below.

		May 19	March 20
>6 hour	Actual	**2,576**	**852**
	Target	573	537
>12 hour	Actual	**696**	0
	Target	108	108
>24 hour	Actual	**23**	0
	Target	7	7

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

Major Incidents

Multiple Bursts on Trunk Main between Tullywhisker and Rakelly Service Reservoirs, Ardstraw, Newtownstewart

(*Ref: IMS Event ID 258013; DG3 ID 184473, IMS Event ID 258004; DG3 ID 184489, IMS Event ID 258579; DG3 ID 184870, IMS Event ID 258580; DG3 ID 184872, IMS Event ID 258581; DG3 ID 184873, IMS Event ID 258582; DG3 ID 184874, IMS Event ID 258583; DG3 ID 184875, IMS Event ID 258653; DG3 ID 184916, IMS Event ID 258654; DG3 ID 184917, IMS Event ID 258023; DG3 ID 184481, IMS Event ID 258025; DG3 ID 184485, IMS Event ID 258655; DG3 ID 184918 and IMS Event ID 258656; DG3 ID 184919)*

	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs
Properties Affected	**5,770**	**2,709**	**1,824**	**233**	**23**

During the period 4th to 11th May 2019, a series of bursts occurred on the 300mm diameter spun iron trunk main from Tullywhisker SR to Rakelly SR, Ardstraw, Newtownstewart (rural

area). The burst mains were effectively over two event periods, initially from the 4th to 6th May *(Incident 1)* and then from the 8th to 11th May *(Incident 2)*.

Incident 1: On Saturday 4th May 2019, a high flow alarm was triggered at 4:45am on the trunk main from Tullywhisker SR to Rakelly SR. A burst occurred on a sluice valve where the main crossed the Derg River at Ardstaw. This repair was a complex operation due to the very poor ground conditions, within a river embankment, with high pressure (approx. 16 bar) and the location of the existing valves at this locus. An initial repair was completed on 4th May 2019.

Incident 2: Then at around 2:00am on 8th May, a second burst occurred on the trunk main in the same general area as the repairs completed on 4th and 5th May. Initial repairs were completed on the outstanding defects overnight but unfortunately, a further mains failure occurred at approximately 8am the following morning. Rezoning was again carried out and neighbouring service reservoirs balanced to minimise disruption to customers. Tankering operations continued throughout the day.

These bursts had a significant impact upon customer supplies in the affected DMAs. A combination of complex operational difficulties were experienced during both incidents i.e. limited options for rezoning and the location of the bursts close to river bank, etc. The trunk main from Tullywhisker to Rathkeely supplies multiple SRs and DMAs, adding further complexity to incident management. Multiple repairs were carried out during Incidents 1 & 2, which subsequently failed. A number of these failures were due to the poor ground not providing adequate anchorage at the burst location. The incident was the subject of **Upward Report 002.**

The impact of this incident in terms of percentages of connected properties affected was 0.206% >6hrs, 0.026% >12hrs and 0.003% >24hrs.

Burst main, Craigstown Road, Kells

(Ref: IMS Event ID 257887; DG3 ID 184397)
Note: Property counts for this event were derived using network modelling

	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs
Properties Affected	**629**	**629**	**626**	**463**	**0**

At 18:15 on 15th May 2019, a burst occurred on an 8 inch asbestos cement main at Craigstown Road, Kells affecting properties in Craigstown DMA. Due to the rural location of the burst, rezoning options were limited. A section of main was replaced during the repair but when the new length of main reached normal pressure, it split, resulting in a second unplanned shutdown of the main for the replacement of the failed main. Due to the length of time required to repair the main, twice at the same location, the DMA drained down considerably. The size and amount of small diameter mains within Craigstown DMA increased the time taken for the DMA to return to its normal pressure. An extensive number of airlocks also had to be removed from within the system. The incident was the subject of **Upward Report 003**.

The impact of this incident in terms of percentages of connected properties affected was 0.071% >6hrs and 0.052% >12hrs.

Burst main, Stewartstown Road, Dunmurry

(Ref: IMS Event ID 261607; DG3 ID 196663)

	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs
Properties Affected	**437**	**437**	**437**	**0**	**0**

On the Saint Patrick's Day bank holiday on 17th March 2020, a burst occurred on a 150mm PVC main at Stewartstown Road, Dunmurry. A second burst occurred during operations to isolate the first burst. Both bursts were close to the Glider bus lane and made it more difficult to carry out the necessary repairs. The incident was the subject of **Upward Report 022.**

The impact of this incident in terms of percentages of connected properties affected was 0.049% >6hrs.

Other note-worthy events during 2019/20

In addition to the three events already described that caused one or more in-month targets to be missed, the following three note-worthy events also occurred during 2019/20.

Burst main, Jacksons Road, Holywood

(Ref: IMS Event ID 259001; DG3 ID 196731)

Note: Property counts for this event were derived using network modelling

	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs
Properties Affected	**927**	**613**	**400**	**33**	**0**

On Sunday 25th August 2019, a burst occurred on a 6 inch main at Jacksons Road, Holywood affecting properties in Holywood Town Upper and My Lady's Mile DMAs. Difficulties were encountered in locating valves during operations to isolate the burst and a greater area than expected had to be rezoned. The burst itself was difficult to locate whilst the excavation was protracted, due to the existence of a reinforced concrete carriageway and multiple layers of asphalt. A longitudinal split in the main was eventually pinpointed and subsequently repaired.

This event was note-worthy because of the large numbers of properties affected for more than 3 hours *(613nr)* and more than 6 hours *(400nr)*. The incident was the subject of **Upward Report 009.**

The impact of this incident in terms of percentages of connected properties affected was 0.045% >6hrs and 0.004% >12hrs.

Burst main, Lettermire North Service Reservoir, Foreglen Road, Londonderry

(Ref: IMS Event ID 260244; DG3 ID 196910)
Note: Property counts for this event were derived using network modelling

	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs
Properties Affected	**61**	**49**	**49**	**22**	**0**

On Sunday 24th November 2019, a burst occurred on the 8 inch asbestos cement outlet at Lettermire North Service Reservoir, Foreglen Road, Londonderry, affecting properties in the predominantly rural Gulf Road DMA. The reservoir dropped to 40% (1 metre) before the burst was isolated. The repair crew worked throughout the night to try to locate the burst. A deep dig (2.5m) commenced on the outlet in a field below the SR. A temporary overland connection with a PRV was installed between Gulf Road and Sisterkeel DMAs.

This event was note-worthy because of the duration of interruption *(16 Hrs 20 Mins)*. The incident was the subject of **Upward Report 016.**

The impact of this incident in terms of percentages of connected properties affected was 0.006% >6hrs and 0.002% >12hrs.

Pump equipment failure, Aghalislone Treated Water Pumping Station, Oldpark Road, Lisburn (Boomers Hill SR)

(Ref: IMS Event ID 260495; DG3 ID 196739)
Note: Property counts for this event were determined by the Network Modelling Team using available GIS and pressure information.

	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs
Properties Affected	**1,635**	**1,247**	**386**	**0**	**0**

On Sunday 15th December 2019, a pump equipment failure occurred at Aghalislone Treated Water Pumping Station, Oldpark Road, Lisburn which pumps water to Boomers Hill Service Reservoir. The reservoir supplies properties in Drumnakelly Stoneyford, Drumnakelly White Mountain and Drumnakelly Colin River DMAs.

This event was note-worthy because of the large numbers of properties affected for more than 3 hours *(1,247nr)* and 6 hours *(386nr).* The incident was the subject of **Upward Report 017.**

The impact of this incident in terms of percentages of connected properties affected was 0.044% >6hrs.

Note: All six major incidents detailed in this section of the commentary occurred outside normal working hours, four on a weekend, one on a bank holiday and one at 18:15 on a working day. The Company has fully assessed the issues that led to each event as well as the ways in which the events were managed from an operational perspective and has developed a series of actions aimed at mitigating the impact of similar events.

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. On 4th July 2014, NI Water first introduced the Incident Management System *(IMS)* as a replacement for the Operations Management Information System *(OMIS)* to capture data relating to supply interruptions. In 2015/16, the Company increased its DG3 confidence grade from 'B3' to 'A3' because it was the first full year in which IMS had been used instead of OMIS.

IMS has now been used to capture five 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. The Company continues to develop the system on an annual basis by seeking suggestions from its key users and making the necessary modifications to improve the usability and functionality of the system as well as ensuring that growing requirements are met across all areas of the business.

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. Previous analysis has confirmed that an average of 10% of customers complain when they experience an unplanned interruption to their water supply.

In 2019/20, NI Water reviewed a random sample of 96 unplanned interruption events with durations of 5 hours or more and found that the number of properties associated with those events was 12,686 *(as recorded on IMS)*. The number of 'no water' complaints associated with the same events was 1,243 *(excluding repeat calls)*. Based on the figures for the 96 events, the percentage of customers that complained was 9.80%. As the percentage is in keeping with the results of the previous analysis, the Company is confident that the property counts assigned to the 96 events were accurate.

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 842 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 144 records of interruption events lasting more than 3 hours. A random sample of 48 records *(4 per month)* was checked against the corresponding Interruption Record Sheets to ensure that the details had been accurately transcribed. This represents 33% 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 2019/20, NI Water has again 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 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.

Note: Due to the Covid-19 pandemic and associated *'working from home'* rule, it was not possible to complete all of the intended audit checks for 2019/20. NI Water hopes to resume the audit process during 2020/21.

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 2019

The AIR20 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 2018 to March 2019 *(see table below)* along with the number of non-resident visitor nights for the same period *(the last available published figure, inclusive of visitors from RoI)* in order to determine the relationship between the two datasets.

Ref: Table 1.2 of the NISRA publications '*Northern Ireland Tourism Statistics Tables (2011 – 2020)'* dated 09/04/2020.

- *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-18	280,744	54,370	335,114
May-18	336,284	86,267	422,552
Jun-18	350,213	91,934	442,147
Jul-18	363,194	101,783	464,977
Aug-18	408,415	104,983	513,398
Sep-18	341,263	80,554	421,817
Oct-18	322,353	57,962	380,315
Nov-18	278,349	41,337	319,686
Dec-18	294,916	42,535	337,451
Jan-19	232,216	31,508	263,724
Feb-19	274,402	38,899	313,301
Mar-19	308,143	45,317	353,460
Total	**3,790,493**	**777,450**	**4,567,943**

Total bed-spaces sold (Apr 18 to Mar 19) = 4,567,943

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2018 – March 2019)'* dated 19/09/2019.

- *'Estimated number of overnight trips, nights and expenditure in NI (excluding NI residents) for the 12 months to March 2018 and March 2019'*

Non-resident visitor nights (Apr 18 to Mar 19) = 11,905,876

11,905,876 / 4,567,943 = 2.606

Based on data for the period April 18 to March 19, the number of non-resident visitor nights was found to be 2.606 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 2019 to December 2019 *(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 1.2 of the NISRA publication *'Northern Ireland Tourism Statistics (2011 – 2020)'* dated 09/04/2020.

- *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 2019
Jan-19	232,216	31,508	263,724	5.52%
Feb-19	274,402	38,899	313,301	6.56%
Mar-19	308,143	45,317	353,460	7.40%
Apr-19	291,591	66,338	357,929	7.49%
May-19	353,957	75,838	429,795	8.99%
Jun-19	381,005	96,859	477,865	10.00%
Jul-19	408,819	113,966	522,786	10.94%
Aug-19	444,286	124,899	569,185	11.91%
Sep-19	344,568	81,511	426,079	8.92%
Oct-19	328,592	66,397	394,989	8.27%
Nov-19	292,004	50,024	342,028	7.16%
Dec-19	292,224	34,837	327,061	6.84%
Total	**3,951,808**	**826,394**	**4,778,202**	**100.00%**

Total bed-spaces sold (Jan 19 to Dec 19) = 4,778,202

Estimated non-resident visitor nights (Jan 19 to Dec 19) =

4,778,202 x 2.606 = 12,453,895

Having estimated number of non-resident visitor nights in 2019, all components of the Winter Population calculation are now available and the 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 2019 to December 2019 *(see table above)* in order to calculate the percentages of bed-spaces sold per month in 2019 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 2019, the percentage of bed spaces sold during the winter was:

5.52 + 6.56 + 7.40 + 7.49 + 7.16 + 6.84 = 40.97%

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

Estimated non-resident winter visitor nights in 2019 =

(12,453,895 / 100) x 40.97 = 5,102,031

According to AIR20: Table 7: Line 17, the baseline resident population was 1,886.30 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 =

5,102,031 / (31 + 28 + 31 + 30 + 30 + 31) = 28,188

Population (winter) = 1,886,300 + 28,188 = **1,914,488**.

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.

AIR20 Methodology

In its AIR19 commentary, NI Water explained that NISRA had identified delays in both the provision of Household Travel Survey (HTS) 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.

Unfortunately, the issues previously identified are still ongoing and NISRA Tourism Statistics are currently unable to publish updated tourism estimates for Northern Ireland, inclusive of visitors from RoI. In addition to this, there is now the added complication of the Covid-19 pandemic which is likely to impact the provision of information for some time to come.

In view of the circumstances highlighted above, NI Water has used the last available published figure, inclusive of visitors from RoI *(for the 12-month period from April 2018 to March 2019)* and has estimated the annual number of non-resident visitor nights in 2019.

Impact of Change in AIR20 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 1.2 of the NISRA publication *'Northern Ireland Tourism Statistics (2011 – 2020)'* dated 09/04/2020.

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

Estimated non-resident visitor nights (Apr 17 to Mar 18) =
4,351,784 x 2.606 = 11,342,481

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2018 – March 2019)'* dated 19/09/2019.

Actual non-resident visitor nights (April 17 to March 18) = 11,583,915

Difference between actual and estimate =
11,583,915 - 11,342,481 = 241,434

Percentage difference = 241,434 / 11,583,915 = 2.08%

As the difference between the actual and estimate is within the tolerance of any previously assigned confidence grading for this measure i.e. between 1% and 5%, this is deemed to be a suitable method for estimating the number of non-resident visitor nights.

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

AIR18	Confidence Grade	AIR19	Confidence Grade	AIR20	Confidence Grade
1,896.46 x 10^3	C2	1,900.66 x 10^3	C2	**1,914.49 x 10^3**	**C2**

Update on AIR19 Reporter Recommendation
At the time of reporting on AIR19, a non-resident visitor nights figure was available for only the first nine months of 2018 and a figure for the entire twelve months had to be estimated. In accordance with the AIR19 Reporter Recommendation, NI Water has recalculated the AIR19 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 2018)'* dated 19/09/2019.

- *'Estimated number of overnight trips, nights and expenditure in NI (excluding NI residents) 2011-2018'*

Non-resident visitor nights (Jan 18 to Dec 18) = 11,775,815

Estimated non-resident winter visitor nights =

11,775,815 x 41.23* = 4,854,661 *(*also recalculated)*

Winter nights = 181

Estimated average non-resident winter visitors per night =

4,854,661 / 181 = 26,821

AIR19: Table 7: Line 17: Baseline resident population = 1,873,140

AIR19: Table 2: Line 20: Population (winter) =

26,821 + 1,873,140 = **1,899,961**

The recalculated AIR19 outturn of 1,899,961 is only 694 properties *(0.04%)* lower than the original AIR19 outturn of 1,900,655. This is well within the tolerance of the assigned confidence grading.

Last year, the Company reported a Table 2 Line 20 outturn of 1,900.655 x 10^3. Based on the AIR20 outturn of 1,914.488 x 10^3, the estimated winter population has increased by 13.83 x 10^3 *(0.73%)*. 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 2019 *(3,951,808)* was higher than the revised estimate for 2018 *(3,733,979)*. The estimated number of guesthouse and B&B bedspaces sold in 2019 *(826,394)* was higher than the revised estimate for 2018 *(766,636)*. And the estimated number of non-resident visitor nights in 2019 *(12,453,895)* was higher than the published figure for 2018 *(11,775,815)*.

Despite the absence of information relating to Q2 to Q4 of 2019, a comparison of the statistics for Q2–2017 to Q1–2018 and Q2–2018 to Q1–2019 reveals an increase in tourism and hence, an increase in winter population.

	Visitor Nights (Q2–2017 to Q1–2018)	**Visitor Nights (Q2–2018 to Q1–2019)**
GB Visitors	5,727,569	5,762,459
RoI Visitors	1,133,520	1,486,992
Visitors from outside UK & RoI	4,722,826	4,656,425
All Visitors (excluding NI)	**11,583,915**	**11,905,876**

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 – 2020)'* 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 2018 – March 2019)'* 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 40,618 *(+2.12%)*. *(See calculation below)*

12,453,895 / (31 + 28 + 31 + 30 + 30 + 31) = 68,806 non-resident visitors
1,886,300 + 68,806 = 1,955,106 residents + non-resident visitors
1,955,106 - 1,914,488 = 40,618
(40,618 / 1,914,488) x 100 = 2.12%

At the time of reporting on AIR20, a non-resident visitor nights figure, inclusive of visitors from RoI, was available for only the first quarter of 2019 and a figure for the entire 12-month period had to be estimated. When reporting on AIR21, NI Water will recalculate the AIR20 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

There were no hosepipe restrictions, drought orders or sprinkler/unattended hosepipe restrictions in 2019/20 and therefore, the percentage population experiencing DG4 Restrictions on Use of Water is 0.0% for Lines 21, 22 and 23.

Also therefore, no detailed timetables for hosepipe restrictions have been necessary and the recording template has a Nil return.

Other calculations would have been based on information provided by Asset Information Development and 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 would be taken from Table 2 Line 20 (winter population).

The reliability assessments of “A” are based on the established procedures for the making of any order to prohibit or restrict the use of water. The accuracy assessments of “1” are a reflection that none of the population was affected by restrictions during the report period.

Hose pipe restrictions

Area affected	None
Population affected (000s)	000.0
Date imposed	N/A
Date lifted	N/A
Total duration (weeks)	N/A

Sprinkler/unattended hosepipe restrictions	
Area affected	None
Population affected (000s)	000.0
Date imposed	N/A
Date lifted	N/A
Total duration (weeks)	N/A
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 looking at further development of existing reporting systems to capture DG4 events on a standalone basis. This will provide a more detailed breakdown and audit trail 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 2020
2. Water Shortage Management Process Guidelines 2019
3. DG4 – Recording of Affected Populations and Durations for AIR 20.

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 2019/2020 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 AIR20 (dated 31st March 2020) as attached.

RPS March YE 2020.xlsx

Total Connected properties at Year End	AIR20
Non-Household Unmeasured	14003
Non-Household Measured	76302
Household Unmeasured	741224
Household Measured – Not Charged (test meters)	121
Household Measured	48736
Household Measured – No meter	0
Household Site Meters	3019
Household Unmeasured – Not Charged	18
Total Connected Properties at Year End	**883423**

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	677.1	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	7	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	7	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	0	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	0	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		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	24	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	24	B2		
8	Flooding incidents (other causes - equipment failures)	nr	0	15	B3	14	B2	2	B2	1	B2	1	B2	0	B2	2	B2	4	B2		
9	Flooding incidents (other causes - blockages)	nr	0	22	B3	36	B2	38	B2	34	B2	38	B2	26	B2	17	B2	6	B2		
10	Flooding incidents (other causes - collapses)	nr	0	4	B3	5	B2	12	B2	3	B2	8	B2	7	B2	4	B2	14	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	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	55	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	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	57	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	62	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	2	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	19	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	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	1	B2		
23	Removed because of better information	nr	0	2	B3	0	B2	0	B2	2	B2	1	B2	0	B2	2	B2	0	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	0	B2		
25	Added because of better information (modelled)	nr	0	0	A1	0	B2	4	B2	0	B2	2	B2	0	B2	3	B2	0	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	577.4	B2	56.0	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	0	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	4	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	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	0	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	482.1	B2	0.0	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.

Our AIR20 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).

The RPS provides us with a snapshot at the end of each month in terms of net movement; however it alone does not support in the explanation of gross movements within the data. With this is mind, during the 19/20 reporting year the CSD Services MI & Data Team explored the use of Power BI to re-create the RPS with a drill down function to display the gross movement. The Power BI property models developed take their direct feed from the Diamond Warehouse in order to refresh. These models provide us with information on gross movements and allow us to 'slice and dice' the data from various angles, providing invaluable insights. The plan is to further enhance and incorporate these models across the business during 2020/21.

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 AIR19 and the AIR20 figure is 8,783. The breakdown can be explained as follows;

1. New Connections during the 2019/20 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 chair 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 2019/20, the continued 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

The PIG Strategy for 2020/21 will include the following:

- New Connections - A push to move to on-system reporting following the Business Improvement New Connections Review
- Further use of PowerBI – We currently use Power BI to create and issue the monthly Rapid Property Summary (RPS) and will continue to explore the use of Power BI in other aspects of our property work throughout 2020/21
- 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.
- Continued monitoring of data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – Ongoing data sharing project that commenced in August 19
  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. 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 – monitor numbers of ‘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 AIR20, 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 2019 to March 2020 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 20 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.
   Line 15a relates to properties that have not been fully investigated and categorized i.e. 2 for 2019/20 ([redacted] and [redacted] that are awaiting further investigation by AP)
7. The required information to populate Line 17 is extracted directly from the monthly spreadsheet completed by the contractor. This year (19/20) there have been none reported.

Changes in Methodology over the Previous Year

For the first half of the reporting year the methodology remained the same the previous year as follows. 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 is 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.
For the second half of the reporting year NIW have had a new contract provider and there have been implementation issues. Due to the lack of data being provided to NIW and quality issues with same, the Business unit has rigorously ensured that all incidents of internal flooding were fully scrutinised and allocated to the appropriate categories.

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. Due to the extensive checking by the Business unit 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 5

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 19/20 was 1.

KR663 [redacted] Flood Alleviation

- [redacted], Newtownards, [redacted] (2 in 10)
  The project including closing the sewer connection from the front of the property and creating a new sewer connection by laying 37m of 150mm sewer from the rear of the property to a larger combined sewer, so removing the risk of internal flooding.

  Scheme cost £56,000. ESL was 100% = £56,000.

[redacted]

It should be noted 4 properties were also removed due to better information, giving a total of 5 properties being removed from the DG5 Register.

- [redacted] Belfast, BT1 [redacted] (1 in 20)
- [redacted] BT35 [redacted] (1 in 20)
- [redacted] Newtownards, BT23 [redacted] (1 in 20)
- [redacted] Belfast BT5 [redacted] (1 in 10)

[redacted]

Additions to the Register

In year 19/20, there was no properties added to the flooding register

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

There are 19 properties on the Register which have not flood in the last 10 years see uploaded file below.

[redacted]

Line 17 Restricted Toilet use.

There is one property on the DG5 Register at present.

- [redacted], Londonderry BT48 [redacted] (2 in 10)

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

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 19/20.

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 2020).

This figure is based on the 31st March 2020 Rapid Property Summary for AIR20, as attached.

RPS March YE 2020.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 2020
Household Unmeasured	639324
Household Sewerage only	8
Household Measured - Not Charged (Test)	88
Household Measured	35281
Household Measured - no meter	0
Household Site meters	2350
Household Unmeasured - Not Charged	14
Number of Domestic Properties Connected to the Sewerage System	**677065**

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	17	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	17	D6		
3	Highway flooding incidents (overloaded sewers)	nr	0	32	D6	23	D6	26	D6	6	D6	4	D6	4	D6	9	D6	0	D6		
4	Other flooding incidents (overloaded sewers)	nr	0	96	D6	22	D6	20	D6	0	D6	0	D6	0	D6	2	D6	0	D6		
5	Total flooding incidents (overloaded sewers)	nr	0	225	D6	115	D6	132	D6	23	D6	20	D6	15	D6	57	D6	17	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	5	D6		
6a	Areas flooded externally attributed to severe weather	nr	0	29	D6	1	D6	14	D6	6	D6	3	D6		D6	41	D6	5	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	4,515	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	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	15	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	4,044	D6		
11	Flooding incidents (other causes - collapses)	nr	0	31	D6	73	D6	85	D6	97	D6	268	D6	308	D6	307	D6	456	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	252	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	28	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	88	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	368	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	D6		
	(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	0	D6		
21	Removed by company action (external linked)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	2	B2	0	B2	0	D6		
22	Removed because of better information	nr	0	0	A1	113	A1	0	A1	0	A1	0	A1	2	B2	0	B2	0	D6		
23	Added because of better information (actually flooded)	nr	0	213	A1	113	A1	103	A1	16	A1	7	A1	9	B2	14	B2	10	D6		
24	Added because of better information (modelled)	nr	0	0	A1	0	A1	0	A1	0	A1	1	A1	0	B2	0	B2	0	D6		
25	Transferred from external to internal register	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	B2	0	B2	0	D6		

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

Introduction

The processing of external flooding incidents has continued as it did in year 2018-19. 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 2019-20; the figures within Table 3a have been transferred from that spreadsheet.

The total number of 'overloaded sewers' incidents for the year 2019-20 was 17.

The total number of 'other causes' incidents has increased from 4273 in 2018/19 to 4515, in 2019/2020.

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 seven years.

Lines 12-25 - At Risk Register

The total number of areas, on the Register at the start of year 2019/20 was 358.

The processing of external flooding incidents has continued as it did in year 2018/19, resulting in 10 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 368.

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)

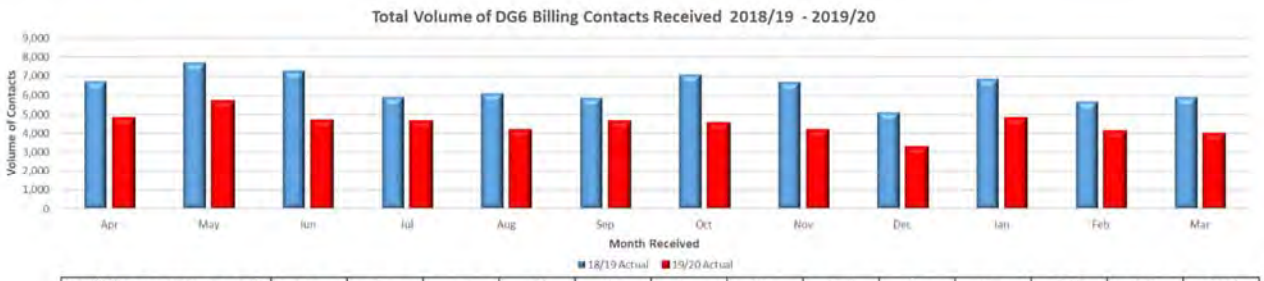
	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	DG6 RESPONSE TO BILLING CONTACTS - 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	53,942	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	53,928	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	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	99.97	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	0.01	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		A2	165,152	A2	165,133	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	718,290	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	29	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 2019/20 charging year.

No material changes, other than tariff changes, were made to billing in 2019/20.
The chart below shows the DG6 received volumes during 18/19 – 19/20.



Total billing contacts received	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
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	77,016
19/20 Actual	4844	5735	4707	4663	4208	4685	4572	4201	3323	4841	4156	4007	53,942

Chart 1 – DG6 Billing Contacts Received 2019/20

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 2019/20

Debit / Credit Card Payment	21%
Promise Of Payment	10%
Checking Payment Recd	7%
Request Copy Bill	6%
Refund Request	5%

Table 1 – Top 5 DG6 contact types 2019/20

Analysis of DG6 Received CMS Types in 18/19 against 19/20 highlights that the Top 3 CMS Types continues to relate to payments. Measures implemented since Q4 18/19 to reduce the volume of customer billing contacts relating to payments has proved successful. There has been a 54% reduction in Debit / Credit Card Payment contacts on last year, as customers increasingly opt to pay bills online via QuickPay and the NIW Self Service portal.

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 4% lower than at this stage last year.

- Debtor Days for March 2020 – at 45 days has significantly exceeded the target of 56 and performance last year and is a record low year end outturn.

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

- on-going proactive promotion (via text alerts, call scripts, customer correspondence, flyer in 19/20 annual billing mailshot, etc.) 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.
- review of Checking Payment Received contacts to determine appropriate solution to reduce in-coming volume.

Notably, less customer contacts were received in 19/20 regarding disputed liability and bill calculation queries.

The outbreak of the Covid-19 pandemic in mid-March 2020 and the significant and unprecedented social and economic impact of the mandatory lockdown affected the last two weeks of FY19/20 in terms of income. With the suspension of billing and metering operations during Q1 FY20/21, it is anticipated that the impact will be felt throughout the year with, in particular, an increase in the number and age profile of contacts throughout the beginning of the financial year.

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 for reference purposes.

NIW_Re-categorisation of written conta

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

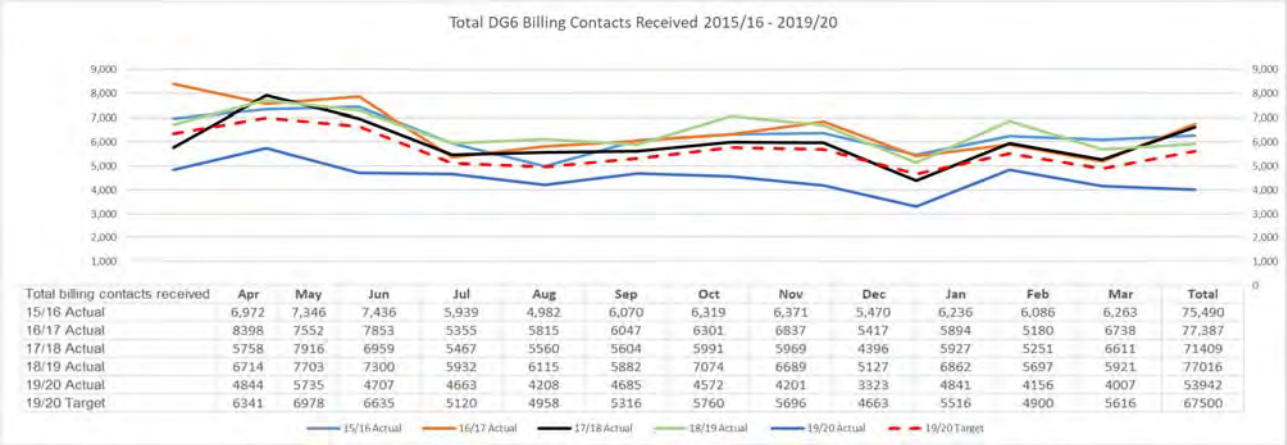
Systems remained in place to ensure that the receipt date of email/fax contacts is recorded as the date it is delivered to the company with the following working day being recorded as Day 1.

Payment Cards

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

DG6 Volumes Year-on-year

DG6 received volumes from 2015/16 to 2019/20 is displayed in Chart 2.



Total billing contacts received	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
15/16 Actual	6,972	7,346	7,436	5,939	4,982	6,070	6,319	6,371	5,470	6,236	6,086	6,263	75,490
16/17 Actual	8398	7552	7853	5355	5815	6047	6301	6837	5417	5894	5180	6738	77,387
17/18 Actual	5758	7916	6959	5467	5560	5604	5991	5969	4396	5927	5251	6611	71409
18/19 Actual	6714	7703	7300	5932	6115	5882	7074	6689	5127	6862	5697	5921	77016
19/20 Actual	4844	5735	4707	4663	4208	4685	4572	4201	3323	4841	4156	4007	53942
19/20 Target	6341	6978	6635	5120	4958	5316	5760	5696	4663	5516	4900	5616	67500

Chart 2 - DG6 received 2015/16 to 2019/20

The total received volume for 2019/20 is 53,942. This is a decrease of 23,074 or 30% on 2018/19 total.

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

Based on data extracted on 04.05.20

- 141 DG6 contacts received during 19/20 were open;
- The oldest open DG6 contact received during 19/20 was 63 working days
- 141 DG6 contacts received during 19/20 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 19/20 was 30 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

AIR19 figure – 165152
AIR20 figure – 165133

There has been a net decrease of circa 19 properties during the 19/20 year, which were connected for water only.

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

AIR19 figure – 709155
AIR20 figure - 718290

There has been a net increase of circa 9135 properties connected for water and sewerage services during the 19/20 year – commentary detailed below.

Line 8 - Number of Properties Connected for Sewerage Services Only

AIR19 figure – 25
AIR20 figure - 29

The number of properties connected for sewerage only has increased by 4 during the 19/20 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 2019/20 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 chair 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 2019/20, the continued 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

The PIG Strategy for 2020/21 will include the following:

- New Connections - A push to move to on-system reporting following the Business Improvement New Connections Review
- Further use of PowerBI – We currently use Power BI to create and issue the monthly Rapid Property Summary (RPS) and will continue to explore the use of Power BI in other aspects of our property work throughout 2020/21
- 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.
- Continued monitoring of data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – Ongoing data sharing project that commenced in August 19
- 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. 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 – monitor numbers of 'retain for review' meters
- Properties with 'no water supply' (no water/well water) – review and validate on a monthly basis

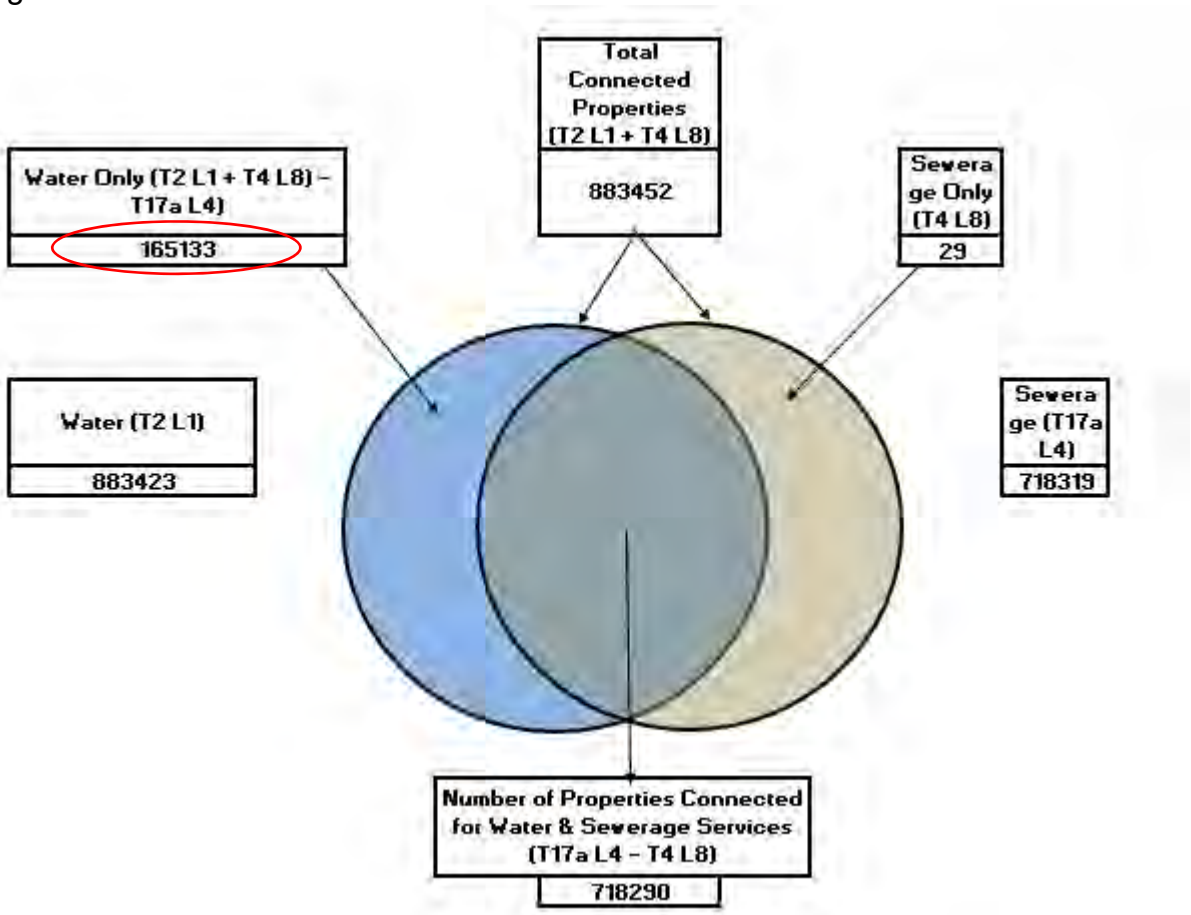
Annex A details the Line Methodology for the figures calculated in Table 4 Lines 6-8.

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

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 AIR20 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 AIR20 and is displayed in the diagram below:



Therefore:-

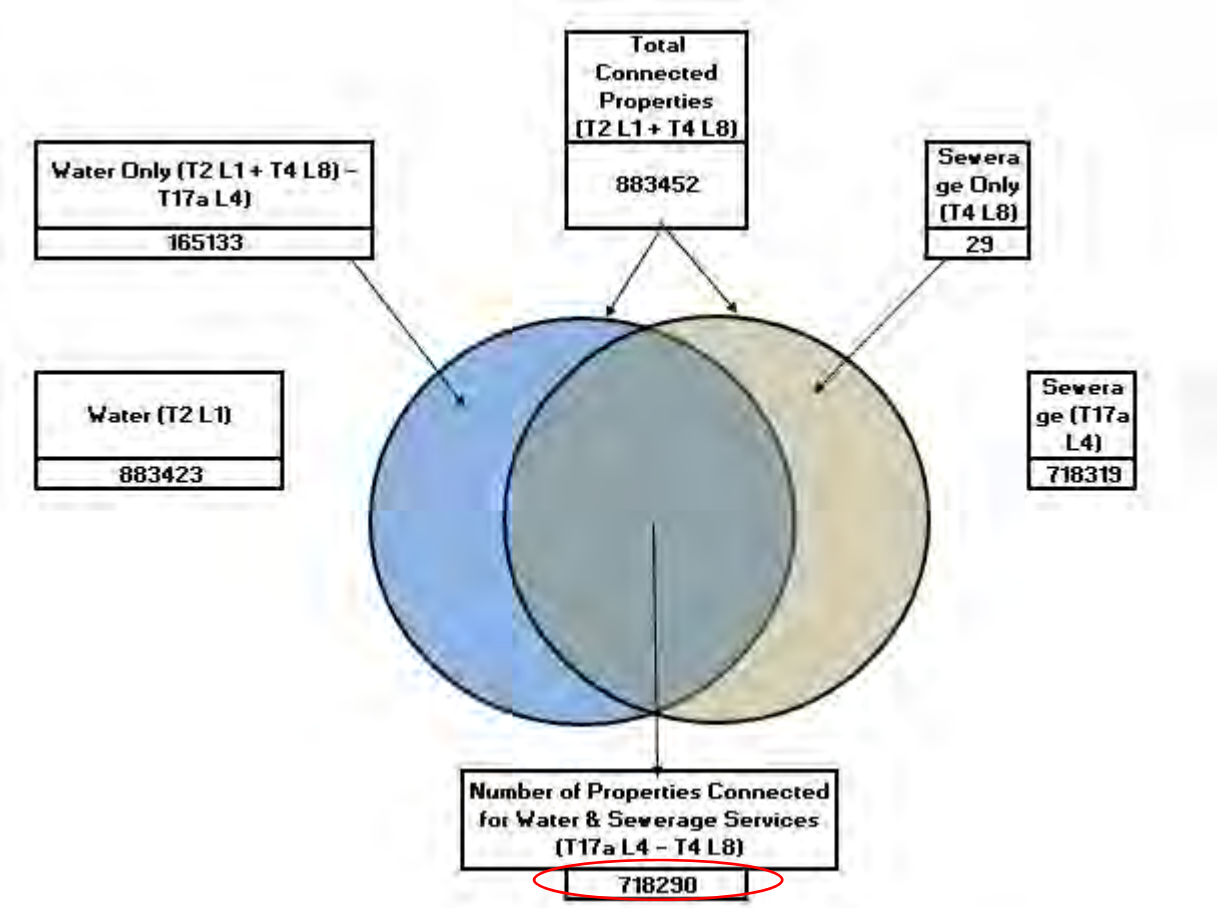
	End March 2020
Total Connected Properties (T2 L1 + T4 L8)	883452
less	
Total Connected Properties for Sewerage (T17a L4)	718319
Total Connected for Water Only	**165,133**

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 AIR20 and is displayed in the diagram below:



	End March 2020
Number of Properties Connected for Water & Sewerage Services (T17a L4 - T4 L8)	**718290**

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 AIR20.

	End March 2020
Domestic sewerage only	8
plus	
Non-domestic sewerage only	21
Total Properties Connected for Sewerage Only	**29**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

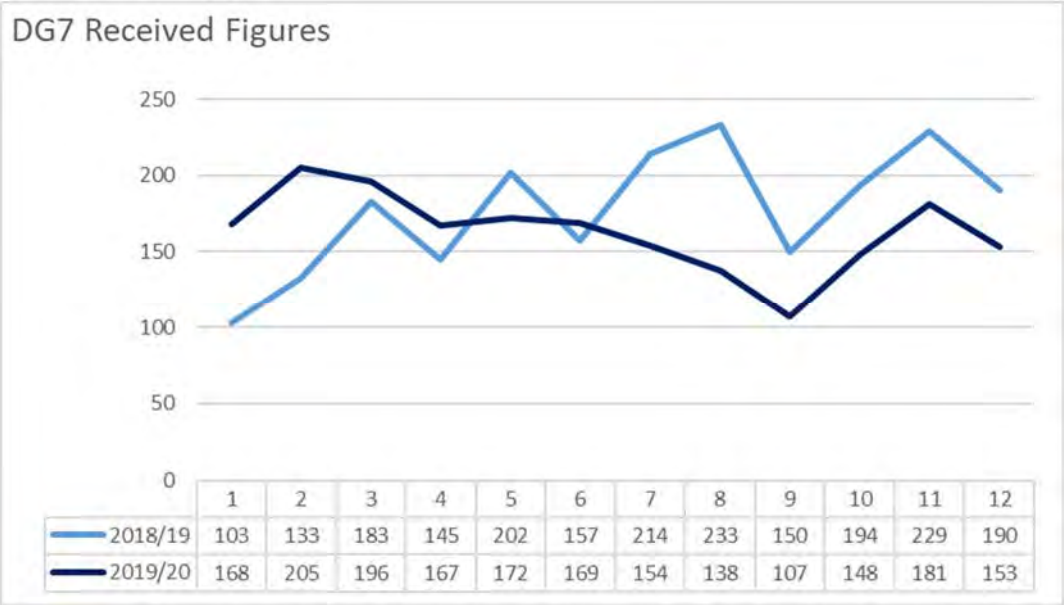
ANNUAL INFORMATION RETURN - TABLE 5 KEY OUTPUTS
CUSTOMER SERVICE - 2 (TOTAL)

	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	1,958	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	1,957	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	99.95	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	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	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		A1	129,387	A1	130,375	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	61,091	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	68,938	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	68,958	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	295	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	31	A1		
12	Unread by company for 2 years	nr	0	310	A1	186	A1	164	A1	207	A1	173	A1	90	A1	21	A1	58	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	197,184	A2		
14	All lines busy	nr	0	0	A2	0	A2	32	A2	159	A2	63	A2	18	A2	29	A2	44	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	196,289	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	53,210	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	2,246	A2		
E	CUSTOMER SATISFACTION MEASURES																				
19	Total contacts	nr	0									257,866	A2	250,753	A2	252,844	A2	190,729	A2		
20	Unwanted contacts	nr	0									110,197	A2	105,964	A2	75,569	A2	67,013	A2		
22	First Point of Contact Resolved (FPOCR)	%	1									66.5	A2	65.8	A2	90.0	A2	90.4	A2		
23	Customer advocacy measure	nr	0									27	A1	31	A1	32	A1	42	A1		
24	Omnibus survey question 1	nr	1									80.3	A1	92.4	A1	81.6	A1	71.7	A1		
25	Omnibus survey question 2	nr	1									11.2	A1	8.2	A1	8.3	A1	7.6	A1		

Table 5 – Customer Service 2

Lines 1-5 – DG7 Received Volumes

The chart below shows the DG7 received volumes during 18/19 and 19/20.



The chart shows a decrease in the overall volume of written complaints received in 19/20 compared to the previous year; 1,958 in total received in 19/20 compared with a total of 2,133 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 19/20 were above average monthly received figures in 4 of the 12 months.

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
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
19/20	168	205	196	167	172	169	154	138	107	148	181	153
Average	**150**	**170**	**192**	**152**	**195**	**175**	**189**	**197**	**136**	**189**	**207**	**170**

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

As in previous years, the number of written complaints in the Charges & Billing category was highest, representing 40% of the total received across the reporting period. This represents a 2% increase on 2018/19.

For 2019/20, 93 written complaints were linked to accounts which had been reviewed by the Metering & Billing project. This represents a decrease from 2018/19 when 113 written complaints were linked to accounts reviewed by the project. It should be noted that, whilst

linked to accounts reviewed since the start of the project, the complaints received were not necessarily related to the actions undertaken by the Project Team.

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:

- 291 complaints were recorded as being from customers disputing liability for charges.
- 91 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 29 April 2020, no DG7 contacts received during 19/20 remained open.

Petitions

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

CCNI Written Complaints Assessment

The 5th formal CCNI Written Complaints Assessment was held in June 2019. A number of actions, including the re-briefing of complaints handling procedures and the inclusion of a link to the complaints section of niwater.com in all responses to written complaints, were agreed.

E-mail and Faxes

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

1,708, or 87.23%, of the total DG7 received volume were recorded with a document type of “email”.

No DG7 contacts were 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.niwater.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 19/20.

No complaints of this nature were recorded via this process during the reporting period.

Complaints about HVCH

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

NI Direct

There were no written 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 as 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.

Complaints 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 they we 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 RapidXtra screen wccm11 (Contact Amendments) and closed contacts can be re-categorised using RapidXtra 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:

- Customer Service Officer Review - it is the responsibility of the Customer Service Officer in the Complaints & Executive Mail Team 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 RapidXtra accordingly. If unsure, they should seek guidance from their line manager.
- Line Management checks – the 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 RapidXtra.

Exclusions

A total of 28 written customer complaints have been excluded from DG7 reporting during 19/20 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 2018/19 performance figures.

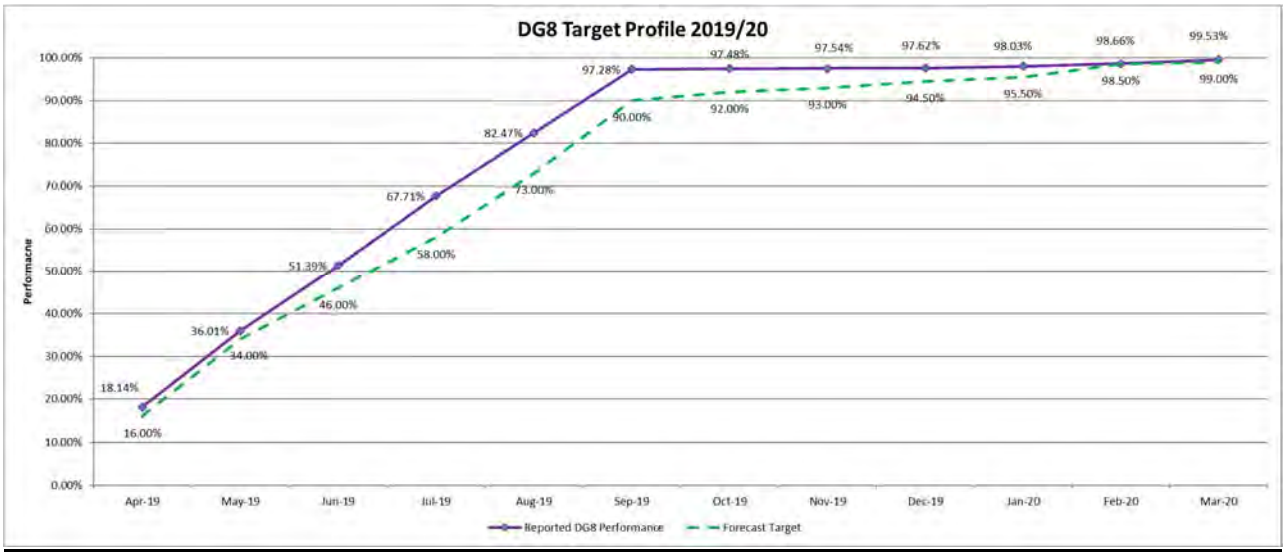
1	Total written complaints	B2
2	Number dealt with within 10 working days	B2
3	Percentage dealt with within 10 working days	B2
4	Number dealt with in more than 20 working days	B2
5	Percentage dealt with in more than 20 working days	B2

Lines 6-12 DG8 – Bills for metered customers

99.53% of meters were read and billed based on an ‘actual’ meter read during 19/20, exceeding the target of 99.00%.

The target for 20/21 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 19/20. The monthly performance is based on actual meter reads out of the total meter stock base.

As at Sep19, per graph detailed above, 97.28% 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 84 for 18/19 to 55 19/20, 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 2020 from RapidXtra:

- 61,091 Meters were excluded in 19/20.

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 61,092 but the actual Exclusion total is 61,091.

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 20/21.

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 19/20:

Reason for Exclusion	Count of Exclusions	% of total Exclusions
Charged on another basis	58,085	95.08%
New Property	338	0.55%
Occupied < 181 consecutive days	103	0.17%
Void Property/No Occupier	2,565	4.20%
Grand Total	**61,091**	**100%**

For 19/20 the total meters excluded has risen by 549 compared to the total exclusion reported in 18/19.

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 2018/19 performance figures:

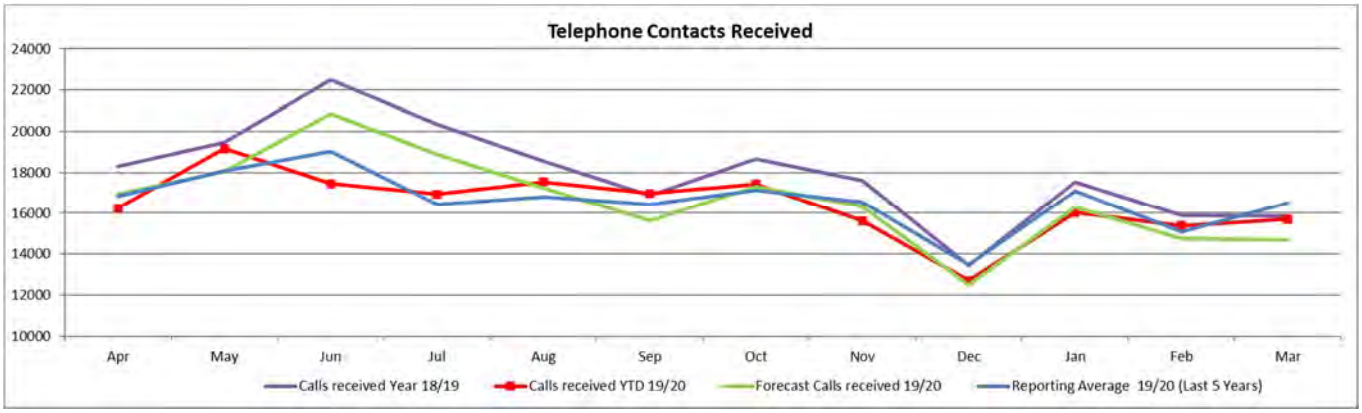
6	Total Meter Accounts	A1
7	Metered accounts excluded from indicator	A1
8	Company readings	A1
9	Company or customer readings (or both)	A1
10	Estimated bills only	A1
11	No bills received during the report year	A1
12	Unread by company for 2 years	A1

Lines 13 – 17- DG9 Telephone Contact

DG9 Introduction

During the reporting year a total of 197,184 calls were made to the Public Advertised Company telephone numbers.

Graph 1 shows a comparison against the previous reporting year (2018/19) and against our target level of calls for the year and the 5 year average.



Graph 1: Telephone Contacts Received

Call volumes for 19/20 were 17,827 lower than the previous reporting year 2018/19 (215,011, with December (12,699 receiving the lowest call volumes YTD.

HVCA has been renamed HVCH (High Volume Call Handling from September 2019 due to a new company providing the system.

The deployment of a High Volume Call Handling (HVCH 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. HVCH was available to handle overflow calls for customers reporting faults on the Waterline.

The High Volume Call Handling (HVCH) 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 HVCH 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 HVCH call routing plan to have their issue logged.

HVCA received 2,616 calls, 31% of HVCA calls were received in June and September.

HVCA Calls	YTD	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Total HVCA Calls (All Classed as Answered)	**2616**	119	218	339	132	238	470	341	260	99	72	129	199
Total HVCA Calls Answered	**1592**	82	138	222	79	138	248	202	157	66	38	89	133
Total HVCA Calls Abandoned	**1024**	37	80	117	53	100	222	139	103	33	34	40	66

New – IVR Platform

A new IVR platform was introduced to provide customers with another channel of choice, the IVR platform is available 24/7 and supports 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.

IVR Calls	YTD	April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
IVR - Billing Calls	**13830**	1202	1518	1185	1177	1061	1190	1243	931	1060	1178	1013	1072
IVR - Debt Line	**1158**	12	139	162	126	112	119	116	79	65	117	63	48
IVR - Septic Tank Calls	**4728**	583	618	467	616	510	588	535	40	141	220	211	199
TOTAL IVR Calls	**19716**	**1797**	**2275**	**1814**	**1919**	**1683**	**1897**	**1894**	**1050**	**1266**	**1515**	**1287**	**1319**

Line 14 - All Lines Busy

There were 44 instances of 'All lines busy' during the reporting year 19/20. An increase of 15 instances compared with the number received during 18/19.

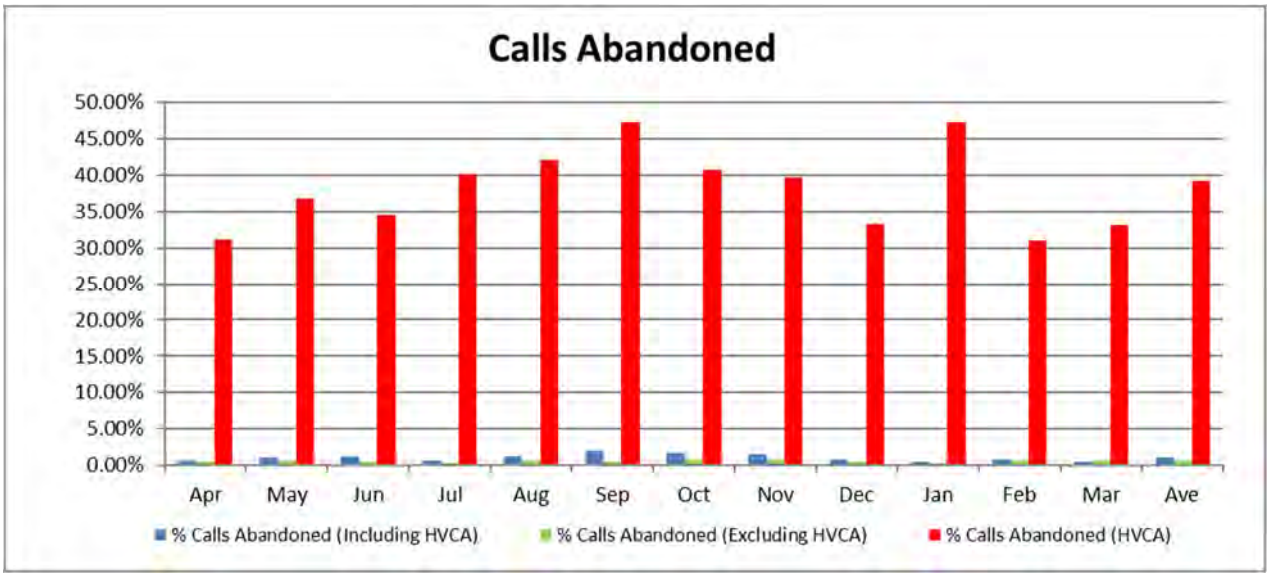
Lines 15 – Calls Abandoned

There were 992 calls abandoned on the Call Media system during the year leading to a reportable Company performance of 99.50% of 'calls not abandoned', which exceeded the 99% target set for the year.

All calls abandoned on HVCH 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 HVCH 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 HVCH 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 1124 abandoned on the HVCH system and the details on calls abandoned, including and excluding the HVCH system, are set out in Table 1 in Annex A.

As reported previously to the Regulator, 39.14% of all calls transferred to the HVCH 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 2019 – 2020

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 decreased to 53,210 compared to 59,686 received during 2018/19 reporting period.

Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	YTD
4282	5093	4917	4265	4697	3935	4366	4321	3847	4162	4562	4763	53210

Line 18 – Customers on the Customer Care Register

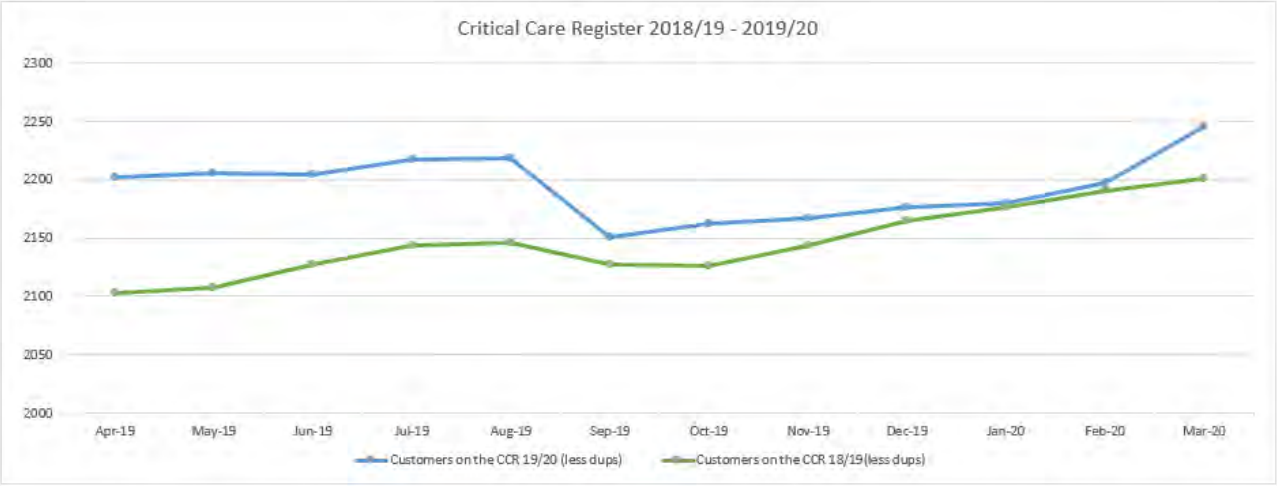
The Customer Care Register offers a range of free additional services to customers who are older, have a disability, a serious medical condition or require extra help when experiencing an interruption to their water supply.

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 19/20 reporting year 2,246 customers were registered on the Customer Care Register, this has increased slightly compared to the reported 2,201 for 18/19.



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

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 19/20. During the reporting year 190,729 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 2019/20:

Month Received	Count
April	15721
May	18287
June	16972
July	16447
August	17447
September	16329
October	16979
November	15857
December	12408
January	15369
February	14479
March	14434
Grand Total	190729

Line 20 – Unwanted Contacts

During the reporting year 19/20 a total of 67,013 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). This is determined by the subject matter of the contact.

The table below illustrates the breakdown of unwanted contacts across the financial year:

Month	Unwanted Contacts
Apr	5,409
May	6,462
Jun	6,083
Jul	5,426
Aug	5,991
Sep	5,294
Oct	5,623
Nov	5,419
Dec	4,701
Jan	5,252
Feb	5,596
Mar	5,757
Grand Total	**67,013**

Based on the total unwanted telephone contacts received by the company, 25,561 are relating to Sewerage Services and 33,535 are relating to Water Services.

The top Sewerage Service unwanted contact for 19/20 is *'Blocked Sewer Inc. Cleanup & Disinfect',* with a total of 13,319 (19.9% of unwanted customer contacts.

The top Water Service unwanted contact for 19/20 is '*No Water Complaint',* with a total of 17,613 (26.2%) 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 4 potential anomalies were found throughout the entire year (a mere 0.3% of the sample taken).

	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
	Oct-19	1	0
	Nov-19	0	0
Q3	Dec-19	0	0
	Jan-20	0	0
	Feb-20	0	0
Q4	Mar-20	1	1

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	89%
Jun	90%
Jul	91%
Aug	90%
Sep	91%
Oct	90%
Nov	91%
Dec	90%
Jan	91%
Feb	90%
Mar	91%
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

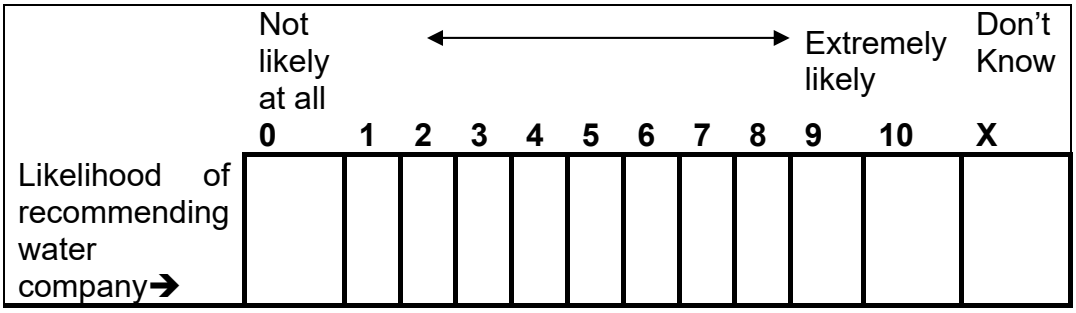
Line 23 – Customer Advocacy measure

Customer advocacy is an annual satisfaction score which is assessed by Northern Ireland Water's Voice of the Customer service in which surveys are conducted by Watermelon, an independent Customer Experience and Insights specialist. Previously this score was gauged by Allto, an external market research company who carried out quarterly surveys of customers. The switch to Voice of the Customer came about as it is a continually operating service, day-by-day, with each customer being asked to complete a survey after interacting with Northern Ireland Water. This provides a much greater sample size over the course of an entire year, giving a more true reflection of Northern Ireland Water's satisfaction score as opposed to the Allto method which only focused on a single week within a 3 month time-span.

The objective of the surveys 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 "*Based on your recent experience with us, how likely are you to recommend NI Water? Please respond 0 for very unlikely up to 10 for very likely".*

The score is calculated using Net Promoter Score methodology based on results from the previous question.



Customer Advocacy is calculated: Promoter % - Detractor %

NPS Calculation document embedded below:

NPS Calculation - AIR 20.docx

The survey is based on resolved contacts only (from telephone and written channels in relation to all areas of the business. Every morning Watermelon provides the latest completed surveys via SFTP into NI Water's data warehouse where the master set of surveys are stored.

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

Ipsos MORI 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 is to survey a sample of domestic and non-domestic customers who may or may not have contacted NI Water, to confirm their level of customer satisfaction and ascertain 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 happy with the service I receive from NI Water."

The Omnibus survey is based on a sample of 1000+ domestic consumers and 500 non-domestic consumers that may have had direct or no contact with NI Water to request a service or make a complaint. The survey is carried out once a year, the data for the survey was collected between 24th January and 4th March 2020.

Each domestic survey consists of a freshly drawn sample of 1000+ people, aged 16 and over (with each interview representing one household). The sample is quota controlled to represent the Northern Ireland population in terms of gender, age, social class and geographical location. 70 sampling points where selected across Northern Ireland. The sampling points were chosen at random from 285 electoral wards, each sampling point incorporates up to 3 wards depending on the population of the area.

As mentioned, quota sampling was used to ensure that the final sample was representative of the population. The survey for domestic customers was conducted face to face and non-domestic customers were surveyed using Computer Assisted Telephone Interviewing (CATI).

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 happy with the service I receive from 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 (70% of domestic customers agreeing that they were satisfied.

The level of satisfaction reported for 19/20 cannot be compared to the level of satisfaction reported in 18/19 due to various contributing factors:

- Domestic customers surveyed had decreased to 1,009 compared to the 1,035 surveyed the previous year.
- Non-domestic customers surveyed had increased from 200 to 500.
- The survey was carried out later in the year (January). Previously the survey had been carried out in September and there is potential for a seasonal impact on the customers' response.
- NI Water does not have control over the order in which the survey questions are asked, there is potential for the previous question asked to impact the response given to the statement above.

As per table below, the overall score achieved was 71.66

	Nr	Score	Total/Ave
Domestic	1009	70	70630
Non-domestic	500	75	37500
Total/Average	1509		**71.66**

Line 25 – Omnibus survey question 2

Ipsos MORI 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 is to survey a sample of domestic and non-domestic customers who may or may not have contacted NI Water, to confirm their level of customer satisfaction and ascertain 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'

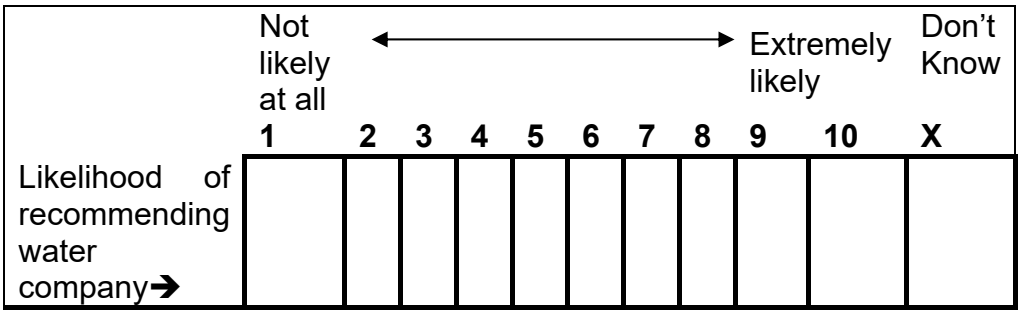
The Omnibus survey is based on a sample of 1000+ domestic consumers and 500 non-domestic consumers that may have had direct or no contact with NI Water to request a service or make a complaint. The survey is carried out once a year, the data for the survey was collected between 24th January and 4th March 2020.
Each domestic survey consists of a freshly drawn sample of 1000+ people, aged 16 and over (with each interview representing one household. The sample is quota controlled to represent the Northern Ireland population in terms of gender, age, social class and geographical location. 70 sampling points where selected across Northern Ireland. The sampling points were chosen at random from 285 electoral wards, each sampling point incorporates up to 3 wards depending on the population of the area.

As mentioned, quota sampling was used to ensure that the final sample was representative of the population. The survey for domestic customers was conducted face to face and non-domestic customers were surveyed using Computer Assisted Telephone Interviewing (CATI.

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'



Advocacy across both domestic and non-domestic customers is largely aligned; 66% of non-domestic customers and 63% of domestic customers would recommend NI Water to a friend or colleague.

Among domestic customers, advocacy is higher among those aged 55+. There are no significant differences in terms of advocacy for non-domestic customers along the lines of sector or business size.

Among non-domestic customers who would recommend NI Water, 7 in ten are motivated by NI Water's good quality service. For those who would not recommend NI Water the most common reasons provided were a lack of competition and perceived poor quality service.

As per table below, the overall score achieved was 7.63.

	Nr	Score	Total/Ave
Domestic	1009	7.65	7718.85
Non-domestic	500	7.58	3790
Total/Average	1509		**7.63**

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 493 work orders were received by the Company from FIL.

Month Received	April	May	June	July	August	September	October	November	December	January	February	March	Grand Total
Count	32	42	88	32	70	34	38	29	25	28	51	24	493

Confidence Grades

Call volume data is derived using a combination of telephony systems, the HVCH system for automated calls, Call Media that draws information from the Avaya system for agent handled calls and the IVR platform for calls linked to the Billing Enquiry and Waterline PACC lines.

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 HVCH; however the confidence grade assigned to the data remains at ‘A2’, as per the AIR guidance.

Customer Satisfaction retains the confidence grade of ‘A1’ as it is conducted independently and the results are provided to NI Water by Ipsos MORI.

Table 1: HVCA (2019/20)

Annex A

Calls received/answered to HVCA

Details	YTD	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Total calls received (HVCA)	**2616**	**119**	**218**	**339**	**132**	**238**	**470**	**341**	**260**	**99**	**72**	**129**	**199**
Total calls answered (HVCA)	**1592**	**82**	**138**	**222**	**79**	**138**	**248**	**202**	**157**	**66**	**38**	**89**	**133**
% Calls transferring to HVCA based on total calls received	**1.39%**	**0.44%**	**1.26%**	**2.13%**	**0.87%**	**1.50%**	**3.17%**	**2.18%**	**1.82%**	**0.89%**	**0.52%**	**0.94%**	**1.45%**

Abandoned on HVCA

Details	YTD	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Total of Abandoned Calls (Call Media)	**992**	60	109	86	44	92	75	129	113	52	44	81	107
Total of Abandoned Calls (HVCA)	**1024**	37	80	117	53	100	222	139	103	33	34	40	66
Total of Abandoned Calls	**2016**	97	189	203	97	192	297	268	216	85	78	121	173
% Calls Abandoned (Including HVCA)	**1.14 %**	0.67%	1.12%	1.30%	0.65%	1.21%	1.97%	1.72%	1.48%	0.74%	0.54%	0.86%	0.54%
% Calls Abandoned (Excluding HVCA)	**0.57%**	0.42%	0.65%	0.55%	0.29%	0.58%	0.50%	0.83%	0.78%	0.45%	0.30%	0.58%	0.58%
% Calls Abandoned (HVCA)	**39.14%**	31.09%	36.70%	34.51%	40.15%	42.02%	47.23%	40.76%	39.62%	33.33%	47.22%	31.01%	33.17%

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS

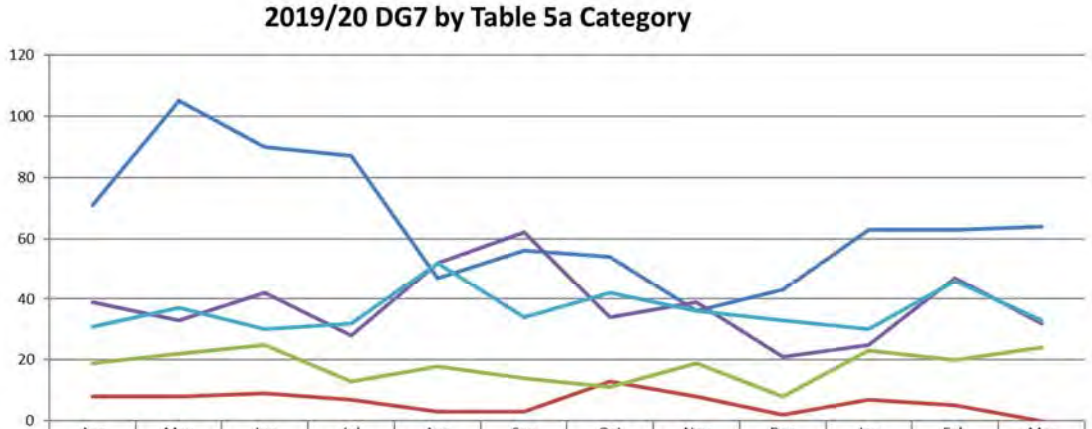
CUSTOMER COMPLAINTS DATA FOR CONSUMER COUNCIL FOR NORTHERN IRELAND (TOTAL)

	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	1,958	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	1,957	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	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	779	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	60	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	436	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	23	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	454	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	24	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	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	8	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	216	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	27	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	211	B4		
15	Consumer Council investigations	nr	0	27	B2	40	B2	28	B2	34	B2	30	B2	23	B2	5	B2	10	B2		

Table 5a – DG7 Response to Written Complaints

DG7 Received Annual Profile & Explanation

The volume of DG7 complaints received each month during 19/20 by type is shown in the chart below.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Charges & Billing	71	105	90	87	47	56	54	36	43	63	63	64
Metering	8	8	9	7	3	3	13	8	2	7	5	0
Other Activities	19	22	25	13	18	14	11	19	8	23	20	24
Sewerage Services	39	33	42	28	52	62	34	39	21	25	47	32
Water Services	31	37	30	32	52	34	42	36	33	30	46	33

In line with previous years, those falling into the Charges & Billing Category remain the principal written complaint type. In 19/20 40% of the total written complaints received fall into this category. This represents a 2% increase in comparison to the previous reporting period.

There were no key drivers linked to billing or operational complaints identified during the reporting period.

Second Stage Complaints

Systems remained in place to enable the reporting of complaints escalated to second stage review throughout 19/20.

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

Monitoring systems remain in place 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 19/20.

System-based report data was used to derive the number of holding responses issued between 01/04/19 and 31/03/20.

The figure reported in Line 14 is the total recorded number of holding responses issued to customers during 19/20 owing to pending investigations linked to open DG7 contacts which were received in 19/20. It does not include holding responses issued within 19/20 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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
39	Revenue outstanding 36 - 48 months (measured non households)	£m	3			0.000		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		0			
41	Revenue outstanding > 48 months (measured non households)	£m	3			0.000		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		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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
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	0.000	0		
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	0	0		
53	Revenue outstanding 36 -48 months (unmeasured non households)	£m	3			0.000		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		0			
55	Revenue outstanding >48 months (unmeasured non households)	£m	3			0.000		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		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	0.000	0		
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	0.000	0		
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	8.014	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	4.858	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	3.142	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	1.040	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	-1.026	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	2.234	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	10.248	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 2020 NI Water had no actual revenue from households as this is received by way of a subsidy from Department for Infrastructure ("DfI"). There was £1.35m due to NIW from DfI for subsidy at 31 March 2020. 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 2020.

At 31 March 2020 the closing trade debtor balance was £5.496m. 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 £2.123m and is made up of the following:

- £0.115m for debt over 4 years
- £0.096m for debt 3 - 4 years
- £0.306m for debt 2 – 3 years
- £0.462m for debt 1 – 2 years
- £0.657m for debt 90 – 365 days
- £0.487m 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. £1.9m less than the detailed debtors listing provided by Echo. This was due to the following:

- Future system adjustments (£1.6m)
- Other adjustments (£0.3m)

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 2019/20 outstanding from measured non households for less than 48 months. Balance as at 31 March 2020 was £5.496m.

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 2020 was 11,102. 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 £1.9m. The £1.9m is approximately 15% of total outstanding debtors at 31 March 2020 of £12.5m. 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 2019/20 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2020 was £4,862m.

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months: The number of measured non households at end of 2019/20, with revenue outstanding for less than 3 months. As at 31 March 2020 this totalled 8,379.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households): The total amount of revenue at the end of 2019/20 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2020 was £0.359m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months: The number of measured non households at end of 2019/20 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2020 this totalled 1,762.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households): The total amount of revenue at the end of 2019/20 outstanding from measured non households for at least 12 months but less than 24 months. At 31 March 2020 this totalled £0.227m.

Row 36 – Number of Measured Non-Households with Outstanding Revenue 12-24 months: The number of measured non households at end of 2019/20 with revenue that has been outstanding for at least 12 months but less than 24 months. At 31 March 2020 this totalled 642.

Row 37 – Total Revenue Outstanding 24-36 months (Measured Non Households): The total amount of revenue at the end of 2019/20 outstanding from measured non households for at least 24 months but less than 36 months. At 31 March 2020 this totalled £0.048m.

Row 38 – Number of Measured Non-Households with Outstanding Revenue 24-36 months: The number of measured non households at end of 2019/20 with revenue that has been outstanding for at least 24 months but less than 36 months. At 31 March 2020 this totalled 319.

Row 39 – Number of Measured Non-Households with Outstanding Revenue 36-48 months: The number of measured non households at end of 2019/20 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 2020 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 2020.

- At 31 March 2020 the closing trade debtor balance was £2.870m (31 March 2019, £2.650m).

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.139m and is made up of the following:

- £0.008m for debt over 4 years
- £0.006m for debt 3 - 4 years
- £0.020m for debt 2 – 3 years
- £0.030m for debt 1 – 2 years
- £0.043m for debt 90 – 365 days
- £0.032m for debt less than 90 days

Summary of all relevant rows for Section D

Row 43 – Total Revenue Outstanding < 48 months - Unmeasured Non Households: The total amount of revenue at the end of 2019/20 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2020 was £2.870m.

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months: The number of unmeasured non households at the end of 2019/20 with revenue that has been outstanding for less than 48 months. Total at 31 March 2020 was 8,974.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households: The total amount of revenue at the end of 2019/20 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2020 was £2.552m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months: The number of unmeasured non households at the end of 2019/20 with revenue outstanding for less than 3 months. Total at 31 March 2020 was 8,160.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households: The total amount of revenue at the end of 2019/20 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2020 was £0.085m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months: The number of unmeasured non households at end of 2019/20 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2020 was 217.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households: The total amount of revenue at the end of 2019/20 outstanding from unmeasured non households for at least 12 months but less than 24 months. Balance at 31 March 2020 was £0.170m.

Row 50 – Numbers of Unmeasured Non-Households with Outstanding Revenue 12-24 months: The number of unmeasured non households at end of 2019/20 with revenue

outstanding for at least 12 months but less than 24 months. Total at 31 March 2020 was 435.

Row 51 – Revenue Outstanding 24-36 months - Unmeasured Non Households: The total amount of revenue at the end of 2019/20 outstanding from unmeasured non households for at least 24 months but less than 36 months. Balance at 31 March 2020 was £0.063m.

Row 52 – Numbers of Unmeasured Non-Households with Outstanding Revenue 24-36 months: The number of unmeasured non households at end of 2019/20 with revenue outstanding for at least 24 months but less than 36 months. Total at 31 March 2020 was 162.

Row 53 – Revenue Outstanding 36-48 months - Unmeasured Non Households: The total amount of revenue at the end of 2019/20 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 2020 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 £0.332m (2018/19, £0.4936m).

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 [By Item]	Recommendation from (External service provider)	Approval required Grade (Internal)	DoF/DfI * (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 2019/20 was £0.290m (2018/19, £0.442).

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 2019/20 was £0.042m (2018/19, £0.051m).

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. In the context of the Covid-19 Pandemic - a predicted 3-month lockdown followed by 3 months of partial restrictions and the resultant unprecedented socio-economic impact, the risk model in the current environment required inclusion of a 'very high' risk classification. 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	181-365 Days	1-2 years	2-3 years	3-4 years	4 + years
Very High	40%	40%	55%	55%	70%	100%	100%	100%	100%	100%	100%
High	20%	20%	35%	35%	50%	80%	95%	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 Very High, High, Medium and Low

A review of the total debtors (debit balances) was carried out in March 2020. Account balance and aged debt taken into consideration when applying risk of default. Data was filtered by VAT SIC code. Past payment behaviours, legal recovery status, aged debt profile and various issues raised via repeat customer contact were all considered when allocating risk category to the VAT codes.

VAT code:

0 Agriculture/Forestry & Fishing – agri-food crisis due to closure of food service sector and anticipated market disruption with issues linked to food production lines | on-going Brexit uncertainty.

1 Energy & Water Supply – changes to supply chains and restricted workforce mobility | contraction in cash liquidity.

2 Extraction of Minerals & Ores – supply chain uncertainty and restricted workforce mobility | operational disruption | implementation of employees' safe social distancing | on-going Brexit uncertainty.

3 Metal Goods and Engineering – production interruption | adjusted production lines | supply chain disruptions | significant drop in market demand | high govt. job retention scheme uptake and staff furlough measures | on-going Brexit uncertainty.
4 Other manufacturing – production interruption | adjusted production lines | supply chain disruptions | significant drop in market demand | high govt. job retention scheme uptake and staff furlough measures | on-going Brexit uncertainty.

5 Construction – redirection of public investment | shelving of public/private sector infrastructure projects | disruption to complex material supply chains | implementation of employees' safe social distancing | high govt. job retention scheme uptake and staff furlough measures | on-going Brexit uncertainty.

6 Distribution/Hotel/Catering – total shutdown of retail (with exception of essential items) and hospitality sectors | predicted 0.5m job losses in UK hospitality and tourism sector | mass lay-offs in NI already seen | multiple retailers operating in an already vulnerable state (due to online channels) predicted to enter administration | uncertainty re: potential easing of travel restrictions and social distancing measures | high govt. job retention scheme uptake and staff furlough measures | on-going Brexit uncertainty.

7 Transport & Communication – non-essential travel prohibited | airline fleets grounded and ports closed to all except freight transport | on-going Brexit uncertainty.

8 Banking/Finance/Insurance – exposure to negative impact of Covid-19 dependent on length of lockdown, travel restrictions, etc. | time-bound capital and liquidity buffers | risk profiling of customers likely to intensify.

9 Other services – health trusts / councils / local govt. agencies all operating under very high pressure | implementation of employees' safe social distancing | delays expected.

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 £1m of future system adjustments.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2020 and 31 March 2019:

	2020	**2019**
	£m	**£m**
Measured water & sewerage	1.777	1.215
Unmeasured water & sewerage	0.139	0.048
Trade effluent	0.346	0.282
Total	**2.262**	**1.545**

Subsidy

NI Water received £287.9m subsidy in relation to household customers in 2019/20 with nothing outstanding from DfI at 31 March 2020.

NI Water received £17.656m subsidy in relation to non-household customers and at 31 March 2020 an amount of £1.350m was outstanding from DfI. The total subsidy for non-households for the year ended 31 March 2020 was £19.006m. 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.

Line 59 – General customer services operating expenditure

The line 59 total of £8.014m in AIR20 is a £1.21m increase (17.74%) against the costs of £6.806m in AIR19. This arises for the following reasons:

- Employment costs (increase of £0.66m (16%)).
- Hired and contracted costs (increase of £0.37m (13%)).
- Other costs (decrease of £0.13m (15%)).

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	5.776	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	0.308	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	750.207	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	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	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	750.207	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	788.789	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	8.731	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	71.145	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	79.876	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	90.077	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	48.783	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	1,784.60	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	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	4.25	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	97.45	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	1,886.30	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 AIR20 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 alone does not support in the explanation of gross movements within the data. With this is mind, during the 19/20 reporting year the CSD Services MI & Data Team explored the use of Power BI to re-create the RPS with a drill down function to display the gross movement. The Power BI property models developed take their direct feed from the Diamond Warehouse in order to refresh. These models provide us with information on gross movements and allow us to 'slice and dice' the data from various angles, providing invaluable insights. The plan is to further enhance and incorporate these models across the business during 2020/21.

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 AIR20 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 AIR19 and the AIR20 properties can be explained as follows:

1. New Connections during the 2019/20 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 chair 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 2019/20, the continued 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

The PIG Strategy for 2020/21 will include the following:

- New Connections - A push to move to on-system reporting following the Business Improvement New Connections Review
- Further use of PowerBI – We currently use Power BI to create and issue the monthly Rapid Property Summary (RPS) and will continue to explore the use of Power BI in other aspects of our property work throughout 2020/21
- 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.
- Continued monitoring of data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – Ongoing data sharing project that commenced in August 19
- 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. 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 – monitor numbers of '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 2019' and 'End March 20'. The '1st Dec 2019' are actuals used in the Principal Statement and Tariff Setting process.

Property Numbers	March 2019	1st Dec 2019	March 2020	Expected Movement
Unmeasured Water Household	745765	752455	754648	Increase
Unmeasured Water Non-Household	8622	8738	8839	Decrease (but project work has led to an increase)
Measured Water Non-Household	70994	71121	71296	Increase
Voids	48926	48804	48640	Currently no trend
Total	**874,307**	**881,118**	**883,423**	**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 19/20 the household no water/well water category increased by 237 and the non-household have increased by 604. 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 3019 domestic properties (an increase of 728 during 19/20) classified as site meters and there will be further investigation and analysis to be completed during 2020/21 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 increased by circa 492 during 2019/20. 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 640 (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 2019	1st Dec 2019	March 2020
Unmeasured Water Gross Household (L7 year-end sub calc)	784459	791022	793118
Unmeasured Water Occupied Household (L3 year-end sub calc)	745765	752455	754648
Unmeasured Water Voids Household	38694	38567	38470

Household Voids	Voids	Difference (in-year)
March 2020	38470	(+) 173
March 2019	38694	(-) 224
March 2018	38521	

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 2019	1st Dec 2019	March 2020
Unmeasured Water Gross Non-Household	13976	13981	14003
Unmeasured Water Occupied Non-Household (L8 year-end sub calc)	8622	8738	8839
Unmeasured Water Voids Non-Household	5354	5243	5164

Measured Non-Household Property Movement

Property Numbers	March 2019	1st Dec 2019	March 2020
Measured Water Gross Non-Household	75872	76115	76302
Measured Water Occupied Non-Household (L9 year-end sub calc)	70994	71121	71296
Measured Water Voids Non-Household	4878	4994	5006

Non-Household Voids

Non-Household Voids	Voids	Difference (in-year)
March 2020	10170	(-) 62
March 2019	10232	(-) 218
March 2018	10450	

Confidence Grades

We have kept the confidence grades consistent with those of AIR19. 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 AIR20.

Annex A details the Line Methodology followed for the figures within Table 7 Lines 1-12.

Lines 13 – 17 Population

The population data used by NI Water has been derived from 2018 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/NPP18-ppp-coc.xlsx

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 9,688 and an occupancy rate is calculated at 0.865 (rounded) to determine a total population for unconnected properties of 8,380. The total supplied population for all connected properties is calculated as 1886.30 (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 23,818.

The farm population is 30,932 x 2.518 = 77,877. Therefore with the addition of the communal population, the non-household population is 101.69 (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 1784.60 (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 (77,877) has been classed as measured. The communal population (23,818) is split based on 8,731 unmeasured customers (17.87%) and 40,133 measured customers which excludes farms (82.13%). This therefore provides a population for measured NHH of 97.45 (x1000) (Line 16) and an unmeasured NHH population of 4.25 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure of 1886.30 (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 – 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 20 NC_ 6084 Water.xlsx

Therefore, the number of new household connections for the year is 5776.

Household properties connected during the year	**5776**

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 308.

Non-Household properties connected during the year	**308**

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 AIR20 (dated 31st March 2020) as attached below.

RPS March YE 2020.xlsx

Households Billed Unmeasured Water	End March 2019	End March 2020
Household – Unmeasured	700574	708529
Household - Measured – Not Charged (test meters)	144	116
Household - Measured	43596	43996
Household - Site Meters	1437	1991
Unmeasured - Not Charged	14	16
Total	745765	754648
Average (Apr19/Apr20)	**750207**	

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 2019	End March 2020
	0	0
Average Apr19/Apr20	**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 2019	End March 2020
	0	0
Average (Apr19/Apr20)	**0**	

Line 6: Households Billed Water

Average number of households billed for water within the water supply area.

Calculated by adding AIR20 Table 7 lines 3, 4 and 5

Households Billed Water	Average 19/20
Households billed unmeasured water (Line 3)	750207
Households billed measured water (external meter) (Line 4)	0
Households billed measured water (not external meter) (Line 5)	0
Total	**750207**

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 AIR20 (dated 31st March 2020).

Household Properties (Water Supply Area)	End March 2019	End March 2020
Unmeasured	733723	741224
Measured – Not Charged (Test)	150	121
Measured	48279	78736
Site Meters	2291	3019
Unmeasured - Not Charged	16	18
Total	784459	793118
Average (Apr19/Apr20)	**788789**	

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 2019 and End March 2020 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Water	End March 2019	End March 2020
	8622	8622
Average (Apr19/Apr20)	**8731**	

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 2019 and End March 2020 non-domestic measured properties.

Non-Households Billed Measured Water	End March 2019	End March 2020
	70994	71296
Average (Apr19/Apr20)	**71145**	

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 AIR20, excluding voids.

The sum of AIR20 Table 7 lines 8 & 9

Non-Households Billed Water	Average 19/20
Non-Households Billed Unmeasured Water (Line 8)	8731
Non-Households Billed Measured Water (Line 9)	71145
Total	**79876**

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 2019	End March 2020
Unmeasured	13976	14003
Measured	75872	76302
Total	89848	90305
Average (Apr19/Apr20)	**90077**	

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 2019	End March 2020
Non-Household – Unmeasured	5354	5164
Non-Household – Measured	4878	5006
Household – Unmeasured	33149	32695
Household - Measured	4683	4740
Household – Measured - Not Charged (Test)	6	5
Household – Site Meters	854	1028
Household - Not Charged	2	2
Total	48926	48640
Average	**48783**	

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	0	B3		
2	Meter optants installed	nr	0	0	A1	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	0	B3		
4	Meters installed - external meter without boundary box	nr	0	0	A1	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	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	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	708	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	3,344	B2		
8	Meter optants installed	nr	0	45	B2	23	B2	18	B2	20	B2	57	B2	61	B2	52	B2	71	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	706	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	61	B2		
11	Meters installed - internal meter	nr	0	82	B2	62	B2	18	B2	2	B2	16	B2	11	B2	7	B2	12	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	4	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	440.49	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 708. New connections accounted for 61 large and 299 small diameter installations, the other 348 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 opened as cases on the corporate case management system (Savvion) and issued to the contractor via a daily batch. The returned data is processed automatically via uploads to the Savvion system and any rejects go to various queues within the system monitored and progressed by NIW teams. 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 1863 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 235 meters under the PME programme.

An additional 526 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation.

Other teams within NI Water replaced a total of 720 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 3344 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 71.

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 706.

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 61 in the reporting year. This is a significant increase on previous reporting years due to a general upturn in the economy and a confidence by developers to move these larger projects forward. The projects included schools, hotels and four of these meters were installed because of Portrush hosting the Open Golf Championship.

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 12.

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 4.

Line 13 – Average Water Billed - Selective Metered Properties

The meters uploaded to Rapid during the previous reporting year (2018/19) are the focus for this line, along with the consumption usage throughout the 2019/20 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 440.49 l/prop/day, a decrease of 187.84 l/prop/day from AIR19. To demonstrate the range of consumption for AIR19 and AIR20, please see table below:

Consumption Band (m^3)	AIR19	AIR20
1-1000	572	1388
> 1000	77	136
Total (excl. zeros)	649	1524

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.

AIR19_20
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	44.225	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	588.510	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	0.000	A2		
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	203.819	A2		

Table 9 – Water Quality

Background – Year on Year

Drinking water quality compliance in 2019 was above the target level set for all water quality monitoring measures.

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 remained stable from 99.90% in 2018 with 99.90% in 2019 (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 fallen from 99.69% in 2018 to 99.52% in 2019. This is due to the 2019 performance being slightly lower for all parameters involved.
- The percentage compliance measured at Water Treatment Works (WTWs) has stayed comparatively stable from 99.97% in 2018 to 99.96% in 2019.
- The percentage compliance measured at Service Reservoir (SR) has stayed stable from 99.96% in 2018 to 99.96% for 2019.

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. This was closed in 2019, and replaced with a Regulation 31(4)b notice.

A CPEO for Ballinrees WTW was opened in 2017 for the pesticide MCPA. This was closed in 2019, and replaced with a Regulation 31(4)b notice.

Including these 2 sites, the volume for Raw Water deterioration is therefore 44.225 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	9.266
Ballinrees	28.527
Belleek	1.703
Carmoney	19.668
Carran Hill	5.415
Castor Bay	100.918
Caugh Hill	16.992
Clay Lake	3.689
Derg	15.699
Dorisland	27.343
Drumaroad	102.901
Dungonnell	8.832
Dunore Point	103.521
Fofanny	35.274
Forked Bridge	12.177
Glenhordial	4.200
Killyhevlin	25.941
Killylane	11.630
Lough Bradan	6.637
Lough Fea	12.202
Lough Macrory	11.264
Moyola	14.954
Seagahan	9.757
Total:	588.510

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 in the treated drinking water supply is carried out under the Drinking Water Safety Plan (DWSP) Regulation 31 Report for the treatment works and supply systems. The DWSP assesses the risk in the catchment and the treatment works pre and post control measures. The post control risk demonstrates if the treatment process has effective barriers in place to control the risk in the treated drinking water supply to low risk. The DWSPs are revised at least annually and submitted to the DWI.

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.

A warning letter for a Cryptosporidium exceedance at Drumaroad WTW was issued by the DWI during 2018. The treatability study carried out at Drumaroad WTW in PC15 identified treatment improvements to be undertaken to meet industry best practice for Cryptosporidium control. An Annex A has been submitted to the DWI to request support for a PC21 Water Non-Infra – WTW’s funded scheme.

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 203.819 Ml/d.

Confidence Grades

Confidence grades used in returns are based on OFWAT guidance documentation.

Appendix – Lines 6, 8 & 9

Site	Regulatory Enforcement	Parameter	Date Issued	Date Closed
Castor Bay WTW	PEO 18/01	Odour	25.06.18	Ongoing
Drumaroad WTW	CPEO 18/03	Aluminium	30.11.18	10.01.2020
Derg WTW	PEO 16/11	MCPA	24.03.18	12.03.2019 (PEO Revoked)
Derg WTW	Reg. 31(4)(b) Notice 01/19	MCPA	12.03.19	Ongoing
Ballinrees WTW	CPEO 17/01	MCPA	20.06.17	3.04.2019
Ballinrees WTW	Reg. 31(4)(b) Notice 03/19	MCPA	12.04.19	Ongoing
Rathlin WTW	CPEO 18/02	THM	02.03.18	12.03.2019 (CPEO Revoked)
Rathlin WTW	Reg. 31(4)(b) Notice 02/19	THM	12.03.19	4.12.2019

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		0.00			
2	Billed measured non-household	Ml/d	2	121.44		125.79		120.17		118.03		120.58		122.02		128.40		123.89			
3	Billed measured	Ml/d	2	121.44		125.79		120.17		118.03		120.58		122.02		128.40		123.89			
4	Billed unmeasured household	Ml/d	2	297.41		285.52		292.36		294.86		302.76		304.82		315.93		317.76			
5	Billed unmeasured non-household	Ml/d	2	6.87		6.07		5.82		5.28		5.17		5.14		5.49		5.53			
6	Billed unmeasured	Ml/d	2	304.28		291.59		298.18		300.14		307.93		309.96		321.42		323.29			
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	633.38	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	423.56	B3		
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	158.00	B3		
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		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		47.71			
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		23.86			
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		47.71			
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		47.71			
14	Meter under-registration (measured households)	Ml/d	2	0.00		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		6.87			
16	Distribution system operational use	Ml/d	2	2.36		2.39		2.51		3.05		2.93		3.51		3.20		3.05			
17	Water taken legally unbilled	Ml/d	2	14.79		15.16		17.10		16.80		16.40		17.57		16.76		15.09			
18	Water taken illegally unbilled	Ml/d	2	0.51		0.48		0.43		0.38		0.68		0.66		0.69		0.62			
19	Water taken unbilled	Ml/d	2	15.30		15.64		17.53		17.18		17.08		18.23		17.45		15.71			
20	Water delivered (potable)	Ml/d	2	441.02		433.02		435.88		435.35		445.59		450.21		467.27		462.89			
21	Water delivered (non-potable)	Ml/d	2	0.00		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		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		0.00			
24	Distribution losses	Ml/d	2	115.44		127.31		126.08		122.08		123.52		122.52		120.23		120.62			
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	160.53	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	586.56	B2		
27	Bulk supply imports	Ml/d	2	0.00		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		0.34			
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		586.22			
30	Overall water balance	CG			B2		A1		A1		A2		B2		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		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) AIR20 Reporting Requirements and Definitions manual March 2020. 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 AIR19, NI Water reported a reconciled leakage figure of 160.14 Ml/d.

For AIR20, the pre-MLE bottom up leakage figure of 157.15 Ml/d equated to an increase of 0.62 Ml/d from AIR19. 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. Household night use was updated for AIR20.

In summary, the outputs of this water balance are that the Integrated Flow Method of leakage assessment has given a figure of 177.67 Ml/d for total leakage and the Minimum Night Flow Method has provided a figure of 157.15 Ml/d. When the resulting imbalance between the two methods of 20.52 Ml/d is compared to the Distribution Input figure of 588.71 Ml/d (pre-MLE), it provides a percentage discrepancy of 3.49%. 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 160.53 Ml/d. This figure is 5.53 Ml/d behind the PC15 profiled leakage target of 155.00 Ml/d.

Demand Analysis

The pre-MLE distribution input for AIR20 was 588.71 Ml/d, a reduction of 4.34 Ml/d from 593.05 Ml/d in AIR19.

The graph in Fig. 1 below illustrates the monthly distribution input from AIR16 to AIR20 and shows that the DI for AIR20 remained consistent throughout the year however an increase was observed in the second half of March 2020 likely due to the government lockdown and the Covid-19 pandemic.

Fig. 2 shows AIR20 having a similar rainfall observation profile to AIR19 until mid-June when a clear increase in rainfall was observed which continued throughout the remainder of the year. Ground temperatures, shown in Fig. 3, were consistently low for the first two months of AIR20 (average 0 ^{o}C) however showed a higher rate of weekly increase than observed in the previous two years, also coinciding with increased levels of rainfall.

Although AIR20 observed similar sunshine to that of AIR19, rainfall was 23% higher and ground temperatures 7% lower for comparison.

NRRt analysis for AIR20 was comparable to that of AIR19 however, the NRRd was calculated at 4 Ml/d higher than in AIR19. This increase in NRRd occurred in the first half of the year, an increase that was challenging to recover from.

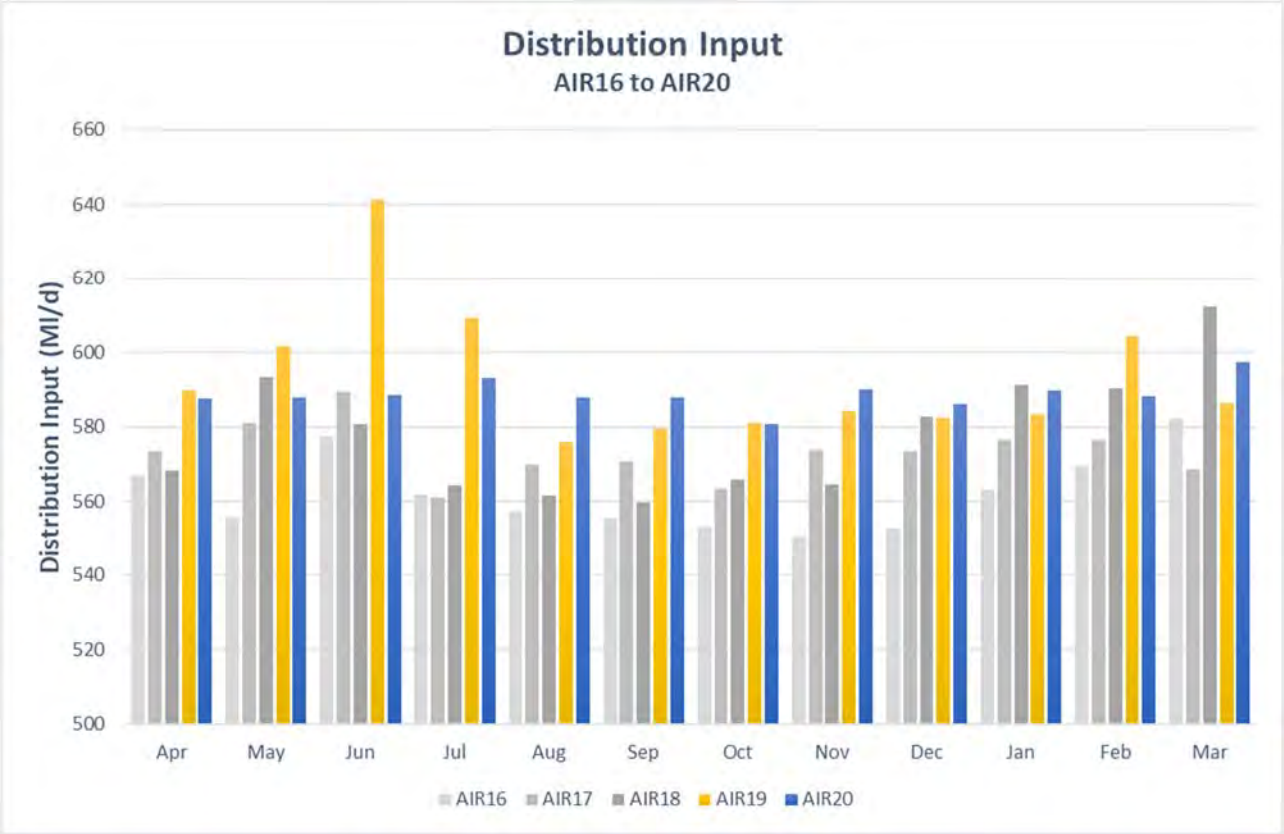


Fig 1

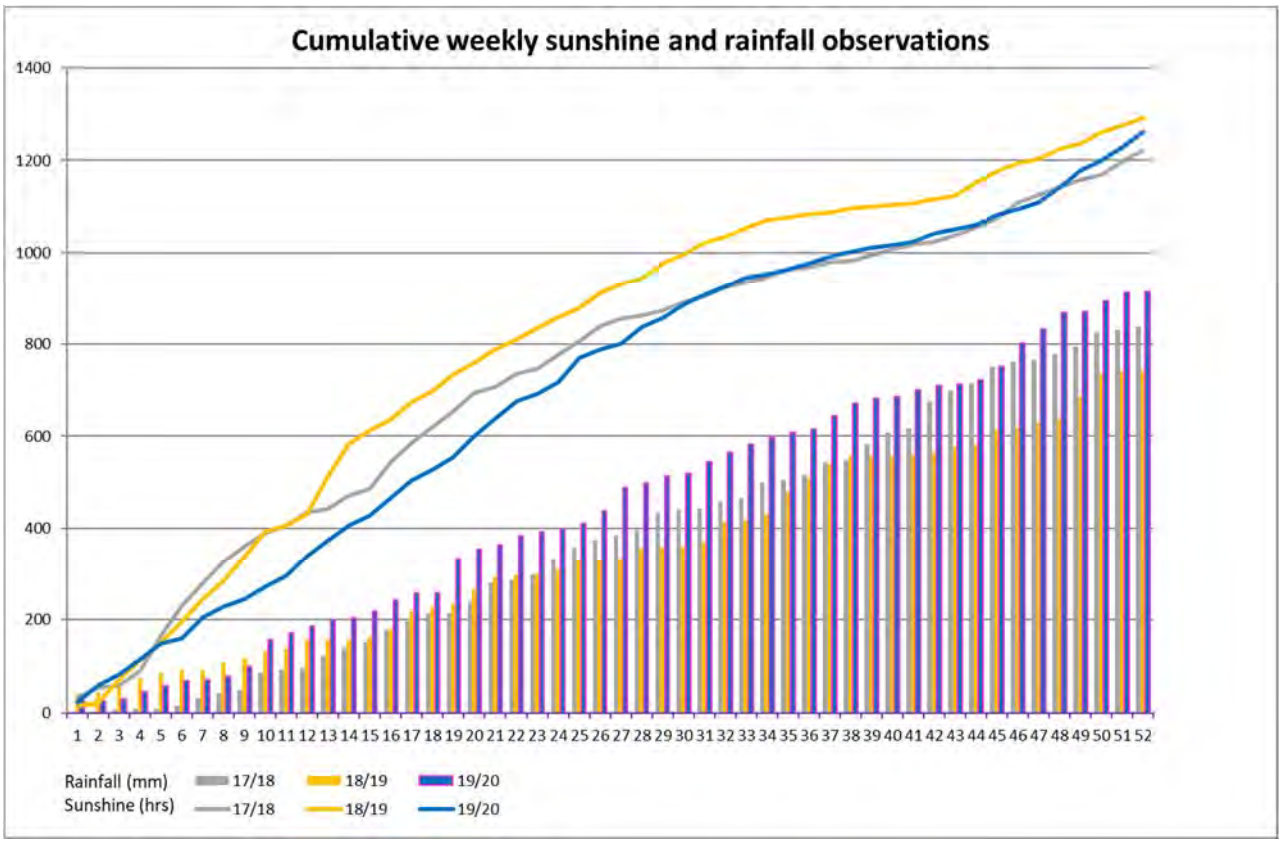


Fig 2

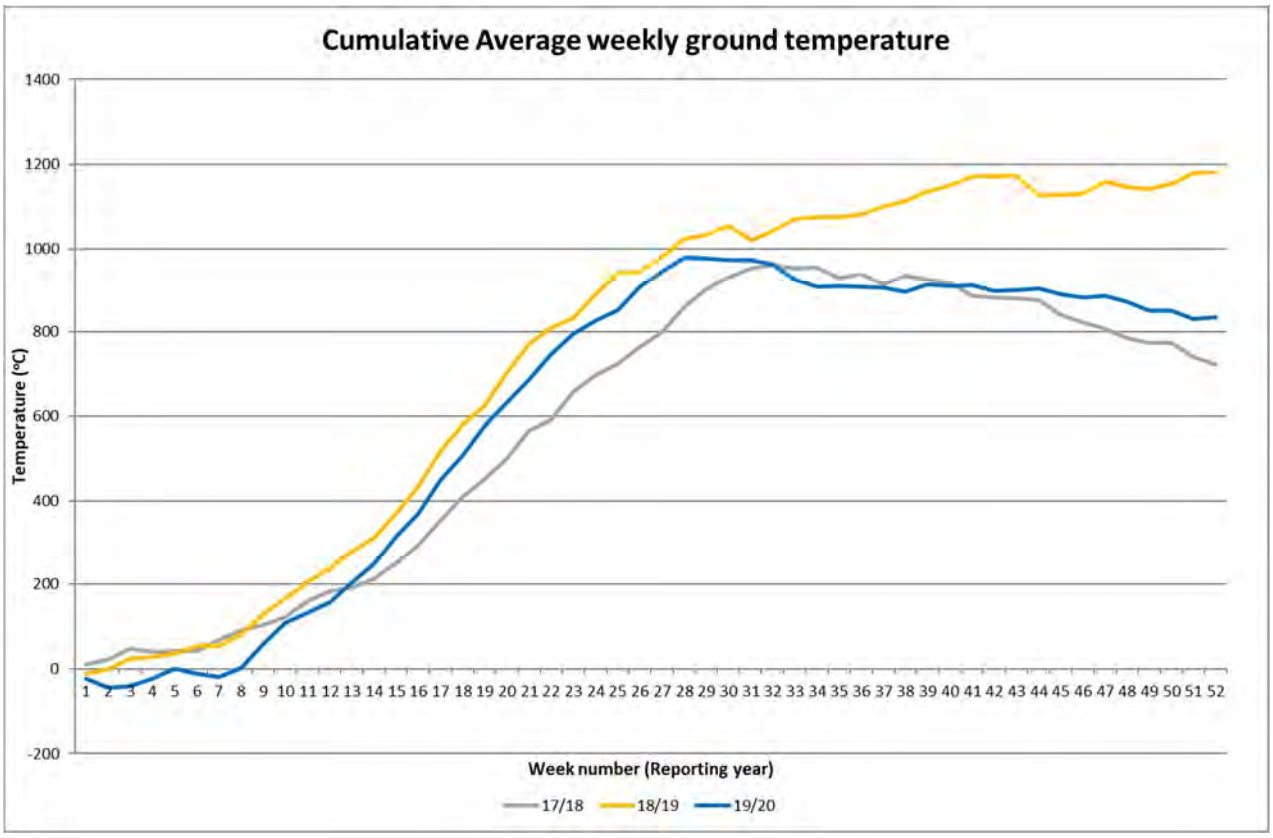

Cumulative Average weekly ground temperature
Temperature (°C)
1400
1200
1000
800
600
400
200
0
-200
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
Week number (Reporting year)
17/18
18/19
19/20

Fig 3

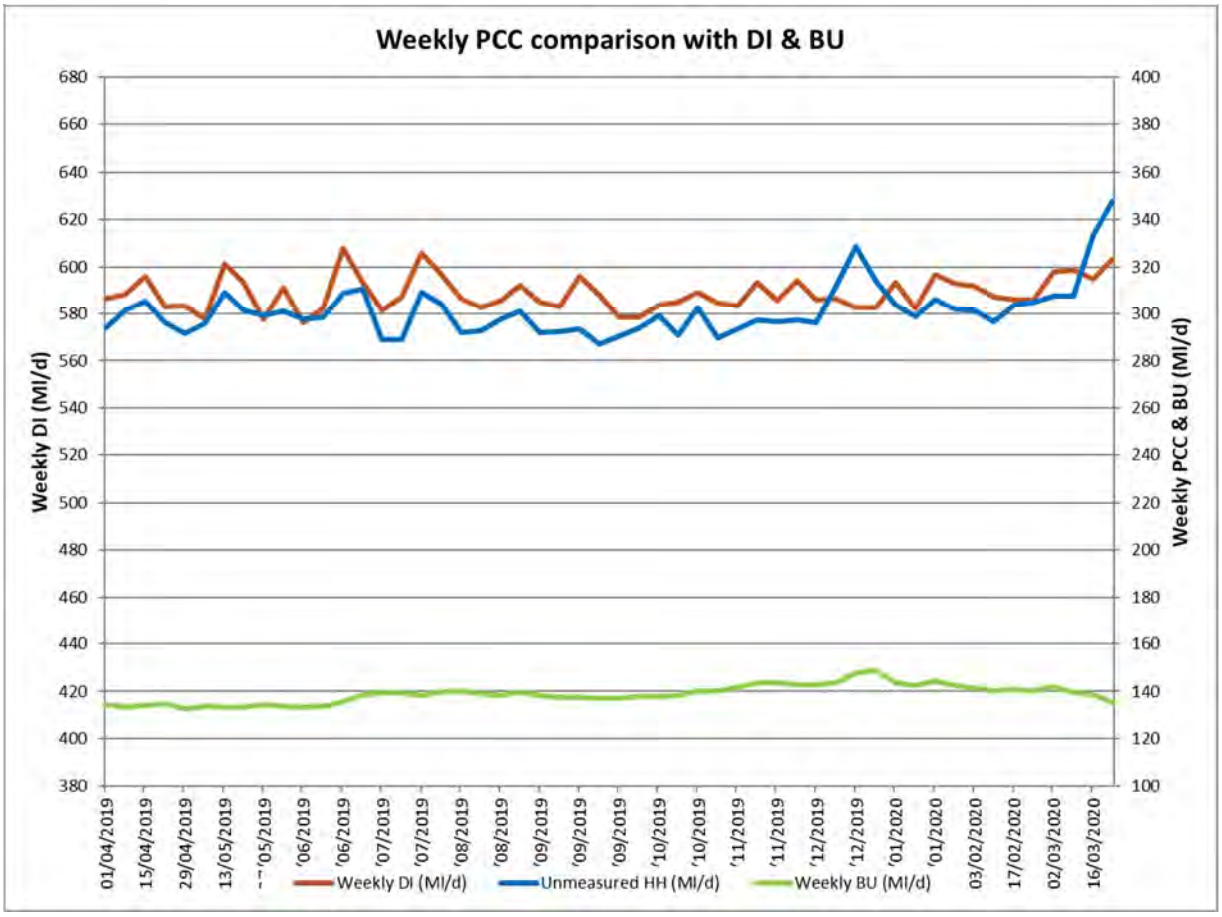

Weekly PCC comparison with DI & BU
Weekly DI (Ml/d)
680
660
640
620
600
580
560
540
520
500
480
460
440
420
400
380
Weekly PCC & BU (Ml/d)
400
380
360
340
320
300
280
260
240
220
200
180
160
140
120
100
01/04/2019
15/04/2019
29/04/2019
13/05/2019
'05/2019
'06/2019
'06/2019
'07/2019
'07/2019
'08/2019
'08/2019
'09/2019
'09/2019
'09/2019
'10/2019
'10/2019
'11/2019
'11/2019
'12/2019
'12/2019
'01/2020
'01/2020
03/02/2020
17/02/2020
02/03/2020
16/03/2020
Weekly DI (Ml/d)
Unmeasured HH (Ml/d)
Weekly BU (Ml/d)

Fig 4

Data Quality

NI Water has remained committed to improve data quality throughout the PC10 and PC13 periods and continues 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 AIR19 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.

We are in the process of upgrading our leakage management software, Netbase, to the latest version which will align with the GB companies utilising this software. It is proposed that the Netbase upgrade will be in place to for reporting for the start of the PC21 period.

NI Water have recovered operability to prior year levels and reports a DMA operability value of 78% for year-end. 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 AIR20, NI Water continues to follow its leakage reduction action plan and have commenced a number of further initiatives. The following is an overview of actions during AIR20.

- Recommendations on 'hotspot' rehabilitation schemes identified through the intensive DMA Studies workstream in regards to influencing Rehab Work Packages. A number of these renewal recommendations have been undertaken and the benefits will continue to be monitored.
- Targeted DMA leak detection reporting is 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. NI Water have purchased 200 controllers for installation during AIR21.
- Leakage Detection resources have been increased during AIR20.
- In AIR19, NI Water engaged with Fujitsu and Catapult in regards to utilising satellite technologies and artificial intelligence in regards to leak detection. Unfortunately this project was not successful. In March 2020, NI Water commenced a pilot study with Utilis, utilising satellite SAR imagery to identify leakage points of interest.
- Other innovations include an increased deployment of noise logging and we have consulted with other water companies regarding the best practice for installation and analysis. We have also increased the use of pressure transient logging on the network to understand the implications of transients in a calm network.
- 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.
- We have installed fast-logging points on a number of our PCC sites and sections of our rural network. We will expand our fast-logging installations and 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. Our consultant, RPS, is undertaking analysis to advise on best practice in utilising this data.

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 developed and 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 for the start of PC21 and enhanced further during this 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 AIR20, NHH MUR has been updated to 5.97%.

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 daily via GPRS loggers. NI Water have been working closely with our suppliers and have recently completed the automatic integration of GPRS logged data into the telemetry system. This work will provide enhanced monitoring of remote network locations including all DMAs, PMAs and key customers. Multiple daily data downloads in parallel with the setting of flow and pressure alarm protocols will increase data availability and quality to enhance leakage monitoring, targeting and reporting as well as being available during major incidents.

During 2019/20 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 30 PRV replacements being identified and 83 new PRV installations during the year.

DMA optimisation continues to play an important role within the success of the function. In 2019/20 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 this has resulted in over 600 infrastructure improvement schemes being installed as part of the overall capital improvement programme and includes the installation of 429 flow loggers on the network.

For reference, the table below states the variables/parameters which may impact upon the variance in individual water balance component calculations.

	AIR19	AIR20
HDF (hrs)	23.2	23.2
UNHH consumption (m3/yr)	207.70	207.70
PCC MUR (%)	7.39	7.39
HH occupancy (nr)	2.52	2.52
NHH MUR (%)	6.44	5.97
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 (20.38)
Per Capita Consumption (l/hd/d)	136.43	139.52

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 decreased from 128.40 Ml/d in AIR19 to 123.89 Ml/d in AIR20.

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 closed 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 AIR19, 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 decrease in measured consumption in AIR20 of 6.38 Ml/d. This decrease follows a noted increase of similar magnitude from AIR18 to AIR19 and could be attributed to the summer demand event observed in 2018.

A non-household meter under-registration (MUR) value of 5.97% 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 and propose to 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 AIR20 is 317.76 Ml/d. This figure represents an increase from the AIR19 value of 315.93 Ml/d.

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) 2018. Adjustments are made to this household population figure to account for:

- Non-Household Population – Sourced from the most recent NISRA 2018 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 2019/20 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 and is specific to NI Water's domestic consumption monitor meters and has remained constant throughout PC15.

During the reporting year work has continued to maintain the reliability of this value:

- A comprehensive door to door survey covering approximately 20% of properties within the Domestic Consumption Monitor Areas was initiated in March 2020. Due to the government lockdown, the survey programme was postponed however approximately 50% was already completed. The survey updates were input into the AIR20 consumption monitor assessment. The overall occupancy rate is calculated at 2.37 for AIR20 and is a slight reduction from the AIR19 occupancy rate of 2.38. The NISRA occupancy rate for Northern Ireland is 2.52 for 2019/20.

- 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.

In AIR19, NI Water applied a confidence limit of 12% to this component which was at the upper range of the 'Per Capita Consumption' reporting guidance of 8% to 12%. This accounted for an increased uncertainty of household consumption during the summer 2018 heatwave event and considered the recommendations from RPS analysis.
As stated in AIR19 reporting, NI Water have reverted this confidence limit back to 10%.

In order to better understand the seasonal consumption patterns within the company's rural household stock, NI Water have installed 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 AIR20 is 5.53 Ml/d. The value reported in AIR19 was 5.49 Ml/d. NI Water has continued with a programme of meter installation of unmeasured non-household properties.

As 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 5.97% was applied for AIR20.

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.

Line 7 – Estimated Water Delivered Per Unmeasured Non–Household

The post MLE figure for estimated water delivered per unmeasured non-household for AIR20 is 633.38 l/prop/d. The figure reported for AIR19 was 633.41 l/prop/d.

The allowance for unmeasured non-household properties for AIR20 is 207.70 m^3/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household

The post MLE figure for estimated water delivered per unmeasured household for AIR20 is 423.56 l/prop/d. The figure reported for AIR19 was 426.75 l/prop/d.

The confidence grade applied to this line has decreased back from a B4 in AIR19 to a B3 in AIR20 because of the billed unmeasured household error estimate increasing from 10% to 12% during the summer demand event to reflect the uncertainty in household consumption.

Line 8 – Per Capita Consumption (Unmeasured Household – Excluding Supply Pipe Leakage

The post MLE PCC figure for AIR20 is 158.00 l/hd/d. The figure reported for AIR19 was 158.18 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 139.52 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2019 to 31 March 2020. This compares to a figure of 136.43 l/hd/d for AIR19.
Fast-logging has been installed on a number of PCC sites reporting 1-minute logged averages. The assessed domestic consumption on these sites therefore reflects the 1-minute data.

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 will be implemented during PC15 and will reflect the installation of new metering for fast-logging.

The confidence grade applied to this line has decreased back from a B4 in AIR19 to a B3 in AIR20 because of the billed unmeasured household error estimate increasing from 10% to 12% during the summer demand event to reflect the uncertainty in household consumption.

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 25% 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 AIR20 unit values are 47.71 l/prop/d for unmeasured, other households and void properties, with a value of 23.86 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).

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 AIR20 leak notices increased by a further 2% 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 a non-household consumption MUR study and propose to 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 work undertaken over recent years in terms of developing company specific data.

For AIR20, NHH MUR has reduced to 5.97%. 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 AIR20 is 3.05 Ml/d. The value reported for AIR19 was 3.20 Ml/d. This calculation is consistent with the AIR19 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 15.71 Ml/d in AIR20 is a decrease from the value of 16.76 Ml/d in AIR19.

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 AIR20 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 AIR19 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 AIR20 are estimated to be 120.62 Ml/d. This is a slight increase on the AIR19 figure of 120.23 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 AIR19 was 160.14 Ml/d. The reported figure for AIR20 is 160.53 Ml/d.

Total leakage is also calculated using an MNF methodology. For AIR19 the reported pre MLE MNF method leakage was 156.53 Ml/d. The figure reported for AIR20 is 157.15 Ml/d and equates to an increase in BU leakage of 0.62 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. The GPRS loggers have an automatic link to the company's telemetry system and are programmed to provide data multiple times per day. NI Water are exploring the functionality to enhance the alarm capability of these loggers.

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 2.83 l/prop/hr in AIR19 to 2.64 l/prop/hr in AIR20. 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 a number of our PCC sites and on a small number of DMAs with no non-household properties as well as on sections of rural DMAs to understand household demand patterns.

Fast-logging data has now become available and analysis is ongoing as to the most appropriate use of this data. This will likely lead to a change in methodology for the calculation of household night uses and will be documented fully.

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 AIR20 is 20.4 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 in the reporting requirements, 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 AIR20 is calculated as a post MLE figure of 586.56 Ml/d. The distribution figure for AIR19 was 590.70 Ml/d.

The company specific confidence interval for distribution input for AIR20 remains at 2.1% and is unchanged from AIR19.

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	28.01	27.91
Castor Bay	111.08	110.67
Dunore Point	104.90	104.52
Moyola	14.65	14.60
Total	**258.64**	**257.70**

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 78 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 0.34 Ml/d and includes an MUR adjustment of 5.97%.

Line 29 – Water Treated At Own Works to Own Customers

With the exception of the 78 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 586.56 Ml/d and deducting the cross border exports the volume of water treated at NI Water’s own works to its own customers is 586.22 Ml/d.

Overall Water Balance

AIR20 - 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	121.86	10%	148.50	9.9%	2.03	123.89
Billed Unmeasured HH	305.02	10%	930.40	62.1%	12.74	317.76
Billed Unmeasured NHH	5.52	15%	0.68	0.0%	0.01	5.53
SPL	39.91					39.91
DSOU	3.05	25%	0.58	0.0%	0.01	3.05
Water Taken Unbilled	15.50	25%	15.02	1.0%	0.21	15.71
Sum of components	568.18					586.56
Distribution Input	588.71	2%	157.24	10.5%	2.15	586.56
Top Down Leakage	**177.67**					
BU Leakage	**157.15**	10%	246.95	16.5%	3.38	**160.53**
Imbalance (mld)	**20.52**			100.0%		
% Imbalance	**3.49%**					**465.94**

Table 1: Water Balance

The Water Balance produces an overall imbalance of 20.52 Ml/d, (3.49%). The imbalance reported for AIR19 was 27.31 Ml/d, (4.60%).

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 2020, the confidence grade applied to the NI Water's water balance for AIR20 is B2. The confidence level for the overall water balance for AIR19 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 AIR20.
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 B3. In AIR19 a confidence grade of B4 was applied as a result of uncertainties regarding household demand during the summer weather event. The error estimate for this component has reverted from 12% for AIR19 to 10% for AIR20.

Line 8 - Unmeasured Household Per Capita Consumption has a confidence grade of B3. This component has been calculated using the company's own consumption monitor data. As stated within the commentary, an error estimate of 10% has been applied to this component, a reduction from 12% due to the increased uncertainty in regards to household demand during the summer weather event in AIR19.

Line 25 - Total Leakage has a confidence grade of B3 for AIR20 and is consistent with AIR19.
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 AIR20.

It is considered appropriate that the confidence grade for AIR20 is B2, as the water balance components reconcile with measured distribution input to greater than 2% and less than 5%. Similar to AIR19, 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.

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 MEASURE

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	74.02	74.51	31.05	4.73	26.32	33.43	259.479	0.00	0.000	
West	86.44	0.00	0.00	64.97	65.40	21.46	4.89	16.57	23.72	168.483	0.00	0.000	
Central	11.86	19.00	0.00	26.99	27.16	3.87	1.98	1.89	6.52	73.932	0.00	0.000	
East	146.51	207.00	0.00	266.02	267.76	87.49	19.47	68.02	23.83	952.476	0.00	0.000	
South	70.17	127.00	0.00	152.88	153.88	44.29	13.00	31.29	18.86	431.930	0.00	0.000	
Total	**370.05**	**403.00**	**0.00**	**584.88**	**588.71**					**1886.300**		**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 AIR20 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 AIR19.

For 2019/20 the SoSI remains 100. This is mainly due to the following reasons:
The Distribution Input (DI) has reduced slightly from last year. In 2018/19 the total average DI was 593.05 Ml/day, this has reduced by 0.73% to 588.7 in 2019/20, and this is based on the Post Maximum Likelihood Estimation (MLE) figure.

There are also a number of other factors that influence the AIR20 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 2018/19 at 773.05Ml/d including imports from NI Water Alpha site.
- 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 20 Table 7.
As part of previous reporters Recommendations it stated that *'Recommend as part of the WMRP update the Company continues to investigate if data exists to further refine the normal year uplift.'*

NI Water has completed the Water Resource and Supply Resilience Plan (WR&SRP), which was submitted to DfI in April 2020 for permission to publish. 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 2020, 2019/20 is deemed as a “Warm & Wet” year as can be seen in Figure 1 below. The monthly demand weather model was populated with the outputs for 2019/20 and this estimates the average DI would be 6.5% lower in a dry year (like 1995/96) than in 2019/20. This was calculated as the DI was 2.35% higher in 2019/20 than would be expected in NYAA.

Therefore the Dry Year Uplift Factor then would be 1.7% (Difference in DYAA TO NYAA) – 2.35% (Difference in 2019/20 to NYAA) which equates to -0.65% (1.7% - 2.35% = -0.65 so 0.9935). Thus, an uplift factor of 0.9935 has been used in the SoSI 20 calculation.

As highlighted above the monthly demands witnessed in summer 2019 were higher than those within the modelled ‘Dry Year’ of 1995. This is likely due to changes in customer behaviour as overall the year was not nearly as extreme as 1995. 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 1.019 was used the SOSI calculation this still equates to 100. This uplift factor equates to the uplift factor used in 2012/12, which was the year with the lowest DI over the last ten years.

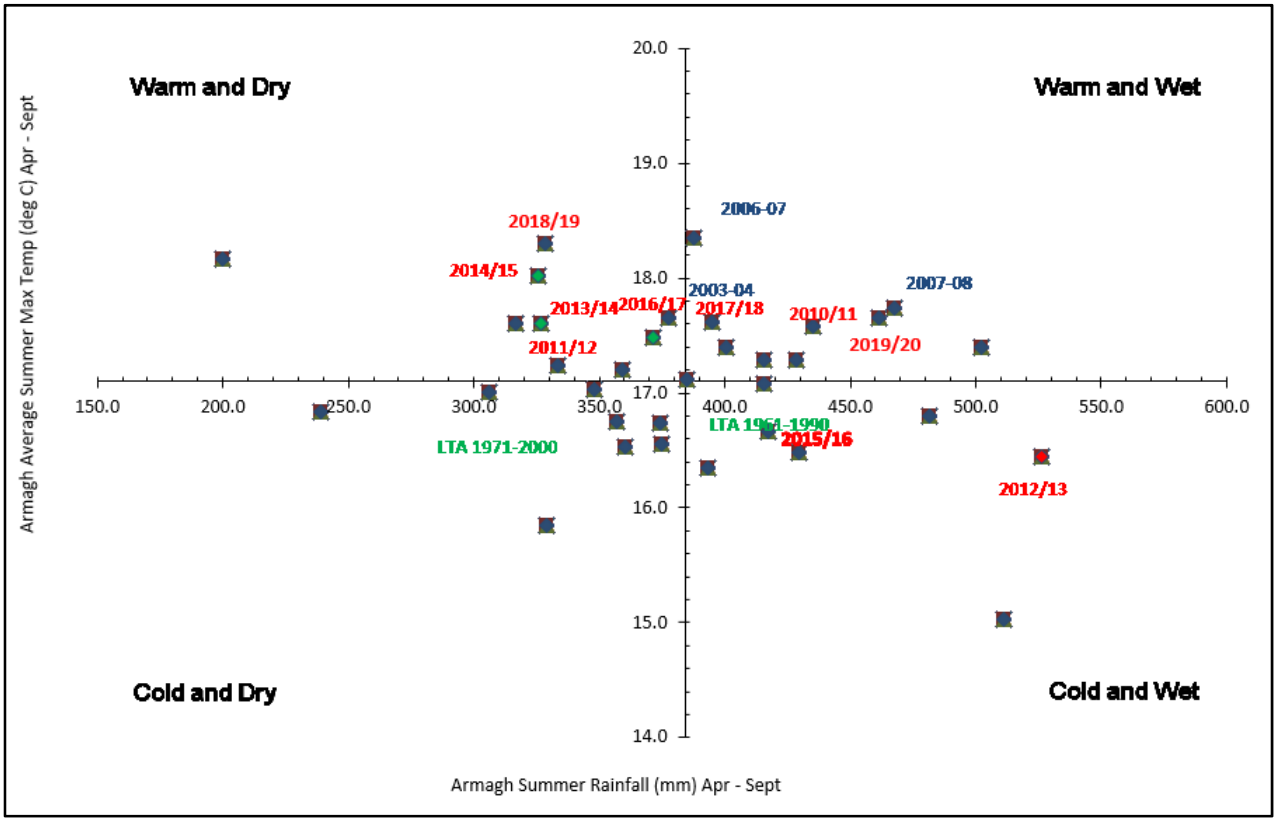


Figure 1 – Historical rainfall & Temperature Data Summer (April-September 2019)

The calculation for AIR20 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 was submitted to DfI in April 2020 for permission to publish. 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 WR&SR Plan, and these are detailed below:

1. The 2017 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 decreased from the 2012 plan by 13.95Ml/d from 773.05Ml/d to 759.1Ml/d. This is due to a number of reasons including an increase in outage allowance from 2% to 5% and the decommissioning of Camlough WTWs.
3. The dry year uplift factor has decreased in the latest plan from 7% in 2012 to 1.7%. As described previously the 2017 WR&SR Plan figure was obtained from applying the monthly demand-weather model, developed as part of the 2017 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 AIR20. However there has been further slippage in the delivery of the plan and as consequence it will be AIR21 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 MEASURES
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	26,958.40	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	133.94	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	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	2,390.31	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	81.68	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	215.62	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	149.33	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	135.13	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	18	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	455	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	41	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	1,781	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	2,295	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	5,664	A2		
11	Mains bursts per 1000km	nr	0	93	B3	86	B3	85	B3	74	B3	80	B3	91	B3	92	B3	82	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	27,002.82	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	71	A1		
14	Distribution zone studies ongoing	nr	0	0	A1	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	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	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	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	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	99.84	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	98.89	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	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	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	1	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	1	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	2	A1		
26	Number of school visits	nr	0	138		150		209		277	A1	257	A1	219	A1	246	A1	229	A1		
27	Number of other education events	nr	0	35		38		59		65	A1	64	A1	62	A1	66	A1	143	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	100.0	A1		

Table 11– Water Service Activities

Line 1 – Total length of mains at 1st April 2019

This value has been extracted from AIR19 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 19/20 on water mains and communication pipes.

The figures for these lines were supplied respectively by:

- Consultants: Capita Infrastructure and Real Estate, 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 215.62km 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 + 149.33 = **731.04.**

The final year target to achieve the 814km PC 15 target is 814km -731.04km = 82.96km target for year 6 of PC 15
Note: The 814km Target is related to the PC15 final determination target of 905km minus 91km =814km, as decided by the NIW Organisational Review Group (ORG)

Proactive Lead Replacements Total against PC15 Target

The Lead Communications pipe replacement target for PC15 is on target at end of year 5.

The PC15 year 5 sub programme 23 results showed 1,781nr lead pipes replaced as a result of the implementation of the proactive lead replacement programme. **Overall NIW has exceeded the FD cumulative target of 9,220nr** (i.e. 1,844 annual target x 5).

The 5 year target of 9,220 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 + 1,781
The AIR20 running total is 9,407nr. Exceeding the target by 187.

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)	Total Return AIR20 (km)	PC15 TOTAL (km)
New Mains (WMRP)	12.87	11.77	17.60	23.12	18.90	84.26
Renewed Mains (WMRP)	104.05	160.50	108.40	143.40	130.43	646.78
Relined Mains (WMRP)	0.00	0.00	0.00	0.00	0.00	0.00
Total WMRP Activity	116.92	172.27	126.00	**166.52**	**149.33**	**731.04**
Nominated Trunk Mains (New)	20.32	7.86	0.00	0.00	0.00	28.18
Nominated Trunk Mains (Renewed)	0.00	0.00	0.00	0.00	0.00	0.00
Total Nominated Trunk Mains Activity	20.32	7.86	0.00	0.00	0.00	28.188
Sub Programme 23c and 23e Trunk Mains	0.00	0.00	10.98	10.02	1.54	22.54
Sub Programme 23c and 23e Distribution Mains	0.00	0.00	0.00	10.02	1.88	1.88
Total Sub Programme 23c and 23e	0.00	0.00	10.98	10.02	3.42	24.42
New Mains – within new Developments	42.37	55.59	74.83	60.79	62.78	296.36
Total mains within new Developments	**42.37**	**55.59**	**74.83**	60.79	62.78	296.36
1st Time Services – Serving New Developments	0.95	0.00	0.00	0.00	0.00	0.95
1st Time Services - Renewed	0.00	0.00	0.00	0.00	0.00	0.00
Total 1st Time Services	0.95	0.00	0.00	0.00	0.00	0.95
Mains Development/Diversions -Renewed	1.19	0.79	1.17	1.24	0.09	4.48
Total New Development Activity	1.19	0.79	1.17	1.24	0.09	4.48
Total Mains Activity in the Period	**181.75**	**236.51**	**212.98**	**238.57**	**215.62**	1085.43

Strategic Trunk Mains Progress for PC15 - Year 5

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 AIR20 Period

The following Non-Nominated Trunk Mains were addressed in 18/19 as risk based prioritised rehabilitation schemes.

JN550 Lough Fea to Kingmills TM

No pipe laying work took place in this reporting period on this scheme this pipeline is now complete.

JN544 Doochrock to Drumkeeran TM

No pipe laying work took place in this reporting period on this scheme this pipeline is now complete.

JN545 112 Alleyhill to Doochrock

No pipe laying work took place in this reporting period on this scheme this pipeline is now complete.

JL785 A6 Dungiven Drumahoe

As part of the A6 Dungiven Drumahoe TNI Project 0.93km of replacement trunk main was installed during this reporting period. (This Project is not complete on site – additional trunk main installations, along with 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 608m (0.61km) of Watermains pipeline under railway tracks were slip lined.
TOTAL AIR20 = 0.61km

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 **1.54 km**.(The figure includes 0.61km of structural lining of watermains under Railways and 0.93km at the TNI Scheme , JL 785 Dungiven Drumahoe)

Line 2 - Mains renewed (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
2	Mains renewed	km	2	133.85	A2	0.09	**B3**	133.94	**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 130.43km of Watermains Rehabilitation and 1.88km of distribution mains installed alongside the Dungiven to Drumahoe Trunk Main ,the 0.93km of trunk mains installed under the Dungiven to Drumahoe scheme and 0.61 km of Trunk mains relined under Railway crossings
- 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.
- This confidence grade is B3

Networks Water continues to develop the established process for monthly reporting using the Mobile Works Management system, 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.

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 0.00km.

Overall Line Confidence Grade is A1 as the return is zero for both 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 continue to review the value for money from the delivery of mains relining.

Line 4 - Mains cleaned (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
4	Mains cleaned (total)	km	2	70.86	A2	**2,319.45**	**B3**	2,390.31	**B3**

Asset Delivery

In this reporting period, Asset Delivery undertook a pilot project to trial an intelligent, unidirectional flushing programme. Based on existing data, namely water quality complaints, age of infrastructure and customer contacts, water zones in both the Belfast (Ballygomartin) and Derry City (Foyle Road) areas were selected for the pilot.

The work consisted of flushing existing and newly installed under pressure hydrants, selected using hydraulic modelling, to flush for a specific duration at a minimum flow to shear

the biofilm off the internal lining of the main and remove existing deposits. Post sampling has been completed and the results and analysis are ongoing, however, there have been no customer water quality contacts in these areas since the completion of this work in this reporting period.
This work is still ongoing for 20/21.
Confidence Grade A2

CSD Networks Water
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 dispatched to Distribution Technicians in the field. 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 0.329km per flushing.
(See Methodology statement for detail).

- The 2020 information return is: 7050no. flushings x 0.329km per flush = 2319.45kms.

  The 7050 figure comprises a total count of 6709no. flushing MST's in Ellipse, minus 107no. flushing MST's identified as not having been carried out in the report year, plus 448no. reactive flushing jobs completed.

For AIR20, 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. The flushing programme was suspended for the last week of March 2020 as a result of COVID 19 Contingency Planning but this will have had a negligible impact on returns for the reporting year

The total length of main flushed continues to increase year on year as information provided from the field improves and focus remains on maintaining water quality standards. Following restructuring in June 19, Distribution Technicians, who would complete the flushing MST's, have been able to become more customer focused as other tasks they would have previously carried out have been re-assigned elsewhere.

Confidence Grade B3
Although the total no. of reactive flushing jobs (448no.) 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 decrease in the completed no. of reactive flushing's which may be linked to overall improvements in water quality standards and 'Calm Network' training completed by both Distribution Technicians and contractor's staff.

The number of flushing MST's not carried out has increased noticeably from AIR 19 but this is primarily down to both annual and bi-annual frequency MST's not being completed. Once

cancelled or rejected, for whatever reason, these are difficult to reschedule during the reporting year.

As per previous audit recommendations the number of flushing's have been converted to km.

The number of flushing's have been captured for the period 1st April 19 – 31st March 20 year using base information from MWM and then converted to km using the revised factor of 0.329

The revised factor of 0.329km per flush is based on an increasing sample batch (383no. in total) 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 21.

The Total figure for mains cleaned by CSD has increased throughout PC15
AIR16 = 1,191.68km, AIR17 = 1,665.69km, AIR18 = 2,008.61km, AIR19= 2,257.19km, AIR 20=2,319.45

Overall Confidence Grade = B3 as the majority of cleaning has been carried out by CSD

Line 6 - New mains (km)

Line	Description	Units	DP	AD	AD CG	CSD	CSD CG	Total	Overall CG
6	New mains	km	2	18.90	A2	62.78	B2	81.68	B2

Asset Delivery

The new mains which have been laid in year 19/20 are predominantly situated in the Ballyclare, Magherafelt and Cookstown areas.

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 19/20 = 18.90km.

The 18.90km total for the AD Team , is slightly down on last year's total of 23.12km as a consequence of 0.00km new Trunk Mains being installed

Asset Delivery Confidence Grade is A2. This figure is obtained from Monthly Reports in CMS and aggregated into an annual return.

CSD Networks Water

Data for the period April 19 – March 20 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. The figure of 62.78km is similar to last year's total of 60.79km

CSD Networks Confidence Grade is B2.

The Overall Line Confidence Grade is B2 -This figure is arrived at by considering that the AD total is less than one third of the CSD total. It is reasonable therefore to state that the CG assessment is B2

The overall lengths of new mains installed by both CSD and AD Team are comparable to last year when combined.
The total new mains figure of 81.68km is made up of 18.9 km of New Mains WMRP with 0 km of New Strategic Trunk Mains and 62.78km of first time services.

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	152.75	A2	62.87	B2	215.62	A2

This is the calculated sum of Lines 2, 3 and 6 the Asset Delivery Total (130.43km of Watermains Rehab plus 18.9km of new mains plus 0.93km of Trunk Main Rehab and 0.61 km of slip lined mains under Railway Crossings and 1.88km of replacement watermain as part of the TNI Dungiven to Drumahoe Project) = 152.75km.

The CSD Total of 62.87km is derived from (0.09km of renewed mains plus 62.78 km of new mains) = 62.87km.

Overall Line Confidence Grade is A2 as Asset Delivery contribution is approximately 70% 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	149.33	A2	149.33	**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 149.33 is derived from the Asset Delivery totals of 130.43km of Watermains Rehab plus 18.90km new mains. Relining was not utilised as a watermains rehabilitation technique during this period.

Overall Line Confidence Grade is A2 as the Asset Delivery Team are the only contributors to this line.

The corresponding figures for the last 5 years is shown here:
AIR16=116.92km, AIR17=72.27km, AIR18 =126km, AIR19 =166.52km, AIR 20=149.33km

The PC15 Running Total is (AIR 19 Total Cumulative mains laid is calculated as: 581.71km plus the (AIR 20 Total = 149.33km giving a cumulative total to end of March 2020 of 731.04km
The final year target to achieve the 814km PC 15 target is 814km -731.04km = 82.96km target for year 6 of PC15.

Note: This target looks achievable even considering the Covid delay.

Overall Line Confidence Grade is A2 as Asset Delivery contribution is 100% of the total here, therefore A2 is the Confidence Grade.

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	133.49	A2	1.64	B3	135.13	**A2**

Asset Delivery

The total of Abandoned Mains in this period = 135.13 km

Asset Delivery Confidence Grade is A2.

CSD Networks Water

Data for April 19 – March 20 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.

The Overall Line Confidence Grade is A2 as approximately 99% of this return is from Asset Delivery**.**

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	18	18	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 19 – March 20. This is managed by the Water Business Unit, which collates the data for the annual reporting period.

This figure is around half of last year's figure (35) but these are small amounts which can easily fluctuate from year to year

Overall Line Confidence Grade is B2.

Comment – 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	455	455	B2

Data for the reporting period April 19 – March 20 was collated from Customer Field Managers using system reports which, when checked, confirmed, and input onto a spreadsheet.

The total submitted for AIR20 is approximately 80% of last year's total (of 562)
(The last 3 years totals, AIR 17 to 19, were similar totals)
There is no set target for this line. These relatively small figures each year can easily fluctuate as the replacements counted here are opportunistic so there is no significance to this annual change.

Overall Confidence Grade is B2 as the return is exclusively from CSD.

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	41	**B3**	41	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 is not something that seems to be currently recorded in the CPMR system, so it is feasible that there may have been some opportunistic lead communication pipes replaced while replacing existing watermains. The potential recording of this is something that will need to be discussed for the next year reporting cycle within NIW.

CSD Networks Water

Data for the reporting period April 19 – March 20 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 AIR20 for CSD is around 50% of last year's total (75), although these are relatively small figures each year and can easily fluctuate as the replacements counted here are opportunistic
This issue 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.

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	1,781	1,781	**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. This output figure is an accurate representation of this activity as it is a proactive Project focused on replacing a number of lead communications pipes in defined areas. Again this figure is extracted from the CMS/CPMR system.
The PC15 year 5 sub programme 23 results showed 1,781nr lead pipes replaced as a result of the implementation of the proactive lead replacement programme.

The 5 year running target total of 9,220 Nr is therefore exceeded as the number of lead communications pipe replacements completed is respectively, starting from AIR16:, 17, 18, 19 and 20 :
1,922 + 1,867 + 1,767 + 2,070 +1781= **9,407Nr**

The AIR19 running total is 9,407nr exceeding the 5 year target of 9,220nr

Against the PC 15 6 year target of 1844 x 6(11,064nr) There are 11 064 - 9 407= 1,657 nr proactive Lead Replacements remaining to be done in the AIR 21 Period to hit the PC15 target.
Note: There was no site work carried out under this programme from mid-March 2020 .It is not envisaged that this will commence on site until July 2020 all being well. The revised target for 20/21 will be reviewed at that time.

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	1,781	A2	514	B2	2,295	**A2**

Asset Delivery

This is the calculated sum of Lines 8a, 8b, 8c and 8d
Calculation - The Asset Delivery Total is 1,781 + 0 (No opportunistic Lead Replacements) = 1,781
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 18+455+41 = 514
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

NIW are currently ahead of the PC15 target for proactive Lead replacements

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	4,102	A2	1,562	**B3**	5,664	A2

Asset Delivery

The Asset Delivery Water Confidence Grade is A2.This annual figure seems to be higher than previous years. It is not clear as to why this figure is around 25% + greater than previous years even though the pipelaying figures are similar to these past years but it may reflect on increased awareness/use of the procedure to return this data.

CSD Networks Water

Data for the reporting period April 19 – March 20 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.

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 A2 as approximately 75% of this return comes from the Asset Delivery Team

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 19 – March 20 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spreadsheet. 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

2237 – 26 (rechargeables) / 27,002.82km = 0.0819 x 1,000 = 81.88

Total Bursts per 1,000km = 81.88

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)
2019 information return was 2,562 (inc. 95no. rechargeables)
2020 information return is 2,237 (inc. 26no. rechargeables)

Proportion of bursts within line 11 detected by proactive methods

The total number of Mains Repairs carried out by NIW was 2237 (including 26no. due to third party damage).

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1186.

The number of mains repairs carried out due to proactive leakage detection methods was 1051.

Confidence Grade B3

Networks Water, within the Water Production Line, underwent some re-organisational change in early June 2019. This did not, however, impact data capture methodologies or technical processes when collating the required information.

Burst Numbers Summary Table	AIR15	AIR16	AIR17	AIR18	AIR19	AIR20	Percentage Changes	
							AIR18 to AIR19	AIR19 to AIR 20
CSD Networks Water (non-proactive detection)	1352	1127	1313	1394	1451	1186	4.1%	-18.3%
CSD Networks Water (pro-active detection)	996	924	883	1116	1111	1051	-0.4%	-5.4%
Third Party Damage	82	79	61	66	95	26	43.9%	-72.6%
Total	2266	1972	2135	2444	2467	2211	0.9%	-10.4%
Burst Rate per 1000km	84.8	73.8	79.7	91.1	91.5	81.9	0.4%	-10.5%

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. In conjunction with burst flag reports, taken from the CAR2Map database, individual Work Orders have been analysed and duplicates and non-mains repairs extracted. This year's total figure shows a significant decrease from AIR 19 but is very much in line with those provided for AIR 15 and AIR 17. The following comments continue to be positive factors in relation to burst main repair numbers:

- 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 the relocation of pressure reducing / sustaining valves.
- Continuing detail has been paid to the classification of mains repairs as opposed to communication pipe repairs or replacements.

The number of mains repairs due to non-proactive leakage detective methods shows a decrease from AIR 19 and this may be down to a combination of a mild winter, with no significant freeze / thaw periods, and factors within the three points listed above. A substantial reduction, from AIR 19 to AIR 20, in the reported 'Run of Water' complaints by the general public would also confirm this.
The number of mains repairs down to proactive leakage detection methods, while slightly down from AIR 19, is in line with the last five years' average figure from AIR 16 onwards

(1017no.) There has been no deviation from the emphasis on proactive leakage detection by 'In House' Crews.

The number of reported defects by Leakage detection teams, relative to mains and service repairs, is consistent with previous years in total but a slightly higher proportion have fallen into the communication pipe repairs category. This is mirrored by the slight increase in communication pipe replacements carried out in the report year (Table11_L10).

There is a significant reduction in the number of repairs attributable to Third Party Damage. The reasons for this are unclear and are difficult for NI Water to manage as the figure is dependent on both contractors admitting liability and front line operatives initiating a rechargeables process when required. NI Water will review procedures and re-emphasis the need for this process to be followed when applicable.

Between AIR19 and AIR20, there was a further 16% reduction in the Table 2 Line 5 outturn number of properties affected by an unplanned interruption of more than 3 hours. When records of 'no water' complaints were used to substantiate the reduction, the outturn was confirmed to be consistent with expectations and not unduly lower. The reduction was also consistent with the burst rate trend reported in Table 11 Line 11 which fell by 10.5% between 2018/19 and 2019/20.

The Table 2 Line 5 outturn has continued to decrease as proposals and initiatives identified under the ITS Strategy are implemented across the Business. The Company has commenced a Post Interruption Review (PIR) process, the aim of which is to establish learning points from Interruption to Supply (ITS) events. Significant engagement work has been undertaken with the implementation of the new 'Working Differently' process aimed at reducing the Company's lost minutes per property outturn from planned work. Additional equipment has been purchased to assist colleagues and the benefits of such initiatives are already being realised, for example, tanker operations during the Dungonnell to Parkmore incident.

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. The relative movement indicated that fewer properties were experiencing an interruption of more than 3 hours as a result of burst main events as better working practices were resulting in an improvement in DG3 performance. In 2018/19, the Table 2 Line 5 outturn also benefitted from a review of unplanned interruption events involving more than 500 properties.

Future Reporting
For AIR 21 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 2020

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 AIR19 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.

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.

The hydraulic models are rebuilt and kept up to date so they can be used as a tool to help identify network performance problems and develop best value solutions which improve the customers' levels of service. The hydraulic models are currently being used to develop

schemes for the Water Mains Rehabilitation programme, determine the impact of new developments, resolve DG2 low pressure problems, verify DG3 figures for Interruption to Supply (ITS) events and support major incidents. The hydraulic models are currently being used to plan network improvements, inform robust investment decisions and support operational decision making. The model library is continually enhanced to improve coverage across the entire network so that the models can be used as a valuable support tool.

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 Completed in 2019-2020

Hydraulic Models Rebuilds Completed in 2018-2019	Month Completed	Year Completed	Numbers of Properties
Dunore East	December	2019	2,086
Killylane CWB North	March	2020	2,735
Killylane CWB South	March	2020	17,435

Hydraulic Model Rebuilds in Progress 2019-2020

Hydraulic Models Rebuilds in Progress 2019-2020	Status	Year To Be Completed	Numbers of Properties
Camlough Newry West	Ongoing	2020	10,932
Lough Macrory Beragh	Ongoing	2020	4,652
Killyhevlin / Enniskillen	Ongoing	2020	34,448
Belleek Garrison	Ongoing	2020	2,122
Lough Macrory Killyclogher Omagh	Ongoing	2020	14,615
Derg Strabane	Ongoing	2020	16,508
Castor Bay Tandragee	Ongoing	2020	5,693
Drumaroad Lisburn - Castlereagh	Ongoing	2021	11,947
Lisburn South Rural	Ongoing	2021	6,053

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
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	2020
14	KESH	Killylane CWB South	17,435	2020
15	DPAM	Dunore Point Antrim	25,803	2015
16	DEET	Dunore East	2,086	2019
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

Model Number	Model Code	Model Name	Number of Properties Supplied	Model Calibration Date
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
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 18 - % Overall compliance with drinking water regulations

NI Water is assessed for its overall performance by % Overall Compliance at customer tap, WTWs, SRs, and Authorised Supply Points. Under this measurement method, there has been a plateauing in compliance over the last number of years, against a Utility Regulator specified target of 99.79%. Please note that water supplied from PPP assets is included in the compliance assessment.

Reporting Year	2014	2015	2016	2017	2018	2019
% Overall Compliance	99.86	99.83	99.86	99.88	99.90	99.90

Line 19 - % Compliance at consumers tap (including supply points

NI Water is assessed for its overall performance by % Compliance at customer tap including authorised supply points. Please note that water supplied from PPP assets is included in the compliance assessment.

Reporting Year	2014	2015	2016	2017	2018	2019
% Compliance at consumer tap (including supply points)	99.78	99.74	99.77	99.81	99.83	99.84

As the root data used for the derivation of these lines is accurate, but there is an inherent uncertainty in any non-bacteriological analytical measurement, the confidence grade should be reported as A2.

Line 20 - % Iron compliance at consumers tap

Reporting Year	2014	2015	2016	2017	2018	2019
% Iron compliance at consumer tap	98.95	98.40	98.66	98.85	98.94	98.89

As the root data used for the derivation of these lines is accurate, but there is an inherent uncertainty in any non-bacteriological analytical measurement, the confidence grade should be reported as A2.

Line 21 - % Service reservoirs with coliforms in >5% samples

NI Water has continued to report 0 for this metric, having had 0 service reservoirs with >5% exceedances over the last number of years. There is an ongoing service reservoir cleaning programme to maintain this.

As the root data used for the derivation of these lines is accurate and the bacteriological analysis shows no presence of coliforms in >5% of samples, the confidence grade should be reported as A1.

For 2019, all PC15 targets were met.

Line 22 - Completion of nominated trunk main schemes

No trunk mains schemes identified in the PC15 Programme achieved Beneficial Use in Year 5 (2019/20) of the programme. The FD Target for PC15 was 3 Trunk Mains for completion with none planned for delivery in 2019/20.

NI Water have cumulatively delivered 3 Trunk Mains to the end of 2019/20.

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

The Caugh Hill WTW project was the subject of a Change Control agreed with the Utility Regulator as a 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 was substituted out of the PC15 delivery programme and several WTW sites with enforcement orders for pesticides and a bromide water quality related issue were brought into PC15. Rathin Borehole, one of the outputs agreed through the Caugh Hill WTW Change Control process, achieved Beneficial Use in Year 5 (2019/20). The FD Target for PC15 was 4 Water Treatment Works for completion with none planned for delivery in 2019/20. The PC15 Target has increased to 6 as a result of the Change Control Process.

NI Water have cumulatively delivered 2 Water Treatment Works to the end of 2019/20.

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

Lough Fea CWT achieved Beneficial Use in 2019/20. The FD Target for PC15 was 3 Service Reservoirs and Clear Water Tanks for completion with 1 planned for delivery in 2019/20. The PC15 Target has increased to 4 as a result of the Change Control Process.

NI Water have cumulatively delivered 2 Service Reservoirs and Clear Water Tanks to the end of 2019/20.

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 been 15 live Catchment Management Plans (CMPs) fully completed in the PC15 period.

Killyhevlin and Belleek CMPs were completed under the 'Erne' system joint CMP as part of the Source To Tap project system in Q4 of 2019/20 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. Derg CMP was also reproduced under the Source To Tap project to include the cross-border catchment information which had not been included in the 2015 edition (see Table 2 below *).

The PC15 Final Determination originally stated a total of 40 CMPs for completion in the period (Table 1 row 1). However it was discussed and agreed at ORG (Outputs Review Group) that CMPs for out-of-service catchments were not required (Annex A). Subsequently, the Utility Regulator have reflected this in their latest Cost & Performance Report by adjusting the target to 15 (extract below line 24, footnote 7).

E	New Output Measures			
24	Number of Catchment Management Plans	15[7]	13	On track
25	Number of lead communication pipes replaced under the proactive lead replacement programme	7376	7626	Target met
26	Number of school visits	704	999	Target met
27	Number of other education events	228	257	Target met
28	% Service Reservoirs where sample taps have been assessed and are to required standard	100%	98.3%	Marginally behind

Table 3.1: NI Water PC15 Key Outputs for Water Services

[6] Target amended for reasons described in 3.2 to ensure a like for like comparison with delivery.
[7] The original PC21 target was based on all catchments, including those not in service. It has subsequently been revised to reflect catchments in service and exclude those completed in PC13.

In the PC15 period there have been 15 CMPs completed.

Table 1.

		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	2	-	**15**

Table 2

Water Treatment Works Name	**CMP 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 / 31/03/2020 **
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 (incl 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	31/03/2020 *
Belleek	2018/19	31/03/2020 *

Completed in PC13 period

Line 26 - Number of school visits

There were 229 schools visited during this reporting period. This figure exceeds the annual PC15 target of 176 for School Visits, with an overall total target of 1056 for the duration of the six year term. The target has been exceeded substantially each year throughout PC15 term. Previous years school visit outputs are below for ease of reference:-

- 2015/16 = 277
- 2016/17 = 257
- 2017/18 = 219
- 2018/19 = 245
- 2019/20 = 229

- Accumulative output target up to year five of PC15 = 880

- Current actual output up to year five of PC15 = 1217

This output figure demonstrates that we have facilitated 337 more 'School Visits' to date with one year of PC15 still remaining.

Line 27 - Number of other education events

There were 143 other education events attended during this reporting period. This figure exceeds the annual PC15 target of 57 Other Education Events, with an overall target of 342 for the duration of the six year term. The target has been exceeded each year throughout the PC15 term with this past year seeing a significant rise in visits/talks. Previous year other education events outputs are below:-

- 2015/16 = 65
- 2016/17 = 64
- 2017/18 = 62
- 2018/19 = 66
- 2019/20 = 143

- Accumulative output target up to year five of PC15 = 287

- Current actual output up to year five of PC15 = 400

This output figure demonstrates that we have facilitated 113 more 'Other Education Events' to date with one year of PC15 still remaining.

Line 28 - % Service Reservoirs where sample taps have been assessed and are to required standard

291 sample taps have been installed during PC 15. This is 100% of the total of 291 to be addressed. This figure was confirmed by the Project Manager for the "Sample Tap Installation "Project

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.

The final three of these taps (not reported in AIR 19) were completed in April 2019 to confirm that the 10% target has been met for PC 15

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 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			22	0.771	0.000		B2
2	River abstractions			9	0.229	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				89.0	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	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	0.516	9
10	Proportion of distribution input - W4	0.484	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	21,131.69	4,196.12	1,391.66	283.34

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	0.051	0.000		B2
2	River abstractions			4	0.949	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				152.0	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	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			24	0.454	0.000		B2
2	River abstractions			13	0.545	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				116.7	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	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	0.262	9
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	21,131.69	4,196.12	1,408.08	283.34

Table 12 – Water Explanatory Factors

Water sources & treatment types – NI Water only

Changes to Sources since AIR19

NI Water (Only) had the following 32 sources in service for part or all of AIR20, 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 AIR19 to AIR20.

Changes to treatment types since AIR19

The treatment type totals in service for part or all of AIR20, have not changed since AIR19. However there has been a change in the treatment category for Rathlin Borehole. A new Magnetic Ion Exchange (MIEX) Plant was brought into service at this site on 27th November 2019. This has changed the treatment category from simple disinfection (SD) to more than one stage of complex treatment (W3). Therefore for AIR20 the treatment categories are - simple disinfection (SD) (0 nr); 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) (9 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 decreased slightly from last year. In 2018/19 the total average DI was 593.05 Ml/day, this has decreased by 0.73% to 588.71 in 2019/20, and this is based on the Post Maximum Likelihood Estimation (MLE) figure.

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 20	Sources In Service at 31st Mar 2019	Sources In Service at 31st Mar 2020
Rathlin	Borehole	W3	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
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes

Location	AIR18 Source Type	Treatment Type	WTW In Service during AIR 20	Sources In Service at 31st Mar 2019	Sources In Service at 31st Mar 2020
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
Derg	River	W4	Yes	Yes– 2No sources (River Strule introduced April 2016, and River Derg)	Yes– 2No sources

Location	AIR18 Source Type	Treatment Type	WTW In Service during AIR 20	Sources In Service at 31st Mar 2019	Sources In Service at 31st Mar 2020
		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 19/20 indicates that 23.78% of the raw water into the WTWs came from Glenedra River during the AIR20 period. The Distribution Input for Caugh Hill has therefore been split between the IR and the River, for the computation of the proportional distribution input for Lines 1 to 3.

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. NI Water is listing these three sources for Fofanny WTWs, for AIR19.

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 AIR20, according to the Plant Manager, 40% of the total WTWs' raw water comes from Lough Lee (and 60% 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 AIR19, NI Water is listing Lough Macrory and Fingrean IR as two sources for Lough Macrory WTW for AIR20.

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. NI Water 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 30% of the raw water which is pumped to the Derg WTW Inlet, during AIR20. NI Water is listing River Strule and River Derg as two sources for Derg WTW, for AIR20, 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 NI Water's impounding reservoirs (22No)

The table below depicts the capacities of the 22 NIW Only Impounding Reservoirs which were in service during the AIR20 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
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 NI Water'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%	0.892	0.392
B – with reference to Treatment Type W4	0%	0.940	0.718

Line 5 - Average pumping head – NIW only / PPP only / Total

The NI Water 'Total' AIR20 Average Pumping Head is 116.73m.hd with a confidence grade of B4, a decrease of 6.01m.hd from AIR19 (122.74m.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 NI Water have been investigating alternative data sources, principally Telemetry, for updating and improved confidence. Data sourced from NI Water telemetry system, Telemweb, had been included in the APH calculation from AIR12. For AIR20 the use of data from telemetry has continued to be used with 78% of pump set returns based fully or in part on telemetry data.

For AIR20, NI Water had 378 pump sets in service. Of these 262 are based on flow and/or lift data from telemetry. 59 of the 378 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 102 pump sets with an individual contribution greater than or equal to 50m.h. Of these 100 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 1561.08Ml/d. Of this 1550.51Ml/d is based on telemetry data. Thus 99.3% of flow is based on data relative to the reporting year. Similarly the total lift for individual pump sets is 17709.08m, of which 6707.31m is based on telemetry data, equating to 38% of lift based on data relative to the reporting year.

The Average Pumping Head figure has decreased by 6.01m.hd from AIR19. Distribution pump sets have contributed an increase of 0.29m.hd to the overall figure Water Supply, an increase of 1.15m.hd and PPP a decrease of 7.44m.hd. The decrease is mainly attributed to a Supply Source Optimisation Project (as part of an energy efficiency drive) where cheaper upland water is preferred over lowland sources as storage levels permit. The table below lists pump sets whose contribution to the overall AIR20 APH figure has changed by +/-0.5m.hd or greater from its corresponding contribution in AIR19. These 9 pump sets

represents 4.24m.hd decrease. The changes are explained in more detail further in the commentary.

Pump sets whose contribution to the overall AIR20 APH figure has changed by +/- 0.5m.hd or greater from AIR19

Name	AIR19 Individual APH	Contribution to Overall AIR19 APH Figure	AIR20 Individual APH	Contribution to Overall AIR20 APH Figure	Contributing difference from AIR19/AIR20
Glenlough WPS	N/A	N/A	302.19	0.513	0.513
Dunore Point RWPS	5499.0	9.272	5074.59	8.620	-0.65
Dunore WTW HL (Hydepark & Ballyrobin)	12,802.9	21.588	11,844.66	20.120	-1.47
River Bann RWPS	3258.63	5.495	2695.41	4.579	-0.92
Castor Bay RWPS	3096.0	5.22	2746.56	4.665	-0.56
Castor Bay 1 WPS	8015.04	13.515	7560.08	12.842	-0.67
Castor Bay WPS	2713.62	4.576	1417.9	2.408	-2.17
Drumaroad - Dunmore WPS	5027.54	8.477	5549.85	9.427	0.95
Lough Island Reavy Fofanny RWPS	1467.30	2.474	1883.79	3.2	0.73

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 78% 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 22% of the return.

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.

- Glenlough WPS
- Slieve Gullion WBS

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.

Changes to distribution pumpsets have contributed 0.29m.hd increase to the overall from AIR19

The main contributors are listed below:-

Name	AIR19 Individual APH	Contribution to Overall AIR19 APH Figure	AIR20 Individual APH	Contribution to Overall AIR20 APH Figure	Contributing difference from AIR19/AIR20
Glenlough WPS	N/A	N/A	302.19	0.513	0.513

Telemetry data has become available for Glenlough WPS to allow a return to be made.

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
- NI Water 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 an in decrease of 1.15m.hd to the overall change from AIR19.

The main contributors are listed in the table below:-

Name	AIR18 Individual APH	Contribution to Overall AIR18 APH Figure	AIR19 Individual APH	Contribution to Overall AIR19 APH Figure	Contributing difference from AIR19/AIR20
Drumaroad - Dunmore WPS	5027.54	8.477	5549.85	9.427	0.95
Lough Island Reavy Fofanny RWPS	1467.30	2.474	1883.79	3.200	0.73

Drumaroad-Dunmore WPS – Output increased following a supply source optimisation project

Lough Island Reavy Fofanny RWPS – Flow/drought management of supply sources (Foffanny WTW)

Distribution Input (DI)

The Company DI by Supply Source (588.71Ml/d) has been provided by the Company's Leakage Data Management Unit, as has the PPP Only DI (258.65Ml/d) and the NI Water Only DI (330.061Ml/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 2019/20 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 NI Water 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 a decrease in overall calculated Average Pumping Head [152.03m for AIR20 and 157.78m for AIR19]. This decrease in Average Pumping Head has been caused by the decreased proportion of pumped abstraction (from the River Bann compared to gravity abstraction from upland sources at the Ballinrees WTW, associated with the overall decrease in throughput from this WTW. Other factors in APH decrease include the decreased throughput for Dunore Point, Moyola and Castor Bay WTW's, which are all pumped into supply. Changes to PPP pump sets have contributed 7.44m.hd decrease to the overall figure from AIR19.

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 AIR19/AIR20
Dunore Point RWPS	5499.00	9.272	5074.59	8.620	-0.65
Dunore WTW HL (Hydepark & Ballyrobin)	12802.90	21.588	11844.66	20.120	-1.47
River Bann RWPS	3258.63	5.495	2695.41	4.579	-0.92
Castor Bay RWPS	3096.00	5.220	2746.56	4.665	-0.56
Castor Bay 1 WPS	8015.04	13.515	7560.08	12.842	-0.67
Castor Bay 2 WPS	2713.62	4.576	1417.9	2.408	-2.17

The changes in PPP contribution is mainly around the Source Optimisation Project. When storage levels permit, upland supply sources are prioritised, which allow for cheaper production costs, over lowland supply sources. Dunore and Castor Bay are both lowland sources with pumped inlets and outlets.

There is a minor discrepancy between the PPP APH figure (152.08m.hd) calculated by the PPP Concessionaire and the figure calculated by NI Water (152.03m.hd). The discrepancy has occurred with the PPP DI figure used, 258.6Ml/D by PPP, 258.65Ml/D NI Water and rounding up/down of individual pump data. The NI Water PPP DI figure is based on data provided by the Company's Leakage Data Management Unit as indicated above.

PPP only and NI Water 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 NI Water only and PPP only. It should be noted that it is NI Water's interpretation that the true definition (as stated above) of Average Pumping Head is not being reflected through the splitting up of the overall NI Water Average Pumping Head value.

The NI Water only and PPP only 'Average Pumping Heads' are 89.01m.hd and 152.03m.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 NI Water Distribution Network. Within the Distribution Network, PPP water then mixes with NI Water, therefore making it impossible for NI WATER and PPP flows to be truly separated for use in PPP only and NI Water only

average pumping head calculations. Hence the value of 152.03m.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.'

NI Water has complied with this request and has provided separate Average Pumping Head values for NI Water 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 NI Water 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 NI Water Distribution Network.

A confidence grade of 'B4' has been allocated to these values of 89.01m.hd and 152.03m.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 NI Water 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.

59 of the 378 as having an 'in service' operational status during AIR20 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 AIR20

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 38% 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 2020

	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
018 Assessment	577.62	70,092.1	121.03
2019 Assessment	593.05	72,788.13	122.74
2020 Assessment	588.71	68,722.01	116.73

PPP

Lines 1- 4 Column 1 only – Number of sources (PPP

The PPP Water sources have remained consistent over the reporting period for AIR20 as they were with AIR19. 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 2019-20 as it did in 2018-19.

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 only – Types of Treatment by Proportion (PPP

No changes to the PPP types of treatment over the reporting period.

Lines 6-10 Column 2 only – Total number of Units referred to Type (PPP

No changes to the PPP types of treatment over the reporting period.

Line 13 – Potable Mains (PPP

No changes to the length of Potable Mains operated by the PPP Contractor 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 AIR19 reports. Any new data will have adhered to the NI W Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

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	5.170	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	0.266	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	639.082	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	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	639.082	A2		
6	Non-households billed unmeasured sewage	000	3	9.250	A2	8.706	A2	8.132	A2	7.513	A2	7.314	A2		A2	7 362	A2	7.480	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	25.705	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	33.185	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	41.483	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	1565.984	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 AIR20 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 alone does not support in the explanation of gross movements within the data. With this is mind, during the 19/20 reporting year the CSD Services MI & Data Team explored the use of Power BI to re-create the RPS with a drill down function to display the gross movement. The Power BI property models developed take their direct feed from the Diamond Warehouse in order to refresh. These models provide us with information on gross movements and allow us to 'slice and dice' the data from various angles, providing invaluable insights. The plan is to further enhance and incorporate these models across the business during 2020/21.

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 AIR20. 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 AIR19 and the AIR20 property figures can be explained as follows:

1. New Connections during the 2019/20 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 chair 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 2019/20, the continued 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

The PIG Strategy for 2020/21 will include the following:

- New Connections - A push to move to on-system reporting following the Business Improvement New Connections Review
- Further use of PowerBI – We currently use Power BI to create and issue the monthly Rapid Property Summary (RPS) and will continue to explore the use of Power BI in other aspects of our property work throughout 2020/21
- 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.
- Continued monitoring of data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – Ongoing data sharing project that commenced in August 19
- 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. 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 – monitor numbers of '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 2019' and 'End March 20'. The '1st Dec 2019' actuals are used in the Principal Statement and Tariff Setting process.

Property Numbers	March 2019	1st Dec 2019	March 2020	Expected Movement
Unmeasured Sewerage Household	634602	640884	643562	Increase
Unmeasured Sewerage Non-Household	7373	7504	7587	Decrease (but project work has led to an increase)
Measured Sewerage Non-Household	25598	25720	25812	Increase
Voids	41607	41471	41358	Currently no trend that aligns with water
Total	**709180**	**715579**	**718319**	**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 2350 domestic properties (an increase of 468 during 19/20) classified as site meters. There will be further investigation and analysis to be completed during 2020/2021 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 increased by 434 during 2019/20. (14775 - 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 627 (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 2019	Dec 2019	March 2020
Unmeasured Sewerage Gross Household	668282	674453	677065
Unmeasured Sewerage Occupied Household (L3 year-end sub calc)	634602	640884	643562
Unmeasured Sewerage Voids Household	33680	33569	33503

Household Voids	Voids	Difference (in-year)
March 2020	33503	(-) 177
March 2019	33680	(+) 221
March 2018	33459	

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 2019	1st Dec 2019	March 2020
Unmeasured Sewerage Gross Non-Household	12284	12314	12311
Unmeasured Sewerage Occupied Non-Household (L6 year end sub calc)	7373	7504	7587
Unmeasured Sewerage Voids Non-Household	4911	4810	4724

Measured Non-Household Property Movement

Property Numbers	March 2019	1st Dec 2019	March 2020
Measured Sewerage Gross Non-Household	28614	28812	28943
Measured Sewerage Occupied Non-Household (L7 year end sub calc)	25598	25720	25812
Measured Sewerage Voids Non-Household	3016	3092	3131

Non-Household Voids

Non-Household Voids	Voids	Difference (in-year)
March 2020	7855	(-) 72
March 2019	7927	(-) 165
March 2018	8092	

Confidence Grades

We have kept the confidence grades consistent with those of AIR19. 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 AIR20.

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 20 NC_ 5436 Sewerage.xlsx

Households properties connected during the year	5170

The number of new domestic connections for the year is 5170.

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	266

The number of new non-domestic connections for the year is 266.

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 AIR20 (dated 31st March 2020) as embedded below.


RPS March YE 2020.xlsx

Households Billed Unmeasured Sewerage	End March 2019	End March 2020
Household - Unmeasured	602398	611062
Household - Sewerage Only	7	8
Household - Measured – Not Charged (test meters)	99	83
Household - Measured	31023	31010
Household – Site Meters	1064	1387
Household - Unmeasured - Not Charged	11	12
Total	634602	643562
Average (Apr19/Apr20)	**639082**	

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 2019	End March 2020
	0	0
Average (Apr19/Apr20)	**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 19/20
Households billed unmeasured sewerage	639082
Households billed measured sewerage	0
Total	**639082**

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 2019 and End March 2020 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Sewerage	End March 2019	End March 2020
Non-Household - Unmeasured	7361	7571
Non-Household - Sewerage Only	12	16
Total	7373	7587
Average (Apr19/Apr20)	**7480**	

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 2019 and End March 2020 non-domestic measured properties.

Non-Households Billed Measured Sewerage	End March 2019	End March 2020
	25598	25812
Average (Apr19/Apr20)	**25705**	

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 AIR20 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 19/20**
Non-Households Billed Unmeasured Sewerage	7480
Non-Households Billed Measured Sewerage	25705
Total	**33185**

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 AIR20 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 2019**	**End March 2020**
Household - Unmeasured	630987	639324
Household - Sewerage Only	7	8
Household – Measured - Not Charged (test meters)	104	88
Household - Measured	35289	35281
Household – Site Meters	1882	2350
Household - Unmeasured - Not Charged	13	14
Non-Household – Unmeasured	12266	12290
Non-Household – Sewerage only	18	21
Non-Household - Measured	28614	28943
Total	709180	718319
Average (Apr19/Apr20)	**713750**	

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 AIR20 submission.

Voids	**End March 2020**
Total Gross Properties (as above)	713750
Less total occupied properties (line 5+line 8) =	672267
Total	**41483**

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 2019 and End March 2020.

	End March 2019	End March 2020	Average 19/20		
Gross number of properties connected for sewerage	709180	718319	713750		
Gross number of properties connected for water (T7 L7 + T7 L11)	874307	883423	875565		
Calculation = Sewerage Properties / Water Properties	= (713750 / 875565) * 100		**81.21%**	**Therefore, Total Connected Population equals (Table 7 Line 17 [1,886,300] * 81.21%) + Table 17a Line 2 [34,120]**	**1,531,864**
				1,531,864+34,120	

As detailed above, the number of sewerage properties has been calculated as 81.21% 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 81.21%) + Non-Resident Population (Source Lisa Woodman) = Table 13 line 10

(1,886,300 X 81.21%) = 1,531,864 + 34,120 = 1,565,984

T13 L10	**1565.984**

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	257.16	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	4.50	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	261.66	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	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	40.88	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	52.15	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	354.69	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		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 AIR20 volume reported for unmeasured household sewage is 257.16 Ml/d. The volume reported in AIR19 was 255.21 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 AIR20 is 5.53 Ml/d. The value reported in AIR19 was 5.46 Ml/d.

The AIR20 volume reported for unmeasured non-household sewage is 4.50 Ml/d. The volume reported in AIR19 was 4.46 Ml/d.

Line 5 - Volume Measured Non-Household Domestic Sewerage

The reported sewerage figure was based on actual billed sewerage discharge April 10 to March 20. The discharge volumetric information was derived directly from;

- The monthly 'Reconciling' Reports Apr19 – Mar20, detailing actual billed sewerage discharge M^3.
- The DfI Domestic Allowance Subsidy Assurance Report Apr19 – Mar20, detailing actual domestic sewerage allowance applied per bills.
- Monthly FN12 Transaction Reports Apr19 – Mar20, detailing Bad Debt Write-Off by Charge Type.

The calculated sewerage discharge volume was 14,922,282 M^3 converted to mega litres per day of 40.88 Ml/d.

Sewerage volume is 2% (263,713 M^3 | 0.72Ml/d) greater than last year.

The increase in sewerage volume is primarily due to the impact of the Laundrette Trade Effluent Consent Project being lower than anticipated:

- Laundrette sewerage discharge, which previously was classified and billed as 'standard sewerage' volume, is now classified and billed as 'trade effluent' volume.
- The agreed consent date for newly consented Laundrettes was 01 Jan 20, rather than 01 Apr 17.
- The actual 'in-year' reduction in billed sewerage volume related to the Laundrette Trade Effluent Consent Project, was circa 280,000 M^3 lower than the anticipated reduction reflected in 2018/19.
- The 'in year' increase in billed sewerage volume is offset by a corresponding decrease in trade effluent volume.

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

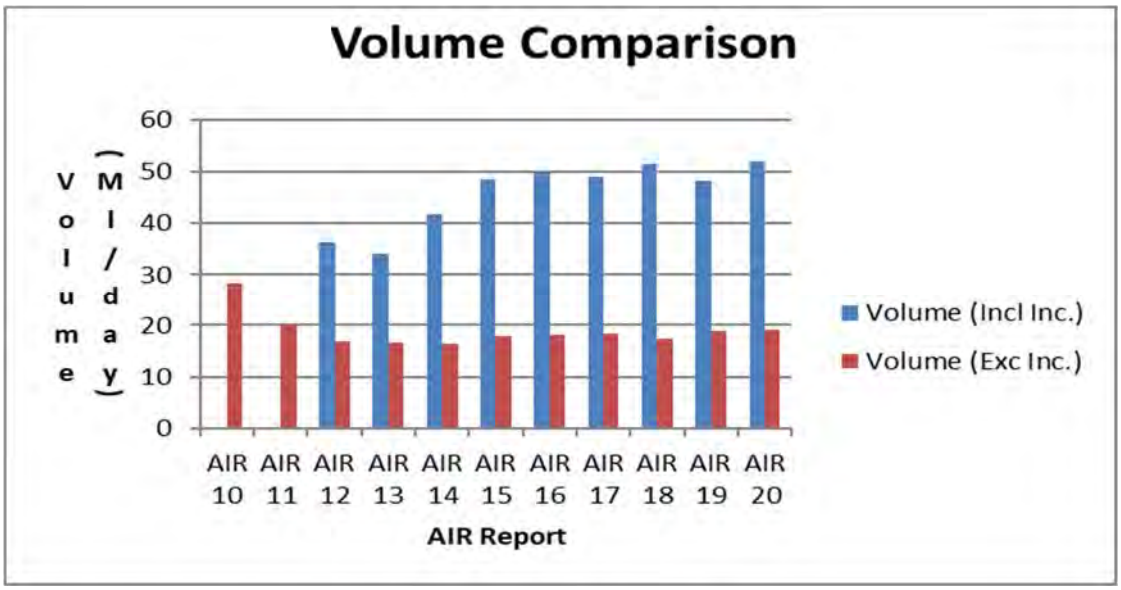
Sources

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 45 traders out of 620 assessed. The total number of traders has increased from 594 in AIR19 to 620 in AIR20.

The total volume for AIR 19 and 20 are detailed below:

AIR 19 Volume = 48.28 Ml/day
AIR 20 Volume = 52.15 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 3.49Ml/day increase of effluent discharged from [redacted] during this period (29.481 Ml/day to 32.97 Ml/day). Comparing the total AIR 20 volume to the AIR 19 volume there has been an overall increase of 3.87 Ml/day. With the volumes for [redacted] excluded there has been an increase of 0.38 Ml/day.

Summary of Volumes changes between AIR19 and AIR20 excluding the [redacted] are detailed below:

Comparison of AIR19 and AIR20 Vo

There has been a small increase in volume of 0.38 ML/Day. This can be attributed to small increases in NIW and PPP categories with the largest increase (0.67 ML/Day) seen in North West Std Charge. North East Std Charge remains essentially unchanged (1.57 to 1.56 ML/Day) between reporting periods. There has been a decrease of 0.34ML/Day for Southern Sampled and Charged customers and a small decrease of 0.19 ML/Day for North West Sampled and charged customers.

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

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	4,642 8	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	41,918 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	212 5	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	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	42,640 2	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	1,785.84	C3	1,928.28	C3	1,912.75	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	1,724.77	C3	1,866.95	C3	1,850.57	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	A2	1,015	A2	1,016	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	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	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	36 2	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	34.7	A2	35.4	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	0.8	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	1,678.7	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	7,751 3	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	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	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	7,751 3	B3		
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	353.71	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	353.71	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	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	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	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	6.1	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	35.4	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	41 5	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	6,013.4	B2	6,746 9	B2	6,321 5	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	46,033.5	C3	49,633 0	C3	49,669 3	B3		
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	212 5	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	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	46,759.9	C3	50,366 6	C3	50,391 5	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	2,101.35	C3	2,265.55	C3	2,266.46	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	2,040.28	C3	2,204.22	C3	2,204.28	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	A2	1,021	A2	1,022	A2		
9	Treatment capacity available (BOD5/day)	tonnes	1	162.8	D3	163.8	D3	164 6	D3	164.5	D3	164.6	D3	165.4	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	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	42.3	B2	6.6	B3	42 3	B2		
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	42.3	B2	41.3	B2	42 3	B2		

Table 15 –Sewage Treatment

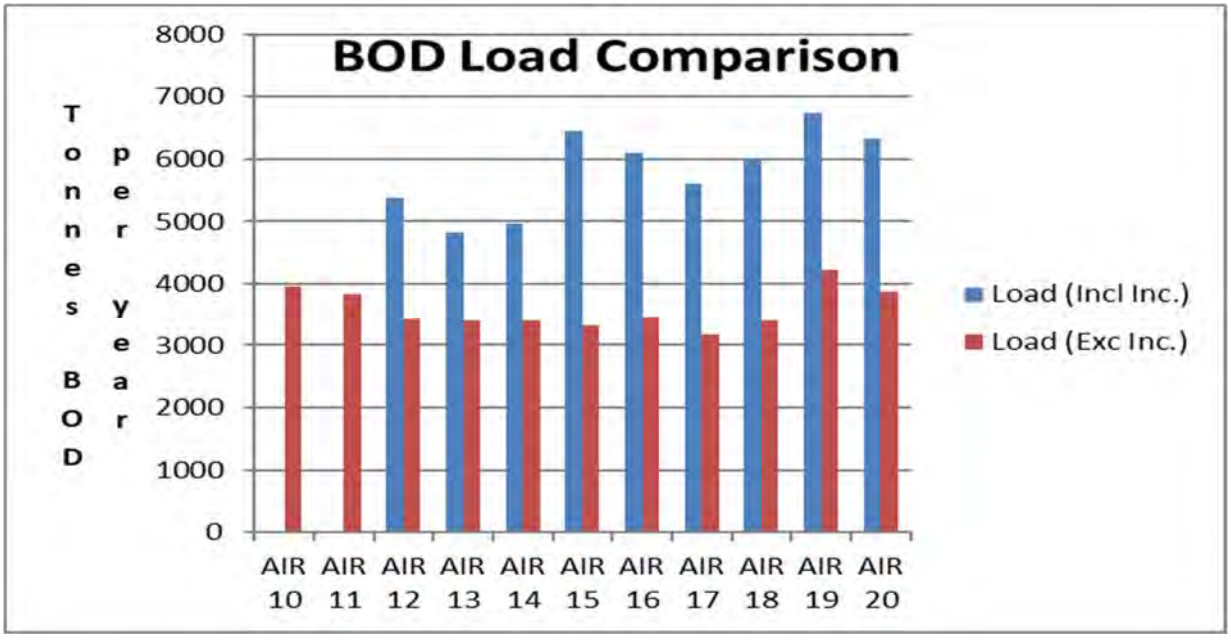
Line 1 - Trade effluent load receiving secondary treatment (BOD/year)

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.

The loading for this year's and the previous year's reports were as follows:

AIR20 = 6321.4 tonnes BOD/year
AIR19 = 6746.9 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 77.42 tonnes BOD/year from 2523.31 tonnes BOD/year (AIR19) to 2445.89 tonnes BOD/year (AIR20). Overall the loading for AIR20 decreased by 425.49 tonnes BOD/year. With the decrease from the [redacted] removed from this figure, the difference between the two reports is a decrease of 348.07 tonnes BOD/year.

As detailed in the methodology, the Fixed Strength COD's were then converted to a BOD strength. These calculated BOD strengths will be kept the same for future AIR reports unless there is a significant variation from the rolling 5 year average of the Mogden sample results. This will allow for easier comparison in BOD loading year on year. 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 AIR19 and AIR20 are detailed below:

Comparison of AIR19 and AIR20 BO

There were increases noted for NE Sampled and Charged and Standard Charge traders across NIW and PPP WwTW's. This increase was 85.79 and 3.13 tonnes BOD/year respectively. There was a large decrease of 110.09 tonnes BOD/Year for the North West Sampled and Charged traders with a similar large decrease of 328.17 tonnes BOD/year shown for South Sampled and charged traders.

There were increases reported for both NE PPP Sampled and charged traders as well as NE PPP Standard charge .This equated to an increase of 84.29 and 7.68 tonnes BOD/year respectively. There were decreases in South PPP Sampled and Charged of 116.4 tonnes of BOD/year and South PPP Std charged of 7.38 tonnes BOD/year.

The net of these changes equates to the 348.1 tonnes BOD/year decrease in AIR loadings with the incinerator figures excluded.

Line 2 - 7 – Sewage 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 - Wasterwater 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 AIR19, PEs for 189 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 AIR19, 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 AIR20 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 AIR20 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 478,618. Please note an element of this figure, 117,010, 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 478,618 has been adopted for AIR20.

NIW has information pertaining to septic tank imports to its WWTWs. In summary of the 17 WWTWs that are septic tank imports centres five receive the sludge at the head of the inlet works and the remaining 12 receive it via sludge reception centres

For AIR20 conversion factors, received from our scientific staff, were used to convert the septic tank imports to PEs for the 5 WWTWs where imports are discharged directly to the inlet works.

Allowance at the other 12 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, Lisburn (New Holland) and Strabane. 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	883.492	2.42	0.02	24.21	403
Glenstall	1109	6223.598	17.05	0.17	170.51	2842
Limavady	3162	14.042	0.04	0.0004	0.38	6
Lisburn (New Holland)	329	9798.043	26.84	0.27	268.44	4474
Strabane	3213	198.596	0.54	0.01	5.44	91

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	1,247,903	27,329.08
Non-Residential	223,462	4,893.83
Hotels	4,369	95.67
Nursery School	1,217	26.64
Playschool	1,079	23.64
Primary School	30,089	658.96

Components used in build-up of Total Load	Total PE	000 tonnes of BOD per annum
Secondary School	29,936	655.59
Trade PE	201,723	4,417.73
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)	24,971	546.87
Total (Line 5)	**1,927,224**	**42,206.21**

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 AIR20.

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 AIR19 for Line 2. NB. Change in PE (-Ve AIR20 PE Higher).

Name of Works	CAR Site ID	PE Change	Comments
Aghanloo (1)	S02989	-55.2	TE Updated
Aghinlig (WWTW)	S02554	0.4	Actual PE updated following PE Review by APT
Aghnagar	S02830	3.3	Actual PE updated following PE Review by APT
Annsborough	S02687	-70.1	TE Updated
Antrim (WWTW)	S01422	-332.8	TE Updated
Ardglass (WWTW)	S00268	-89.4	TE Updated
Attical (WWTW)	S02688	-32.8	Actual PE updated following PE Review by APT
Ballybrick	S02115	1.6	Actual PE updated following PE Review by APT
Ballycastle (WWTW)	S01071	-0.3	TE Updated

Name of Works	CAR Site ID	PE Change	Comments
Ballyclare	S01467	-314.4	TE Updated
Ballyhacket	S01133	2.0	Actual PE updated following PE Review by APT
Ballykelly (L/Derry)	S03016	2.4	TE Updated
Ballylintagh (New)	S01135	-23.1	TE Updated
Ballymacallion (WWTW)	S03017	0.9	Actual PE updated following PE Review by APT
Ballymena (WWTW)	S01456	5572.1	TE Updated
Ballynahinch (Down)	S00311	-4.4	TE Updated
Ballyvarley (WWTW)	S02119	1.5	Actual PE updated following PE Review by APT
Banbridge (WWTW)	S02102	-40.3	TE Updated
Belfast (WWTW)	S00345	6616.5	TE Updated. Sludge import/export PE updated
Belleek (Fermanagh)	S03024	0.2	TE Updated
Bells Hill	S00291	-2.3	Actual PE updated following PE Review by APT
Beltrim (WWTW)	S03025	0.2	Actual PE updated following PE Review by APT
Bushmills (WWTW)	S01178	10.2	TE Updated
Caheney	S01141	1.2	Actual PE updated following PE Review by APT
Carnanbane	S03037	-34.0	Actual PE updated following PE Review by McAdam Design
Carrickfergus (WWTW)	S00261	261.1	TE Updated
Carrowclare	S03300	-138.2	Actual PE updated following PE Review by APT
Castlederg (WWTW)	S03042	-0.3	TE Updated
Castlemellan Lower	S03043	0.9	Actual PE updated following PE Review by APT
Castlemellan Upper	S03044	6.4	Actual PE updated following PE Review by APT
Castletown (WWTW)	S03046	-5.0	Actual PE updated following PE Review by APT
Churchfield Road	S01182	1.8	Actual PE updated following PE Review by APT

Name of Works	CAR Site ID	PE Change	Comments
Clanabogan South WwTW	S05568	2.5	Review completed by AP
Coagh (WWTW)	S01562	0.5	TE Updated. Trader has ceased, therefore loading has been removed.
Coalisland	S02828	67.3	TE Updated
Conthem Rd	S04884	-3.1	Actual PE updated following PE Review by APT
Cookstown (WWTW)	S01582	-699.7	TE Updated
Coolkeeran	S01098	3.0	Actual PE updated following PE Review by APT
Coragh	S03058	1.4	Actual PE updated following PE Review by APT
Corgary Cottages (New)	S02724	-0.4	Actual PE updated following PE Review by APT
Corickmore	S03062	0.5	Actual PE updated following PE Review by APT
Crew Bridge	S03069	-0.5	Actual PE updated following PE Review by APT
Culbane (WWTW)	S01145	4.5	Actual PE updated following PE Review by APT
Culmore (WWTW)	S03071	317.3	TE Updated
Derryhale	S02570	-63.5	TE Updated
Derrynoose	S02605	-103.7	Actual PE updated following PE Review by APT
Dervock (WWTW)	S01102	0.0	TE Updated
Diamond Road(73-79)	S02124	-2.3	Actual PE updated following PE Review by APT
Doan Place	S02839	2.0	Actual PE updated following PE Review by APT
Donagh (WWTW)	S03078	-28.0	Actual PE updated following PE Review by APT
Donaghmore (WWTW)	S02840	-71.9	TE Updated
Donemana	S03103	5.9	TE Updated
Donnybrewer	S03080	-17.2	TE Updated

Name of Works	CAR Site ID	PE Change	Comments
Doogary	S02573	-0.9	Actual PE updated following PE Review by APT
Downpatrick (WWTW)	S00771	853.0	TE Updated
Draperstown	S01615	-16.9	TE Updated
Dromara (WWTW)	S00316	0.9	TE Updated
Dromore (Down)	S02127	236.4	TE Updated
Drumane	S01150	1.7	Actual PE updated following PE Review by APT
Drumkee	S02841	-2.9	Actual PE updated following PE Review by APT
Drummack	S03094	-1.0	Actual PE updated following PE Review by APT
Dungannon	S02850	7627.9	TE Updated
Dungiven	S03101	0.0	TE Updated
Dunmurry	S00346	-46.3	TE Updated
Enniskillen	S03218	-453.4	TE Updated
Fivemiletown (WWTW)	S03113	22.6	TE Updated
Gallrock	S02433	-0.1	Actual PE updated following PE Review by APT
Garrison (WWTW)	S03115	23.2	Actual PE updated following PE Review by Doran Consulting.
Garryduff Road(112- 122)	S01715	-1.0	Actual PE updated following PE Review by APT
Glack (WWTW)	S03118	16.4	Actual PE updated following PE Review by APT
Glen Villas	S02723	-58.1	Actual PE updated following PE Review by APT
Glenstall	S01109	-240.9	TE Updated. Sludge import/export PE updated
Gortereghy	S01110	-12.6	Actual PE updated following PE Review by APT
Gortnacross	S01577	-3.5	Actual PE updated following PE Review by APT
Grange (Taylorstown)	S01442	-1.5	TE Updated
Greenisland (WWTW)	S00263	-990.0	TE Updated
Greysteel (WWTW)	S03123	-0.6	TE Updated
Hilltown (WWTW)	S02701	0.0	TE Updated

Name of Works	CAR Site ID	PE Change	Comments
Hilltown Road	S02702	4.2	Actual PE updated following PE Review by APT
Irvinestown	S03137	0.0	TE Updated
Keady (Armagh)	S02553	2.2	TE Updated
Keady (Fermanagh)	S03138	0.2	Actual PE updated following PE Review by APT
Keenaghan (1)	S01578	-3.6	Actual PE updated following PE Review by APT
Keenaghan (Tyrone)	S03139	-3.8	Actual PE updated following PE Review by APT
Kesh (WWTW)	S03140	0.3	TE Updated
Kildress Terrace	S01580	-0.7	Actual PE updated following PE Review by APT
Kilkeel (WWTW)	S00313	-156.5	TE Updated
Killinchy (WWTW)	S00252	-3213.0	TE Updated
Killygonlan (WWTW)	S02043	-8.2	TE Updated
Killymuck	S01583	-68.5	Actual PE updated following PE Review by APT
Kilrea	S01156	100.8	TE Updated
Kinturk	S01584	-6.7	Actual PE updated following PE Review by APT
Knocknagore (WWTW)	S02409	-1.9	Actual PE updated following PE Review by APT
Knockonny	S03153	-5.4	Actual PE updated following PE Review by APT
Larne (WWTW)	S02044	787.5	TE Updated
Legacurry (Tyrone)	S03156	1.5	Actual PE updated following PE Review by APT
Lessans	S00281	-0.1	Actual PE updated following PE Review by APT
Limavady (WWTW)	S03162	-93.9	TE Updated. Sludge import/export PE updated
Lisburn (New Holland)	S00329	-779.0	TE Updated. Sludge import/export PE updated
Lislea Terrace	S01624	4.7	Actual PE updated following PE Review by APT
Lisnaskea (WWTW)	S03171	-233.3	TE Updated

Name of Works	CAR Site ID	PE Change	Comments
Maghera (L/Derry)	S01629	-23.8	TE Updated
Magherafelt (WWTW)	S01621	437.4	TE Updated
Maghernarhar	S01193	-3.1	Actual PE updated following PE Review by APT
Managher	S01162	-3.6	Actual PE updated following PE Review by APT
McNally Park(1-6)	S04124	1.0	Actual PE updated following PE Review by APT
Moneymore (WWTW)	S01589	-4.5	TE Updated
Monteith	S02152	-52.1	Actual PE updated following PE Review by APT
Moorfield	S03190	-0.4	Actual PE updated following PE Review by APT
Mountcastle	S03191	0.6	Actual PE updated following PE Review by APT
Mounthill	S01465	28.0	Actual PE updated following PE Review by APT
Mountjoy (Dungannon)	S02849	0.0	TE Updated
Mountnorris	S02248	-0.4	TE Updated
Moy (WWTW)	S02859	55.3	TE Updated
Mullynaburtlan	S03197	0.2	Actual PE updated following PE Review by APT
Newmills (WWTW)	S02852	3.4	TE Updated. Trader has ceased, therefore loading has been removed.
Newry (WWTW)	S02685	-2153.6	TE Updated
Newtownbreda (WWTW)	S00342	2.0	TE Updated
Newtownbutler (WWTW)	S03200	5.4	TE Updated
North Coast (WWTWs)	S04150	-645.2	TE Updated
Oakland Villas	S01711	-0.5	Actual PE updated following PE Review by APT
Omagh (WWTW)	S03999	3007.1	TE Updated
Pomeroy (WWTW)	S01593	-1.5	TE Updated
Portaferry (2)	S05200	2.1	TE Updated
Rathfriland (WWTW)	S02713	-96.5	TE Updated
Reaskmore Road	S05286	-2.6	Actual PE updated following PE Review by APT

Name of Works	CAR Site ID	PE Change	Comments
Rocktown	S01635	-4.0	Actual PE updated following PE Review by APT
Roughfort (WWTW)	S01470	-38.2	TE Updated
Saval More Cottages	S02715	0.2	Actual PE updated following PE Review by APT
St Annes Terrace	S02722	0.2	Actual PE updated following PE Review by APT
Stangmore (WWTW)	S02854	3.0	Actual PE updated following PE Review by APT
Strabane	S03223	169.2	TE Updated. Sludge import/export PE updated
Tamnamore (WWTW)	S02862	1.5	TE Updated
Tandragee	S02174	682.6	TE Updated
Teemore (WWTW)	S03228	-24.5	Actual PE updated following PE Review by APT
Trillick (WWTW)	S03231	4.7	TE Updated. Trader has ceased, therefore loading has been removed.
Tullyroan	S02600	0.3	TE Updated
Waringsford	S02166	-19.4	Actual PE updated following PE Review by APT
Warrenpoint (WWTW)	S02720	-220.2	TE Updated
Whitehouse	S00265	202.6	TE Updated
Ballintoy New WwTW	S05672	-332	Design PE updated following PC15 capital upgrade
	TOTAL	**15014.6**	**Change in Line 2 since AIR19**

The change in PE equates to a decrease in load of 328.82t BOD/yr (i.e. 15,014.6 x 60 for 60g/hd/day /1000/1000 x 365) from AIR19 to AIR20, allowing for rounding up and down and conversions.

Difference between AIR20 and AIR19 values (to 2 decimal places):

Line 2 for AIR20-	**41,917.96**
Line 2 for AIR19 -	**42,246.77**
Total Difference -	**328.81**

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 AIR19.

Name of Works	CAR Site ID	PE Change	Comments
Annaghmore Road(28)	S02016	-2	Actual PE updated following PE Review by APT
Connaught Road(21)	S01768	0.40	Actual PE updated following PE Review by APT
Deerpark Road(92)	S01771	-7	Actual PE updated following PE Review by APT
Demoan Villas	S02299	1	Actual PE updated following PE Review by APT
Drumsough Road Randalstown ST	S05750	0.30	Review completed by AP
Duncastle Road (52-60)	S04113	-2	Actual PE updated following PE Review by APT
Ervey Road	S03107	2	Actual PE updated following PE Review by APT
Ford Road(27)	S01806	4	Actual PE updated following PE Review by APT
Glaskerbeg Road (11)	S04088	0.20	Actual PE updated following PE Review by APT
Kilnacart	S02861	-3	Actual PE updated following PE Review by APT
Liscorran Road(3-5)	S02389	-0.20	Actual PE updated following PE Review by APT
Lisnamorrow	S01810	-1	Actual PE updated following PE Review by APT
Magee Terrace	S02292	0.20	Actual PE updated following PE Review by APT
Manor House	S02590	-9	Actual PE updated following PE Review by APT
Tamnadeese Road(7-9)	S01816	6	Has been replaced (see Tamndeese New WwTW)
Tamndeese New WwTW	S06138	-6	New works to replace Tamnadeese Rd 7-9
Tullyveagh Road(2-4)	S01819	1	Actual PE updated following PE Review by APT

Name of Works	CAR Site ID	PE Change	Comments
Woburn Road (63-69)	S00234	2	Actual PE updated following PE Review by APT
	TOTAL	**-13.1**	**Change in Line 3 since AIR19**

The change in PE equates to an increase in load of 0.29t BOD/yr (i.e. 13.1 x 60 for 60g/hd/day /1000/1000 x 365) from AIR19 to AIR20, allowing for rounding up and down and conversions.

Difference between AIR20 and AIR19:

Line 3 for AIR20 -	**212.47**
Line 3 for AIR 19 -	**212.19**
Total Difference -	**0.28**

Line 4 - Total load receiving preliminary treatment only

There were no changes in WwTWs receiving preliminary treatment only since AIR19.

Difference betweenAIR20 and AIR19:

Line 4 for AIR20-	**389.69**
Line 4 for AIR19 -	**389.69**
Total Difference -	**0**

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR19 that affects load entering the system for Line 5. NB. Change in PE (-Ve AIR20 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Aghanloo (1)	S02989	-55.21	TE Updated
Aghinlig (WWTW)	S02554	0.43	Actual PE updated following PE Review by APT
Aghnagar	S02830	3.30	Actual PE updated following PE Review by APT
Annaghmore Road(28)	S02016	-1.57	Actual PE updated following PE Review by APT
Annalong (WWTW)	S00300	196.49	TE Updated
Annsborough	S02687	-70.11	TE Updated
Antrim (WWTW)	S01422	-332.79	TE Updated
Ardglass (WWTW)	S00268	-89.40	TE Updated
Attical (WWTW)	S02688	-32.80	Actual PE updated following PE Review by APT
Ballintoy (Retention Tank)	S01174	332.00	Process has been decommissioned following PC15 capital upgrade (Ballintoy New).

Name of Works	CAR ID	PE Change	Comments
Ballybrick	S02115	1.56	Actual PE updated following PE Review by APT
Ballycastle (WWTW)	S01071	-0.27	TE Updated
Ballyclare	S01467	-314.44	TE Updated
Ballyhacket	S01133	1.99	Actual PE updated following PE Review by APT
Ballyhornan Outfall	S04090	0.96	TE Updated
Ballykelly (L/Derry)	S03016	2.36	TE Updated
Ballylintagh (New)	S01135	-23.11	TE Updated
Ballymacallion (WWTW)	S03017	0.90	Actual PE updated following PE Review by APT
Ballymena (WWTW)	S01456	5572.08	TE Updated
Ballynahinch (Down)	S00311	-4.39	TE Updated
Ballyvarley (WWTW)	S02119	1.49	Actual PE updated following PE Review by APT
Banbridge (WWTW)	S02102	-40.34	TE Updated
Belfast (WWTW)	S00345	6616.52	TE Updated. Sludge import/export PE updated
Belleek (Fermanagh)	S03024	0.20	TE Updated
Bells Hill	S00291	-2.30	Actual PE updated following PE Review by APT
Beltrim (WWTW)	S03025	0.18	Actual PE updated following PE Review by APT
Bushmills (WWTW)	S01178	10.21	TE Updated
Caheney	S01141	1.20	Actual PE updated following PE Review by APT
Carnanbane	S03037	-34.00	Actual PE updated following PE Review by McAdam Design
Carrickfergus (WWTW)	S00261	261.13	TE Updated
Carrowclare	S03300	-138.17	Actual PE updated following PE Review by APT
Castlederg (WWTW)	S03042	-0.27	TE Updated
Castlemellan Lower	S03043	0.87	Actual PE updated following PE Review by APT
Castlemellan Upper	S03044	6.44	Actual PE updated following PE Review by APT
Castletown (WWTW)	S03046	-4.99	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Churchfield Road	S01182	1.80	Actual PE updated following PE Review by APT
Clanabogan South WwTW	S05568	2.50	Review completed by AP
Coagh (WWTW)	S01562	0.49	TE Updated. Trader has ceased, therefore loading has been removed.
Coalisland	S02828	67.25	TE Updated
Connaught Road(21)	S01768	0.40	Actual PE updated following PE Review by APT
Conthem Rd	S04884	-3.10	Actual PE updated following PE Review by APT
Cookstown (WWTW)	S01582	-699.73	TE Updated
Coolkeeran	S01098	3.00	Actual PE updated following PE Review by APT
Coragh	S03058	1.41	Actual PE updated following PE Review by APT
Corgary Cottages (New)	S02724	-0.43	Actual PE updated following PE Review by APT
Corickmore	S03062	0.50	Actual PE updated following PE Review by APT
Crew Bridge	S03069	-0.50	Actual PE updated following PE Review by APT
Culbane (WWTW)	S01145	4.50	Actual PE updated following PE Review by APT
Culmore (WWTW)	S03071	317.30	TE Updated
Cushendall	S01183	0.05	TE Updated
Deerpark Road(92)	S01771	-7.30	Actual PE updated following PE Review by APT
Demoan Villas	S02299	1.10	Actual PE updated following PE Review by APT
Derryhale	S02570	-63.47	TE Updated
Derrynoose	S02605	-103.70	Actual PE updated following PE Review by APT
Dervock (WWTW)	S01102	-0.04	TE Updated
Diamond Road(73-79)	S02124	-2.30	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Doan Place	S02839	1.98	Actual PE updated following PE Review by APT
Donagh (WWTW)	S03078	-28.00	Actual PE updated following PE Review by APT
Donaghmore (WWTW)	S02840	-71.86	TE Updated
Donemana	S03103	5.92	TE Updated
Donnybrewer	S03080	-17.19	TE Updated
Doogary	S02573	-0.90	Actual PE updated following PE Review by APT
Downpatrick (WWTW)	S00771	852.97	TE Updated
Draperstown	S01615	-16.87	TE Updated
Dromara (WWTW)	S00316	0.91	TE Updated
Dromore (Down)	S02127	236.38	TE Updated
Drumane	S01150	1.70	Actual PE updated following PE Review by APT
Drumkee	S02841	-2.90	Actual PE updated following PE Review by APT
Drummack	S03094	-1.00	Actual PE updated following PE Review by APT
Drumsough Road Randalstown ST	S05750	0.30	Review completed by AP
Duncastle Road (52-60)	S04113	-1.80	Actual PE updated following PE Review by APT
Dungannon	S02850	7627.90	TE Updated
Dungiven	S03101	-0.03	TE Updated
Dunmurry	S00346	-46.34	TE Updated
Enniskillen	S03218	-453.39	TE Updated
Ervey Road	S03107	1.60	Actual PE updated following PE Review by APT
Fivemiletown (WWTW)	S03113	22.57	TE Updated
Ford Road(27)	S01806	3.80	Actual PE updated following PE Review by APT
Gallrock	S02433	-0.10	Actual PE updated following PE Review by APT
Garrison (WWTW)	S03115	23.20	Actual PE updated following PE Review by Doran Consulting.
Garryduff Road(112- 122)	S01715	-1.02	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Glack (WWTW)	S03118	16.40	Actual PE updated following PE Review by APT
Glaskerbeg Road (11)	S04088	0.20	Actual PE updated following PE Review by APT
Glen Villas	S02723	-58.10	Actual PE updated following PE Review by APT
Glenstall	S01109	-240.92	TE Updated. Sludge import/export PE updated
Gortereghy	S01110	-12.60	Actual PE updated following PE Review by APT
Gortnacross	S01577	-3.50	Actual PE updated following PE Review by APT
Grange (Taylorstown)	S01442	-1.50	TE Updated
Greenisland (WWTW)	S00263	-989.98	TE Updated
Greysteel (WWTW)	S03123	-0.62	TE Updated
Hilltown (WWTW)	S02701	0.05	TE Updated
Hilltown Road	S02702	4.20	Actual PE updated following PE Review by APT
Irvinestown	S03137	0.02	TE Updated
Keady (Armagh)	S02553	2.24	TE Updated
Keady (Fermanagh)	S03138	0.20	Actual PE updated following PE Review by APT
Keenaghan (1)	S01578	-3.60	Actual PE updated following PE Review by APT
Keenaghan (Tyrone)	S03139	-3.80	Actual PE updated following PE Review by APT
Kesh (WWTW)	S03140	0.26	TE Updated
Kildress Terrace	S01580	-0.70	Actual PE updated following PE Review by APT
Kilkeel (WWTW)	S00313	-156.50	TE Updated
Killinchy (WWTW)	S00252	-3213.01	TE Updated
Killygonlan (WWTW)	S02043	-8.17	TE Updated
Killymuck	S01583	-68.48	Actual PE updated following PE Review by APT
Kilnacart	S02861	-2.70	Actual PE updated following PE Review by APT
Kilrea	S01156	100.81	TE Updated

Name of Works	CAR ID	PE Change	Comments
Kinturk	S01584	-6.70	Actual PE updated following PE Review by APT
Knocknagore (WWTW)	S02409	-1.90	Actual PE updated following PE Review by APT
Knockonny	S03153	-5.40	Actual PE updated following PE Review by APT
Larne (WWTW)	S02044	787.45	TE Updated
Legacurry (Tyrone)	S03156	1.48	Actual PE updated following PE Review by APT
Lessans	S00281	-0.10	Actual PE updated following PE Review by APT
Limavady (WWTW)	S03162	-93.93	TE Updated. Sludge import/export PE updated
Lisburn (New Holland)	S00329	-779.02	TE Updated. Sludge import/export PE updated
Liscorran Road(3-5)	S02389	-0.20	Actual PE updated following PE Review by APT
Lislea Terrace	S01624	4.70	Actual PE updated following PE Review by APT
Lisnamorrow	S01810	-0.80	Actual PE updated following PE Review by APT
Lisnaskea (WWTW)	S03171	-233.25	TE Updated
Magee Terrace	S02292	0.20	Actual PE updated following PE Review by APT
Maghera (L/Derry)	S01629	-23.75	TE Updated
Magherafelt (WWTW)	S01621	437.37	TE Updated
Maghernarhar	S01193	-3.10	Actual PE updated following PE Review by APT
Managher	S01162	-3.55	Actual PE updated following PE Review by APT
Manor House	S02590	-8.90	Actual PE updated following PE Review by APT
McNally Park(1-6)	S04124	1.00	Actual PE updated following PE Review by APT
Moneymore (WWTW)	S01589	-4.55	TE Updated

Name of Works	CAR ID	PE Change	Comments
Monteith	S02152	-52.12	Actual PE updated following PE Review by APT
Moorfield	S03190	-0.40	Actual PE updated following PE Review by APT
Mountcastle	S03191	0.60	Actual PE updated following PE Review by APT
Mounthill	S01465	28.00	Actual PE updated following PE Review by APT
Mountnorris	S02248	-0.35	TE Updated
Moy (WWTW)	S02859	55.32	TE Updated
Mullynaburtlan	S03197	0.20	Actual PE updated following PE Review by APT
Newcastle Road (58-66)	S04110	-14.20	Actual PE updated following PE Review by APT
Newmills (WWTW)	S02852	3.38	TE Updated. Trader has ceased, therefore loading has been removed.
Newry (WWTW)	S02685	-2153.60	TE Updated
Newtownbreda (WWTW)	S00342	2.04	TE Updated
Newtownbutler (WWTW)	S03200	5.42	TE Updated
North Coast (WWTWs)	S04150	-645.18	TE Updated
Oakland Villas	S01711	-0.50	Actual PE updated following PE Review by APT
Omagh (WWTW)	S03999	3007.05	TE Updated
Pomeroy (WWTW)	S01593	-1.53	TE Updated
Portaferry (2)	S05200	2.09	TE Updated
Rathfriland (WWTW)	S02713	-96.50	TE Updated
Reaskmore Road	S05286	-2.56	Actual PE updated following PE Review by APT
Rocktown	S01635	-4.00	Actual PE updated following PE Review by APT
Roughfort (WWTW)	S01470	-38.20	TE Updated
Saval More Cottages	S02715	0.20	Actual PE updated following PE Review by APT
St Annes Terrace	S02722	0.20	Actual PE updated following PE Review by APT
Stangmore (WWTW)	S02854	3.00	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Strabane	S03223	169.18	TE Updated. Sludge import/export PE updated
Tamnadeese Road(7-9)	S01816	6.00	Has been replaced (see Tamndeese New WwTW)
Tamnamore (WWTW)	S02862	1.54	TE Updated
Tamndeese New WwTW	S06138	-6.00	New works to replace Tamnadeese Rd 7-9
Tandragee	S02174	682.57	TE Updated
Teemore (WWTW)	S03228	-24.50	Actual PE updated following PE Review by APT
Trillick (WWTW)	S03231	4.68	TE Updated. Trader has ceased, therefore loading has been removed.
Tullyroan	S02600	0.30	TE Updated
Tullyveagh Road(2-4)	S01819	0.70	Actual PE updated following PE Review by APT
Waringsford	S02166	-19.40	Actual PE updated following PE Review by APT
Warrenpoint (WWTW)	S02720	-220.16	TE Updated
Whitehouse	S00265	202.55	TE Updated
Woburn Road (63-69)	S00234	2.10	Actual PE updated following PE Review by APT
Ballintoy New WwTW	S05672	-332.00	Design PE updated following PC15 capital upgrade
	Total	15516.88	**Change in Line 5 PE since AIR19**

The change in PE equates to a decrease in load of 339.82t BOD/yr (i.e. 15,516.88 x 60 for 60g/hd/day /1000/1000 x 365) from AIR19 to AIR20, allowing for rounding up and down and conversions.

Difference between AIR20 and AIR19:

Line 5 for AIR20 -	**42,640.54**
Line 5 for AIR19 -	**42980.36**
Total Difference -	**339.82**

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 AIR19 that affects equivalent population served (resident) for Line 6.

Name of Works	CAR ID	PE Change	Comments
Aghanloo (1)	S02989	-55.21	TE Updated
Aghinlig (WWTW)	S02554	0.43	Actual PE updated following PE Review by APT
Aghnagar	S02830	3.30	Actual PE updated following PE Review by APT
Annaghmore Road(28)	S02016	-1.57	Actual PE updated following PE Review by APT
Annalong (WWTW)	S00300	196.49	TE Updated
Annsborough	S02687	-70.11	TE Updated
Antrim (WWTW)	S01422	-332.79	TE Updated
Ardglass (WWTW)	S00268	-89.40	TE Updated
Attical (WWTW)	S02688	-32.80	Actual PE updated following PE Review by APT
Ballintoy (Retention Tank)	S01174	332.00	Process has been decommissioned following PC15 capital upgrade (Ballintoy New).
Ballybrick	S02115	1.56	Actual PE updated following PE Review by APT
Ballycastle (WWTW)	S01071	-0.27	TE Updated
Ballyclare	S01467	-314.44	TE Updated
Ballyhacket	S01133	1.99	Actual PE updated following PE Review by APT
Ballyhornan Outfall	S04090	0.96	TE Updated
Ballykelly (L/Derry)	S03016	2.36	TE Updated
Ballylintagh (New)	S01135	-23.11	TE Updated
Ballymacallion (WWTW)	S03017	0.90	Actual PE updated following PE Review by APT
Ballymena (WWTW)	S01456	5572.08	TE Updated
Ballynahinch (Down)	S00311	-4.39	TE Updated
Ballyvarley (WWTW)	S02119	1.49	Actual PE updated following PE Review by APT
Banbridge (WWTW)	S02102	-40.34	TE Updated
Belfast (WWTW)	S00345	6616.52	TE Updated. Sludge import/export PE updated
Belleek (Fermanagh)	S03024	0.20	TE Updated
Bells Hill	S00291	-2.30	Actual PE updated following PE Review by APT
Beltrim (WWTW)	S03025	0.18	Actual PE updated following PE Review by APT
Bushmills (WWTW)	S01178	10.21	TE Updated

Name of Works	CAR ID	PE Change	Comments
Caheney	S01141	1.20	Actual PE updated following PE Review by APT
Carnanbane	S03037	-34.00	Actual PE updated following PE Review by McAdam Design
Carrickfergus (WWTW)	S00261	261.13	TE Updated
Carrowclare	S03300	-138.17	Actual PE updated following PE Review by APT
Castlederg (WWTW)	S03042	-0.27	TE Updated
Castlemellan Lower	S03043	0.87	Actual PE updated following PE Review by APT
Castlemellan Upper	S03044	6.44	Actual PE updated following PE Review by APT
Castletown (WWTW)	S03046	-4.99	Actual PE updated following PE Review by APT
Churchfield Road	S01182	1.80	Actual PE updated following PE Review by APT
Clanabogan South WwTW	S05568	2.50	Review completed by AP
Coagh (WWTW)	S01562	0.49	TE Updated. Trader has ceased, therefore loading has been removed.
Coalisland	S02828	67.25	TE Updated
Connaught Road(21)	S01768	0.40	Actual PE updated following PE Review by APT
Conthem Rd	S04884	-3.10	Actual PE updated following PE Review by APT
Cookstown (WWTW)	S01582	-699.73	TE Updated
Coolkeeran	S01098	3.00	Actual PE updated following PE Review by APT
Coragh	S03058	1.41	Actual PE updated following PE Review by APT
Corgary Cottages (New)	S02724	-0.43	Actual PE updated following PE Review by APT
Corickmore	S03062	0.50	Actual PE updated following PE Review by APT
Crew Bridge	S03069	-0.50	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Culbane (WWTW)	S01145	4.50	Actual PE updated following PE Review by APT
Culmore (WWTW)	S03071	317.30	TE Updated
Cushendall	S01183	0.05	TE Updated
Deerpark Road(92)	S01771	-7.30	Actual PE updated following PE Review by APT
Demoan Villas	S02299	1.10	Actual PE updated following PE Review by APT
Derryhale	S02570	-63.47	TE Updated
Derrynoose	S02605	-103.70	Actual PE updated following PE Review by APT
Dervock (WWTW)	S01102	-0.04	TE Updated
Diamond Road(73-79)	S02124	-2.30	Actual PE updated following PE Review by APT
Doan Place	S02839	1.98	Actual PE updated following PE Review by APT
Donagh (WWTW)	S03078	-28.00	Actual PE updated following PE Review by APT
Donaghmore (WWTW)	S02840	-71.86	TE Updated
Donemana	S03103	5.92	TE Updated
Donnybrewer	S03080	-17.19	TE Updated
Doogary	S02573	-0.90	Actual PE updated following PE Review by APT
Downpatrick (WWTW)	S00771	852.97	TE Updated
Draperstown	S01615	-16.87	TE Updated
Dromara (WWTW)	S00316	0.91	TE Updated
Dromore (Down)	S02127	236.38	TE Updated
Drumane	S01150	1.70	Actual PE updated following PE Review by APT
Drumkee	S02841	-2.90	Actual PE updated following PE Review by APT
Drummack	S03094	-1.00	Actual PE updated following PE Review by APT
Drumsough Road Randalstown ST	S05750	0.30	Review completed by AP
Duncastle Road (52-60)	S04113	-1.80	Actual PE updated following PE Review by APT
Dungannon	S02850	7627.90	TE Updated

Name of Works	CAR ID	PE Change	Comments
Dungiven	S03101	-0.03	TE Updated
Dunmurry	S00346	-46.34	TE Updated
Enniskillen	S03218	-453.39	TE Updated
Ervey Road	S03107	1.60	Actual PE updated following PE Review by APT
Fivemiletown (WWTW)	S03113	22.57	TE Updated
Ford Road(27)	S01806	3.80	Actual PE updated following PE Review by APT
Gallrock	S02433	-0.10	Actual PE updated following PE Review by APT
Garrison (WWTW)	S03115	23.20	Actual PE updated following PE Review by Doran Consulting.
Garryduff Road(112- 122)	S01715	-1.02	Actual PE updated following PE Review by APT
Glack (WWTW)	S03118	16.40	Actual PE updated following PE Review by APT
Glaskerbeg Road (11)	S04088	0.20	Actual PE updated following PE Review by APT
Glen Villas	S02723	-58.10	Actual PE updated following PE Review by APT
Glenstall	S01109	-240.92	TE Updated. Sludge import/export PE updated
Gortereghy	S01110	-12.60	Actual PE updated following PE Review by APT
Gortnacross	S01577	-3.50	Actual PE updated following PE Review by APT
Grange (Taylorstown)	S01442	-1.50	TE Updated
Greenisland (WWTW)	S00263	-989.98	TE Updated
Greysteel (WWTW)	S03123	-0.62	TE Updated
Hilltown (WWTW)	S02701	0.05	TE Updated
Hilltown Road	S02702	4.20	Actual PE updated following PE Review by APT
Irvinestown	S03137	0.02	TE Updated
Keady (Armagh)	S02553	2.24	TE Updated
Keady (Fermanagh)	S03138	0.20	Actual PE updated following PE Review by APT
Keenaghan (1)	S01578	-3.60	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Keenaghan (Tyrone)	S03139	-3.80	Actual PE updated following PE Review by APT
Kesh (WWTW)	S03140	0.26	TE Updated
Kildress Terrace	S01580	-0.70	Actual PE updated following PE Review by APT
Kilkeel (WWTW)	S00313	-156.50	TE Updated
Killinchy (WWTW)	S00252	-3213.01	TE Updated
Killygonlan (WWTW)	S02043	-8.17	TE Updated
Killymuck	S01583	-68.48	Actual PE updated following PE Review by APT
Kilnacart	S02861	-2.70	Actual PE updated following PE Review by APT
Kilrea	S01156	100.81	TE Updated
Kinturk	S01584	-6.70	Actual PE updated following PE Review by APT
Knocknagore (WWTW)	S02409	-1.90	Actual PE updated following PE Review by APT
Knockonny	S03153	-5.40	Actual PE updated following PE Review by APT
Larne (WWTW)	S02044	787.45	TE Updated
Legacurry (Tyrone)	S03156	1.48	Actual PE updated following PE Review by APT
Lessans	S00281	-0.10	Actual PE updated following PE Review by APT
Limavady (WWTW)	S03162	-93.93	TE Updated. Sludge import/export PE updated
Lisburn (New Holland)	S00329	-779.02	TE Updated. Sludge import/export PE updated
Liscorran Road(3-5)	S02389	-0.20	Actual PE updated following PE Review by APT
Lislea Terrace	S01624	4.70	Actual PE updated following PE Review by APT
Lisnamorrow	S01810	-0.80	Actual PE updated following PE Review by APT
Lisnaskea (WWTW)	S03171	-233.25	TE Updated
Magee Terrace	S02292	0.20	Actual PE updated following PE Review by APT
Maghera (L/Derry)	S01629	-23.75	TE Updated

Name of Works	CAR ID	PE Change	Comments
Magherafelt (WWTW)	S01621	437.37	TE Updated
Maghernarhar	S01193	-3.10	Actual PE updated following PE Review by APT
Managher	S01162	-3.55	Actual PE updated following PE Review by APT
Manor House	S02590	-8.90	Actual PE updated following PE Review by APT
McNally Park(1-6)	S04124	1.00	Actual PE updated following PE Review by APT
Moneymore (WWTW)	S01589	-4.55	TE Updated
Monteith	S02152	-52.12	Actual PE updated following PE Review by APT
Moorfield	S03190	-0.40	Actual PE updated following PE Review by APT
Mountcastle	S03191	0.60	Actual PE updated following PE Review by APT
Mounthill	S01465	28.00	Actual PE updated following PE Review by APT
Mountnorris	S02248	-0.35	TE Updated
Moy (WWTW)	S02859	55.32	TE Updated
Mullynaburtlan	S03197	0.20	Actual PE updated following PE Review by APT
Newcastle Road (58-66)	S04110	-14.20	Actual PE updated following PE Review by APT
Newmills (WWTW)	S02852	3.38	TE Updated. Trader has ceased, therefore loading has been removed.
Newry (WWTW)	S02685	-2153.60	TE Updated
Newtownbreda (WWTW)	S00342	2.04	TE Updated
Newtownbutler (WWTW)	S03200	5.42	TE Updated
North Coast (WWTWs)	S04150	-645.18	TE Updated
Oakland Villas	S01711	-0.50	Actual PE updated following PE Review by APT
Omagh (WWTW)	S03999	3007.05	TE Updated
Pomeroy (WWTW)	S01593	-1.53	TE Updated
Portaferry (2)	S05200	2.09	TE Updated
Rathfriland (WWTW)	S02713	-96.50	TE Updated
Reaskmore Road	S05286	-2.56	Actual PE updated following PE Review by APT

Name of Works	CAR ID	PE Change	Comments
Rocktown	S01635	-4.00	Actual PE updated following PE Review by APT
Roughfort (WWTW)	S01470	-38.20	TE Updated
Saval More Cottages	S02715	0.20	Actual PE updated following PE Review by APT
St Annes Terrace	S02722	0.20	Actual PE updated following PE Review by APT
Stangmore (WWTW)	S02854	3.00	Actual PE updated following PE Review by APT
Strabane	S03223	169.18	TE Updated. Sludge import/export PE updated
Tamnadeese Road(7-9)	S01816	6.00	Has been replaced (see Tamndeese New WwTW)
Tamnamore (WWTW)	S02862	1.54	TE Updated
Tamndeese New WwTW	S06138	-6.00	New works to replace Tamnadeese Rd 7-9
Tandragee	S02174	682.57	TE Updated
Teemore (WWTW)	S03228	-24.50	Actual PE updated following PE Review by APT
Trillick (WWTW)	S03231	4.68	TE Updated. Trader has ceased, therefore loading has been removed.
Tullyroan	S02600	0.30	TE Updated
Tullyveagh Road(2-4)	S01819	0.70	Actual PE updated following PE Review by APT
Waringsford	S02166	-19.40	Actual PE updated following PE Review by APT
Warrenpoint (WWTW)	S02720	-220.16	TE Updated
Whitehouse	S00265	202.55	TE Updated
Woburn Road (63-69)	S00234	2.10	Actual PE updated following PE Review by APT
Ballintoy New WwTW	S05672	-332.00	Design PE updated following PC15 capital upgrade
	Total	15516.88	**Change in Line 6 PE since AIR19**

Difference between AIR20 and AIR19:

Line 6 for AIR20 -	**1,912,765**
Line 6 for AIR19 -	**1928282**
Total Difference -	**15,517**

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 AIR19 that affects equivalent population served (resident) with numerical consents for Line 7. NB. Change in PE (-Ve AIR20 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Aghanloo (1)	S02989	-55	TE Updated
Annsborough	S02687	-70	TE Updated
Antrim (WWTW)	S01422	-333	TE Updated
Ardglass (WWTW)	S00268	-89	TE Updated
Ballycastle (WWTW)	S01071	-0.3	TE Updated
Ballyclare	S01467	-314	TE Updated
Ballykelly (L/Derry)	S03016	2	TE Updated
Ballymena (WWTW)	S01456	5572	TE Updated
Ballynahinch (Down)	S00311	-4	TE Updated
Banbridge (WWTW)	S02102	-40	TE Updated
Belfast (WWTW)	S00345	6617	TE Updated. Sludge import/export PE updated
Belleek (Fermanagh)	S03024	0.2	TE Updated
Bushmills (WWTW)	S01178	10	TE Updated
Carrickfergus (WWTW)	S00261	261	TE Updated
Castle Archdale Country Park (WWTW)	S05877	35	
Castlederg (WWTW)	S03042	-0.3	TE Updated
Coagh (WWTW)	S01562	0.5	TE Updated. Trader has ceased, therefore loading has been removed.
Coalisland	S02828	67	TE Updated
Cookstown (WWTW)	S01582	-700	TE Updated
Culmore (WWTW)	S03071	317	TE Updated
Derryhale	S02570	-63	TE Updated
Donaghmore (WWTW)	S02840	-72	TE Updated
Donemana	S03103	6	TE Updated
Donnybrewer	S03080	-17	TE Updated
Downpatrick (WWTW)	S00771	853	TE Updated
Draperstown	S01615	-17	TE Updated
Dromara (WWTW)	S00316	1	TE Updated
Dromore (Down)	S02127	236	TE Updated
Dungannon	S02850	7628	TE Updated
Dunmurry	S00346	-46	TE Updated
Enniskillen	S03218	-453	TE Updated
Fivemiletown (WWTW)	S03113	23	TE Updated
Garrison (WWTW)	S03115	23	Actual PE updated following PE Review by Doran Consulting.
Glenstall	S01109	-241	TE Updated. Sludge import/export PE updated
Grange (Taylorstown)	S01442	-2	TE Updated
Greenisland (WWTW)	S00263	-990	TE Updated
Keady (Armagh)	S02553	2	TE Updated
Kesh (WWTW)	S03140	0.3	TE Updated

Name of Works	CAR ID	PE Change	Comments
Kilkeel (WWTW)	S00313	-157	TE Updated
Killinchy (WWTW)	S00252	-3213	TE Updated
Killygonlan (WWTW)	S02043	-8	TE Updated
Kilrea	S01156	101	TE Updated
Larne (WWTW)	S02044	787	TE Updated
Limavady (WWTW)	S03162	-94	TE Updated. Sludge import/export PE updated
Lisburn (New Holland)	S00329	-779	TE Updated. Sludge import/export PE updated
Lisnaskea (WWTW)	S03171	-233	TE Updated
Maghera (L/Derry)	S01629	-24	TE Updated
Magherafelt (WWTW)	S01621	437	TE Updated
Moneymore (WWTW)	S01589	-5	TE Updated
Mountnorris	S02248	-0.4	TE Updated
Moy (WWTW)	S02859	55	TE Updated
Newmills (WWTW)	S02852	3	TE Updated. Trader has ceased, therefore loading has been removed.
Newry (WWTW)	S02685	-2154	TE Updated
Newtownbreda (WWTW)	S00342	2	TE Updated
Newtownbutler (WWTW)	S03200	5	TE Updated
North Coast (WWTWs)	S04150	-645	TE Updated
Omagh (WWTW)	S03999	3007	TE Updated
Pomeroy (WWTW)	S01593	-2	TE Updated
Portaferry (2)	S05200	2	TE Updated
Rathfriland (WWTW)	S02713	-97	TE Updated
Roughfort (WWTW)	S01470	-38	TE Updated
Stoneyford Beeches One WwTW	S05705	695	
Strabane	S03223	169	TE Updated. Sludge import/export PE updated
Tamnamore (WWTW)	S02862	2	TE Updated
Tandragee	S02174	683	TE Updated
The Loup (WWTW)	S01588	-255.0	
	Total	16379	**Change in Line 7 PE since AIR19**

Difference between AIR20 and AIR19:

Line 7 for AIR20 -	**1,850566**
Line 7 for AIR19 -	**1,866,946**
Total Difference -	**16,380**

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 1016, 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 (5 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR19 for Line 8.

Name of Works	CAR ID	Change in Nr of STWs	Comments
Ballintoy New WwTW	S05672	**1**	**PC15 capital upgrade. This work has replaced Ballintoy RT which was an unscreened sea outfall .**
Tamnadeese Road (7-9)	S01816	**-1**	**Replaced with Tamnadeese New WwTW due to relocation need.**
Tamnadeese New WwTW	S06138	**1**	**New works to replace Tamnadeese Rd 7-9**
		Net Increase	**1**

Difference between AIR20 and AIR19:

Line 8 for AIR20 -	**1,016**
Line 8 for AIR19 -	**1,015**
Total Difference -	**1**

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR19 for Line 9. NB. Change in PE (-Ve AIR20 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Ballee Road (75-83)	S04091	-5	Design PE updated following RWwIP upgrade.
Ballintoy (Retention Tank)	S01174	225	Process has been decommissioned following PC15 capital upgrade (Ballintoy New).
Beagh	S01605	-9	Design PE updated following RWwIP upgrade.
Broagh	S01607	2	Design PE updated following RWwIP upgrade.
Dundrod	S00326	110	Design PE updated following RWwIP upgrade.
Gortaclady (WWTW)	S01575	-66	Design PE updated following RWwIP upgrade.
Mossvale Terrace	S02153	-12	Design PE updated following RWwIP upgrade.
Mullyroddan	S02851	15	Design PE updated following RWwIP upgrade.
Tamnadeese Road(7-9)	S01816	6	Has been replaced (see Tamndeese New WwTW)
Tamndeese New WwTW	S06138	-6	New works to replace Tamnadeese Rd 7-9
Tartaraghan	S02421	-23	Design PE updated following RWwIP upgrade.
Ballintoy New WwTW	S05672	-500	Design PE updated following PC15 capital upgrade
	Total	-263	**Change in Line 9 PE since AIR19**

The change in PE equates to an increase in load of 0.016t BOD/day (i.e. 263 x 60 for 60g/hd/day /1000/1000) from AIR19 to AIR20.

Difference between AIR20 and AIR19:

Line 9 for AIR19 -	**135.57**
Line 9 for AIR19 -	**135.56**
Total Difference -	**0.01**

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 WwTW's 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 20 submission Table 15 (NIW Only) relates to sewage sludge produced for 2019/20 (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 for the period of 2019/20.

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). 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 97.8% of sewage sludge to PPP during 2019/20. 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 & other (ReCon) in 2019/20.

Lines 14- 17 Sewage – Sludge Disposal

PPP only

Line 14

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

Line 15 - Total sewage sludge produced

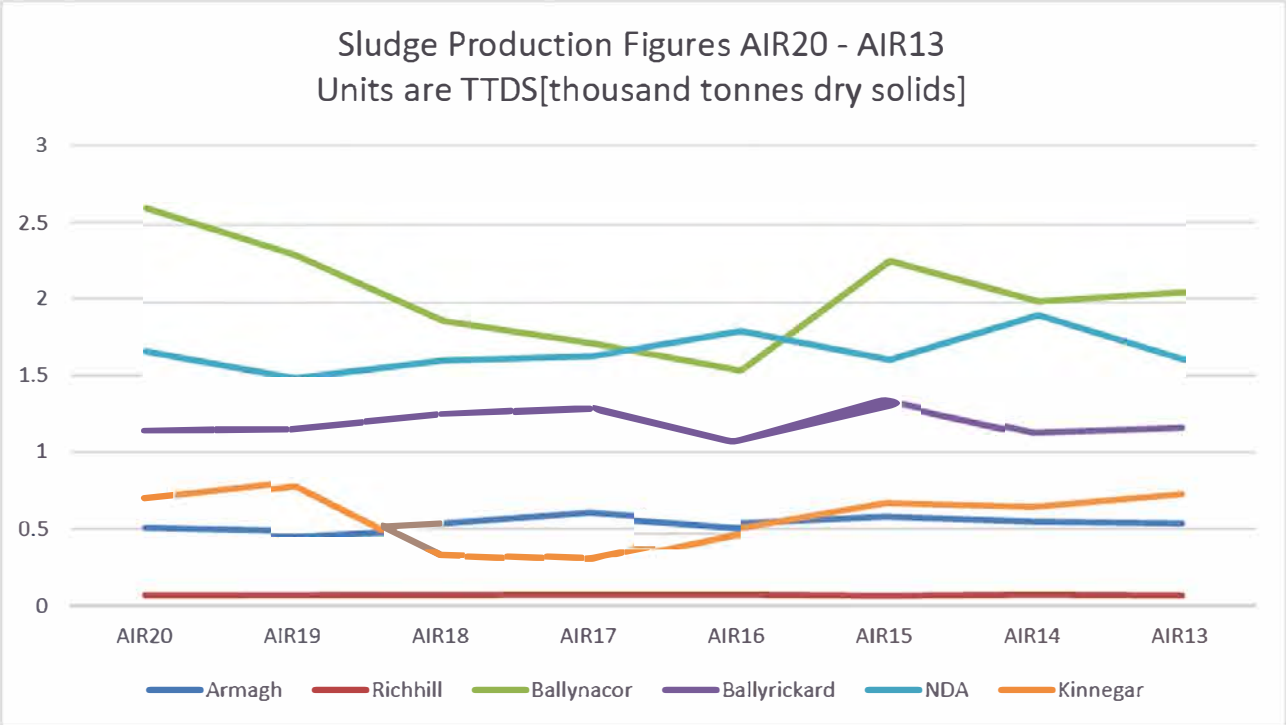
The changes in sludge produced data reflect the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control. There are minor additions for Screenings and Grit which were initially reported in AIR13 and subsequently in AIR submissions since by the Contractors.
The variations are tabulated below;

PPP Production	AIR20	AIR19	AIR18	AIR17	AIR16	AIR15	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.506	0.486	0.534	0.605	0.535	0.579	0.547	0.535	0.570	0.759	0.840
Richhill WWTW	0.066	0.067	0.068	0.071	0.071	0.063	0.071	0.065	0.066	0.213	0.210
Ballynacor WWTW	2.607	2.307	1.882	1.739	1.564	2.269	2.007	2.069	3.330	2.468	2.290
Ballyrickard WWTW	1.140	1.150	1.246	1.293	1.064	1.337	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.687	1.514	1.629	1.656	1.818	1.633	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.699	0.805	0.331	0.302	0.501	0.668	0.643	0.726	0.823	0.792	0.700
Omega Screenings/Grit	0.141	0.220	0.233	0.206	0.083	0.083	0.088	0.106			
Kinnegar Screenings/Grit	0.030	0.033	0.035	0.058	0.049	0.057	0.047	0.022			
Totals	6.876	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:

(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.



The lower Kinnegar WwTW Sludge Production figures in the AIR20 period compared with the AIR19 period reflects the fact that Sludge is now being processed at a more standardised and sustainable rate via a newly installed Centrifuge. Significant quantities of Sludge had 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. Sludge removal during AIR19 assisted the return to normality and retained Sludges were also been processed for disposal. This had resulted 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 AIR20 period.

Kinnegar aside, the Omega sites continue to present a reasonably 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, AIR18, AIR19 and for AIR20, the site is now returned to slightly above 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 AIR16-18. This is supported by the data behind Line 2 (Load Receiving Secondary Treatment) and may be indicative of the scale and variance of trade discharges in this catchment.

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 AIR19 the Omega Contractor reported a sludge disposal of 41.3 ttds [41.293 ttds]. This year (AIR20) the reported figure is 41.5 ttds [41.536 ttds]; these Omega based figures also exclude the Screenings and Grit removal for both the Kinnegar site and the NIW sites I, 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 AIR20 the Incinerator Returns have been calculated to be 2.707 ttds [AIR 19 - 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 38.829 ttds [AIR19 - 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 comparable 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.

Specific Commentary Requirements:

- Assumptions Made:
  - 60g/h/d as per NIAUR requirements
  - Skips weights (for 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 AIR20 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 10-19.

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 AIR19 the PPP Contractors reported a disposal of 42.0 ttds [41.975] sludge disposed of. This year (AIR20) the reported figure is 42.4 [41.362] ttds.

In AIR19 the Company disposed of 0.7 ttds [0.681 ttds] relating to grit/screenings sludge. This year (AIR20) the reported figure is 0.8 ttds [0.796 ttds]. The AIR20 year was a wetter year than on average [1,100mm of rainfall] with 1,293.1mm recorded on the Areal series. Rainfall for the AIR19 period was 1,039.2mm.

In total, AIR19 reported 42.0 ttds [41.975 ttds] of sludge disposed of by all parties. In this reporting year (AIR20) the figure is 42.4 ttds [42.362 ttds].
The variance of 0.387 ttds [0.3 ttds AIR19] 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) An increase in Sludge and Screenings handled by NI Water.

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	16,009.10	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	3,930.23	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	1.14	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	65.60	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	2.55	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	2.38	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	1.40	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	63.18	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	3.64	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	9.95	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	0.21	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	18.52	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	77.3	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	1,088.5	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	4,960	B3		
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	3,634	B3		
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	655	B3		
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	16,163.23	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	3,997.00	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	134	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	253	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	1,776	C2		
17b	Number of CSOs	nr	0	779	B3	802	B3	802	B3	800	B3	796	C2	788	C2	784	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	71	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	48	B2		
20	Total sewerage drainage areas	nr	0	256	A2	254	A2	251	A2	250	A2	250	A2	250	A2	250	B2	257	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	27.6	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	85.2	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	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	94.0	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	99.4	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	89.29	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	3	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	2	A1	6	A1	2	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	8	A2	9	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	37	B2		
30	WwTWs upgraded to comply with PPC Regulations	nr	0							0	A1	0	A1	1	A1	6	A1	7	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	59,586	B2		
32	Number of sustainable WwTW solutions delivered (p.e. ≥ 250)	nr	0							1	A1	1	A2	0	A2	2	A2	0	A1		
33	Number of sustainable WwTW solutions delivered (p.e. < 250)	nr	0							0	A1	1	A2	0	A2	0	A2	0	A1		

Table 16 - Sewerage Service Activities (NI Water only WWTW)

Line 1 – Total length of sewers at 1 April 2019

This value has been extracted from line 14 of the AIR19 Table 16.

Line 2 – Total length of 'critical' sewers at 1 April 2019

This value has been extracted from line 15 of the AIR19 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	0.45	0.69	0	1.14
5	"Critical" sewers - renovated	2.34	n/a	0.21	2.55
6	"Critical" sewers - replaced	2.38	n/a	0	2.38
7	Abandoned "critical" sewers and other changes	1.40	n/a	0	1.40
8	New "non-critical" sewers	11.55	51.63	0	63.18
9	"Non-critical" sewers - renovated	2.38	n/a	1.26	3.64
10	"Non-critical" sewers - replaced	9.95	n/a	0	9.95
11	Abandoned "non-critical" sewers and other changes	0.21	n/a	0	0.21
11a	Total length of sewers replaced or renovated				18.52

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 increased from 44.73km in AIR19 to 64.32km.


Copy of SEWERS ADOPTED - 2019-20 \


Copy of Sewers for AD for AIR20.xlsx


Copy of Sewers for CSDD AIR20.xls

The critical sewer lengths have been calculated using the same methodology as AIR19. 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	7.95	41.74	15.91	65.60

Asset Performance

Carried out 15.91 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 AIR20 as 166.96km.

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 41.74.


Copy of SEWERS LENGTHS SURVEYED


Copy of CCTV for AIR 20.xlsx


CCTV FOR AIR20 In House.xlsm

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 (18.52km) is an increase from the AIR 19 figure of 10.52 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 1.61 km which is an increase from the AIR19 figure of 0.39 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 former contractor (from end of March 2015 to end of September 2019), accurately details on their invoices what section within the sewer the blockage occurred (e.g. main, lateral or private). From start of October 2019, the new contractor was not in a position to provide this level of detail. As a result, NIW took the average percentage of main, lateral and private sewer figures for the first half of the reporting year, and applied it to each blockage figure provided for the remaining 6 months of data. This provided the figure for AIR20 and allowed NI Water to be in a position to report on whether collapses or blockages had occurred in a private lateral, public lateral or public main sewer.

This reporting year the number of blockages has risen, particularly in the Q4 reporting period, across all WW Operational Areas. This may be linked to the end of current contract and will be monitored for ongoing trend with analysis required for full reporting period... 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 as follows:

5 Rising Main Failures Repaired
1165 Gravity Main Sewers Repaired
80 Gravity Lateral Sewers Repaired
1250 Total number of sewer repairs

16512 Main Sewer Blockages
1081 Lateral Sewer Blockages

17593 Total Number of sewer blockages

Of the 17593 sewer blockages, for 19/20 reporting year there were 24 incidents of actual internal flooding.

Note: There were no other sewer repairs other than those documented above.

All FOC's attributed to 14 Blockages 6 Collapses 4 Equipment Failure

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.

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.

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 19 was:

CSOs: 253
Other UIDs: 137

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 AIR20 are equal to the above figures minus the numbers UID improvements which were executed in 19/20. i.e.

CSOs: 253 – 0 = 253
Other UIDs: 137 – 3 = 134.

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.

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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 AIR19 and AIR20

Intermittent Discharges	APT Preliminary AIR19 Number	Final AIR19 Number (after removal of Dual, Duplicates and Bifurcation Assets)	APT Preliminary AIR20 Number	Difference between AIR19 & AIR20 Preliminary Number	Total Number of Dual, Duplicates and Bifurcation assets to be removed	Final AIR20 Number (after removal of Dual, Duplicates and Bifurcation Assets)
Combined Storm Overflows (CSOs)	826	788	826	0	-42	784
Waste Water Pumping Stations (WwPSs)	1107	1105	1104	-3	-2	1102
Total Number of Intermittent Discharges	1933	1893	1930	-3	44	1886

Hence for AIR20 the total number of Sewerage System Overflows is 784 plus 1102 i.e. 1886.

From the APT data used there has been no change in CSOs since AIR19 (i.e. 826).

There has been a 3No decrease in WWPS overflows since AIR18 (i.e.1107 -3 = 1102)

Preliminary net decrease of 3 CSOs overflows since AIR19

Preliminary total decrease of 3 overflows since AIR19 (i.e. 1933 to 1930).

(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 1930. 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 -3 Preliminary overflows since AIR19
Plus: 1933 Preliminary overflows identified in AIR19
Sub Total: 1930 sewerage system overflows
Minus: 44 Overflows not included in the finalised number for AIR19
Total: 1886 sewerage system overflows identified for AIR20

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 AIR20

Drainage Area	No of CSOs added since AIR19	No of CSOs removed since AIR19	No of WWPS added since AIR19	No of WWPS removed since AIR19	Comments
Antrim DA	0	0	0	1	SP002022851 Crumlin Town WWPS Upgrade of WWPS with increased storage.
Ballyrickard DA	0	0	0	1	SP002022248 Portaferry Road WWPS Upgrade of WWPS with increased storage.
Armagh DA	0	0	0	1	SP002021730 Killylea WWPS Upgrade of WWPS with increased storage.
Total Number of intermittent discharges added or removed since AIR19	0	0	0	-3	
Net decrease in CSOs since AIR19	-3				
Net Increase in WWPSs since AIR19		0			

Table C – AIC Preliminary changes in Intermittent discharges by drainage area for AIR20

Drainage Area	No of CSOs added since AIR19	No of CSOs removed since AIR19	No of WWPS added since AIR19	No of WWPS removed since AIR19	Comments
N/A	0	0	0	0	**No Updates from AIC for AIR20**
AIC Net Increase in CSOs since AIR19	**0**				
AIC Net Increase in WWPSs since AIR19			**0**		

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR20

	No of CSOs added since AIR19	No of CSOs removed since AIR19	No of WWPS added since AIR19	No of WWPS removed since AIR19
Preliminary APT number of intermittent discharges added or withdrawn since AIR19	0	0	0	3
Preliminary AIC number of intermittent discharges added or withdrawn since AIR19	0	0	0	0
Subtotals	0	0	0	-3
Preliminary net increase or decrease in WWPS & CSOs since AIR19	0		-3	
Preliminary total decrease in sewage system overflows for AIR20	-3			

Table E - Dual Manholes not included in the finalised number for AIR20

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
Ballynaor	NM001230688		Y	
Ballynacor	NM001231583		Y	
Ballynaor	NM001231355		Y	
Ballynacor	NM001229426		Y	
Ballynacor	NM001232930		Y	
Ballynacor	NM001278776		Y	
Ballynacorr	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 AIR20				**29**

Table F - Bifurcation Manholes not included in the finalised number for AIR20

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 AIR20				**4**

Table G - Duplicate Assets not included in the finalised number for AIR20

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 AIR20				**11**

Lines 17a and 17b – Above Ground Overflows from within WTWWs

Table H - Total number of Overflows within WWTW

	AIR19	AIR20
Total number of Overflows from within WWTW	666	674

Hence for AIR20 the total number of overflows within WWTW is 674.

The overall number of WWTW overflows from AIR19 to AIR20 has had a net increase of 8 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 AIR20 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 AIR19 are as follows:

- 8 Additional overflows within WWTW since AIR19.

  (See Table M, N & O below)

Hence a net increase of 8 overflows since AIR19.

Table I - Overflows within WWTW withdrawn since AIR19 due to works becoming a pump away in AIR20

NAME of Works	Site ID	Status in AIR20	Withdrawn O/Fs Since AIR19
Not applicable for AIR20			0
Total Number of overflows withdrawn since AIR19 due to the WWTWs becoming a pump away			**0**

Table J - Overflows within WWTW withdrawn since AIR19 due to works being upgraded

NAME of Works	Site ID	Status in AIR20	Changes to Overflows for AIR20	Withdrawn O/Fs Since AIR19
Not applicable for AIR20				0
Total Number of overflows withdrawn since AIR19 due to being upgraded				**0**

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR19

NAME of Works	Site ID	Status in AIR20	Withdrawn O/Fs Since AIR19
Not Applicable for AIR20			0
Total Number of overflows withdrawn due to incorrect designation in AIR19			**0**

Table L– Summary of the total number of Overflows withdrawn since AIR19

Total of overflows withdrawn since AIR19 due to the works becoming a pump away	0
Total of overflows withdrawn since AIR19 due to the works being upgraded	0
Total of Withdrawn Overflows due to incorrect designation in AIR19	0
Combined Total Number of overflows within WWTW withdrawn since AIR19	**0**

Table M - Additional overflows within WWTW since AIR19 due to WWTW upgrades

NAME of Works	Site ID	Status in AIR20	Changes to Overflows for AIR20	Additional O/Fs Since AIR19
Ballintoy WwTW	S01174	Works upgraded	1 additional FFT overflow with storm retention	1
Dundrod WwTW	S00326	Works upgraded	1 additional FFT overflow	1
Beagh WwTW	S01605	Works upgraded	1 additional FFT overflow	1

NAME of Works	Site ID	Status in AIR20	Changes to Overflows for AIR20	Additional O/Fs Since AIR19
Broagh WwTW	S01607	Works upgraded	1 additional FFT overflow	1
Gortacladdy WwTW	S01575	Works upgraded	1 additional FFT overflow	1
Mossvale Terrace WwTW	S02153	Works upgraded	1 additional FFT overflow	1
Mullyroddan WwTW	S02851	Works upgraded	1 additional FFT overflow	1
Tartaraghan WwTW	S02421	Works upgraded	1 additional FFT overflow	1
Total Number of additional overflows since AIR19 due to WWTW being upgraded				**8**

Table N - Additional overflows within WWTW due to incorrect designation in AIR19

NAME of Works	CAR ID	Status in AIR20	Changes in Overflows for AIR20 from Process Info	Additional O/Fs Since AIR19
Not Applicable for AIR20				0
Totals Number of additional overflows within WWTW due to incorrect designation in AIR19				**0**

Table O – Summary of additional overflows within WWTW since AIR19

Total Number of additional overflows since AIR19 due to works being upgraded	8
Totals Number of additional overflows within WWTWs due to incorrect designation in AIR19	0
Combined Total: of Additional overflows within WWTWs since AIR19	**8**

For AIR20, 8 additional overflows (see Table M) due to works being upgraded have now been included.

This equates to a net increase of 8 additional overflows since AIR19.

Table P – Summary of Overflow type within WWTW

Overflow Type	AIR19 Overflows from WWTW	AIR19 Overflows - Totals	AIR20 Overflows from WWTW	AIR20 Overflows - Totals	Difference between AIR19 & AIR20
Formula "A" O/Fs only	171	199	171	199	0
Formula "A" O/Fs (which also act as PS E/O)	19		19		

Overflow Type	AIR19 Overflows from WWTW	AIR19 Overflows - Totals	AIR20 Overflows from WWTW	AIR20 Overflows - Totals	Difference between AIR19 & AIR20
Formula "A" O/Fs with Storm (which also act as PS E/O)	9		9		
FFT O/Fs only	103	342	110	350	8
FFT O/Fs (which also act as PS E/O)	16		16		
FFT O/Fs with Storm Retention	213		214		
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	**666**	**666**	**674**	**674**	**8**

Since AIR19 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.

AIR20 WWTW Overflows.xls

Lines 18, 19, 20, 21 and 22 – Drainage Area Plans

Background

NI Water's programme of Drainage Area Studies commenced in 1995. Typically the programme relates 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.

NI Water takes a risk based approach to sewerage management, following the principles set out in the Sewerage Rehabilitation Manual, 4th Edition (WRc). Each DAP model is built to industry best practice guidelines aligning to CIWEM code of practice. Recently, NIW has introduced a model audit programme to ensure that Plans consistently meet NIW requirements and specifications.

NI Water has developed a risk based prioritisation matrix. This 'live' tool ensures that Drainage Areas demonstrating key needs aligning to NIW business objectives are promoted for investigation such that NIW can deliver evidence based and targeted investment planning.

It has been NI Water practice to review each Study on a 5-10 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.

Current studies

The following DAP studies are being undertaken:

Annalong DA
Annsborough DA
Antrim DA
Ballymena DA
Ballynahinch DA
Ballyrickard DA
Ballywalter DA
Belfast DA
Bellaghy DA
Bushmills DA
Carrickfergus DA
Cloughey DA
Cookstown DA
Cranfield DA
Culmore DA
Donnybrewer DA
Downpatrick DA
Dromore Down DA
Dundrum DA
Dungannon DA
Enniskillen DA
Glenarm and Carnlough DA
Glenstall DA
Greenisland DA
Greyabbey DA
Greysteel DA

Kilkeel DA
Killinchy DA
Killough DA
Killyleagh and Crossgar DA
Kinnegar DA
Kircubbin DA
Larne DA
Magherafelt DA
Moy DA
Newcastle DA
Newry DA
Newtownbreda DA
North Coast DA
North Down DA
Omagh DA
Portaferry DA
Saintfield DA
Seahill DA
Strabane DA
Strangford DA
Warrenpoint DA
Whitehouse DA

This gives a total of 48 No. DAPs currently in progress.

Specification

NI Water's DAS specification is the "NI Water Risk Based Drainage Area Plan Specification". Version number D11.

Outputs.

The main outputs from a DAP are:

- UIDs
- DG5s
- New Developments/Growth
- Inform Integrated Environmental Modelling (IEM) studies
- 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 May 2020

The table below sets out the programme of DAPs since 2003. The number of completed DAPs has been recalculated and the value (n=82) has therefore changed since AIR19.

The number of completed DAPs was recalculated because there were 14 No. catchments which were individual Drainage Areas when their DAPs were completed, but since then these 14 No. catchments have been agglomerated, thereby expanding 5 No. pre-existing Drainage Areas, and creating 3 No. new Drainage Areas, as detailed in the table below. Therefore the recalculated figure of completed DAPs is 71 (n=(82-14)+5)

DAPS.xlsx

The above domestic PEs have been updated where possible from the '200529_FINAL_AIR20 PEs from APT' spreadsheet. The value has changed from AIR19, giving a TOTAL PE of 1,961,172.

Line 18 – Cumulative number of drainage area plans completed

The number of drainage area plans that have been completed. The AIR 20 value of 71 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 2019/20 AIR20 reporting year the number of drainage areas was calculated as 257.

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 AIR19 and is 27.6% (71 DASs/ 257 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 AIR20 Line 18 is 1,961,172, giving the total population for completed DASs since 2003 (n=82).
- The PE for the total sewerage network is 2,300,767.

The percentage of PE covered by completed DAS studies is 85.2% (i.e. the division of 1,961,172 by 2,300,767 which is then converted to a percentage value).

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 4 of these profiled for delivery in 2019/20. 3 of these PC15 FD nominated outputs profiled for 2019/20 were delivered between 01 April 2019 and 31 March 2020 with UID011 Carnalea Golf Club CSO 1 now expected to be delivered in year 6.
3 UIDs in total were delivered during 2019/20.

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 2019/20, 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 third year of PC15 – AIR20 Period

Catchment	UID Address	FD Ref.	Project ID	Comments	Operational Date
Antrim Milltown WwTW	Crumlin Town WwPS	UID387	KA247	Upgraded	30/07/2019
Newtownards Ballyrickard WwTW	Portaferry Road, Newtownards, 1 WWPS	UID351	KR504	Upgraded	12/10/2019
Armagh Drumcarn WwTW	Killylea WWPS	UID009	KF397	Upgraded	29/01/2020

Line 27 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

2 WwTW nominated outputs were delivered between 01 April 2019 and 31 March 2020. Ballintoy WwTW and Dungannon WwTW (Phase 1) are both PC15 outputs.

Changes to the definition of how Beneficial Use can be claimed on a WwTW project were agreed with the Regulator in 2018/19 to ensure a WwTW is capable of meeting the appropriate consent standard.

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 2019/20, 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 – AIR20 Period

Project Name	Project Code	Beneficial Use Date
Ballintoy WwTW	KC302	24/01/2020
Dungannon WwTW (Phase1)	KF350	09/12/2019

Line 28 - Investment in improvements to small wastewater treatment works as part of the Rural Wastewater Investment Programme.

Nine small wastewater treatment works achieved Beneficial Use during 2019/20. 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 2018/19, as such Mayboy WwTW was rejected in 2018/19 and claimed in 2019/20.

CAR Site Reference	Project title	Year claimed
S00326	Dundrod WwTW	2019/20
S02851	Mullyroddan WwTW	2019/20
S01607	Broagh WwTW	2019/20
S01163	Mayboy	2019/20
S02153	Mossvale Terrace	2019/20
S04091	Ballee Road	2019/20

CAR Site Reference	Project title	Year claimed
S01575	Gortaclady Cottages	2019/20
S02421	Tartaraghan	2019/20
S01605	Beagh	2019/20

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 37 monitors in 19/20 giving an overall total of 151 monitors up to now. We plan to install all necessary monitoring equipment in the PC15 period.

The confidence grade is unchanged at B2

EDM WwPS CSO List PC15 REVC.XLSX

Line 31 Impermeable Surface Area

NI Water removed 59,586 m2 of impermeable surface water from the combined sewerage system. This was achieved from the completion of three schemes as listed below.

Project No.	Project Name	Impermeable Surface removed
KR687	4A Newforge Lane Belfast	600
KR417	Ormeau Avenue, Belfast Sewerage Upgrades	47,986
KR479	Main Street, Ballykelly, Storm Separation	11,000
	Total	**59,586**

The confidence grade is unchanged at B2

Copy of Impermable Area AIR20.xlsx

Line 32 - Number of sustainable WwTW solutions delivered (p.e. ≥ 250)

No WwTW sustainable solution with a p.e. greater than 250 was delivered in 2019/20.

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 2019/20 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.

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																	1,531.9	C3
2	Annual average non-resident population	000	1																	34.1	C3
3	Volume of sewage collected (daily average)	Ml/d	1																	354.7	B2
4	Total connected properties	nr	0																	718,319	A2
5	Area of Sewerage District	km^2	0																	13520	B2
B	**SEWERAGE DATA**																				
6	Total length of sewer	km	0																	16163	B3
C	**Costs**																				
7	Sewerage: Direct Costs	£000	0																	14,668	
8	Sewerage: Power Costs	£000	0																	4,909	
9	Sewerage: Service Charges	£000	0																	0	
10	Sewerage: General & Support Expenditure	£000	0																	9,651	
11	Sewerage: Functional Expenditure	£000	0																	24,319	

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 AIR20: Table 13: Line 10, the total connected population (comprising resident and non-resident population) is 1,565.984 x 10^3
- According to AIR20: Table 17a: Line 2, the annual average non-resident population is 34.120 x 10^3
- By calculation, the annual average resident connected population = 1,565.984 x 10^3 - 34.120 x 10^3 = **1,531.864 x 10^3**

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

AIR18	Confidence Grade	AIR19	Confidence Grade	AIR20	Confidence Grade
1,512.0 x 10^3	C3	1,517.6 x 10^3	C3	**1,531.9 x 10^3**	**C3**

The estimated annual average resident sewerage connected population has increased from 1,517.6 x 10^3 in AIR19 to 1,531.9 x 10^3 in AIR20, an increase of 14.2 x 10^3 *(0.94%)*.

Confidence Grade

There are two figures associated with the calculation of AIR20: Table 17a: Line 1: Column 9. The first figure is derived from AIR20: Table 13: Line 10 and was allocated a confidence grade of B3. The second figure is derived from AIR20: 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)

AIR18	Confidence Grade	AIR19	Confidence Grade	AIR20	Confidence Grade
32.4 x 10^3	C3	33.1 x 10^3	C3	**34.1 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.

AIR20 Methodology

In its AIR19 commentary, NI Water explained that NISRA had identified delays in both the provision of Household Travel Survey (HTS) 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.

Unfortunately, the issues previously identified are still ongoing and NISRA Tourism Statistics are currently unable to publish updated tourism estimates for Northern Ireland, inclusive of visitors from RoI. In addition to this, there is now the added complication of the Covid-19 pandemic which is likely to impact the provision of information for some time to come.

In view of the circumstances highlighted above, NI Water has used the last available published figure, inclusive of visitors from RoI *(for the 12-month period from April 2018 to March 2019)* and has estimated the annual number of non-resident visitor nights in 2019.

Impact of Change in AIR20 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 1.2 of the NISRA publication *'Northern Ireland Tourism Statistics (2011 – 2020)'* dated 09/04/2020.

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

Estimated non-resident visitor nights (Apr 17 to Mar 18) =
4,351,784 x 2.606 = 11,342,481

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2018 – March 2019)'* dated 19/09/2019.

Actual non-resident visitor nights (April 17 to March 18) = 11,583,915

Difference between actual and estimate =
11,583,915 - 11,342,481 = 241,434

Percentage difference = 241,434 / 11,583,915 = 2.08%

As the difference between the actual and estimate is within the tolerance of any previously assigned confidence grading for this measure i.e. between 1% and 5%, this is deemed to be a suitable method for estimating the number of non-resident visitor nights.

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 1.2 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (2011 – 2020)'* dated 09/04/2020.

- *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 18 to Mar 19) = 4,567,943
Total bed-spaces sold (Jan 19 to Dec 19) = 4,778,202

Ref: Table 1.4 of the NISRA publication *'Northern Ireland Tourism Statistics Tables (April 2018 – March 2019)'* dated 19/09/2019.

- *Estimated number of overnight trips, nights and expenditure in Northern Ireland (excluding NI residents) for the 12 months to March 2018 and March 2019'*

Non-resident visitor nights (Apr 18 to Mar 19) = 11,905,876
11,905,876 / 4,567,943 = 2.606

Estimated non-resident visitor nights (Jan 19 to Dec 19) =
4,778,202 x 2.606 = 12,453,895

Annual average non-resident population = 12,453,895 / 365 nights = **34,120**

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 AIR19, a non-resident visitor nights figure was available for only the first nine months of 2018 and a figure for the entire twelve months had to be estimated. In accordance with the AIR19 Reporter Recommendation for Table 2 Line 20, NI Water has recalculated the AIR19 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 = 11,775,815 / 365 nights = **32,263**

The recalculated AIR19 outturn of 32,263 is only 834 properties *(2.52%)* lower than the original AIR19 outturn of 33,097 which was based on an estimated number of non-resident visitor nights in 2018 of 12,080,487. This is well within the tolerance of the assigned confidence grading.

Last year, the Company reported a Table 17A Line 2 outturn of 33.1 x 10^3. Based on the AIR20 outturn of 34.1 x 10^3, the estimated annual average non-resident sewerage population has increased by 1.0 x 10^3 *(3.09%)*. This increase can be attributed to an increase in the number of non-resident visitor nights. The 2019 estimate was 12,453,895 compared to the 2018 confirmed figure of 11,775,815.

Despite the absence of information relating to Q2 to Q4 of 2019, a comparison of the statistics for Q2–2017 to Q1–2018 and Q2–2018 to Q1–2019 reveals an increase in tourism and hence, an increase in the annual average non-resident sewerage population *(Table 17a Line 2)*.

	Visitor Nights (Q2–2017 to Q1–2018)	**Visitor Nights (Q2–2018 to Q1–2019)**
GB Visitors	5,727,569	5,762,459
RoI Visitors	1,133,520	1,486,992
Visitors from outside UK & RoI	4,722,826	4,656,425
All Visitors (excluding NI)	**11,583,915**	**11,905,876**

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

The annual average non-resident sewerage population is an estimate based on several sources of information:

1. The NISRA publications *'Northern Ireland Tourism Statistics (2011 – 2020)'* 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 2018 – March 2019)'* 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 **C3** 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.

At the time of reporting on AIR20, a non-resident visitor nights figure, inclusive of visitors from RoI, was available for only the first quarter of 2019 and a figure for the entire 12-month period had to be estimated. When reporting on AIR21, NI Water will recalculate the AIR20 outturn using the figure published for the entire 12-month period.

Line 3 – Volume of Sewerage Collected
This figure has been copied from AIR20 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 AIR20 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 alone does not support in the explanation of gross movements within the data. With this is mind, during the 19/20 reporting year the CSD Services MI & Data Team explored the use of Power BI to re-create the RPS with a drill down function to display the gross movement. The Power BI property models developed take their direct feed from the Diamond Warehouse in order to refresh. These models provide us with information on gross movements and allow us to 'slice and dice' the data from various angles, providing invaluable insights. The plan is to further enhance and incorporate these models across the business during 2020/21.

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 AIR19 and the AIR20 figures is 9,139. The breakdown can be explained as follows:
1. New Connections during the 2019/20 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 chair 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 2019/20, the continued 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

The PIG Strategy for 2020/21 will include the following:

- New Connections - A push to move to on-system reporting following the Business Improvement New Connections Review
- Further use of PowerBI – We currently use Power BI to create and issue the monthly Rapid Property Summary (RPS) and will continue to explore the use of Power BI in other aspects of our property work throughout 2020/21
- 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.

- Continued monitoring of data alignment between systems – Rapid and Ellipse, GIS, Netbase, Diamond, IMS etc.
- Smart Cities (Belfast City Council Rates Maximisation Project) – Ongoing data sharing project that commenced in August 19
- 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. 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 – monitor numbers of '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.

Lines 7-11 - Costs

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 2020. Work is on-going, through the Cost to Serve Project. Cost to Serve is not fully implemented and therefore could not be used for AIR20. 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 £1.2M from AIR19.

The main reason for this was increased power costs (see below) and Hired and Contracted Services.

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 £0.5M from AIR19 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 increased by £1.9M from AIR 19 mainly due to the increased allocation of Pot 3 M&E (% split provided by M&E function) from 24.9% in AIR19 to 38.5% in AIR20.

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. £3.1m since AIR19. This is due to the combination of higher power costs, higher Hired and Contracted Services and increased general and support as explained above.

Annex A Table 17a Lines 3-4 - Total Connected Properties

Total properties connected for sewerage services (including voids) at year end.

This figure is taken from the AIR20 Rapid Property Summary, as attached.

RPS March YE 2020.xlsx

Total Gross Sewerage Properties	End March 2020
Household - Unmeasured	639324
Household - Sewerage Only	8
Household – Measured - Not Charged (test meters)	88
Household - Measured	35281
Household – Site Meters	2350
Household - Unmeasured - Not Charged	14
Non-Household - Unmeasured	12290
Non-Household – Sewerage only	21
Non-Household - Measured	28943
Total	**718319**

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	1,328	479	C5	134	C5	68	C5	88	C5	77	C5	64	C5	72	C5	66	C5	46	C5	34	C5	81	C5	35	C5	32	C5	26	C5	26	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				10.0	A1	3.0	A1							2.5	A1	15.0	A1	2.5	A1	10.0	A1	7.0	A1	5.0	A1			10	A1		
7	Phosphates consent	mg/l	1						1.0	A1							2.0	A1	1.0	A1	2.0	A1	2.0	A1	1.0	A1	2.0	A1			1	A1		
C	**TREATMENT CATEGORY**																																
8	Classification of Treatment Works				TA2		SAS		TA2		TA2		SAS		SAS		TA2		TA2		TA2		TA2		TA2		TA2		TA2		TA2		TA2	
D	**COSTS**																																
9	Direct cost	£000	0	6,581	1,545		530		421		394		253		442		491		353		356		215		408		293		291		273		315	
10	Power costs	£000	0	3,703	1,087		291		227		228		170		232		232		172		141		102		236		128		136		120		200	
11	Service Charges	£000	0	255	34		26		14		12		4		21		18		16		20		12		15		15		18		17		13	
12	General and support expenditure	£000	0	3,532	466		359		189		170		56		295		253		216		283		166		209		207		243		236		186	
13	Functional expenditure	£000	0	10,112	2,011		889		611		564		309		737		744		569		638		381		617		500		534		508		501	
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

Lines 1-8 Works Size, Effluent Standards and Treatment Category

NI Water has a number of sites which fall into the Band 6 category and are to be reported within this submission.

The WWTW to be reported on for AIR20 are:

LIMS Code	LIMS Name	Confirmed PE	AIR20 Band	BOD WOC	BOD UWWTR
S34AG	Carrickfergus WWTW	32232	Band 6	30	25
S34AK	Belfast WWTW	478618	Band 6	30	25
S37AB	Dunmurry WWTW	46331	Band 6	10	25
S37AA	Lisburn (New Holland) WWTW	71517	Band 6	10	25
S34AD	Newtownbreda WWTW	34494	Band 6	15	25
S34AE	Whitehouse WWTW	87929	Band 6	30	25
S15AO	Antrim (Milltown) WWTW	66342	Band 6	10	25
S13BE	Ballymena (Tullaghgarley) WWTW	68092	Band 6	15	25
S25AC	Dungannon (Moygashel) WWTW	81292	Band 6	25	25
S27AC	Newry WWTW	63554	Band 6	30	25
S45IB	Omagh WWTW	34061	Band 6	30	25
S43CI	Culmore WWTW	133891	Band 6	30	25
S17HF	North Coast WWTW	77106	Band 6	30	25
S47HK	Enniskillen WWTW	25752	Band 6	20	25
S15BS	Larne WWTW	25748	Band 6	30	25

No assumptions have been made for the return.

All consents reported have both BOD and SS as part of the consent as issued by Northern Ireland Environment Agency (NIEA).

There are no consents for ammonia by itself without accompanying BOD and SS consents.

The consent conditions as issued by NIEA are based on 95%ile limits. For the purposes of reporting the WOC BOD limit has been reported for all WWTW's. It should be noted that in some instances, the UWWTR BOD limit of 25mg/l is lower, as identified in the table above.

For reference, the works in Band 5 which have the potential to be included in subsequent returns are listed here:

LIMS Code	LIMS Name	Confirmed PE	AIR20 Band
S36AA	Downpatrick	17573	Band 5
S34AH	Greenisland	12894	Band 5
S36BB	Kilkeel	14725	Band 5
S36BO	Newcastle	16227	Band 5
S17ED	Ballycastle	12798	Band 5
S15AA	Ballyclare	16707	Band 5

LIMS Code	LIMS Name	Confirmed PE	AIR20 Band
S17BP	Ballymoney	20999	Band 5
S13CH	Cookstown	20942	Band 5
S13GK	Magherafelt	18307	Band 5
S27AA	Banbridge	20706	Band 5
S25AB	Coalisland	10004	Band 5
S27AN	Tandragee	11279	Band 5
S27AD	Warrenpoint	16050	Band 5
S43GI	Limavady	16258	Band 5
S45JA	Strabane	23530	Band 5

Costs

This table was populated in the same way as AIR19. 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 2020. The Population Equivalent (PE) information used to complete this table was received from Asset Delivery on 29 May 2020. 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 AIR20 there are 15 works that fall into Band 6, which is the same as AIR20.

Direct costs have decreased by approx. £0.3M from AIR19. This is mainly due to decreased power costs (see below).

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 decreased in AIR20 by £0.3M mainly in Belfast WWTWs.

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 48:52 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 51:49 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR20.

Line 11 – Service Charges

Service Charges for AIR20 are in line with AIR19.

Line 12 – General & Support

The total general & support expenditure was taken from Table 22 line 10 column 2 (see Table 22 methodology and 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 decreased by £0.4m since AIR19. 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 decreased since AIR19 by £0.6M mainly due to the decreased power costs and General and Support costs.

Line 14 – Terminal Pumping Costs

This information was populated in the same way as AIR19. 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										
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL
A	SMALL WORKS													
1	Number of STWs in size band 1	nr	0	240	21	505		0	3	2	0	0	4	775
2	Number of STWs in size band 2	nr	0	0	5	37	3	1	10	6	1	1	0	64
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	595	13	47	30	22	5	2	5	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	60										

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										
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL
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	0	0	0	0	0	0	0	0
4	Number of STWs in size band 4	nr	0	0	0	0	1	0	0	0	0	0	0	1
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										
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL
A	SMALL WORKS													
1	Number of STWs in size band 1	nr	0	240	21	505	0	0	3	2	0	0	4	775
2	Number of STWs in size band 2	nr	0	0	5	37	3	1	10	6	1	1	0	64
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	2	15	2	5	3	1	0	52
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	595	14	51	30	22	5	2	5	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	62										

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 187 WWTWs (which were live during AIR20) have been updated.

Changes regarding WWTWs from the AIR19 period are as follows:

- 1 WWTWs have been upgrade and achieved beneficial use in the last financial year – i.e. Ballintoy New WwTW (replaced Ballintoy Retention Tank).
- 9 WWTWS had 'turn of flow' under the RWwIP project (including upgrades to Ballee Rd (75-83), Beagh, Broagh, Dundrod, Gortaclady, Mayboy, Mossvale Terrace, Mullyroddan & Tartaraghan WwTWs)
- Tamnadeese New WwTW has been installed replacing Tamnadeese 7-9 WwTW

There is no net change in the number of WWTWs from AIR19 reporting, with 1023 WWTW live on 31st March 2020.

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 5 No). The number of WWTWs in Table 15 line 8 is 1,016 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 AIR20 is 15 No WWTWs.

It should be noted that the AIR20 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 AIR20 comparison between the two figures.

Total Residential Population used to Calculate Table 17c for AIR20	1,247,903
Total Population connected to the sewerage system based on Table 13 Line 10	1,565,984
Difference	**318,081**

As can be seen there is a difference of 318,081. 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 AIR20 Trade PE. The non-residential aspect of these PEs have been subtracted from the overall AIR20 PPP PE (based on the reported AIR20 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	67,689	9,790	57,899
Armagh WWTW	14,160	7,336	6,824
Richhill WWTW	2,690	244	2,446
Newtownards (Ballyrickard)	41,871	19,628	21,616
Ballynacor WWTW	143,657	70,635	73,022
Kinnegar	84,270	37,220	47,050
Total	**33353,710**	**144,853**	**208,857**

As can be seen the residential population for the PPP sites is now approximated to be 208,857. If this is added to the 17c figure (1,247,903) then the total is 1,456,760 which is 109,224 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 AIR20 tourist population for both NIW sites (34,292 pe) and PPP sites (1,964) are included this gives a revised figure of 1,500,758 which is 65,226 pe less than the figure held in Table 13, approximately 4.2% 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 Reporter's 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 696, and
- the number of WWTWs with a PE greater than 100 but less than or equal to 250 (excluding tourist PE) is 79.

The table below highlights the changes in band sizes from AIR19 to AIR20.

Name of Works	CAR ID	AIR19 Band Sizes	AIR20 Band Sizes	Comment
Carrowclare	S03300	Band 1	Band 2	Actual PE updated following PE Review by APT
Donagh (WWTW)	S03078	Band 1	Band 2	Actual PE updated following PE Review by APT
Killymuck	S01583	Band 1	Band 2	Actual PE updated following PE Review by APT
Monteith	S02152	Band 1	Band 2	Actual PE updated following PE Review by APT
Teemore (WWTW)	S03228	Band 1	Band 2	Actual PE updated following PE Review by APT

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 AIR19 to AIR20.

Name of Works	CAR ID	AIR19 Treatment Category	AIR20 Treatment Category	Comment
Ballintoy (Retention Tank)	S01174	Sea Out Unscreen		Process has been decommissioned following PC15 capital upgrade (Ballintoy New).
Broagh	S01607	Sec Act	Sec Bio	Design PE updated following RWwIP upgrade.

Name of Works	CAR ID	AIR19 Treatment Category	AIR20 Treatment Category	Comment
Dundrod	S00326	Sec Act	Sec Bio	Design PE updated following RWwIP upgrade.
Tamnadeese Road(7-9)	S01816	Prim	N/A	Has been replaced (see Tamndeese New WwTW)
Tamndeese New WwTW	S06138	N/A	Prim	New works to replace Tamnadeese Rd 7-9
Ballintoy New WwTW	S05672	N/A	Sec Bio	Design PE updated following PC15 capital upgrade

Difference between AIR19 and AIR20 for total in Table 17c (column 11, row 7)

Total Number of Works for AIR20 -	**1,023**
Total Number of Works for AIR20 -	**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 AIR19 to present are summarised below:

Line	Nr AIR19	Nr AIR20	Difference	Comment
8	44	44		No consent changes during AIR20 with regards to line 8. Net change - zero
9	59	60		Numeric consent applied to The Loup WwTW. Net Change - 1

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 AIR20 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	AIR20 Actual PE	Actual PE recognised by NIEA
Ballymena (WWTW)	S01456	68,092	113825
Dromore (Tyrone)	S03083	1919	2032
Dunmurry	S00346	46,331	53605

PPP

Lines 1-6

The category of Richill STW has been changed to Category 4 from a previous 3 to reflect the increased loading rate which is within the threshold of a Category 4 works.

Line 9

The category of Richill STW has been changed to Category 4 from a previous 3 to reflect the increased loading rate which is within the threshold of a 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 AIR20 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
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS				
					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	105	1,363	0	0	62	25	0	0	12	1,708	C3
2	Load received by STWs in size band 2	kg BOD_5/day	0	0	121	777	61	18	213	139	248	69	0	1,647	C3
3	Load received by STWs in size band 3	kg BOD_5/day	0	91	1,019	2,482	433	816	995	538	42	0	55	6,469	C3
4	Load received by STWs in size band 4	kg BOD_5/day	0	350	3,522	1,546	130	4,205	329	1,386	778	193	0	12,441	C3
5	Load received by STWs in size band 5	kg BOD_5/day	0	0	4,800	0	1,655	7,387	0	1,098	0	0	0	14,940	C3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD_5/day	0	0	16,473	0	0	63,144	0	0	0	0	0	79,617	C3
7	Total loads rec'd (daily average all size bands)	kg BOD_5/day	0	582	26,040	6,168	2,279	75,570	1,599	3,187	1,068	262	67	116,823	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	5,127											
9	Load rec'd by small STW w. NH_3 consents (< = 5mg/l)	kg BOD_5/day	0	14,181											

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	0	0	0	0	0	0	0	0	0
4	Load received by STWs in size band 4	kg BOD5/day	0	0	0	0	161	0	0	0	0	0	0	161	B3
5	Load received by STWs in size band 5	kg BOD5/day	0	0	0	0	0	850	0	0	0	0	0	850	B3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	5,056	0	0	15,155	0	0	0	0	0	20,211	B3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	0	5,056	0	161	16,005	0	0	0	0	0	21,222	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	1,011											

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	105	1,363	0	0	62	25	0	0	12	1,708	C3
2	Load received by STWs in size band 2	kg BOD5/day	0	0	121	777	61	18	213	139	248	69	0	1,647	C3
3	Load received by STWs in size band 3	kg BOD5/day	0	91	1,019	2,482	433	816	995	538	42	0	55	6,469	C3
4	Load received by STWs in size band 4	kg BOD5/day	0	350	3,522	1,546	291	4,205	329	1,386	778	193	0	12,602	C3
5	Load received by STWs in size band 5	kg BOD5/day	0	0	4,800	0	1,655	8,237	0	1,098	0	0	0	15,790	C3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	21,529	0	0	78,299	0	0	0	0	0	99,828	C3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	582	31,096	6,168	2,440	91,575	1,599	3,187	1,068	262	67	138,045	C3
C	SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0	5,127											
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0	15,192											

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 189 WWTWs (which were live during AIR20) 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 AIR20. There have been no additions or reductions in the number of WWTWs being reported from AIR19 to AIR20.

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 AIR20 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 AIR20 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 478,618. Please note an element of this figure, 117,010, 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. Following last year's review and agreement the PE from the incinerator will be added to the overall PE figures for Belfast WWTW giving an overall PE figure of 478,618 and has been adopted for AIR20.

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 (5 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 34 no. WWTWs included in the table.

Name of Works	**CAR ID**	**AIR19 Actual PE**	**AIR20Actual PE**	**Difference* *(-ve indicates AIR20 figure larger)**	**Comments**
Aghnagar	S02830	18	15	3	Actual PE updated following PE Review by APT
Ballintoy (Retention Tank)	S01174	332	N/A	332	Process has been decommissioned following PC15 capital upgrade (Ballintoy New).
Ballylintagh (New)	S01135	97	120	-23	TE Updated
Carnanbane	S03037	41	75	-34	Actual PE updated following PE Review by McAdam Design
Carrowclare	S03300	148	286	-138	Actual PE updated following PE Review by APT
Castlemellan Upper	S03044	18	11	6	Actual PE updated following PE Review by APT
Castletown (WWTW)	S03046	15	20	-5	Actual PE updated following PE Review by APT
Clanabogan South WwTW	S05568	18	16	3	Review completed by AP
Coolkeeran	S01098	9	6	3	Actual PE updated following PE Review by APT
Culbane (WWTW)	S01145	21	17	5	Actual PE updated following PE Review by APT
Deerpark Road(92)	S01771	18	25	-7	Actual PE updated following PE Review by APT

Name of Works	CAR ID	AIR19 Actual PE	AIR20Actual PE	Difference** (-ve indicates AIR20 figure larger)	Comments
Derrynoose	S02605	18	122	-104	Actual PE updated following PE Review by APT
Ford Road(27)	S01806	6	2	4	Actual PE updated following PE Review by APT
Glen Villas	S02723	163	221	-58	Actual PE updated following PE Review by APT
Gortereghy	S01110	17	30	-13	Actual PE updated following PE Review by APT
Gortnacross	S01577	15	19	-4	Actual PE updated following PE Review by APT
Hilltown Road	S02702	15	11	4	Actual PE updated following PE Review by APT
Keenaghan (1)	S01578	12	16	-4	Actual PE updated following PE Review by APT
Keenaghan (Tyrone)	S03139	18	22	-4	Actual PE updated following PE Review by APT
Killinchy (WWTW)	S00252	2664	5877	-3213	TE Updated
Killymuck	S01583	244	312	-68	Actual PE updated following PE Review by APT
Kilnacart	S02861	12	15	-3	Actual PE updated following PE Review by APT
Kinturk	S01584	18	25	-7	Actual PE updated following PE Review by APT
Lislea Terrace	S01624	18	13	5	Actual PE updated following PE Review by APT
Maghernarhar	S01193	12	15	-3	Actual PE updated following PE Review by APT
Managher	S01162	15	18	-4	Actual PE updated following PE Review by APT
Manor House	S02590	12	21	-9	Actual PE updated following PE Review by APT

Name of Works	CAR ID	AIR19 Actual PE	AIR20Actual PE	Difference* *(-ve indicates AIR20 figure larger)	Comments
Monteith	S02152	216	268	-52	Actual PE updated following PE Review by APT
Reaskmore Road	S05286	12	15	-3	Actual PE updated following PE Review by APT
Rocktown	S01635	16	20	-4	Actual PE updated following PE Review by APT
Tamnadeese Road(7-9)	S01816	6	0	6	Has been replaced (see Tamnadeese New WwTW)
Tamnadeese New WwTW	S06138		6	-6	New works to replace Tamnadeese Rd 7-9
Tullyveagh Road(2-4)	S01819	6	5	1	Actual PE updated following PE Review by APT
Waringsford	S02166	224	243	-19	Actual PE updated following PE Review by APT
Woburn Road (63-69)	S00234	12	10	2	Actual PE updated following PE Review by APT
Ballintoy New WwTW	S05672	N/A	332	-332	Design PE updated following PC15 capital upgrade

***(-ve indicates AIR20 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 116,822.5kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of 42,640.23*t BOD/year*, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 582.1kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of *212.47t BOD/yr.*

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 114,843.7kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving secondary treatment in table 15 (line 2) i.e. 41,917.96 *t BOD/yr*.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1067.6kg 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 389.69*t BOD/yr.*

The table below depicts changes in PEs at WWTWs from AIR19 to AIR20.
The following table depicts how PE changes have occurred at WWTWs during the last financial year.

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	Difference*	AIR19 Band	AIR20 Band	Band Size Change
Aghanloo (1)	S02989	786	841	-55	Band 3	Band 3	
Aghinlig (WWTW)	S02554	225	225	0	Band 1	Band 1	
Aghnagar	S02830	18	15	3	Band 1	Band 1	
Annaghmore Road(28)	S02016	18	19	-2	Band 1	Band 1	
Annalong (WWTW)	S00300	3421	3224	196	Band 4	Band 4	
Annsborough	S02687	5921	5991	-70	Band 4	Band 4	
Antrim (WWTW)	S01422	66009	66342	-333	Band 6	Band 6	
Ardglass (WWTW)	S00268	2806	2895	-89	Band 4	Band 4	
Attical (WWTW)	S02688	201	234	-33	Band 1	Band 1	
Ballintoy (Retention Tank)	S01174	332		332	Band 1	N/A	Y
Ballybrick	S02115	18	16	2	Band 1	Band 1	
Ballycastle (WWTW)	S01071	12798	12798	0	Band 5	Band 5	
Ballyclare	S01467	16393	16707	-314	Band 5	Band 5	
Ballyhacket	S01133	18	16	2	Band 1	Band 1	
Ballyhornan Outfall	S04090	912	911	1	Band 3	Band 3	
Ballykelly (L/Derry)	S03016	3652	3649	2	Band 4	Band 4	
Ballylintagh (New)	S01135	97	120	-23	Band 1	Band 1	
Ballymacallion (WWTW)	S03017	18	18	1	Band 1	Band 1	
Ballymena (WWTW)	S01456	73664	68092	5572	Band 6	Band 6	
Ballynahinch (Down)	S00311	7936	7940	-4	Band 4	Band 4	

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	Difference*	AIR19 Band	AIR20 Band	Band Size Change
Ballyvarley (WWTW)	S02119	18	16	1	Band 1	Band 1	
Banbridge (WWTW)	S02102	20666	20706	-40	Band 5	Band 5	
Belfast (WWTW)	S00345	485234	478618	6617	Band 6	Band 6	
Belleek (Fermanagh)	S03024	1755	1755	0	Band 3	Band 3	
Bells Hill	S00291	17	19	-2	Band 1	Band 1	
Beltrim (WWTW)	S03025	15	15	0	Band 1	Band 1	
Bushmills (WWTW)	S01178	5553	5543	10	Band 4	Band 4	
Caheney	S01141	12	11	1	Band 1	Band 1	
Carnanbane	S03037	41	75	-34	Band 1	Band 1	
Carrickfergus (WWTW)	S00261	32493	32232	261	Band 6	Band 6	
Carrowclare	S03300	148	286	-138	Band 1	Band 2	Y
Castlederg (WWTW)	S03042	3902	3902	0	Band 4	Band 4	
Castlemellan Lower	S03043	18	17	1	Band 1	Band 1	
Castlemellan Upper	S03044	18	11	6	Band 1	Band 1	
Castletown (WWTW)	S03046	15	20	-5	Band 1	Band 1	
Churchfield Road	S01182	21	19	2	Band 1	Band 1	
Clanabogan South WwTW	S05568	18	16	3	Band 1	Band 1	
Coagh (WWTW)	S01562	1189	1189	0	Band 3	Band 3	
Coalisland	S02828	10071	10004	67	Band 5	Band 5	
Connaught Road(21)	S01768	15	15	0	Band 1	Band 1	
Conthem Rd	S04884	29	32	-3	Band 1	Band 1	
Cookstown (WWTW)	S01582	20242	20942	-700	Band 5	Band 5	
Coolkeeran	S01098	9	6	3	Band 1	Band 1	
Coragh	S03058	18	17	1	Band 1	Band 1	
Corgary Cottages (New)	S02724	18	19	0	Band 1	Band 1	
Corickmore	S03062	18	18	1	Band 1	Band 1	
Crew Bridge	S03069	18	19	-1	Band 1	Band 1	
Culbane (WWTW)	S01145	21	17	5	Band 1	Band 1	
Culmore (WWTW)	S03071	134208	133891	317	Band 6	Band 6	
Cushendall	S01183	4006	4006	0	Band 4	Band 4	
Deerpark Road(92)	S01771	18	25	-7	Band 1	Band 1	
Demoan Villas	S02299	18	17	1	Band 1	Band 1	
Derryhale	S02570	1102	1165	-63	Band 3	Band 3	
Derrynoose	S02605	18	122	-104	Band 1	Band 1	
Diamond Road(73-79)	S02124	12	14	-2	Band 1	Band 1	
Doan Place	S02839	18	16	2	Band 1	Band 1	
Donagh (WWTW)	S03078	234	262	-28	Band 1	Band 2	Y
Donaghmore (WWTW)	S02840	2058	2130	-72	Band 4	Band 4	
Donemana	S03103	1046	1040	6	Band 3	Band 3	
Donnybrewer	S03080	5229	5246	-17	Band 4	Band 4	
Doogary	S02573	17	18	-1	Band 1	Band 1	
Downpatrick (WWTW)	S00771	18426	17573	853	Band 5	Band 5	
Draperstown	S01615	3253	3270	-17	Band 4	Band 4	
Dromara (WWTW)	S00316	1388	1387	1	Band 3	Band 3	
Dromore (Down)	S02127	7746	7509	236	Band 4	Band 4	
Drumane	S01150	18	16	2	Band 1	Band 1	
Drumkee	S02841	17	20	-3	Band 1	Band 1	
Drummack	S03094	16	17	-1	Band 1	Band 1	
Drumsough Road Randalstown ST	S05750	12	12	0	Band 1	Band 1	
Duncastle Road (52-60)	S04113	15	17	-2	Band 1	Band 1	

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	Difference*	AIR19 Band	AIR20 Band	Band Size Change
Dungannon	S02850	88920	81292	7628	Band 6	Band 6	
Dunmurry	S00346	46284	46331	-46	Band 6	Band 6	
Enniskillen	S03218	25298	25752	-453	Band 6	Band 6	
Ervey Road	S03107	16	14	2	Band 1	Band 1	
Fivemiletown (WWTW)	S03113	2879	2857	23	Band 4	Band 4	
Ford Road(27)	S01806	6	2	4	Band 1	Band 1	
Gallrock	S02433	17	17	0	Band 1	Band 1	
Garrison (WWTW)	S03115	663	640	23	Band 3	Band 3	
Garryduff Road(112-122)	S01715	18	19	-1	Band 1	Band 1	
Glack (WWTW)	S03118	235	219	16	Band 1	Band 1	
Glaskerbeg Road (11)	S04088	3	3	0	Band 1	Band 1	
Glen Villas	S02723	163	221	-58	Band 1	Band 1	
Glenstall	S01109	20758	20999	-241	Band 5	Band 5	
Gortereghy	S01110	17	30	-13	Band 1	Band 1	
Gortnacross	S01577	15	19	-4	Band 1	Band 1	
Grange (Taylorstown)	S01442	569	570	-2	Band 3	Band 3	
Greenisland (WWTW)	S00263	11904	12894	-990	Band 5	Band 5	
Greysteel (WWTW)	S03123	2180	2181	-1	Band 4	Band 4	
Hilltown Road	S02702	15	11	4	Band 1	Band 1	
Keady (Armagh)	S02553	4572	4569	2	Band 4	Band 4	
Keady (Fermanagh)	S03138	18	18	0	Band 1	Band 1	
Keenaghan (1)	S01578	12	16	-4	Band 1	Band 1	
Keenaghan (Tyrone)	S03139	18	22	-4	Band 1	Band 1	
Kesh (WWTW)	S03140	2679	2679	0	Band 3	Band 3	
Kildress Terrace	S01580	18	19	-1	Band 1	Band 1	
Kilkeel (WWTW)	S00313	14569	14725	-157	Band 5	Band 5	
Killinchy (WWTW)	S00252	2664	5877	-3213	Band 4	Band 4	
Killygonlan (WWTW)	S02043	1306	1314	-8	Band 3	Band 3	
Killymuck	S01583	244	312	-68	Band 1	Band 2	Y
Kilnacart	S02861	12	15	-3	Band 1	Band 1	
Kilrea	S01156	2759	2659	101	Band 4	Band 4	
Kinturk	S01584	18	25	-7	Band 1	Band 1	
Knocknagore (WWTW)	S02409	15	17	-2	Band 1	Band 1	
Knockonny	S03153	18	23	-5	Band 1	Band 1	
Larne (WWTW)	S02044	26535	25748	787	Band 6	Band 6	
Legacurry (Tyrone)	S03156	19	18	1	Band 1	Band 1	
Lessans	S00281	18	18	0	Band 1	Band 1	
Limavady (WWTW)	S03162	16164	16258	-94	Band 5	Band 5	
Lisburn (New Holland)	S00329	70738	71517	-779	Band 6	Band 6	
Liscorran Road(3-5)	S02389	6	6	0	Band 1	Band 1	
Lislea Terrace	S01624	18	13	5	Band 1	Band 1	
Lisnamorrow	S01810	15	16	-1	Band 1	Band 1	
Lisnaskea (WWTW)	S03171	6473	6706	-233	Band 4	Band 4	
Magee Terrace	S02292	15	15	0	Band 1	Band 1	
Maghera (L/Derry)	S01629	6729	6753	-24	Band 4	Band 4	
Magherafelt (WWTW)	S01621	18745	18307	437	Band 5	Band 5	
Maghernarhar	S01193	12	15	-3	Band 1	Band 1	
Managher	S01162	15	18	-4	Band 1	Band 1	
Manor House	S02590	12	21	-9	Band 1	Band 1	
McNally Park(1-6)	S04124	18	17	1	Band 1	Band 1	
Moneymore (WWTW)	S01589	2827	2832	-5	Band 4	Band 4	
Monteith	S02152	216	268	-52	Band 1	Band 2	Y

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	Difference*	AIR19 Band	AIR20 Band	Band Size Change
Moorfield	S03190	18	18	0	Band 1	Band 1	
Mountcastle	S03191	12	11	1	Band 1	Band 1	
Mounthill	S01465	243	215	28	Band 1	Band 1	
Mountnorris	S02248	894	894	0	Band 3	Band 3	
Moy (WWTW)	S02859	4139	4084	55	Band 4	Band 4	
Mullynaburtlan	S03197	18	18	0	Band 1	Band 1	
Newmills (WWTW)	S02852	726	723	3	Band 3	Band 3	
Newry (WWTW)	S02685	61400	63554	-2154	Band 6	Band 6	
Newtownbreda (WWTW)	S00342	34496	34494	2	Band 6	Band 6	
Newtownbutler (WWTW)	S03200	1300	1294	5	Band 3	Band 3	
North Coast (WWTWs)	S04150	76461	77106	-645	Band 6	Band 6	
Oakland Villas	S01711	18	19	-1	Band 1	Band 1	
Omagh (WWTW)	S03999	37068	34061	3007	Band 6	Band 6	
Pomeroy (WWTW)	S01593	979	981	-2	Band 3	Band 3	
Portaferry (2)	S05200	3804	3802	2	Band 4	Band 4	
Rathfriland (WWTW)	S02713	3977	4074	-97	Band 4	Band 4	
Reaskmore Road	S05286	12	15	-3	Band 1	Band 1	
Rocktown	S01635	16	20	-4	Band 1	Band 1	
Roughfort (WWTW)	S01470	443	482	-38	Band 2	Band 2	
Saval More Cottages	S02715	19	19	0	Band 1	Band 1	
St Annes Terrace	S02722	18	18	0	Band 1	Band 1	
Stangmore (WWTW)	S02854	18	15	3	Band 1	Band 1	
Strabane	S03223	23700	23530	169	Band 5	Band 5	
Tamnadeese Road(7-9)	S01816	6	0	6	Band 1	N/A	Y
Tamnamore (WWTW)	S02862	619	617	2	Band 3	Band 3	
Tamnadeese New WwTW	S06138		6	-6	N/A	Band 1	Y
Tandragee	S02174	11962	11279	683	Band 5	Band 5	
Teemore (WWTW)	S03228	233	258	-25	Band 1	Band 2	Y
Trillick (WWTW)	S03231	607	602	5	Band 3	Band 3	
Tullyroan	S02600	40	40	0	Band 1	Band 1	
Tullyveagh Road(2-4)	S01819	6	5	1	Band 1	Band 1	
Waringsford	S02166	224	243	-19	Band 1	Band 1	
Warrenpoint (WWTW)	S02720	15830	16050	-220	Band 5	Band 5	
Whitehouse	S00265	88132	87929	203	Band 6	Band 6	
Woburn Road (63-69)	S00234	12	10	2	Band 1	Band 1	
Ballintoy New WwTW	S05672		332	-332	N/A	Band 1	Y
			Total	-15531			

***(-ve indicates AIR20 figure larger)**

The change in PE equates to an increase in load of 931.86kg BOD/day (i.e. 15531 x 0.06 for 60g/hd/day) from AIR19 to AIR20

Difference between AIR20 and AIR19 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR20 -	**116823**
Total Load Received at WWTWs for AIR19 -	**117,754**
Total Difference -	**931**

The differences between the above totals is due to rounding.

The interpretation of the treatment categories is as below:-

AIR20 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

AIR20 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

AIR20 Treatment Category	Highest Form of Treatment at WWTWs	Treatment Category Abbreviation
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
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 AIR19 to AIR20.

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	PE Change *	Comments
Derryhale	S02570	1102	1165	-63	TE Updated
Donaghmore (WWTW)	S02840	2058	2130	-72	TE Updated
Draperstown	S01615	3253	3270	-17	TE Updated
Kesh (WWTW)	S03140	2679	2679	0	TE Updated
Lisnaskea (WWTW)	S03171	6473	6706	-233	TE Updated
Maghera (L/Derry)	S01629	6729	6753	-24	TE Updated
Mountnorris	S02248	894	894	0	TE Updated
Strabane	S03223	23700	23530	169	TE Updated. Sludge import/export PE updated
			Total	-240	

***(-ve Indicates AIR20 PE Higher)**

The change in PE equates to a load change of 14.4kg/d (i.e. 240 x 0.06 for 60g/hd/day) from AIR19 to AIR20, for line 8.

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR20-	**5127**
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR19-	**5113**
Total Difference –	**14**

Changes in Line 9 - Small works with ammonia consent (between 0 and 5) from AIR19 to AIR20.

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	PE Change*	Comments
Annsborough	S02687	5921	5991	-70	TE Updated
Ballyclare	S01467	16393	16707	-314	TE Updated
Ballynahinch (Down)	S00311	7936	7940	-4	TE Updated

Name of Works	CAR ID	AIR19 Actual PE	AIR20 Actual PE	PE Change*	Comments
Banbridge (WWTW)	S02102	20666	20706	-40	TE Updated
Coalisland	S02828	10071	10004	67	TE Updated
Cookstown (WWTW)	S01582	20242	20942	-700	TE Updated
Downpatrick (WWTW)	S00771	18426	17573	853	TE Updated
Dromara (WWTW)	S00316	1388	1387	1	TE Updated
Dromore (Down)	S02127	7746	7509	236	TE Updated
Grange (Taylorstown)	S01442	569	570	-2	TE Updated
Keady (Armagh)	S02553	4572	4569	2	TE Updated
Killinchy (WWTW)	S00252	2664	5877	-3213	TE Updated
Limavady (WWTW)	S03162	16164	16258	-94	TE Updated. Sludge import/export PE updated
Magherafelt (WWTW)	S01621	18745	18307	437	TE Updated
Moneymore (WWTW)	S01589	2827	2832	-5	TE Updated
Newtownbutler (WWTW)	S03200	1300	1294	5	TE Updated
Pomeroy (WWTW)	S01593	979	981	-2	TE Updated
Rathfriland (WWTW)	S02713	3977	4074	-97	TE Updated
Tandragee	S02174	11962	11279	683	TE Updated
The Loup (WWTW)	S01588	255	255	-255	Numeric consent has come into force during reporting period.
			Total	-2512	

***(-ve Indicates AIR20 PE Higher)**

The change in PE equates to a load change of 150.72kg/d (i.e. 2512 x 0.06 for 60g/hd/day) from AIR19 to AIR20 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR20-	**14181.2**
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR19-	**14030.6**
Total Difference -	**150.6**

PPP

Lines 1 – 7

The variation in load data from AIR19 is solely due to the variation in influent loads received by the same PPP works from the NI Water catchments over the AIR20 Period. While in some cases there has been little difference, the North Down WwTW has experienced a 13% Increase in averaged Daily BOD over the entire year, Richhill WwTW has experienced a 45% Increase in averaged Daily BOD over the entire year, which returns it to a more recognised loading profile. This issue has been rechecked and the calculations verified. The prevailing rainfall can enable a partial explanation, as the AIR20 period experienced 1293.1mm while the AIR19 period experienced 1039.2mm of rainfall which is a 24.4% increase during the AIR20 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 Increases. The fact that the Ballynacor WwTW experienced a 5.3% reduction in averaged Daily BOD during the same period demonstrates the variability of loading that

can be experienced by WwTW's irrespective of climatic conditions, and in the case of Ballynacor likely reflects variances in trade effluent loading from within the large industrial catchment.

The load attributed to Richhill STW has increased and the Categorisation been changed to Category 4 from a previous 3 to reflect the increased loading rate which is within the threshold of a Category 4 works.

Line 9
The variation in load data is due to the variation in influent loads received by the Richhill STW over the AIR20 Period.

Specific company commentary;

- The category of Richhill STW has been changed to Category 4 from a previous 3 as the annual loading now resides within the threshold of a 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 or on-going in PPP catchments;

KI559	PC15 Year 1 WWTW Base Maintenance - East Region
KR417	Ormeau Avenue Sewerage upgrade for pollution resolution
KZ008	Wastewater Networks Modelling/Surveys
KR576	Belfast WWTW PLC Upgrade
KR504	Portaferry Road, N,Ards WWPS Upgrade
KS874	Bangor DAP Works Package 3 - Belfast Lough UIDs
KF397	Killylea Road WWPS, Armagh, Upgrade.
KS872	Bangor DAP Work Package 1: Carnalea Stream UID
KG183	Portadown Drainage Area Network Improvements - Meadow Lane and Bann Street
KR689	Holywood A to Kinnegar PM
KI601	Strategic Sewerage Network Modelling, Bathing Waters Excluding Belfast Lough
KI607	NI Long Term Sludge Strategy
KL460	Foyle Springs, Derry Flood Alleviation
KS913	Upper Crescent WWPS Upgrade
KI610	Asset Performance Service
KS914	Scrabo Road, Newtownards, WWPS Upgrade
KS867	Copeland Road, Comber, Tank Sewer
KA270	Neillsbrook WwPS Upgrade Appraisal
KG129	Loughgall Road Portadown Storm and Foul Sewer Extensions
KS873	Bangor DAP Work Package 2: Rathmore Stream UIDs

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
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					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	51.372	67.237	456.458	0.000	0.000	18.887	15.146	0.000	0.000	6.437	615.537
2	Direct costs of STWs in size band 2	£000	3	0.000	61.319	279 046	31.990	14.336	65.704	54.246	78.148	17.322	0.000	602.112
3	Direct costs of STWs in size band 3	£000	3	15.497	497.564	807.580	148.592	440.104	294.932	219.069	15.020	0.000	9.397	2,447.756
4	Direct costs of STWs in size band 4	£000	3	27.862	842.218	312.832	41.308	1,181 210	51.775	155.079	88.344	4.851	0.000	2,705.478
5	Direct costs of STWs in size band 5	£000	3	0.000	626.038	0.000	354.803	1,622 381	0.000	193.373	0.000	0.000	0.000	2,796.595
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3	0.000	1,224.581	0.000	0.000	5,356 055	0.000	0.000	0.000	0.000	0.000	6,580.636
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3	94.730	3,318.957	1,855 916	576.694	8,614 085	431.298	636.913	181.512	22.172	15.834	15,748.112
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	94.730	3,318.957	1,855 916	576.694	8,614 085	431.298	636.913	181.512	22.172	15.834	15,748.112
10	Sewage Treatment: Power costs	£000	3	14.646	1,774.204	538.906	277.990	4,885.625	94.324	250.106	77.398	0.486	4.090	7,917.774
11	Sewage Treatment: service charges	£000	3	8.599	158.628	145.063	30.522	336.843	39.276	39.410	10.850	2.651	1.239	773.081
12	Sewage Treatment: General and Support	£000	3	118.461	2,196.539	1,949 997	422.639	4,724.991	538.078	545.712	150.245	36.712	17.160	10,700.533
13	Sewage Treatment: Functional Expenditure	£000	3	213.191	5,515.495	3,805 914	999.334	13,339 076	969.376	1,182.625	331.757	58.885	32.993	26,448.646

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
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					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]										
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	0.000	0.000	0.000	2,190.728	0.000	0.000	0.000	0.000	0.000	2,190.728
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	0.000	0.000	0.000	41.192	2,309.065	0.000	0.000	0.000	0.000	0.000	2,350.257
10	Sewage Treatment: Power costs	£000	3	0.000	0.000	0.000	41.192	2,309.065	0.000	0.000	0.000	0.000	0.000	2,350.257
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	43.077	0.000	23.695	94.780	0.000	0.000	0.000	0.000	0.000	161.552
13	Sewage Treatment: Functional Expenditure	£000	3	[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
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					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	51.372	67.237	456.458	0.000	0 000	18.887	15.146	0.000	0.000	6.437	615.537
2	Direct costs of STWs in size band 2	£000	3	0.000	61.319	279.046	31.990	14.336	65.704	54.246	78.148	17.322	0.000	602.112
3	Direct costs of STWs in size band 3	£000	3	15.497	497.564	807.580	148.592	440.104	294.932	219.069	15.020	0.000	9.397	2,447.756
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	1,224.581	0.000	0.000	7,546.783	0.000	0.000	0.000	0.000	0.000	8,771.364
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	94.730	3,318.957	1,855.916	617.886	10,923.150	431.298	636.913	181.512	22.172	15.834	18,098.369
10	Sewage Treatment: Power costs	£000	3	14.646	1,774.204	538.906	319.182	7,194.690	94.324	250.106	77.398	0.486	4.090	10,268.031
11	Sewage Treatment: service charges	£000	3	8.599	158.628	145.063	30.522	336.843	39.276	39.410	10.850	2.651	1.239	773.081
12	Sewage Treatment: General and Support	£000	3	118.461	2,239.615	1,949.997	446.334	4,819.771	538.078	545.712	150.245	36.712	17.160	10,862.085
13	Sewage Treatment: Functional Expenditure	£000	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table 17f - Sewage Treatment Works (NIW only)

NIW Only

Lines 1-13

An updated Population Equivalent (PE) database with treatment type by WWTW's was sent from Asset Delivery on the 29 May 2020 which was used to populate Line 1-13. No PPP sites are included in this table. The same 15 sites in Band 6 which applied in AIR19 still apply in AIR20.

Table 17f has been completed based on the figures available at for the year ended 31 March 2020 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 decreased in Lines 1-4 from AIR19 by circa £0.4M.

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 AIR19.

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 AIR19 by circa £0.3M. 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 decreased since AIR19 by circa £0.7M. This is primarily due to a decrease in Band 1-4 sites and a decrease in costs at the Band 6 sites.

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. Power costs have decrease from AIR19 by £0.4m.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 in line with AIR19.

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 £1.0M from AIR19. The apportionment of General and Support 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 decreased from AIR19 by circa £1.7M 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 reduced slightly from AIR19 as a result of lower tariffs in 2019/20 and removal of CRC costs, offset by higher 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									1,498 5	C3	28.8	C3					4.6	C3	1,531.9	C3
2	Amount of sewage sludge	ttds	1									35.4	A2	0.7	B2					0.1	B2	36.2	B2
3	Sludge treatment: direct costs	£000	3	0 000		0 000		0.000		0.000		0.000		0 000		0.000		0 000		3,398 635		3,398.635	
4	Sludge disposal: direct costs	£000	3	0 000		0 000		0.000		0.000		2,445.275		78 583		0.000		0 000		43.779		2,567.637	
5	Sludge treatment & disposal: direct costs	£000	3	0 000		0 000		0.000		0.000		2,445.275		78 583		0.000		0 000		3,442.414		5,966.272	
6	Sludge treatment & disposal: power costs	£000	3	0.000		0 000		0.000		0.000		0.000		0 000		0.000		0 000		2,590 823		2,590.823	
7	Sludge treatment & disposal: service charges	£000	3	0.000		0 000		0.000		0.000		0.000		0 000		0.000		0 000		271.477		271.477	
8	Sludge treatment & disposal: general & support exp.	£000	3	0.000		0 000		0.000		0.000		2,317.384		0 000		0.000		0 000		33 222		2,350.606	
9	Sludge treatment & disposal: functional expenditure	£000	3	0.000		0 000		0.000		0.000		4,762.659		78 583		0.000		0 000		3,475 637		8,316.878	

Table 17g - Sewerage explanatory factors - sludge treatment and disposal information

The methodology has not changed from AIR19. 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 2020.

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 & 1.9 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 2019/20 (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 2.9 is an estimated quantity of WwTW's & WwPS`s grit removed as part of the treatment process and collected under Tender C821. This element of grit is sent to ReCon who treat and process the grit into a re-usable material - for use in concrete products.

Lines 3-9

The methodology has not changed from AIR19. 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 2020.

Line 3 – Sludge Treatment: Direct Costs

Expenditure has been input in Column 9. These costs have decreased by £0.1M from AIR19.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

Power costs in AIR20 do not include the Incinerator or any PPP sites.

Line 4 - Sludge Disposal: Direct Costs

Columns 5, 6 and 9 have been populated on this line. The direct costs have remained in line with AIR19.

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 Total) column 3 line 9. Costs have remained in line with AIR19 (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 AIR19 was 51:49 and in AIR20 is 48:52 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 AIR20.

Line 7 - Sludge treatment & disposal: Service Charges

The Service Charges figure is approx. £0.3m in AIR20 and this is similar to what the costs were in AIR19. 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 AIR19. Overall General and Support costs have remained in line with AIR19. 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 decreased 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

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	**UNITS**	**DP**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
1	Turnover	£m	3	366.398	361.313	364.407	367.287	372.851	381.099	409.662	422.314	
2	Operating costs (excluding HCD)	£m	3	-202.316	-209.933	-205.450	-207.727	-210.758	-219 231	-186.971	-195.772	
3	Historical cost depreciation	£m	3	-44.871	-48.580	-47.523	-54.364	-55.773	-56.418	-82.165	-84.274	
4	Operating income	£m	3	0.334	0.276	0.525	0.799	0.656	1.035	0.551	0.467	
5	Operating profit	£m	3	119.545	103.076	111.959	105.995	106.976	106.485	141.077	142.735	
6	Other income	£m	3	0.000	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	-64.374	
8	Profit on ordinary activities before taxation	£m	3	64.478	54.496	60.002	52.386	53.172	50.232	77.393	78.361	
9	Current tax	£m	3	0.000	0.000	-0.017	-0.017	-0 012	-0.009	0.000	0.000	
10	Deferred tax	£m	3	-24.872	13.798	-24.037	2.536	-6.430	-18 286	-14.018	-35.032	
11	Profit on ordinary activities after taxation	£m	3	39.606	68.294	35.948	54.905	46.730	31.937	63.375	43.329	
12	Extraordinary items	£m	3	0.000	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	43.329	
14	Dividends	£m	3	-26.587	-21.391	-21.562	-22.888	-21.510	-21.153	-23.759	-25.590	
15	Retained profit for the year	£m	3	13.019	46.903	14.386	32.017	25 220	10.784	39.616	17.739	
	ADDITIONAL DISCLOSURES											
16	IFRIC 18 Income	£m	3							12.303	12.895	
17	IFRS 15 Income	£m	3							34.295	46.713	

Table 18 – HC Profit and Loss account for the year ending 31 March 2020

- 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 2019/20 can be analysed as follows:

	Gross Charge	Lease repayment	Capital maintenance	HC Depreciation	Net P&L Charge
	£m	£m	£m	£m	£m
[redacted]	19.757	(2.947)	(1.516)	3.891	19.185
[redacted]	25.915	(3.092)	(2.018)	4.332	25.137
[redacted]	2.176	(0.658)	(0.124)	0.355	1.749
Total	**47.848**	**(6.697)**	**(3.658)**	**8.578**	**46.071**

* 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

The income tax expense in the statutory accounts for the period is £35.584m 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	**2020 £m**	**2019 £m**
Profit for the year	46.011	66.078
Income tax expense	35.584	14.018
Profit before income tax	**81.595**	**80.096**
Income tax using the Company's domestic tax rate (19%)	15.505	15.218
Reduction in tax rate	19.745	(1.643)
Non-deductible expenses	0.347	0.200
Other timing differences	-	-
Adjustment to prior years	(0.013)	0.049
Group relief not chargeable	-	0.194
	35.584	**14.018**

The statutory accounts income tax expense of £35.584m can be shown as follows:

Tax recognised in profit and loss

	2020 £m	**2019 £m**
Current tax expense		
Current year	0.552	-
Adjustment for prior years	-	-
	0.552	-
Deferred Tax		
(Origination)/ reversal of timing differences	15.300	15.612
Adjustment to prior years	(0.013)	0.049
Reduction in tax rate	19.745	(1.643)
Tax charge on profit on ordinary activities	**35.584**	**14.018**

This statutory income tax expense of £35.584m under IFRS is shown in the Regulatory Accounts as follows:

	Appointed activities	**Unappointed activities**	**Total**
	£m	**£m**	**£m**
Current tax	0.405	0.147	0.552
Deferred tax	35.032	-	35.032
Total	**35.437**	**0.147**	**35.584**

The statutory accounts deferred tax expense of £35.032m 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 2020 is £198.508m. Table 19 shows a deferred tax liability on the appointed balance sheet of £206.586m (with zero balance at 31st March 2020 for unappointed activities). This liability reconciles to the IFRS based statutory accounts balance at 31st March 2020 of £198.508m as the Accounts are required to show the deferred tax asset of £8.078m 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 £198.508m can be summarised as follows:

	2020 £m Excluding Pension	2020 £m Pension	**2020 £m Total**
Opening liability	170.038	(6.057)	**163.981**
Current year deferred tax charge/(credit) to profit and loss account	36.548	(1.516)	**35.032**
Current year deferred tax rate change to the Statement of Total Recognised Gains and Losses (17% to 19%)	0.000	(0.342)	**(0.342)**
Current year deferred tax charge to the Statement of Total Recognised Gains and Losses	0.000	(0.163)	**(0.163)**
Closing liability	206.586	(8.078)	**198.508**

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:

	2020
	£m
Benefit obligation at end of year	(276.502)
Fair value of plan assets at end of year	233.988
Net liability	(42.514)
Less deferred tax	8.078
Pension liability after deferred tax	**(34.436)**

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-20**	**31-Mar-19**
Discount rate	2.30%	2.50%
Rate of compensation increase	2.00% for the next 3 years, 3.00% thereafter	2.10% for the next 4 years, 3.10% thereafter
Rate of increase in pensions in payment	2.50%	3.15%
Rate of increase in pensions in deferment	2.50%	3.15%
Inflation RPI	2.40%	3.10%
Inflation CPI	2.00%	2.10%
Weighted average assumptions used to determine net pension cost for year ended:	**31-Mar-20**	**31-Mar-19**
Discount rate	2.50%	2.65%
Rate of compensation increase	2.10% for the next 4 years 3.10% thereafter	2.00% for 5 years 3.00% thereafter
Rate of increase in pensions in payment	3.15%	3.05%
Inflation	3.10%	3.00%

Any changes to the assumptions from 2019 to 2020 have been advised by the independent actuaries.

There is a pension liability at 31 March 2020 of £34.436m (after deferred tax).
A dividend of £28.272m was proposed, approved and paid in 2019/20 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 2020 £25.185m of the statutory dividend of £28.272m was allocated to appointed activities and £3.087m allocated to unappointed activities.

Operating Costs

Cost components in Operating Costs

The following cost components of Line 2 (£195.772m) are provided below:

Employment Costs	55.619m*^
Power	32.285m*
Rates	27.479m*
Contractors	25.199m*
Customer services	6.382m
Materials and consumables	11.755m
General and support expenditure	18.523m
PPP Operating Charges [redacted]	9.549m
PPP Operating Charges [redacted]	12.084m
PPP Operating Charges [redacted]	0.637m
Other	(3.740m)
Total	**195.772m**

* 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	0.063	
Cash Pooling	0.389	
Total Interest received		**0.452**
Interest Payable:		
On bonds held as security	(0.031)	
On all other loans	(51.275)	
On Finance leases	(18.260)	
On Pension Fund	(0.735)	
Total Interest Payable		**(70.301)**
Net Interest		**(69.849)**

Capitalisation of costs

During 2019/20 £15.963m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	**£m**
Staff Costs	13.416
Labour charge	0.464
Temporary staff	0.095
Consultants	-
Overheads capitalised	1.988
Total	**15.963**

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 2018/19 and to PC15 can be shown as follows:

	Actual	**Actual**	**PC15**
	2019 - 2020	**2018 – 2019**	**2019 - 2020**
	£m	**£m**	**£m**
Sales	422.314	409.662	403.249
Expenditure	(279.579)	(268.585)	(290.978)
Net Operating Profit	142.735	141.077	112.271
Operating Margin	*33.8%*	*34.4%*	*27.8%*
Interest payable	(64.374)	(63.684)	(66.901)
Tax charge	(35.437)	(14.018)	(8.496)
Profit for the year	42.924	63.375	36.874
Net Profit Margin	*10.2%*	*15.5%*	*9.1%*

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.

IFRS 15 Income

In 2018/19 the company adopted IFRS 15 and changed its accounting policy such that the value of transfers of assets from customers £46,713k (2019: £34,295k) has been taken to a deferred credit reserve and amortised over the life of the related asset. The amount recognized as income in the current year is £3,250k (2019: £3,145k).

In accordance with IFRS 15, other capital contributions of £12,895k (2019: £12,303k) has been taken to revenue. This is the same as how IFRIC 18 income was previously recognised pre-2018/19. This is shown in the table as IFRIC 18 income for identification purposes.

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	17.739	
2	Actuarial gains/losses on post employment plans	£m	3	-11.535	8 012	-11.081	4 294	-46.621	41.180	-9.413	-0 353	
3	Other gains and losses	£m	3	0.000	0 000	0.000	0 000	0.000	0.000	-0.013	0 000	
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	17 386	

Table 18c – STRGL (HCA)

Line 2 shows £0.353m of actuarial losses on post-employment plans.

The Regulatory Accounts for 2019/20 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	0 000	
2	Other ordinary dividends	£m	3	-26.587	-21 391	-21.562	-22 888	-21.510	-21.153	-23.759	-25 590	
3	Total dividends	£m	3	-26.587	-21 391	-21.562	-22 888	-21.510	-21.153	-23.759	-25 590	
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	0 389	
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	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	0 000	
7	Preference share dividends	£m	3	0.000	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	0 063	
9	Other interest payable	£m	3	-44.137	-41.459	-45.367	-46 604	-47.111	-48.414	-44.859	-51 306	
10	Other finance charges - post employment costs	£m	3	0.849	-0 300	0.155	-0.400	-0.200	-1.600	-0.460	-0.735	
11	Other finance charges	£m	3	-11.913	-6 933	-6.824	-6.701	-6.562	-6.406	-18.826	-18 261	
12	Total net interest	£m	3	-55.067	-48 580	-51.957	-53 609	-53.803	-56.253	-63.684	-69 850	
13	Capitalisation of Interest	£m	3							5.014	5.477	

Table 18d – Analysis of dividends and interest charges

A dividend was proposed and approved in 2019/20 and this is shown on line 2. The full dividend for 2019/20 was £28.272m with £25.185m apportioned to appointed activities and £3.087m 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 (£0.389m) relates to intercompany cash pooling interest.

Interest payable of £51.306m is comprised of £51.273m relating to the loan notes held with DfI, £0.032m relating to interest payable on cash bonds and £0.001 relating to interest on corporation tax. The interest on loan notes has increased from last year by £1.484m (3.0%). The increase, as in the prior year, is due to the additional interest on the drawdown of £40m additional loan notes in 2019/20. (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 £0.735m for the finance interest cost relating to post employment plans calculated by the actuaries of the pension fund at year end.

During 2019/20 an amount of £18.261m (2018/19: £18.826m) has been included as other finance charges. £18.215m of this relates to the imputed interest on the finance lease underpinning the on-balance sheet [redacted] Project. With the change to IFRS in 2018/19, both [redacted] Project became on balance sheet. £0.046m relates to imputed interest on finance leases on the implementation of IFRS 16 Leases in 2019/20.

The following table compares the actual net interest payable and balance of loan notes with the 2019/20 budget and PC15:

	Actual	Budget	PC15
	£m	£m	£m
Net Interest payable	69.850	67.258	79.079*
Loan notes	1,186.560	1,203.560	1,285.839

The drawdown of loans is £99.279m less than the PC15 projected for 2019/20. This is primarily driven by reduced funding in the capital programme and a lower working capital requirement than was anticipated particularly for capital creditors.

* Omega interest ([redacted]) and Kinnegar interest ([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	3274.623	
2	Investment - loan to group company	£m	3	0 000	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	5 015	
4	Total fixed assets	£m	3	1907 631	1994.939	2073.483	2139.704	2201 878	2262.573	3128 627	3279.638	
B	**CURRENT ASSETS**											
5	Stocks	£m	3	2 379	2.021	2 269	2.368	2 347	2.469	2.947	3 554	
6	Debtors	£m	3	28 824	27.167	30.759	29.832	30 386	62.428	70.856	71.492	
7	Cash	£m	3	9.102	1.637	0.792	2.015	0.412	0.723	5.711	1 359	
8	Short term deposits	£m	3	5 300	0.600	0 020	1.000	2 501	2.508	1.270	1 276	
10	Total current assets	£m	3	48 946	31.475	33 840	35.215	35 646	71.701	80.784	77 681	
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	0 000	
13	Creditors	£m	3	-118 022	-124.404	-132.752	-131.139	-136 204	-129.195	-128.224	-128.380	
14	Borrowings	£m	3	0 000	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	0 682	
16	Ordinary share dividends payable	£m	3	0 000	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	0 000	
18	Total creditors	£m	3	-118 022	-124.404	-133.454	-137.172	-137 314	-128.967	-127.992	-127.698	
19	Net current assets	£m	3	-69 076	-92.929	-99.614	-101.957	-101 668	-57.266	-47.208	-50.017	
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	-1371.904	
21	Other creditors	£m	3	-96.187	-95.302	-93.773	-91.751	-89 305	-87.360	-1.500	-0 537	
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	-1,372.441	
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	-206.586	
24	Deferred income - grants and contributions	£m	3	-19.456	-19.785	-21.969	-22.301	-23 070	-25.769	-426 885	-483.401	
25	Post employment asset / (liabilities)	£m	3	-4.123	2.784	-9 304	-5.880	-54.767	-18.915	-29.575	-34.436	
26	Other provisions	£m	3	-9 589	-10.315	-5 837	-5.035	-4 886	-4.739	-4.170	-3 990	
F	**PREFERENCE SHARE CAPITAL**											
27	Preference share capital	£m	3	0 000	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	1128.767	
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	500.000	
30	Share premium	£m	3	0 000	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	457.077	
32	Other reserves	£m	3	171 690	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	1128.767	

Table 19 – HC Balance Sheet as at 31 March 2020

The balance sheet in the published regulatory accounts includes a separate analysis of unappointed activities.

The retained profit for the year is £17.739m (post dividend).

The P&L reserves in the Balance Sheet increased by £17.386m and this movement can be shown as follows:

Retained profit for the year	£17.739m
Pension scheme actuarial losses net of deferred tax	(£0.353m)
Movement in P&L Account	**£17.386m**

The regulatory accounts was produced under International Financial Reporting Standards (IFRS) for the year end 31st March 2020 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	125.16	149.07	12.35	**286.58**
Acc. Deprec	(40.81)	(46.79)	(7.13)	**(94.73)**
NBV	**84.35**	**102.28**	**5.22**	**191.85**

Line - 13 Creditors falling due within one year

	[redacted]	[redacted]	[redacted]	**Finance lease (IFRS 16)**	**Total**
	£m	£m	£m	£m	£m
Lease obligation due < 1 yr	3.268	3.693	0.856	0.274	**8.091**
Accruals	1.655	18.743	0.385	-	**20.783**
Total	**4.923**	**22.436**	**1.241**	**0.274**	**28.874**

Line 21 - Other creditors falling due after more than one year

	[redacted]	[redacted]	[redacted]	**Finance lease (IFRS 16)**	**Total**
	£m	£m	£m	£m	£m
Lease obligation due > 1 yr	79.136	103.339	1.015	1.854	**185.344**

Significant features and movements

Fixed Assets

Increase of £146m in line with in year additions of £230m, capital contributions of £12.9m, HC depreciation of £84m, disposals of £0.467m.

Debtors

Increased by £0.637m from £70.855m to £71.492m (0.9%). This is primarily due to:

- Measured, unmeasured and TE debtors increased by £0.6m
- Measured, unmeasured and TE bad debt provision increased by £0.7m
- Accrued income from measured and TE customers increased by £0.2m.
- VAT receivable debtors decreased by £0.3m.
- DfI Subsidy debtor decreased by £0.1m
- Other Prepayments decreased by £1.5m
- PPP Capital maintenance increased by £0.3m
- Intercompany debtor cash pooling decreased by £4.6m

Cash and Short term deposits

Cash has decreased by £4.353m from £5.712m to £1.359m (-76.21%) and Short term deposits have increased by £0.006m from £1.270m to £1.276m (0.47%).

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	£184.328m
Net Interest paid	£ 63.099m
Dividend paid	£ 25.185m
Finance Lease payments	£ 7.028m
Decrease in cash	(£ 4.353m)
Increase in deposit monies	£ 0.006m
Additional loan to subsidiaries	£ 0.392m
Total	**£275.685m**

Funded by:

Generated from operations	£229.446m
Grants and contributions	£ 4.772m
Loans	£ 40.000m
Disposal of fixed assets	£ 0.117m
Insurance proceeds	£ 1.350m
Total	**£275.685m**

Deferred tax

The deferred tax balance has increased from £170.041m to £205.586m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year (Capital loan notes)

Borrowings have increased by £40m from £1,146.560m to £1,186.560m. 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 £29.574m increased to a Pension liability of £34.436m (a change in value of 16.44%).

This can be shown as follows:

	£m
Opening balance at 1.4.19	**(29.574)**
Current Service Costs	(13.314)
Administration Costs	(1.000)
Past Service Costs	(2.484)
Contributions	11.509
Finance Cost	(0.735)
Actuarial Loss	(0.858)
Decrease in Deferred tax asset on liability	2.020
Closing balance 31.3.20	**(34.436)**

Other provisions

Decreased from £4.170m to £3.990m (4.32%).

This decrease of £0.180m can be summarised as follows:

	£m
Increase in holiday pay provision	0.061
Decrease in Public Liability provision	(0.121)
Decrease in Employer Liability provision	(0.120)
Total	**(0.180)**

PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)

– Capital Maintenance

The table below summarises the IRC, IRE and capital maintenance during 2019/20 in relation to the PPP projects:

	[redacted]	[redacted]	[redacted]	**Total**
	£m	£m	£m	**£m**
IRE	-	-	-	**-**
IRC	-	-	-	**-**
Capital maintenance	1.541	1.795	-	**3.336**

[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 2019-20 this is confirmed by the operator to be £1.541m. 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 2019-

20 this is confirmed by the operator to be £1.795m. 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 2019-20 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 2019-20 (2018-19: nil). There has therefore been no apportionment of IRC in 2019-20 (2018-19: 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	7	627.560	4392.920	2.65%	5.25%	32.947	32.947	627.560
302	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	20.000	140.000	2.43%	5.03%	1.006	1.006	20.000
303	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	20.000	140.000	2.29%	4.89%	0.978	0.978	20.000
304	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	20.000	140.000	1.88%	4.48%	0.896	0.896	20.000
305	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	10.000	70.000	2.53%	5.13%	0.513	0.513	10.000
306	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	10.000	70.000	2.56%	5.16%	0.516	0.516	10.000
307	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	10.000	70.000	2.67%	5.27%	0.527	0.527	10.000
308	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	20.000	140.000	2.45%	5.05%	1.010	1.010	20.000
309	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	2.20%	4.80%	0.240	0.240	5.000
310	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	15.000	105.000	1.79%	4.39%	0.659	0.659	15.000
311	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	7.000	49.000	0.90%	3.50%	0.245	0.245	7.000
312	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	10.000	70.000	0.77%	3.37%	0.337	0.337	10.000
313	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	15.000	105.000	1.02%	3.62%	0.543	0.543	15.000
314	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	18.000	126.000	1.08%	3.68%	0.662	0.662	18.000
315	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	8.000	56.000	1.04%	3.64%	0.291	0.291	8.000
316	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	8.000	56.000	0.76%	3.36%	0.269	0.269	8.000
317	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	0.62%	3.22%	0.161	0.161	5.000
318	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	20.000	140.000	0.46%	3.06%	0.612	0.612	20.000
319	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	10.000	70.000	0.53%	3.13%	0.313	0.313	10.000
320	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	24.000	168.000	0.62%	3.22%	0.773	0.773	24.000
321	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	1.39%	3.99%	0.200	0.200	5.000
322	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	8.000	56.000	1.50%	4.10%	0.328	0.328	8.000
323	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	1.35%	3.95%	0.198	0.198	5.000
324	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	11.000	77.000	1.31%	3.91%	0.430	0.430	11.000
325	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	1.26%	3.86%	0.193	0.193	5.000
326	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	1.12%	3.72%	0.186	0.186	5.000
327	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	1.31%	3.91%	0.196	0.196	5.000
328	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	0.55%	3.15%	0.158	0.158	5.000
329	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	0.60%	3.20%	0.160	0.160	5.000
330	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	8.000	56.000	0.20%	2.80%	0.224	0.224	8.000
331	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	3.000	21.000	0.01%	2.61%	0.078	0.078	3.000
332	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	13.000	91.000	0.06%	2.66%	0.346	0.346	13.000
333	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	0.46%	3.06%	0.153	0.153	5.000
334	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	8.000	56.000	0.32%	2.92%	0.234	0.234	8.000
335	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	0.07%	2.67%	0.134	0.134	5.000
336	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	7	5.000	35.000	-0.12%	2.48%	0.124	0.124	5.000
337	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	0.35%	2.95%	0.148	0.148	5.000
338	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	-0.20%	2.40%	0.120	0.120	5.000
339	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	0.11%	2.71%	0.136	0.136	5.000
340	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	0.01%	2.61%	0.131	0.131	5.000
341	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	10.000	140.000	-0.17%	2.43%	0.243	0.243	10.000
342	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	28.000	392.000	-0.18%	2.42%	0.678	0.678	28.000
343	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	12.000	168.000	0.01%	2.61%	0.313	0.313	12.000
344	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	-0.05%	2.55%	0.128	0.128	5.000
345	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	-0.02%	2.58%	0.129	0.129	5.000
346	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	-0.19%	2.41%	0.121	0.121	5.000
347	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	6.000	84.000	-0.03%	2.57%	0.154	0.154	6.000
348	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	8.000	112.000	-0.11%	2.49%	0.199	0.199	8.000
349	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	17.000	238.000	0.04%	2.64%	0.449	0.449	17.000
350	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	8.000	112.000	0.06%	2.66%	0.213	0.213	8.000
351	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	10.000	140.000	-0.16%	2.44%	0.244	0.244	10.000
352	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	7.000	98.000	-0.12%	2.48%	0.174	0.174	7.000
353	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	7.000	98.000	-0.26%	2.34%	0.164	0.164	7.000
354	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	15.000	210.000	-0.41%	2.19%	0.329	0.329	15.000
355	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	5.000	70.000	-1.08%	1.52%	0.076	0.076	5.000
356	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	15.000	210.000	-1.03%	1.57%	0.236	0.236	15.000
357	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	7.000	98.000	-0.83%	1.77%	0.124	0.124	7.000
358	Capital loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 2034	14	13.000	182.000	-1.15%	1.45%	0.189	0.189	13.000
C2	Floating rate instruments								
360									
"									
400									
C3	Index linked instruments								
401									
"									
450									
	TOTAL FOR OTHER BORROWINGS		1186.560				51.530	51.530	1186.560
D	TOTALS		1186.560	9726.920			51.530	51.530	1186.560
E	RPI assumption	2.6%							
F	ANALYSIS								
F	INDICATIVE INTEREST RATES								
F1	Nominal interest	4.3%							
F2	Cash interest	4.3%							
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	8							

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2020 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 2020 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 or other purposes approved by the lender, the Department for Infrastructure.

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 2019/20 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 2022. That facility was not utilised during 2019/20.

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	4.403	9.708	14.111
2	Power	£m	3	5.046	3.585	8.631
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.718	9.328	12.046
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	5.293	0.544	5.837
7	Service charges	£m	3	0.712	0.000	0.712
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.014	0.041	0.055
10	Total direct costs	£m	3	18.186	23.206	41.392
11	General and support expenditure	£m	3	9.784	11.633	21.417
12	Functional expenditure	£m	3	27.970	34.839	62.809
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			5.658
14	Scientific services	£m	3			2.040
15	Other business activities	£m	3			0.456
16	Total business activities	£m	3			8.154
17	Rates	£m	3			9.557
18	Doubtful debts	£m	3			0.449
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			80.969
21	Third party services - opex	£m	3			0.000
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			80.970
22a	Payment by concessionaire to operator	£m	3			
C	**OPEX)**					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	10.468	10.468
24	Reactive and planned maintenance non-infrastructure	£m	3	0.711	4.991	5.702
D	**CAPITAL MAINTENANCE**					
26	Historical cost depreciation (allocated)	£m	3	10.246	19.116	29.362
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			29.363
31	Third party services - historical cost depreciation	£m	3			0.000
33	Total capital maintenance	£m	3			29.363
34	Total operating costs	£m	3			110.333
E	**ADDITIONAL DISCLOSURES**					
35	Infrastructure renewals charge (excluding third party services)	£m	3	15.325	0.000	15.325
36	Amortisation of deferred credits	£m	3			-0.013
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	5.662	0.000	5.662
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	0.087	0.000	0.087
8	Bulk supply imports	£m	3			
9	Other direct costs	£m	3	0.000	0.000	0.000
10	Total direct costs	£m	3	5.749	0.000	5.749
11	General and support expenditure (NIW Only)	£m	3	0.095	0.000	0.095
12	Functional expenditure	£m	3	5.844	0.000	5.844
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			7.405
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			13.249
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			9.549
22	Total operating expenditure	£m	3			22.798
22a	Payment by concessionaire to operator	£m	3	7.270	0.000	7.270
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	3.891	0.000	3.891
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			3.891
31	Third party services - historical cost depreciation	£m	3			0.000
33	Total capital maintenance	£m	3			3.891
34	Total operating costs	£m	3			26.689
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	4.403	9.708	14.111
2	Power	£m	3	10.708	3.585	14.293
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.718	9.328	12.046
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	5.293	0.544	5.837
7	Service charges	£m	3	0.799	0.000	0.799
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.014	0.041	0.055
10	Total direct costs	£m	3	23.935	23.206	47.141
11	General and support expenditure	£m	3	9.879	11.633	21.512
12	Functional expenditure	£m	3	33.814	34.839	68.653
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			5.658
14	Scientific services	£m	3			2.040
15	Other business activities	£m	3			0.456
16	Total business activities	£m	3			8.154
17	Rates	£m	3			16.962
18	Doubtful debts	£m	3			0.449
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			94.218
21	Third party services - opex	£m	3			0.000
21a	PPP Unitary Charges (Opex element)	£m	3			9.549
22	Total operating expenditure	£m	3			103.767
22a	Payment by concessionaire to operator	£m	3	7.270	0.000	7.270
C	**OPEX)**					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	10.468	10.468
24	Reactive and planned maintenance non-infrastructure	£m	3	0.711	4.991	5.702
D	**CAPITAL MAINTENANCE**					
26	Historical cost depreciation (allocated)	£m	3	14.137	19.116	33.253
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			33.254
31	Third party services - historical cost depreciation	£m	3			0.000
33	Total capital maintenance	£m	3			33.254
34	Total operating costs	£m	3			137.021
E	**ADDITIONAL DISCLOSURES**					
35	Infrastructure renewals charge (excluding third party services)	£m	3	15.325	0.000	15.325
36	Amortisation of deferred credits	£m	3			-0.013
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 29th May 2020 for the year ended 31st March 2020. AIR20 costs are reported using IFRS following the change made in AIR19.

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 AIR20. 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 increased from AIR19 to AIR20 (by circa £0.4M). 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 AIR20.

Allocation of General and Support	Water		Sewerage			
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	Comments
G&S Overhead Pot 1	27.5%	27.6%	17.5%	20.6%	6.8%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	49.9%	50.1%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	39.0%	45.9%	15.1%	Sewerage activities only
G&S Overhead Pot 3 SA 390	27.5%	27.6%	17.5%	20.6%	6.8%	Water and sewerage networks spend only
G&S Overhead Pot 3 M&E	2.6%	17.8%	38.5%	41.1%	0.0%	M&E Function split based on split supplied by M&E Function

The percentage splits in AIR20 used to allocate General & Support expenditure are broadly consistent with AIR19. The allocation to Water from General & Support Overhead Pot 1, which contains approx. 75% of the costs, is the main change in allocation where the allocation has increased from 54.7% in AIR19 to 55.1% in AIR20.

There is no longer any cost associated with the CRC Energy Efficiency Scheme previously 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 2019-20 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 54.7% in AIR19 to 55.1% in AIR20 while allocation to Sewerage has decreased from 45.3% in AIR19 to 44.9% in AIR20.

The table below shows the basis of apportionment for AIR20.

Apportionment of business activities		Water		Sewerage		
Description	Total £	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (Includes general & Support)	84,868,475	27.4%	27.8%	17.5%	20.5%	6.8%
Apportionment						
Water / Sewerage split	100%	55.2%		44.8%		

Rates are coded correctly at source and have fed into the relevant Table. In AIR20 overall rates are split 61.7% Water and 38.3% Sewerage which is consistent with AIR19.

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

2019/20 Atypical costs and credits

Description	Amount	Comment
Brexit	£2.3M	Costs arising from Brexit related expenditure.
Covid-19	£0.3M	Costs arising from Covid-19 pandemic
VER/VS costs	£0.2M	Costs incurred releasing employees via the VER/VS schemes.
BI consultancy	£0.6M	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 2019-20.
PPP atypicals	[redacted]	Primarily relating to performance deductions. See PPP section of this commentary for further information.
RPDM & UR credit	£0.1M	Balance of 2018-19 accruals increased in 2019-20.
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 AIR20 was £2.7M which is £0.3M lower than AIR19 (£3.0M). This is due to a decrease in Consultancy Fees (£0.3M).

Voluntary Early Retirement / Voluntary Severance / Ill Health retirement

During 2019-20 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 2019-20 scheme which is comparable with AIR19.

Negative Opex

NIW generate income from the sale of electricity and Renewable Obligation Certificates (ROCs) by way of water turbine and solar installations and from payments made for participation in the security of electricity supply back up services. In 2019-20 this income amounted to £1.2M which is an increase of £0.5M from AIR19. This is a mostly driven by the participation in the security of electricity supply back up services.

Employment Costs

Staff costs for total NI Water come to circa £56.6M as detailed below which has increased from AIR19 (£53.5M). These costs include the £0.2M VER\VS costs outlined above. Only

circa £23.4M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR19 circa £22.6M).

The table below provides the reconciliation between these amounts:

Description	**Amount**	**Table 21/22 location**
Industrial Wages	£17.7M	
Salaries	£36.1M	
Temporary Staff	£0.7M	
Other Costs of Employment	£1.0M	
Staff Expenses	£1.1M	
Total NI Water staff costs	**£56.6M**	
Less:		
Customer Services	(£4.9M)	Customer Services
Scientific Services	(£1.8M)	Scientific Services
Regulation	(£0.6M)	Other Business Activities
Unallocated	(£25.9M)	General & Support
Total Employment Costs	**£23.4M**	**£14.1M Table 21 and £9.3M Table 22**

The unallocated amount of circa £25.9M 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 increased by approximately £3.1M from AIR19 (£53.5M) due to an increase in Industrial Wages of £0.7M an increase in Salaries of £2.5M and a decrease of £0.1M across Temporary Staff, Other Costs of Employment & Staff Expenses..

Wages and Salaries have increased due to the annual inflationary pay rise where a 2 year pay agreement was reached.

Hired & Contracted

Hired and Contracted Services of circa £21.2M in Table 21 and Table 22 are split out in the table below. The corresponding charge in the AIR19 was circa £19.7M.

Hired & Contracted Services:	**Table 21**	**Table 22**	**TOTAL**
Operational Contractors	£11.2M	£9.2M	£20.4M
Other Contractors	£0.8M	£0.0M	£0.8M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	**£12.0M**	**£9.2M**	**£21.2M**

Within the Contractors costs of £12.0M in Table 21, circa £2.7M relates to the cost of contractors for Water Treatment with the balance being the cost of contractors to facilitate the maintenance of the networks. This is a £1.0M increase on AIR19 which will be explained in Table 21 Line 4 below. Within the Operational Contractors cost of £9.2M in Table 22, circa £2.3M is for the cost of the various Sludge Disposal Routes, circa £5.2M 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 increased by £0.6M from AIR19. This will be explained in Table 22 Line 4 below.

There is no spend on Consultants Fees within Hired and Contracted in AIR20.

General & Support Costs

General & Support costs have increased by circa £1.8M from AIR19 (£42.6M) to AIR20 (£44.4M).

The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£25.9M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.2M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£6.7M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.8M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£4.2M	Included in General & Support (Removed from Other Direct Costs)
Communication	£1.1M	General & Support
Mobile V&P Charges	£2.0M	General & Support
Other	£2.5M	General & Support
Total	**£44.4M**	**£21.5M Table 21 and £22.9M 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 AIR20 and AIR19. See the **Allocation of costs between service areas** section at the start of the commentary.

The main difference from AIR19 is in Unallocated Employment Costs (£1.3M increase).

The increase 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 £5.662m has decreased by 16.2% from the AIR19 reported figure of £6.758m. This reduction is due to a combination of reduced volumes of water taken from PPP Alpha sites (circa 7%) plus a reduction in rate (circa 2% at total NI Water level plus a further reduction due to the removal of CRC).

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 AIR19.

Line 11 - General & support expenditure

General and support expenditure has been calculated on the same basis as in AIR19. These costs have decreased from that reported in AIR19 (£95k vs £148k) largely due to a reduction in consultancy services 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 reduced by 4.9% from AIR19. This is due to lower volumes with the proportion of DI being taken from PPP sites falling from 47.1% to 43.9%.

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 £9.549m opex charge. The charge also includes an atypical credit of £0.644m as follows:

Quality Monitoring Change credit	(£0.484m)
EIB Step-down	(£0.097m)
Refund in respect of reorganisation costs	(£0.063m)
Total	(£0.644m)

Further details on each of these are given in the commentary to table 42 line 10.
The decrease of £0.172m in the unitary charge cost from AIR19 is made up as follows:

Inflationary increase in capacity charge	£0.170m
Decrease in volumetric charge (inflation and flow related)	(£0.185m)
Decrease in performance deductions	£0.041m
Increase in atypical credits	(£0.096m)
Increase in amounts capitalised	(£0.297m)
Decrease in interest element of charge	£0.195m
	(£0.172m)

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 has increased by circa £3.7M from AIR19 to AIR20. This is mainly driven by increases in Hired and Contracted £1.0M and Materials and Consumables £1.3M detailed below. Various other variances which are explained on a line by line basis below:

- Line 1: Employment costs have increased by circa £0.9M from AIR19. This is due to the annual inflationary pay rise.
- Line 2: Power costs include electricity costs and fuel costs for power generation. Overall the costs have decreased by £1.7M from AIR19. The reason for this is due to a decrease in energy tariffs as well as the cessation of CRC Energy Scheme payments.
  Power costs include £5.7M related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have increased by circa £1.0M from AIR19. The increase has been driven by an increase in Water Distribution (WD) where more leakage detection resources were deployed as well as cost increases relating to a new network repair contract.
- Line 5: Associated companies – there are no costs in this line.
- Line 6: Materials & Consumables have increased from AIR19 by £1.3M. This is mainly within Water Resources & Treatment (WRT) where there has been an increase in the cost of Chemicals as well as some treatment issues in year.
- 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 £0.1M 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 AIR19.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR20 direct costs are £1.5M higher than AIR19. This is driven by the increase in Hired and Contracted & Materials and Consumables offset by the decrease in Power costs as detailed above.
- Line 11: General & Support expenditure has increased by circa £0.9M from AIR19 to AIR20. The reason for the increase in the costs in Table 21 is the increase 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 AIR19. 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 £2.4M from AIR19 as a result of the increase in Total Direct Costs as already discussed above and the increase in General & Support Costs as explained in Line 11 above. Line 12 includes £5.8M of costs associated with PPP (AIR19 £7.0M).

B - Operating Expenditure

- Line 13: Customer Services costs have increased £0.7M from AIR19 in Table 21. This is due to increased Employment costs. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR20 the percentage split was calculated at 55.1% Table 21 and 44.9% Table 22. In AIR19 the percentage split was 54.7% and 45.3% between Table 21 & 22 respectively.

- Line 14: Scientific Services costs have increased by £0.2M from AIR19 again due to increased Employment Costs. 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 AIR19. 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 AIR19 of circa £0.8M is driven by the increases as detailed above.
- Line 17: Local authority rates have increased £0.2M from AIR19. This is due to increases in poundages from AIR 19. Rates include circa £7.4M relating to PPP sites.
- Line 18: Doubtful debts have increased by £0.5M from AIR19 to recognise the risk arising to certain businesses from the COVID-19 pandemic. The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR19.
- 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 £3.9M from AIR19 driven by the increases in the costs as detailed above.
- Line 21: Third party services are immaterial.
- Line 21a: Total PPP Unitary Charge has decreased by circa £0.2M from the AIR19 charge at £9.5M in AIR20. 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 £3.7M from AIR19 due to the increase in the costs as discussed. This agrees to Table 35 line 24.
  Total operating expenditure includes circa £22.8M relating to PPP (AIR19 £24.5M).
- Line 22a: This figure is comparable to AIR19 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 increased by circa £0.9M from AIR19. This is as a result of an increase in Leakage detection resources.
- Line 24: Non-infrastructure, this figure has decreased by circa £0.4M from AIR19. This is as a result of a decrease in Power costs relating to Pumping.

Leakage costs

Operating costs relating to leakage have increased from £6.3M in AIR19 to £7.3M in AIR20. This is due to an increase Leakage detection resources. Capital expenditure has remained consistent from AIR19 to AIR20.

Table 22 PPP only

Line 2 - Power costs

Power costs have decreased from AIR19 by 3%. There were a number of factors reducing cost including lower average tariffs in the reporting year, the removal of CRC and reduction in self generation at the incinerator. These reductions were offset by higher waste water volumes as a result of higher rainfall levels in the reporting year.

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 2018-19 actuals being used as a proxy for 2019-20 as outturn reports are not available until July. The allocation to sludge has increased from 14.15% in AIR19 to 16.60% in AIR20. All other allocations are consistent with AIR19.

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 AIR19 reflecting all costs associated with P101 cost centre. These costs have decreased from that reported in AIR19 due to a reduction in 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 decreased from AIR19 mainly as a result of decreased emergency sampling costs within R113 cost centre offset by an increase in the proportion of PPP samples from 17.1% to 20.7% 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 AIR20 is 2.0% and is largely inflationary related.

Line 20a - PPP unitary charges (Opex)

Kinnegar costs have reduced by [redacted] from [redacted] in AIR19 to [redacted] in the reporting year. The difference is largely due to atypical credits of [redacted] and has been set out below:

Decrease in volumetric charge (inflation and flow related)	[redacted]
Increase in atypical credits	
Increase in amounts capitalised	
Decrease in interest element of charge	

Omega costs have increased by [redacted] from [redacted] in AIR19 to [redacted] in the reporting year. The movements causing this increase have been set out below and is mainly due to higher variable costs. This is largely driven by rainfall which has been 25% higher in 2019/20 than the prior year.

Decrease in volumetric charge (inflation and flow related)	[redacted]
Increase in atypical credits	
Increase in amounts capitalised	
Decrease in interest element of charge	

This line includes atypical credits of [redacted] on Omega. 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 £4.7M from AIR19. This is mainly driven by an increase in PPP Costs of [redacted], an increase in General and Support costs of £0.8M and various other variances which are explained on a line by line basis below:

- Line 1: Employment costs are in line with AIR19.
- Line 2: Power costs include electricity costs and fuel costs for power generation. Overall the costs have decreased by £0.1M in AIR20 from AIR19.

  In AIR20 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 AIR19.

  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 48:52 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 AIR19 the estimated split was 51:49.
  Power costs include [redacted] for PPP (AIR19 [redacted]).
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted services have increased £0.5M from AIR19. This is due to an increase in Sewerage costs.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables are in line with AIR19.

- Line 7: Service Charges are in line with AIR19.
- 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. AIR20 direct costs are £0.4M higher than AIR19. This is driven by the increase in Hired and Contracted costs as detailed above.
- Line 10: General & Support expenditure has increased by circa £0.8M from AIR19 to AIR20. The reason for the increase in the costs in Table 22 is the increase 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 AIR19. 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 AIR19.
- Line 11: This is the calculated total line for Functional Expenditure which has increased by £1.2M. This increase is driven by the increase in Hired and Contracted costs and the increase in General & Support Costs as discussed above. Line 11 includes costs of [redacted] associated with PPP (AIR19 [redacted]).

B - Operating Expenditure

- Line 12: Customer Services costs have increased by circa £0.5M compared to AIR19 in Table 22. This is due to increased Employment Costs. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR20 the percentage split was calculated at 55.1% Table 21 and 44.9% Table 22. In AIR19 the percentage split was 54.7% and 45.3% between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have increased £0.1M from AIR19. This is due to increased Employment costs as above. 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 are in line with AIR19. 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 £0.5M from AIR19.
- Line 16: Local authority rates have increased by circa £0.3M from AIR19. This is due to increases in poundages from AIR 19. Line 16 includes circa [redacted] for PPP rates.
- Line 17: Doubtful debts have increased by £0.8M from AIR19 to recognise the risk arising to certain businesses from the COVID-19 pandemic. The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR19.
- 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 £2.9M from AIR19.
- Line 20: Third party services are immaterial.
- Line 20a: Total PPP Unitary Charge has increased by circa [redacted] from AIR19. 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 £4.7M from AIR19.
  Total operating expenditure includes [redacted] of costs associated with PPP (AIR19 [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 £0.1M to £12.2M in AIR20.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has increased £0.2M from AIR19 to £2.5M.
- Line 23: Non-infrastructure, this figure has increased by circa £0.5M from AIR19 to £12.7M. This is due to an increase in Power costs relating to Pumping.

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR19. 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 2020 were £17.5M (AIR19 £13.4M) which amounts to £16.8M before interest costs of £0.7M (AIR19 £12.9M before interest costs of £0.5M) and these were charged to the profit and loss account. This is made up of current service costs of £13.3M (AIR19 £11.9M) and past service costs of £2.5M (AIR19 £0.04M). 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 £11.5M (AIR19 £11.9M) including £Nil relating to payment of 2018/19 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 2020 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 2020.

Third party costs

Third party costs remain negligible in AIR20 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	4 348	4.669	0 298	9.315
2	Power	£m	3	4 909	7.917	1 277	14.103
3	Agencies	£m	3	0 000	0.000	0 000	0.000
4	Hired and contracted services	£m	3	5.153	1.719	2 287	9.159
5	Associated companies	£m	3	0 000	0.000	0 000	0.000
6	Materials and consumables	£m	3	0 255	0.666	0 519	1.440
7	Service charges	£m	3	0 001	0.773	0 271	1.045
8	Other direct costs	£m	3	0 003	0.005	0 000	0.008
9	Total direct costs	£m	3	14 669	15.749	4 652	35.070
10	General and support expenditure	£m	3	9 651	10.701	2 304	22.656
11	Functional expenditure	£m	3	24 320	26.450	6 956	57.726
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				4.590
13	Scientific services	£m	3				1.542
14	Other business activities	£m	3				0.370
15	Total business activities	£m	3				6.502
16	Rates	£m	3				9.372
17	Doubtful debts	£m	3				0.618
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				74.218
20	Third party services - opex	£m	3				0.000
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				74.218
21a	Payment by concessionaire to operator	£m	3				
C	**OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3	2.490	0.000	0 000	2.490
23	Reactive and planned maintenance non-infrastructure	£m	3	9 896	2.828	0 000	12.724
D	**CAPITAL MAINTENANCE**						
25	Historical cost depreciation (allocated)	£m	3	8 984	36.518	0 831	46.333
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				46.333
30	Third party services - historical cost depreciation	£m	3				0.000
32	Total capital maintenance	£m	3				46.333
33	Total operating costs	£m	3				120.551
E	**ADDITIONAL DISCLOSURES**						
34	Infrastructure renewals charge (excluding third party services)	£m	3	11 566		0 000	11.566
35	Amortisation of deferred credits	£m	3				3.260
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	2.308	1 314	3.622
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	2.308	1 314	3.622
10	General and support expenditure (NIW Only)	£m	3	0 000	0.162	0 047	0.209
11	Functional expenditure	£m	3	0 000	2.470	1 361	3.831
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				
13	Scientific services	£m	3				0.113
14	Other business activities	£m	3				
15	Total business activities	£m	3				0.113
16	Rates	£m	3				1.145
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				5.089
20	Third party services - opex	£m	3				
20a	PPP Unitary Charges (Opex element)	£m	3				12.722
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	[redacted]	[redacted]	[redacted]	[redacted]
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				4.687
30	Third party services - historical cost depreciation	£m	3				0.000
32	Total capital maintenance	£m	3				4.687
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	4 348	4.669	0 298	9.315
2	Power	£m	3	4 909	10.225	2 591	17.725
3	Agencies	£m	3	0 000	0.000	0 000	0.000
4	Hired and contracted services	£m	3	5.153	1.719	2 287	9.159
5	Associated companies	£m	3	0 000	0.000	0 000	0.000
6	Materials and consumables	£m	3	0 255	0.686	0 519	1.440
7	Service charges	£m	3	0 001	0.773	0 271	1.045
8	Other direct costs	£m	3	0 003	0.005	0 000	0.008
9	Total direct costs	£m	3	14 669	18.057	5 966	38.692
10	General and support expenditure	£m	3	9 651	10.863	2 351	22.865
11	Functional expenditure	£m	3	24 320	28.920	8 317	61.557
B	OPERATING EXPENDITURE						
12	Customer services	£m	3				4.590
13	Scientific services	£m	3				1.655
14	Other business activities	£m	3				0.370
15	Total business activities	£m	3				6.615
16	Rates	£m	3				10.517
17	Doubtful debts	£m	3				0.618
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				79.307
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	2.490	0.000	0 000	2.490
23	Reactive and planned maintenance non-infrastructure	£m	3	9 896	2.828	0 000	12.724
D	CAPITAL MAINTENANCE						
25	Historical cost depreciation (allocated)	£m	3	8 984	41.205	0 831	51.020
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				51.020
30	Third party services - historical cost depreciation	£m	3				0.000
32	Total capital maintenance	£m	3				51.020
33	Total operating costs	£m	3				[redacted]
E	ADDITIONAL DISCLOSURES						
34	Infrastructure renewals charge (excluding third party services)	£m	3	11 566		0 000	11.566
35	Amortisation of deferred credits	£m	3				3.260
36	Third party services - infrastructure renewals charge	£m	3				0.000

T A WAT M T - A A MAT T

A A MAT T - TA 2 AT A T
A A T V A AT M

T	T		2	3	4	5	6	7	8	9	0		2	3	4	5	6	7	8	9	20	2	22	23	24	25	26		27	28	29
			2 2-			2 - 4			2 4-			2 -			2 - 7			2 7-			2 - 9			2 9-2					2 2 -2		
			WAT V	W A V	A T	WAT V	W A V	A T	WAT V	W A V	A T	WAT V	W A V	A T	WAT V	W A V	A T	WAT V	W A V	A T	WAT V	W A V	A T	WAT V	W A V	A T	WAT	W A		WAT V	W A V	A T
A T V																															
Unmeasu ed - househo d		Em	3	2 95	43 905	265 00	22 39	38 6	260 300	26 574	35 825	262 350	25 277	39 923	264 200	23 828	4 72	265 000	24 853	45 747	270 600	26 736	5 465	278 200	29 067	58 833	287 900	29 067	58 833	A2			
Unmeasu ed - non- househo d		Em	3	2 2	2 766	4 977	2 049	2 545	4 594	762	2 02	3 864	829	2 25	3 954	2 04	2 40	4 442	89	2 203	4 094	2 027	2 395	4 387	2 53	2 486	4 839	0 3	85	A2			
Unmeasu ed		Em	3	23 408	46 67	270 077	24 88	40 706	264 894	28 336	37 927	266 263	27 08	4 048	268 54	25 959	43 573	269 442	26 744	47 950	274 694	28 762	53 825	282 587	3 220	6 3 9	292 539	30 082	60 8 8	A2			
Measu ed - househo d		Em	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	0 000	0 000	0 000	A2			
Measu ed - non- household		Em	3	38 75	22 44	60 895	38 465	24 48	62 8 3	39 872	26 68	66 040	39 955	24 739	64 694	4 056	27 5 8	68 6 4	42 54	26 865	69 408	44 369	27 908	72 277	43 9 4	30 037	73 95	0 045	6 76	A2			
Measu ed		Em	3	38 75	22 44	60 895	38 465	24 48	62 8 3	39 872	26 68	66 040	39 955	24 739	64 694	4 056	27 5 8	68 6 4	42 54	26 865	69 408	44 369	27 908	72 277	43 9 4	30 037	73 95	0 045	6 76	A2			
adle e luent		Em	3		4 326	4 326		3 889	3 889		3 56	3 56		4 557	4 557		4 278	4 278		4 777	4 777		5 236	5 236		4 977	4 977	0 000	0 000	A2			
7a Roads D a naga Ravenue		Em	3	0 000	20 9	20 9		20 049	20 049		9 54	9 54		20 030	20 030		20 593	20 593		2 047	2 047		2 86	2 86		22 556	22 556	0 000	0 000	A2			
a ge uses and spec al ag eement		Em	3	5 354	4 290	9 644	5 243	4 04	9 284	5 36	3 7	8 847	4 980	4 286	9 266	4 980	4 05	9 085	5 5 7	4 8	0 328	6 024	5 229	253	5 879	5 2 0	089	0 000	0 000	A2			
Revenue g anta		Em	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	0 000	0 000	0 000	A2			
Non pchable wa e la ge uses and special ag eements		Em	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	A2			
Recha geable wo ka		Em	3	0 093	0 093	0 86	0 092	0 092	0 84	0 096	0 096	0	0 066	0 065	0 30	0 064	0 064	0 28	0 055	0 055	0	0 42	0 42	0 284	0 43	0 43	0 288	0 000	0 000	A2			
Bu k supp ies in e company payments		Em	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	0 000	0 000	0 000	A2			
he appointed bua ness th d pa y)		Em	3	0 72	0 87	0 359	0 82	0 238	0 400	0 9	0 239	0 439	0 96	0 260	0 456	0 398	0 343	0 7	0 403	0 334	0 737	6 349	9 8 5	6 64	6 56	0 760	6 9 8	0 000	0 000	A2			
hi d pa ty se v ces (exc ud ng non-pc ab e wate)		Em	3	0 265	0 280	0 545	0 254	0 330	0 584	0 247	0 295	0 542	0 26	0 326	0 586	0 432	0 407	0 839	0 468	0 380	0 847	6 49	9 957	6 448	6 299	0 903	7 203	0 000	0 000	A2			
he sou ces (excluding a ge uses a thi d pa ies and special ag eements		Em	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	0 000	0 000	0 000	A2			
o al u ncome		Em	3	67 778	68 622	368 398	68 50	93 63	36 3 3	73 59	90 8 8	364 407	72 302	94 985	367 287	72 377	200 474	372 85	75 260	205 839	38 088	85 646	224 0 8	409 862	87 3 2	235 002	422 3 4	40 27	66 779	A2			
AT M																															
Not used																															
Except onal items		Em	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	0 000			A2			
he ope at ng income		Em	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 55	0 000	0 000	0 000			A2			
o al ope ating income		Em	3	0 33	0 79	-0 303	0 208	0 000	0 208	0 265	0 233	0 488	-0 083	0 74	0 09	0 523	-0 034	0 489	0 000	0 000	0 000	0 243	0 308	0 55	0 000	0 000	0 000			A2			
W K A TA A TM T																															
Not used																															
V T M A M																															
Net evenue movement out o he ta i basket		Em	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	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 carries out 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 at a time after the Day 8 meeting.

Movements in Income against PC15

Following on from the monitoring process detailed above, the 2019/20 year-end position of income against PC15 submission was as follows:

Income	Actual Income 2019/20 £m	PC15 Income 2019/20 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	129.1	128.2	0.9
Domestic phasing subsidy - sewerage	158.8	159.1	(0.3)
Non-domestic phasing subsidy - water	1.0	1.0	0.0
Non-domestic phasing subsidy - sewerage	1.2	1.2	0.0
Domestic allowance - water	10.0	9.1	0.9
Domestic allowance - sewerage	6.8	5.0	1.8
Septic tank subsidy	3.0		3.0
Total subsidy	309.9	303.6	6.3
Non-domestic income:			
Measured water	39.7	39.5	0.2
Measured sewerage	25.3	25.2	0.1
Unmeasured water	1.1	1.0	0.1
Unmeasured sewerage	1.3	1.2	0.1
Trade effluent	8.2	7.2	1.0
Total non domestic income	75.6	74.1	1.5
Road drainage income	22.6	24.7	(2.1)
Other regulated income	17.3	7.7	9.6
Other non-regulated income	4.0		4.0
TOTAL INCOME	**429.4**	**410.1**	**19.3**

The above table includes both appointed and un-appointed income

Specific reasons for the £19.3m increase over PC15 are:

- The domestic phasing subsidy represents a volumetric measured water tariff of £1.1424 per m^3 used at the time of PC15 for 2019/20, as opposed to the actual tariff of £1.093; with measured sewerage, the PC15 tariff was £1.9122 per m^3, against the actual of £1.816. At the same time, the number of domestic customers (which is revised each year) was significantly higher, than what was included in the PC15 exercise.
- 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 (in the 18/19 year) to encourage larger customers to make a claim.
- With measured water:
    - There was a 4.3% reduction in the actual tariff from what was used in the PC15 submission, equivalent to around £1.4m.
    - At the end of March 2020, there was an estimated £0.45m reduction in income arising from the COVID-19 pandemic.
    - The PC15 submission assumed a smaller water volume consumption. The increased consumption of c£2.0m is due to the following:
        - The Metering and Billing project has generated new customers;
        - Other new customers.
        - Increased consumption from some larger customers e.g. [redacted] the two main [redacted] sites;
        - Income from properties, previously designated as voids (and hence not being billed).
- Measured sewerage:
    - There was a 5.0% reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £1.0m.
    - At the end of March 2020, there was an estimated £0.3m reduction in income arising from the COVID-19 pandemic.
    - In addition for 2019/20, there was a £0.9m income increase due to the release of part of the laundrette project provision, 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. The assumption had been that this change would be back-dated to 1 April 2017; however, it was agreed during 2019/20 that the change would occur from 1st January 2020.
    - The PC15 submission assumed a smaller sewerage volume consumption. The increased consumption of c£0.4m is due to the following:
        - The Metering and Billing project has generated new customers;
        - Other new customers.
- For unmeasured income, income was roughly in line with PC15 estimates. The relatively small increases for both water and sewerage can be put down to new customers being discovered, some arising from the Metering and Billing project.
- For trade effluent income:
    - There was a reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £0.6m.
    - There was £0.4m income reduction arising from the release of the laundrette provision (see note in measured sewerage above).

  - At the end of March 2020, there was an estimated £0.1m reduction in income arising from the COVID-19 pandemic.
  - Around £2.1m for a mixture of new customers (e.g. [redacted], [redacted] increased strengths and increased consumption (e.g. [redacted] sites (though not Ballymena), [redacted], [redacted], [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 £9.6m increase is largely due to IFRIC18 income/FRS15 income, as well as increased rechargeable works, and certain areas of Developer Services e.g. pre-development income.

Movements in Income against budget

Following on from the monitoring process detailed above, the 2019/20 year-end position of income against budget was as follows:

Income	Actual Income 2019/20 £m	Budget Income 2019/20 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	129.1	129.1	0.0
Domestic phasing subsidy - sewerage	158.8	158.8	0.0
Non-domestic phasing subsidy - water	1.0	1.0	0.0
Non-domestic phasing subsidy - sewerage	1.2	1.2	0.0
Domestic allowance - water	10.0	10.2	(0.2)
Domestic allowance - sewerage	6.8	6.4	0.4
Septic tank subsidy	3.0	3.4	(0.4)
Total subsidy	309.9	310.1	(0.2)
Non-domestic income:			
Measured water	39.7	41.7	(2.0)
Measured sewerage	25.3	24.1	1.2
Unmeasured water	1.1	1.0	0.1
Unmeasured sewerage	1.3	1.2	0.1
Trade effluent	8.2	8.7	(0.5)
Total non domestic income	75.6	76.7	(0.9)
Road drainage income	22.6	22.6	0.0
Other	21.3	5.0	16.3
TOTAL INCOME	**429.4**	**414.4**	**15.2**

The above table includes both appointed and un-appointed income.

Specific reasons for the £15.2 increase against budget are:

- Increased take up of domestic allowances, mainly with sewerage.
- The upsurge in the demand for the emptying of septic tanks did not happen during the 2019/20 year.
- With measured water non-domestic income:
  - There was a reduction of £0.5m for reduced income arising from COVID-19.
  - There was a £0.2m reduction in income for [redacted], which has been closed for most of the year.
  - A £0.1m reduction at [redacted] where the slaughter was suspended for most of the year.
  - Other smaller reductions totalling £0.8m e.g. [redacted] (leakage in 18/19 and before), [redacted] and [redacted] (reduction in summer of 2019).
  - Budget was based on actual income from Nov 17 to Oct 18, and therefore may have over-stated due to the dry weather of the summer of 2018. Possible £0.4m reduction due to this, and heavy rainfall in the likes of June, September and November 2019.
- Measured sewerage:
  - There was a reduction of £0.2m for reduced income arising from COVID-19.
  - A £1.4m increase in laundrette income, with the £0.5m in the budget not being realised, and a £0.9m increase instead.
  - A number of hospitals had increased consumption coming to c£0.3m e.g. [redacted], [redacted]
  - Reduction in [redacted] income (c£0.2m) arising from leakage in previous years.
  - Budget was based on actual income from Nov 17 to Oct 18, and therefore may have over-stated due to the dry weather of the summer of 2018. Possible £0.1m reduction due to this, and heavy rainfall in the likes of June, September and November 2019.
- For unmeasured income, income was very close to budget, the relatively small increases in both water and sewerage arising from new customers being discovered, some arising from the Metering and Billing project.
- For trade effluent income, there has been:
  - A £0.6m reduction in laundrette income, with the £0.2m in the budget not being realised, and a £0.4m reduction instead.
  - There was a £0.3m reduction for [redacted] income (where the kil was suspended for most of the financial year) and [redacted] (strengths much reduced).
  - A £0.1m reduction for decreased income arising from COVID-19.
  - At the same time, consumption increased at the [redacted] site by £0.2m.
  - Other consumption increases of £0.3m at the likes of [redacted], [redacted] and [redacted]
- For other income, actual figures include IFRIC18 and IFRS15 income; no budget figures were available for this.

Movements in Income between 2019/20 and 2018/19

The table below details the income for the year ended 31 March, for both 2020 and 2019:

Income	Actual Income 2019/20 £m	Actual Income 2018/19 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	129.1	126.7	2.4
Domestic phasing subsidy - sewerage	158.8	151.5	7.3
Non-domestic phasing subsidy - water	1.0	1.0	0.0
Non-domestic phasing subsidy - sewerage	1.2	1.1	0.1
Domestic allowance - water	10.0	9.9	0.1
Domestic allowance - sewerage	6.8	6.7	0.1
Septic tank subsidy	3.0	3.0	0.0
Total subsidy	309.9	299.9	10.0
Non-domestic income:			
Measured water	39.7	40.5	(0.8)
Measured sewerage	25.3	23.0	2.3
Unmeasured water	1.1	1.1	0.0
Unmeasured sewerage	1.3	1.2	0.1
Trade effluent	8.2	8.6	(0.4)
Total non domestic income	75.6	74.4	1.2
Road drainage income	22.6	21.9	0.7
Other	21.3	20.5	0.8
TOTAL INCOME	**429.4**	**416.7**	**12.7**

The above table includes both appointed and un-appointed income.

The income has increased by £12.7m, due to:

- An increase in the subsidy for domestic properties of £9.7m, which reflects the fourth year of the PC15 Final Determination.
- A £0.2m rise in the level of the rateable allowances being claimed by customers, arising from greater customer awareness of the allowance.
- For measured water, there was a 2.15% tariff increase (equivalent to around £0.9m). Furthermore:
    - There was a reduction of £0.5m arising from COVID-19.
    - There was a £0.2m reduction in income for [redacted], which has been closed for most of the year.
    - A £0.1m reduction at [redacted] where the slaughter was suspended for most of the year.

  - Other smaller reductions totalling £0.7m e.g. [redacted] (leakage in 18/19 and before), [redacted] and [redacted] consumption reduction in summer of 2019).
  - 2018/19 income had an increase of c£0.2m for the extremely hot weather in the summer of 2018.
- For measured sewerage, there was a 3.18% tariff increase against 2018/19 (equivalent to around £0.7m). Again, as in the analysis against budget, the big movements against the previous year were:
  - There was a reduction of £0.2m for reduced income arising from COVID-19.
  - In 2018/19, there was a £0.5m decrease for laundrette income; in 2019/20, there was a £0.9m write-back of laundrette income. Therefore, a £1.4m swing.
  - A number of hospitals had increased consumption coming to c£0.3m e.g. [redacted]
  - Reduction in [redacted] income (c£0.2m) arising from leakage in previous years.
  - There was £0.1m release of provisions in 18/19.
  - 2018/19 income had an increase of c£0.1m for the extremely hot weather in the summer of 2018.
- 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 £0.3m.
  - In 2019/20, a £0.1m reduced income arising from COVID-19.
  - In 2018/19, there was a £0.2m increase for laundrette income; in 2020/21, there was a £0.4m write-off of laundrette income. Therefore, a £0.6m swing.
  - There was a £0.2m reduction for [redacted] income (where the kill was suspended for most of the financial year) and [redacted] (strengths much reduced).
  - At the same time, consumption increases of £0.2m at the [redacted] site and at [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 2020:

Measured and unmeasured income	
	£m
Billed income	69.3
Movement in accrued income	0.3
Reduction in accrued income due to COVID-19	(0.8)
2020/21 unmeasured billing deferred	(2.5)
Movement in referred bills	(0.1)
Provisions released	0.2
Belfast Office Properties provision release	0.1
Laundrette provision release	0.9
Total income per accounts	67.4
Accrued income at 31 March 2020 represented 20% (2019: 21%) of annual billed income.	

Trade effluent	
	£m
Billed income	8.6
Movement in accrued income	0.1
Reduction in accrued income due to COVID-19	(0.1)
Laundrette provision release	(0.4)
Total income per accounts	8.2

Accrued income at 31 March 2020 represented 11% (2019: 11%) 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 2019/20, and are not expected to recur:

- Provisions released – released in 2019/20

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.
- Reduction in accrued income due to COVID-19 – this is due to be released in 2020/21.
- 2020/21 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.
- Laundrette provision – with the project due to get under way in 2020/21, there will be movement in the provision during the year.

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 2019/20 on income reporting.

Balance Sheet Nominal Ledger Accounts

The table below gives details of the relevant balance sheet accounts as at 31 March 2020, together with a comparison to the balances as at 31 March 2019.

	Balance 2019/20 £m	Balance 2018/19 £m	Variance £m
Debtors	8.5	7.9	0.6
Bad debt provision	(2.3)	(1.5)	(0.8)

Within the £0.6m increase in debtors there was:

- An increase £0.2m in debit balances, largely due to decreased cash in the month of March, following the outbreak of COVID-19.
- An decrease of £0.3m in credit balances;

There was an increase in the bad debts provision, largely due to:

- An additional provision put in place to cover the estimated risk of non-payment arising from the COVID-19 pandemic.

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 that 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 percentage to either increase or decrease the accrual, depending on the percentage 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.

Echo performs a high-level reconciliation 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 2020 adjustments in Appendix H).
The accrued income in the last two years has been:

	Accrued Income 2019/20 £m	**Accrued Income 2018/19 £m**	**Variance £m**
Accrued income:			
Measured water and sewerage	10.9	10.4	0.5
Trade effluent	1.0	1.3	(0.3)
TOTAL ACCRUED INCOME	**11.9**	**11.7**	**0.2**

The rise of £0.2m against the previous year can be explained as follows:

- There was a £0.8m decrease in MW and MS, being the estimated reduction in accrued income arising from the COVID-19 lockdown.
- A £0.3m increase in MS accrued income, reflecting increased average daily consumption.
- For MS, there was a £0.9m increase arising from a decrease for refunds expected, arising from the laundrette project.
- For trade effluent, there has been a £0.4m decrease in the income expected from the laundrette project.

Subsidy Income

In 2019/20, NI Water had total subsidy income of £309.9m. This was broken down as follows:

- £287.9m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.2m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £16.8m 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 that 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 2019/20 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 £22.6m was invoiced in 2019/20 to DfI, compared to £21.9m in 2018/19. 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	£0.4768 / m^3	£0.2241 / m^3	
Cost of Run off	£15,412,654	£7,143,144	£22,555,798

Non-tariff Basket Income

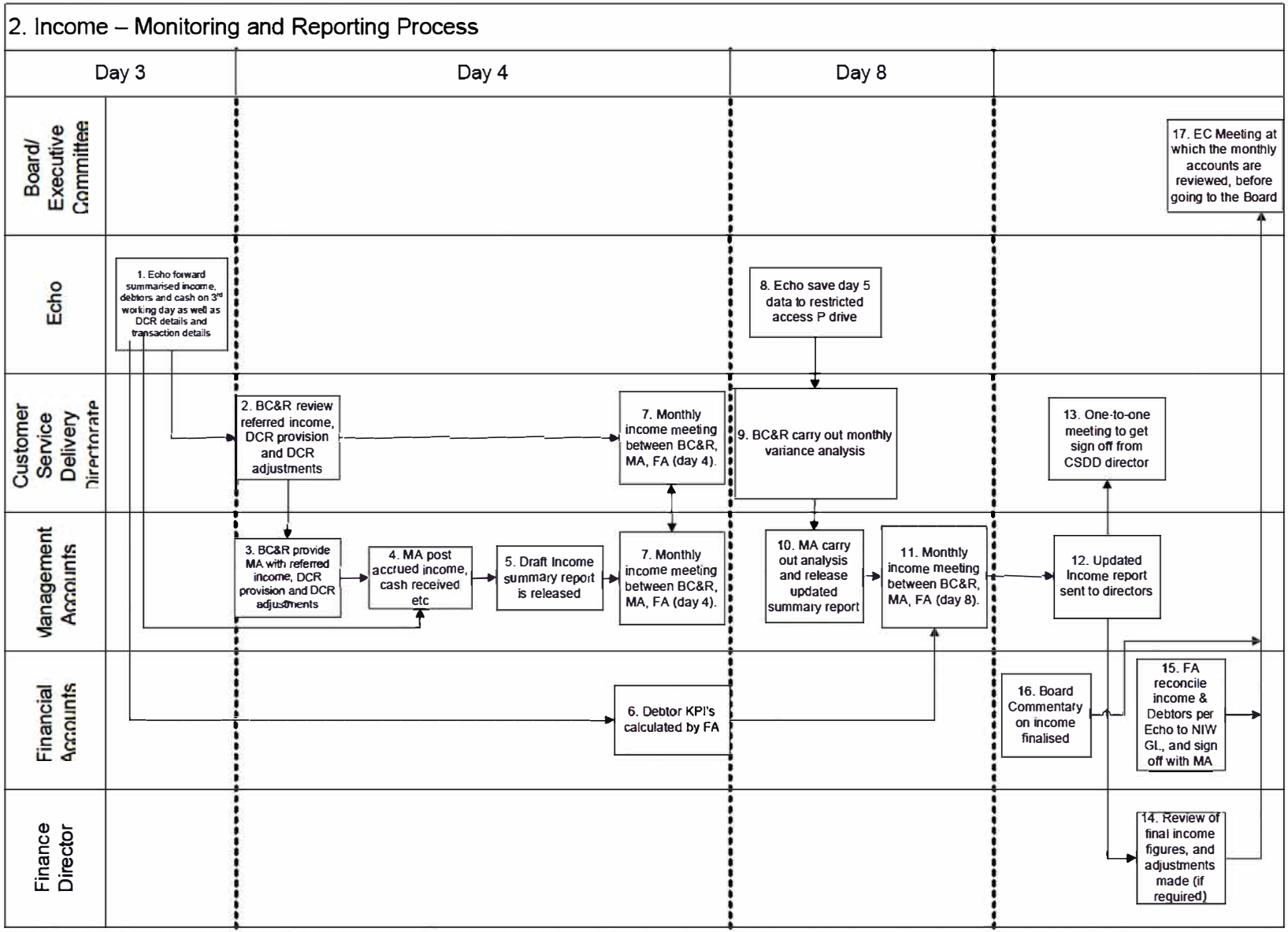
There is no net income movement out of the tariff basket for either water or sewerage.

Other Income

Other income, outside of IFRIC18 and IFRS15 income, was £5.2m for the 2019/20 year, against a budget of £5.0m, largely due to increases in rechargeable works (£0.1m) and in various areas of Developer Services, e.g. standpipe hire, network capacity checks. Within non-regulated income, the fall in vehicle maintenance income was covered off by increases in aerial site income and lab analysis work.

The increase in sundry income from the 2018/19 figure was also £0.2m, with, again, increases in the likes of standpipe hire and network capacity checks. Here the fall in vehicle maintenance income was covered by an increase in electricity generation. A new management charge to NIW Alpha generated £0.2m of income, which was not in place for AIR19.

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 2020

Appendix D – Reconciliation of Debtors account on Oracle

NORTHERN IRELAND WATER LIMITED AS AT 31 MARCH 2020	
Summary of Debtors	
Water & Sewerage Debtors GL code 1210	**Mar-20**
Opening Balance	**£8,304,281.93**
Take on Bills/New Bills- TOTAL	**£5,921,772.98**
Take on Bills/New Bills- Sewerage	1,169,868.96
Take on Bills/New Bills- Water	2,073,769.00
Take on Bills/New Bills- VAT	95,469.38
Annual Billing	2,514,793.95
Annual Billing - VAT	67,871.69
Discounts	0.00
System Adjustments- Total	**£1,023,638.17**
System Adjustments- Sewerage	226,376.58
System Adjustments- Water	718,450.41
System Adjustments- VAT	78,811.18
Manual Adjustments- Total	**-£105,085.90**
Manual Adjustments- Sewerage	(59,729.32)
Manual Adjustments- Water	(45,039.52)
Manual Adjustments- VAT	(317.06)
Write Off Adjustments Total	**£2,342.18**
Write Off Adjustments- Sewerage	**(3.20)**
Write Off Adjustments- Water	**2,345.38**
Write Off Adjustments- VAT	**0.00**
NIWS Bad Debt Authorised Write Off- Total	**-£37,958.79**
NIWS Authorised Write Off- Sewerage	(18,714.62)
NIWS Authorised Write Off- Water	(17,844.85)
NIWS Authorised Write Off- VAT	(1,399.32)
Net Cash	**(5,986,675.22)**
Refunds	328,477.83
Water & Sewerage GL code 1210 Closing Balance	**£9,450,793.18**
Check	
Metered & Unmetered Water & Sewerage Debtors	**£9,450,793.18**
(As per Echo)	
Per Tb GL code 1210	**7,497,791.89**
Variance	**£1,953,001.29**
Due to	
Variance (Oct = w/off Income 0708 in Oct08)	
Referred Bills **NOT** Recognised NET	(102,703.10)
Write-off of mixed supply debt > 3 years	(300,000.00)
System Adjustment Reduction	(1,550,000.00)
Various MS Adjustments	
Unknown	-£298.19
Trade Effluent Debtors GL code 1213	
Opening Balance	**£1,113,951.47**
Take on Bills/New Bills	622,536.28
Referred Bills	
Annual Billing	
System Adjustments	**-£698.54**
Manual Adjustments	**£0.00**
Write Off Adjustments	
NIWS Authorised Bad Debt Write Off	**-£275.70**
Net Cash	**-£697,578.47**
Refunds	**£0.00**
Trade Effluent GL code 1213 Closing Balance	**£1,037,935.04**
Variance	**-£14.05**
Per Trial Balance general ledger code 1213	**£1,037,949.09**
Due to	
Trade Effluent	
Referred Bills	
Total Opening Balance GL code 1213 & 1210	**£9,418,233.40**
Take on Bills/New Bills	**£4,029,515.31**
Annual Billing	**£2,514,793.95**
Discounts	**£0.00**
System Adjustments	**£1,022,939.63**
Manual Adjustments	**-£105,085.90**
Write Off Adjustments	**£2,342.18**
NIWS Authorised Bad Debt Write Off	**-£38,234.49**
Net Cash	**-£6,684,253.69**
Refunds	**£328,477.83**
Total Closing Balance GL code 1213 & 1210	**£10,488,728.22**
Balance as per FN012 Summary	**£10,488,260.33**
Difference	**£467.89**
Echo Debtor Ledger	£10,448,378.54
Balance as per FN012 Summary	**£10,488,260.33**
Suspense Ac FN012 Summary	**£85,816.12**
Difference	**-£125,697.91**
Prepared By [redacted]	
Date 15/4/2020	
Reviewed By	
Date	

E – Reconciliation of Accrued Income Account

NIW Accrued Income	
	Mar-20
Per Echo	
Measured Water	8,530
Measured Sewerage	5,875
Trade Effluent	1,001
Accrued income	**15,407**
Accrued income adjustments	
DCR Provision	-305
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	0
Void back-billing	-70
Laundrette project	-65
Belfast Office Properties	0
Additional [redacted] TE [redacted]	
[redacted]	-30
COVID-19	-840
Accrued income posted	11,891
Per TB (1420/1423)	11,891
Difference	0
Miscellanous accrued Income	842
Interest Received Accrual	0
Total Accrued Income	**12,733**

Appendix F – Reconciliation of Meters

2019/20 - Meter Reconciliation Analysis												
Meters to be read	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Estimated	158	179	120	168	655	898	1,202	728	796	385	721	1,804
No Read	687	685	459	533	557	647	677	678	467	461	543	660
Read	12,290	12,480	10,930	11,344	11,869	11,673	11,379	11,974	10,282	11,169	11,950	10,736
Total Meters	**13,135**	**13,344**	**11,509**	**12,045**	**13,081**	**13,218**	**13,258**	**13,380**	**11,545**	**12,015**	**13,214**	**13,200**
No Reads to be investigated - Code Red	14	6	10	14	16	15	14	15	7	21	3	28
Meters to be billed	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Billable Meters	12,442	12,638	11,049	11,480	12,524	12,564	12,579	12,694	11,078	11,538	12,654	12,546
Non-Billable Meters	693	706	460	565	557	654	679	686	467	477	560	654
Total Meters	13,135	13,344	11,509	12,045	13,081	13,218	13,258	13,380	11,545	12,015	13,214	13,200
Total Meters Billed	12,309	12,519	10,935	11,348	12,372	12,447	12,452	12,558	10,970	11,391	12,514	12,360
Meters to be investigated	133	119	114	132	152	117	127	136	108	147	140	186
Billable Meters	12,442	12,638	11,049	11,480	12,524	12,564	12,579	12,694	11,078	11,538	12,654	12,546
Meters to be investigated - Code Red	36	7	15	27	29	20	29	24	13	36	18	89

	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%	5%	7%	9%	5%	7%	3%	5%	14%
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	94%	94%	95%	94%	91%	88%	86%	89%	89%	93%	90%	81%
Total Meters	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Code Red as % of Meters to be investigated	2%	1%	2%	3%	3%	2%	2%	2%	1%	5%	1%	4%
Estimated % (Excl 'No Reads')	**1%**	**1%**	**1%**	**1%**	**5%**	**7%**	**10%**	**6%**	**7%**	**3%**	**6%**	**14%**

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters as % of Total Meter Records	95%	95%	96%	95%	96%	95%	95%	95%	96%	96%	96%	95%
Non - Billable Meters as % of Total Meter Records	5%	5%	4%	5%	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	27%	6%	13%	20%	19%	17%	23%	18%	12%	24%	13%	48%

Appendix G – Reconciliation of invoices and system adjustments as at 31 March 2020

	Trans Rpt	GL Posting	Variance
Measured Water	2,746,180	2,746,180	0
Measured Sewerage	1,333,195	1,333,195	0
Unmeasured Water	1,163,100	1,163,100	0
Unmeasured Sewerage	1,358,358	1,358,358	0
TE	621,838	621,838	0
Sub-total	7,222,670	7,222,670	0
Discount	0	0	0
VAT	241,835	241,835	(0)
TOTAL	**7,464,505**	**7,464,505**	**0**

Appendix H – Accrued Income Adjustments at 31 March 2020

	Custome	Meter F	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 Accru
Per DCR	9709386	944700	[redacted]	Hospitals	20mm/.75in	Six Monthly Jun/Dec	91	IND AVE	2,753	30	2,615	30	£17	£3,009	£3,026	£21	£4,749	£4,769	£38	£7,758	£7,796
Correction	9709386	944700	[redacted]	Hospitals	20mm/.75in	Six Monthly Jun/Dec	91	IND AVE	91	1	86	1	£17	£99	£117	£21	£157	£178	£38	£256	£294
														Variance	(£2,910)		Variance	(£4,592)		Variance	(£7,501)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	8466507	303323	[redacted]	Energy prod.oil/gas/elec./	150mm/6.0in	Monthly	12	IND AVE	313	26	0	26	£57	£334	£391	£0	£0	£0	£57	£334	£391
Correction	8466507	303323	[redacted]	Energy prod.oil/gas/elec./	150mm/6.0in	Monthly	12	IND AVE	0	0	0	0	£57	£0	£57	£0	£0	£0	£57	£0	£57
														Variance	(£334)		Variance	£0		Variance	(£334)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	84136	1251939	[redacted]	Food Manuf/Process	100mm/4.0in	Six Monthly Feb/Aug	55	IND AVE	1,784	32	0	32	£183	£1,917	£2,100	£0	£0	£0	£183	£1,917	£2,100
Correction	84136	1251939	[redacted]	Food Manuf/Process	100mm/4.0in	Six Monthly Feb/Aug	55	IND AVE	7,700	140	0	140	£183	£8,275	£8,457	£0	£0	£0	£183	£8,275	£8,457
														Variance	£6,357		Variance	£0		Variance	£6,357
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	46791	6550	[redacted]	Hospitals	75mm/3.0in	Six Monthly May/Nov	155	IND AVE	4,690	30	4,456	30	£284	£5,126	£5,410	£335	£8,090	£8,426	£620	£13,216	£13,836
Correction	46791	6550	[redacted]	Hospitals	75mm/3.0in	Six Monthly May/Nov	155	IND AVE	310	2	295	2	£284	£339	£623	£335	£535	£870	£620	£874	£1,493
														Variance	(£4,787)		Variance	(£7,556)		Variance	(£12,343)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	9722981	818634	[redacted]	Car Washes/Valets	40mm/1.5in	Six Monthly Jun/Dec	104	READING	1,696	16	1,696	16	£61	£1,791	£1,853	£72	£0	£72	£134	£1,791	£1,925
Correction	9722981	818634	[redacted]	Car Washes/Valets	40mm/1.5in	Six Monthly Jun/Dec	104	READING	832	8	790	8	£61	£879	£940	£72	£0	£72	£134	£879	£1,012
														Variance	(£913)		Variance	£0		Variance	(£913)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	10901	1402178	[redacted]	Unspecified Agriculture/ Fc	15mm/.50in	Six Monthly May/Nov	153	READING	4,320	28	0	28	£29	£4,722	£4,751	£0	£0	£0	£29	£4,722	£4,751
Correction	10901	1402178	[redacted]	Unspecified Agriculture/ Fc	15mm/.50in	Six Monthly May/Nov	153	READING	765	5	0	5	£29	£836	£865	£0	£0	£0	£29	£836	£865
														Variance	(£3,886)		Variance	£0		Variance	(£3,886)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	9690978	1251957	[redacted]	Restaurants/Cafes	50mm/2.0in	Six Monthly Mar/Sep	25	READING	473	19	449	19	£23	£502	£525	£27	£792	£819	£50	£1,293	£1,344
Correction	9690978	1251957	[redacted]	Restaurants/Cafes	50mm/2.0in	Six Monthly Mar/Sep	25	READING	125	5	119	5	£23	£133	£156	£27	£209	£237	£50	£342	£392
														Variance	(£369)		Variance	(£582)		Variance	(£951)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	46227	8434	[redacted]	Drinks Manufacturing	100mm/4.0in	Monthly	31	IND AVE	757	24	757	24	£103	£827	£930	£121	£458	£579	£224	£1,285	£1,509
Correction	46227	8434	[redacted]	Drinks Manufacturing	100mm/4.0in	Monthly	31	IND AVE	5,580	180	5,301	180	£103	£6,099	£6,202	£121	£3,205	£3,326	£224	£9,304	£9,528
														Variance	£5,272		Variance	£2,747		Variance	£8,019
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	68661	796691	[redacted]	Food Manuf/Process	50mm/2.0in	Six Monthly May/Nov	146	IND AVE	4,735	32	4,735	32	£135	£5,000	£5,135	£160	£550	£710	£295	£5,551	£5,846
Correction	68661	796691	[redacted]	Food Manuf/Process	50mm/2.0in	Six Monthly May/Nov	146	IND AVE	21,900	150	20,805	150	£135	£23,128	£23,263	£160	£2,418	£2,578	£295	£25,546	£25,840
														Variance	£18,127		Variance	£1,867		Variance	£19,995
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	6599300	1393862	[redacted]	Hotels	75mm/3.0in	Six Monthly Mar/Sep	183	READING	0	0	0	0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Correction	6599300	1393862	[redacted]	Hotels	75mm/3.0in	Six Monthly Mar/Sep	183	READING	9,150	50	9,150	50	£0	£0	£0	£0	£16,616	£16,616	£0	£16,616	£16,616
														Variance	£0		Variance	£16,616		Variance	£16,616
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	1282435	298840	[redacted]	Dept of Agric&Rural	150mm/6.0in	Six Monthly May/Nov	147	IND AVE	665	5	632	5	£694	£639	£1,333	£820	£1,010	£1,829	£1,513	£1,649	£3,162
Correction	1282435	298840	[redacted]	Dept of Agric&Rural	150mm/6.0in	Six Monthly May/Nov	147	IND AVE	13,230	90	12,569	90	£694	£12,721	£13,415	£820	£20,080	£20,900	£1,513	£32,801	£34,314
														Variance	£12,081		Variance	£19,070		Variance	£31,152
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	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	620002	1410835	[redacted]	Drinks Manufacturing	25mm/1.0in	Six Monthly May/Nov	120	IND AVE	2,929	24	2,783	24	£38	£3,058	£3,096	£46	£4,827	£4,873	£84	£7,884	£7,969
Correction	620002	1410835	[redacted]	Drinks Manufacturing	25mm/1.0in	Six Monthly May/Nov	120	IND AVE	480	4	456	4	£38	£501	£539	£46	£791	£837	£84	£1,292	£1,376
														Variance	(£2,557)		Variance	(£4,036)		Variance	(£6,592)

Appendix H – Accrued Income Adjustments at 31 March 2020 (cont'd)

	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	9700672	1408789	[redacted]	Leisure Complexes	75mm/3.0in	Six Monthly May/Nov	135	IND AVE	843	6	801	6	£248	£921	£1,169	£292	£1,455	£1,747	£540	£2,376	£2,916
Correction	9700672	1408789	[redacted]	Leisure Complexes	75mm/3.0in	Six Monthly May/Nov	135	IND AVE	4,050	30	3,848	30	£248	£4,427	£4,674	£292	£6,987	£7,279	£540	£11,414	£11,953
														Variance	£3,505		Variance	£5,532		Variance	£9,038
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	9730404	1117830	[redacted]	Business sevices	20mm/.75in	Six Monthly Jun/Dec	104	READING	2,269	22	2,156	22	£20	£2,232	£2,252	£24	£3,523	£3,547	£43	£5,755	£5,798
Correction	9730404	1117830	[redacted]	Business sevices	20mm/.75in	Six Monthly Jun/Dec	104	READING	208	2	198	2	£20	£205	£224	£24	£323	£346	£43	£527	£571
														Variance	(£2,027)		Variance	(£3,200)		Variance	(£5,227)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	55390	768716	[redacted]	Hotels	150mm/6.0in	Monthly	31	IND AVE	289	9	275	9	£146	£297	£444	£173	£470	£643	£319	£768	£1,087
Correction	55390	768716	[redacted]	Hotels	150mm/6.0in	Monthly	31	IND AVE	1,705	55	1,620	55	£146	£1,754	£1,900	£173	£2,770	£2,943	£319	£4,524	£4,843
														Variance	£1,457		Variance	£2,300		Variance	£3,757
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	9159741	1382206	[redacted]	Unspecified Other Manufa	15mm/.50in	Six Monthly Apr/Oct	166	READING	3,938	24	0	24	£31	£4,205	£4,236	£0	£0	£0	£31	£4,205	£4,236
Correction	9159741	1382206	[redacted]	Unspecified Other Manufa	15mm/.50in	Six Monthly Apr/Oct	166	READING	332	2	0	2	£31	£354	£386	£0	£0	£0	£31	£354	£386
														Variance	(£3,850)		Variance	£0		Variance	(£3,850)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	9368635	1388352	[redacted]	Food Manuf/Process	15mm/.50in	Six Monthly Feb/Aug	31	READING	16,104	519	0	519	£6	£17,601	£17,606	£0	£0	£0	£6	£17,601	£17,606
Correction	9368635	1388352	[redacted]	Food Manuf/Process	15mm/.50in	Six Monthly Feb/Aug	31	READING	31	1	0	1	£6	£34	£40	£0	£0	£0	£6	£34	£40
														Variance	(£17,567)		Variance	£0		Variance	(£17,567)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	7786438	323382	[redacted]	Food Manuf/Process	15mm/.50in	Six Monthly Jun/Dec	112	IND AVE	3,633	32	0	32	£21	£3,904	£3,925	£0	£0	£0	£21	£3,904	£3,925
Correction	7786438	323382	[redacted]	Food Manuf/Process	15mm/.50in	Six Monthly Jun/Dec	112	IND AVE	336	3	0	3	£21	£361	£382	£0	£0	£0	£21	£361	£382
														Variance	(£3,543)		Variance	£0		Variance	(£3,543)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	100382	402260	[redacted]	Hospitals	100mm/4.0in	Monthly	29	IND AVE	877	30	877	30	£96	£941	£1,037	£114	£1,485	£1,599	£210	£2,427	£2,636
Correction	100382	402260	[redacted]	Hospitals	100mm/4.0in	Monthly	29	IND AVE	2,030	70	1,929	70	£96	£2,178	£2,275	£114	£3,267	£3,380	£210	£5,445	£5,655
														Variance	£1,237		Variance	£1,781		Variance	£3,018
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	252900	781848	[redacted]	Food Manuf/Process	75mm/3.0in	Six Monthly May/Nov	147	IND AVE	4,768	32	4,768	32	£270	£5,124	£5,393	£318	£2,673	£2,991	£588	£7,797	£8,385
Correction	252900	781848	[redacted]	Food Manuf/Process	75mm/3.0in	Six Monthly May/Nov	147	IND AVE	7,350	50	6,983	50	£270	£7,899	£8,168	£318	£3,915	£4,233	£588	£11,813	£12,401
														Variance	£2,775		Variance	£1,242		Variance	£4,016
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	3503528	324860	[redacted]	Chemical Industry	150mm/6.0in	Six Monthly Feb/Aug	31	IND AVE	455	15	455	15	£146	£479	£625	£173	£211	£384	£319	£689	£1,009
Correction	3503528	324860	[redacted]	Chemical Industry	150mm/6.0in	Six Monthly Feb/Aug	31	IND AVE	31	1	29	1	£146	£33	£179	£173	£14	£187	£319	£46	£365
														Variance	(£446)		Variance	(£197)		Variance	(£643)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	3503528	708392	[redacted]	Chemical Industry	100mm/4.0in	Six Monthly Feb/Aug	31	IND AVE	455	15	455	15	£103	£497	£600	£121	£240	£361	£224	£737	£961
Correction	3503528	708392	[redacted]	Chemical Industry	100mm/4.0in	Six Monthly Feb/Aug	31	IND AVE	186	6	177	6	£103	£203	£306	£121	£93	£214	£224	£296	£521
														Variance	(£294)		Variance	(£147)		Variance	(£441)
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	37682	782496	[redacted]	District Council Premises	150mm/6.0in	Six Monthly Feb/Aug	42	IND AVE	103	2	98	2	£198	£0	£198	£234	£0	£234	£432	£0	£432
Correction	37682	782496	[redacted]	District Council Premises	150mm/6.0in	Six Monthly Feb/Aug	42	IND AVE	6,300	150	5,985	150	£198	£0	£198	£234	£0	£234	£432	£0	£432
														Variance	£0		Variance	£0		Variance	£0
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual Da	Read Histo	Water volu	Water volun	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewera	Total accru	Total accrual	Total Accrual
Per DCR	293610	890728	[redacted]	Cross Border Supplies	175mm/7.0in	Six Monthly Jan/Jul	89	READING	2,680	30	0	30	£420	£2,929	£3,349	£0	£0	£0	£420	£2,929	£3,349
Correction	293610	890728	[redacted]	Cross Border Supplies	175mm/7.0in	Six Monthly Jan/Jul	89	READING	178	2	0	2	£420	£195	£615	£0	£0	£0	£420	£195	£615
														Variance	(£2,735)		Variance	£0		Variance	(£2,735)

Appendix H – Accrued Income Adjustments at 31 March 2020 (cont'd)

	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	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/.50in	Six Monthly Jun/Dec	91	IND AVE	847	9	847	9	£0	£0	£0	£0	£968	£968	£0	£968	£96
Correction	411754	1379762		Hotels	15mm/.50in	Six Monthly Jun/Dec	91	IND AVE	2,275	25	2,161	25	£0	£0	£0	£0	£2,470	£2,470	£0	£2,470	£2,47
														Variance	£0		Variance	£1,502		Variance	£1,50
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	31993	291584	[redacted]	Tradesmens Services	100mm/4.0in	Six Monthly Jun/Dec	127	READING	3,109	24	2,954	24	£422	£3,323	£3,744	£497	£5,245	£5,742	£919	£8,587	£9,48
Correction	31993	291584		Tradesmens Services	100mm/4.0in	Six Monthly Jun/Dec	127	READING	254	2	241	2	£422	£271	£693	£497	£428	£925	£919	£700	£1,61
														Variance	(£3,051)		Variance	(£4,816)		Variance	(£7,867
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9157553	39825	[redacted]	General Manufacture	20mm/.75in	Six Monthly Jun/Dec	106	IND AVE	938	9	0	9	£20	£962	£982	£0	£0	£0	£20	£962	£98
Correction	9157553	39825		General Manufacture	20mm/.75in	Six Monthly Jun/Dec	106	IND AVE	3,922	37	0	37	£20	£4,022	£4,042	£0	£0	£0	£20	£4,022	£4,04
														Variance	£3,060		Variance	£0		Variance	£3,06
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9692997	283153	[redacted]	Intensive Units	25mm/1.0in	Six Monthly Apr/Oct	142	IND AVE	327	2	0	2	£45	£272	£317	£0	£0	£0	£45	£272	£31
Correction	9692997	283153		Intensive Units	25mm/1.0in	Six Monthly Apr/Oct	142	IND AVE	4,970	35	0	35	£45	£4,136	£4,182	£0	£0	£0	£45	£4,136	£4,18
														Variance	£3,864		Variance	£0		Variance	£3,86
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	256205	237556	[redacted]	Timber Related Manuf	100mm/4.0in	Six Monthly Apr/Oct	150	IND AVE	369	2	369	2	£498	£250	£748	£587	£1,347	£1,935	£1,085	£1,598	£2,68
Correction	256205	237556		Timber Related Manuf	100mm/4.0in	Six Monthly Apr/Oct	150	IND AVE	6,750	45	6,413	45	£498	£4,579	£5,077	£587	£23,416	£24,004	£1,085	£27,995	£29,08
														Variance	£4,328		Variance	£22,069		Variance	£26,39
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	40780	10124	[redacted]	Dept of Agric&Rural	100mm/4.0in	Six Monthly Feb/Aug	42	IND AVE	190	5	180	5	£139	£183	£322	£164	£287	£451	£304	£469	£77
Correction	40780	10124		Dept of Agric&Rural	100mm/4.0in	Six Monthly Feb/Aug	42	IND AVE	1,260	30	1,197	30	£139	£1,210	£1,350	£164	£1,908	£2,073	£304	£3,119	£3,42
														Variance	£1,028		Variance	£1,621		Variance	£2,64
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	1542251	1046930	[redacted]	Residential Homes	100mm/4.0in	Six Monthly Jan/Jul	77	READING	2,485	32	2,361	32	£256	£1,921	£2,177	£301	£3,033	£3,334	£557	£4,954	£5,51
Correction	1542251	1046930		Residential Homes	100mm/4.0in	Six Monthly Jan/Jul	77	READING	1,155	15	1,097	15	£256	£893	£1,149	£301	£1,409	£1,711	£557	£2,303	£2,86
														Variance	(£1,028)		Variance	(£1,623)		Variance	(£2,652
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8459201	941392	[redacted]	Food Manuf/Process	100mm/4.0in	Six Monthly May/Nov	141	READING	7,708	55	7,323	55	£468	£8,341	£8,809	£552	£12,467	£13,019	£1,020	£20,808	£21,82
Correction	8459201	941392		Food Manuf/Process	100mm/4.0in	Six Monthly May/Nov	141	READING	423	3	402	3	£468	£458	£926	£552	£684	£1,236	£1,020	£1,142	£2,16
														Variance	(£7,883)		Variance	(£11,783)		Variance	(£19,666
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	40369	10572	[redacted]	School Education	50mm/2.0in	Six Monthly Feb/Aug	47	READING	1,094	23	1,039	23	£43	£1,167	£1,211	£51	£1,843	£1,895	£95	£3,011	£3,10
Correction	40369	10572		School Education	50mm/2.0in	Six Monthly Feb/Aug	47	READING	376	8	357	8	£43	£401	£445	£51	£634	£685	£95	£1,035	£1,13
														Variance	(£766)		Variance	(£1,210)		Variance	(£1,976
	Customer R	Meter Ref	Customer / Company Name	Industry Code	Pipe Size	Read Frequency	Accrual D	Read Hist	Water volu	Water volur	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage S	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	5785233	912770	[redacted]	School Education	15mm/.50in	Six Monthly Jan/Jul	68	READING	1,564	23	1,486	23	£0	£1,709	£1,709	£0	£2,699	£2,699	£0	£4,408	£4,40
Correction	5785233	912770		School Education	15mm/.50in	Six Monthly Jan/Jul	68	READING	340	5	323	5	£0	£372	£372	£0	£587	£587	£0	£958	£95
														Variance	(£1,338)		Variance	(£2,112)		Variance	(£3,450
															Customer specific Accrual Adjs	£2,808		[illegible]			£37,303
															Control Check	£2,808		£34,495			£37,303

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 storm water 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)	0.2241	Run off into Storm water sewers
V (Volumetric)	0.2527	Run off into Combined sewers
R+V	0.4768	

Appendix J – Monthly Income Check Sheet

NI WATER

Income check for March 2020

		ACTION BY	COMPLETE BY
1.	Transaction report for income, bad debt and discount ties up to the GL posting.	[redacted]	03/04/20
2.	DCR listing and TE accrual totals agree to the Table in the Day 3 report.	[redacted]	03/04/20
3.	The number of days in the DCR detailed listing has been increased by the correct number of days in the month.	[redacted]	03/04/20
4.	There are no obvious large incorrect items of accrued income in the DCR listing.	[redacted]	04/04/20
5.	Review the DCR, for where there is volume in m^3, but no £.	[redacted]	03/04/20
6.	Review the DCR, both MW and MS, for any negative items.	[redacted]	03/04/20
7.	Review top 300 customers on DCR for any material over-statement arising from leakage/incorrect meter exchange/faulty meter, etc.	[redacted]	04/04/20
8.	Total for "Ordinary Customers N-stops" agrees total per "Referred Bills Summary" agrees to total per "N-stop Detail".	[redacted]	04/04/20
9.	N-stop detail does not contain any duplicate or triplicate lines.	[redacted]	04/04/20
10.	Debit balance and credit balances in the Day 3 report agree to the debt report.	[redacted]	03/04/20
11.	Cash in the FN012 summary agrees to the cash report.	[redacted]	03/04/20
12.	The FN012 Summary Total has the correct balance c/f and b/f.	[redacted]	03/04/20
13.	Have all the correct adjustments been made for additional provisions/provision release?	[redacted]	06/04/20
14.	Does the summary Excel income report agree to Oracle?	[redacted]	06/04/20

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	900.699	485.766	70.888	1,457.353	1,156.437	1,129.998	76.221	2,362.657	3,820.009
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	-0.943	0.000	-0.259	-1.202	0.000	0.000	-0.165	-0.165	-1.367
5	Additions	£m	3	41.456	33.181	7.692	82.329	70.207	66.283	11.467	147.957	230.286
6	Gross replacement cost at 31 March	£m	3	941.212	518.947	78.321	1,538.480	1,226.644	1,196.281	87.523	2,510.449	4,048.928
B	**DEPRECIATION**											
7	Depreciation at 1 April	£m	3	89.552	133.046	44.063	266.661	67.777	306.306	50.653	424.736	691.397
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	-0.943	0.000	-0.258	-1.201	0.000	0.000	-0.165	-0.165	-1.366
13	Charge for year	£m	3	10.408	17.696	5.150	33.254	8.222	39.295	3.503	51.020	84.274
14	Depreciation at 31 March	£m	3	99.017	150.742	48.955	298.714	75.999	345.601	53.991	475.591	774.305
15	Net book amount at 31 March	£m	3	842.195	368.204	29.366	1,239.765	1,150.645	850.681	33.532	2,034.858	3,274.623
16	Net book amount at 1 April	£m	3	811.147	352.719	26.825	1,190.691	1,088.660	823.693	25.568	1,937.921	3,128.612

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 2019 have been brought forward from the total closing balances for gross book value and depreciation at 31 March 2019. 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 and mobile plants (vans). All disposals have depreciation in the month of disposal.

Decommissioned Assets

A number of assets (NBV £174,776.96) 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)		**170,455**
Less: expenditure classified as opex under IFRS	-	1,161
Add: Capital maintenance Omega		1,795
Less: leases correction	-	26
Total IFRS expenditure in CWP (incl.) Operations)		**171,063**
Add: Water and sewer connections		4,621
Add: adopted assets – infrastructure		45,249
Add: adopted assets – non-infrastructure		1,464
Add: capitalised interest		5,477
Add: leases addition		2,412
Total additions per statutory accounts		**230,286**
PPE note - additions		179,134
PPE note - customer contributions		46,713
Intangibles note - additions		4,439
Total additions per statutory notes		**230,286**

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 Alpha capital maintenance fund and [redacted] relating to Omega (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 2019. 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 £26,079,513.09 (18/19 IFRS: £26,178,060.90) as at 31 March 2020, 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

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Net cashflow from operating activities	£m	3	181.015	190 580	195.707	170 228	182.677	182.769	221.058	228.677	
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	0.455	
3	Interest paid	£m	3	-42.208	-43.723	-45.339	-46 568	-46.945	-47.537	-49.199	-50.772	
4	Interest in finance lease rentals	£m	3	-11.913	-6 933	-6.824	-6.701	-6.562	-6.406	-18.826	-18 261	
5	Non-equity dividends paid	£m	3	0.000	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	-68 578	
B	**TAXATION**											
7	Taxation (paid)/received	£m	3	0.000	0 000	-0.017	0 000	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	-178 828	
9	Receipts of grants and contributions	£m	3	5.757	6 586	7.333	7 980	11.550	12.910	1.384	4.772	
10	Infrastructure renewals expenditure	£m	3	-31.368	-30.118	-31.557	-20.144	-20.145	-30.250	0.000	0 000	
11	Disposal of fixed assets	£m	3	1.177	1.164	1.046	1 693	1.096	1.536	0.646	1.467	
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	-0 392	
13	Net cashflow from investing activities	£m	3	-155.024	-158 339	-157.798	-126 073	-135.714	-174.082	-184.265	-172 981	
D	**ACQUISITIONS AND DISPOSALS**											
14	Acquisitions and disposals	£m	3	0.000	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	-25 590	
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	-0 006	
17	Net cashflow before financing	£m	3	-59.883	-34 992	-35.173	-32 889	-29.481	-66.313	-53.308	-38.478	
G	**FINANCING**											
18	Capital in finance lease rentals	£m	3	-3.675	-1.473	-1.672	-1 888	-2.122	-2.376	-5.706	-7 028	
19	New bank loans taken out	£m	3	75.000	29 000	36.000	36 000	30.000	69.000	64.000	40 000	
20	Repayment of bank loans	£m	3	0.000	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	0 000	
22	Net cash inflow from financing	£m	3	71.325	27 527	34.328	34.112	27.878	66.624	58.294	32 972	
23	Increase/(decrease) in cash in the year	£m	3	11.442	-7.465	-0.845	1 223	-1.603	0.311	4.986	-5 506	

Table 28 – Cashflow statement

Significant movements from last period

Line 1 - Net cashflow from operating activities

This has increased by £8.388m (3.79%) compared to the previous year's figures in the accounts. 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	142.734
2	Movement in working capital	£m	1.870
3	Depreciation	£m	84.274
4	Current cost profit on sale of fixed assets	£m	(0.467)
5	Other non-cash profit and loss items	£m	1.035
6	Net cash flow from operating activities	£m	229.446

Line 3 – Interest paid

Interest paid has increased by 3.20% from £49.199m to £50.772m. This is consistent with an additional loan drawdown of £40m in 2019-2020. 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)
At 31 March 2020	£1,186,56m (average for the year £1,166.56m)

Line 4 - Interest in finance lease rentals

The PPP project ([redacted]) during 2019-2020 gave rise to [redacted] (2018/19: [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). There was [redacted] of interest payable relating to new finance leases on the implementation of IFRS 16 Leases.

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £3.983m (2.12%). This is consistent with capital expenditure plans for 2019-20 and the movement in capital creditors across the period.

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 £0.006m from the end of 2018-2019 to the end of 2019-2020 with a consequent increase in cashflow. The balance on deposit at the end of 31st March 2020 is £1.276m.

Line 18 - Capital in finance lease rentals.

An amount of [redacted] was made in payment against the Alpha, Omega and Kinnegar PPP finance lease. An amount of [redacted] was made against new finance leases on implementation of IFRS 16 Leases.

Line 19 - New bank loans taken out

In 2019-2020 £40m 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	142.734	
2	Not used											
3	Movement in working capital	£m	3	0.595	8.388	12.045	-9.675	-1 670	-5 910	3.535	0.696	
4	Receipts from other income	£m	3	0.000	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	84.274	
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	-0.467	
7	Infrastructure renewals charge	£m	3	30.761	33.409	32.309	25.286	25 008	25.757	0.000	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	1.440	
9	Net cash flow from operating activities	£m	3	181.015	190.580	195.707	170 228	182 677	182.769	221.058	228.677	

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 2019/20 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/PC15 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 has revised the CIDA allocation manual to reflect the revisions. These are being integrated into the capital projects. NI Water recently developed and implemented a standardised PC21 business planning approach to its CIDA calculation for new schemes via the Investment Planning AND Costing tool or IPAC. It is NI Water's intention that for future projects the IPAC tool is used by its staff and consultants at the inception stage. The IPAC tool facilitates the automatic and consistent application of CIDA across new projects and adherence to the CIDA allocation manual.

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 / Integrated Capital Delivery projects.

During 2019/20 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 attention to be given to the PC21 submission. As a result the same process used in AIR 19 has been adopted for AIR 20.

Capital investment driver allocation amendments

Within the process of reviewing projects for AIR submission the following projects were deemed to have an incorrect CIDA and have been changed on the system.

Proj No.	Proj Name	Original %				Amended %			
		Q	B	E	G	Q	B	E	G
KR663	[redacted] Newtownards, Flood Alleviation	0	30	70	0	0	0	100	0

Assets Adopted at Nil Cost

Sewer adoptions paid by third parties of £45.249m are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £1.464m 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 20 the reported numbers in these two tables are as follows:
  Table 25 – £75.632m
  Table 36 – £75.657m

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 2019/20
c) An element of Capital Interest (Total value £5.477m) 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 – £143.378m
  Table 36 – £143.423m.

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 2019/20
f) An element of Capital Interest (Total value £5.477m) is included in table 25.

Expenditure to reduce leakage

The table below provides a breakdown of the leakage expenditure in 2019/20. This includes the purpose allocations which have followed the principle as set out in the 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	2.800	OPEX
Leakage repair costs - opex	4.500	OPEX
Leakage detection costs - capex	0.298	Base
Leakage infra replacement repair costs - capex	0.644	Base
Leakage detection equip	0.044	Base
Leakage software upgrades and developments	0.003	Base
New leakage technology	0.000	Base
DMA[1] studies	0.000	Base
Trunk Main studies	0.000	SDB Growth
DMA optimisation	0.000	SDB Growth
Water balance asset data assessments	0.000	Base
ELL[2] reviews	0.150	Base
Pressure Management	1.381	SDB Growth
PRV[3] replacements	0.110	Base
GSM[4] Loggers/Meter studies/Meter replacement	0.730	Base
Other	0.037	Base
IFRS Adjustment	-1.161	Base
Total (OPEX)	**7.300**	
Total (Capex)	**2.236**	
Total Leakage investment	**9.536**	

Capital programme variance

The Capital programme for 2019/20 when compared to the PC15 final determination has delivered in the 'Water Service' but under 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 £3.33m (once other funding considerations are taken into consideration), from £138.33m to £135.00m.

The main reasons for variance in 2019/20 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 £0.9m of an overspend in year. The remaining overspend in sub programme 12 has been the result of additional sewer rehabilitation work

[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.

[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.

identified during DAP investigations as well as increased costs associated with the UID & DG5 Programmes resulting in an overspend of around £4.5m. This overspend is an improvement on previous year's figures and shall continue to be monitored and managed on an ongoing basis for the remainder of PC15 and into PC21.

b) Sub Programme 8 continued to have an underspend due to adjustments made to accommodate the Capital Programme in year review. Sub Programmes 1 & 2 were managed to reduce the PC15 early Investment which had already taken place within the Base Maintenance Programme. Sub Programme 16 underspent in 19/20 due to a number of delays relating to land purchase in relation to Ballygowan WwTW and the Ards North WwTW Project.

Year 5 saw the PC15 overspend in base maintenance being managed with an in-year baseline of £82.77m against an actual figure of £78.77m and will continue to be addressed in the final year of PC15.

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.

2019/20 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 2019/20 (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	160.371
Capital works programme expenditure	104.346
Operations Capital from CPMR	28.596
M & G capital from CPMR	12.001
Capitalised Salaries and overheads	15.432
Rounding from ORACLE to CAPTRAX/CPMR	-0.004
Reconciled Total	160.371

During the period (April 2019 – March 2020) there has been Capital income in the form of Grants and Contributions totalling to £11.438m. 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, 18/19, 19/20 and OBR forecast figures for the year 2020/21 (based on March 2020 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 2019)	259.433	264.992	274.908	283.308	290.642	296.765
	1.1%	2.1%	3.7%	3.1%	2.6%	2.1%

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)	17.198	18.575	1.377	7.41
2	Infrastructure renewals expenditure (gross)	22.280	22.537	0.257	1.14
3	Capex: Total quality enhancement programme	10.372	10.510	0.138	1.31
4	Capital expenditure - customer service	9.088	9.015	-0.073	-0.81
5	Capital expenditure - supply demand balance	16.718	15.648	-1.070	-6.84
6	Gross Capital expenditure - Water Service	75.657	76.285	0.628	0.82

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)	38.908	38.172	-0.736	-1.93
8	Infrastructure renewals expenditure (gross)	14.310	14.289	-0.021	-0.15
9	Capex: Total quality enhancement programme	24.448	11.915	-12.533	-105.18
10	Capital expenditure: customer service	7.292	7.590	0.298	3.93
11	Capital expenditure supply demand balance	11.752	12.115	0.363	3.00
12	Gross Capital expenditure - Sewerage Service	96.710	84.081	-12.629	-15.02

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. As well as this, a large variance is observed in the Sewerage Service due to the fact that INTERREG projects to a value of ca£13m are not reported on in the CIM however are included for completeness in the AIR figures.

Sixteen Box Summary

2019/20 Current Actual Projected 16 box summary showing expenditure £m (nominal)

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	8.62	22.54	2.72	9.20	43.08
Water Non-Infrastructure	1.89	18.57	6.30	6.45	33.21
Sewerage Infrastructure	2.77	14.29	4.00	6.60	27.67
Sewerage Non-Infrastructure	9.15	38.17	3.59	5.51	56.42
Totals	22.43	93.57	16.60	27.76	160.37

2019/20 Current Actual Projected 16 box summary in percentages

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	5.4%	14.1%	1.7%	5.7%	26.9%
Water Non-Infrastructure	1.2%	11.6%	3.9%	4.0%	20.7%
Sewerage Infrastructure	1.7%	8.9%	2.5%	4.1%	17.3%
Sewerage Non-Infrastructure	5.7%	23.8%	2.2%	3.4%	35.2%
Totals	14.0%	58.3%	10.4%	17.3%	100.0%

2019/20 Baseline 16 box summary showing expenditure £m (2012/13 prices)

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	10.77	14.55	0.75	6.39	32.45
Water Non-Infrastructure	1.14	21.11	2.24	6.55	31.04
Sewerage Infrastructure	3.85	11.00	1.71	4.22	20.78
Sewerage Non-Infrastructure	7.85	36.11	3.04	6.60	53.60
Totals	23.60	82.77	7.74	23.76	137.88

2019/20 Baseline Projected 16 box summary in percentages

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	7.8%	10.5%	0.5%	4.6%	23.5%
Water Non-Infrastructure	0.8%	15.3%	1.6%	4.8%	22.5%
Sewerage Infrastructure	2.8%	8.0%	1.2%	3.1%	15.1%
Sewerage Non-Infrastructure	5.7%	26.2%	2.2%	4.8%	38.9%
Totals	17.1%	60.0%	5.6%	17.2%	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)

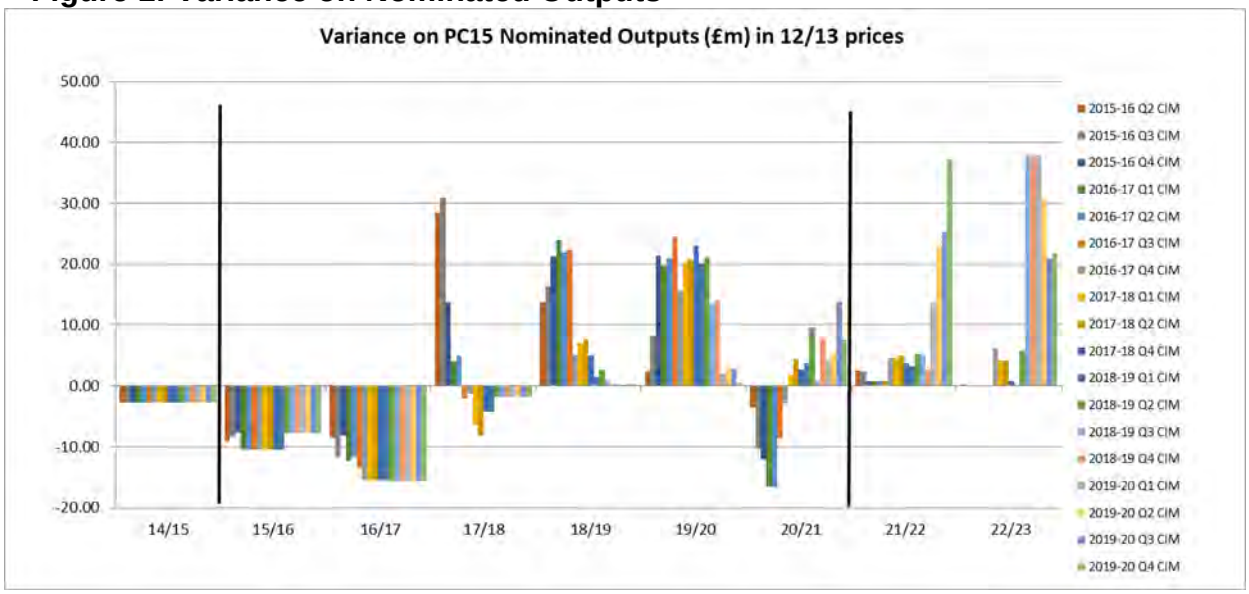
Figure 1 illustrates the movement in the PC15 nominated output projects: this is based on the PC15 FD baseline and assumes a fully funded Final Determination budget with catch-up. In 2014/15 a number of nominated projects were delayed and carried into PC15. In addition, PE reductions have had an impact in PC15 year 1, 2, 3, 4 and 5. The variance showing in 2022/23 is due to spend on KF350 Dungannon WWTW and KR489 Glenmachan Strategic Project Phase 1a Sicily & Marguerite Park Flood Alleviation as well as other PC21 schemes being identified on the CPMR system.

Each year from 2015/16 up until 2017/18 has had a negative variance however, 2018/19 onwards is showing a positive variance to give a cumulative total of -£24.28m to the end of 19/20.

This is reflected in Figure 1: below showing;
-£7.72m in 2015/16 -£15.70m in 2016/17 -£1.77m in 2017/18
£0.28m in 2018/19 £0.62m in 2019/20

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 year 6 in 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 -£16.19m within the PC15 period due to a large reduction in the final year forecast as a result of the Covid-19 restrictions.

Figure 1: Variance on Nominated Outputs



CIM summary Table

Code	Title	Baseline £m (2012/13 prices)	Current actual or projected 2019/20 £m (nominal)	Current actual or projected 2019/20 £m (2012/13 prices using latest OBR RPI forecast)
0	Staff Salaries and on-costs	22.11	15.43	12.99
1	Base maintenance (Water)	4.05	3.93	3.31
2	Base maintenance (sewerage)	18.68	18.35	15.45
3	Water resources	2.19	0.88	0.74
4	Water treatment works	2.05	2.29	1.92
5	Water trunk mains	0.00	0.75	0.63
6	Service reservoirs and clear water tanks	4.86	11.48	9.66
7	Service reservoir rehabilitation	2.51	0.85	0.72
8	Water mains rehabilitation	17.51	18.30	15.40
9	Leakage	2.61	3.41	2.87
10	Ops capital Water	6.05	11.13	9.37
12	Sewerage Maintenance, UIDs, Flooding	11.81	19.38	16.31
15	Wastewater treatment (carryover)	0.00	0.05	0.04
16	Wastewater treatment (new starts)	13.48	9.25	7.78
17	Small wastewater treatment works	1.85	2.96	2.49
18	Ops capital Sewerage	7.15	12.51	10.53
19	Meter installation and maintenance	3.56	1.35	1.14
20	Management and general	10.12	17.09	14.38
23	Minor watermain repairs, requisitions, road schemes and public realm	4.34	4.83	4.06
24	Minor sewer repairs, requisitions, road schemes and public realm	2.90	4.18	3.51
98	Additional Outputs Programme (Enhancement)	0.00	0.00	0.00
99	PC15 balancing line (Base)	0.48	2.00	1.68
Total	**Excluding additional outputs**	**138.33**	**160.37**	**135.00**
Total	**Including additional outputs**	**138.33**	**160.37**	**135.00**

Nominated Outputs

Refer to Table 40a and associated commentary for full detail on nominated outputs over Year 5 of the PC15 period.

Water

Beneficial Use was claimed on the following Water Treatment Works during 2019/20:

Scheme	Site	Quarter claimed
JC390	Rathlin Borehole	2019/20 Q3

Beneficial Use was claimed on the following Clear Water Tanks during 2019/20:

Scheme	Site	Quarter claimed
JB709	Lough Fea CWT	2019/20 Q4

Sewerage

Beneficial Use was claimed on the following UIDs during 2019/20:

Ref	UID	Scheme	UID Name	Quarter claimed
1	387	KA247	Crumlin Town WwPS	2019/20 Q2
2	351	KR504	Portaferry Road, Newtownards, 1 WWPS	2019/20 Q3
3	9	KF397	Killylea WWPS	2019/20 Q4

Beneficial Use was achieved at the following Waste Water Treatment Works during 2019/20:

Scheme	Site	Quarter claimed
KC302	Ballintoy WwTW	2019/20 Q4
KF406	Dungannon WwTW (Phase1)	2019/20 Q3

Beneficial Use was achieved at the following Waste Water Treatment Works from the Rural WwTW Programme during 19/20:

Scheme	Site	CAR ID	Quarter claimed
KI556	Dundrod WwTW	S02153	2019/20 Q2
KI556	Mullyroddan WwTW	S02851	2019/20 Q2
KI556	Broagh WwTW	S01607	2019/20 Q2
KI556	Mayboy	S01163	2019/20 Q1
KI556	Mossvale Terrace	S02153	2019/20 Q3
KI556	Ballee Road	S04091	2019/20 Q3
KI556	Gortaclady Cottages	S01575	2019/20 Q3
KI556	Tartaraghan	S02421	2019/20 Q4
KI556	Beagh	S01605	2019/20 Q4

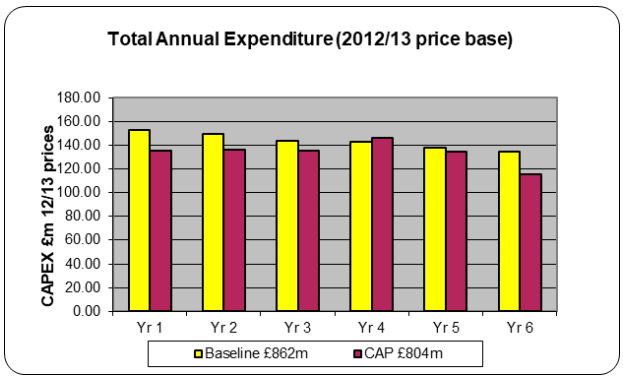
Regulatory Dashboard

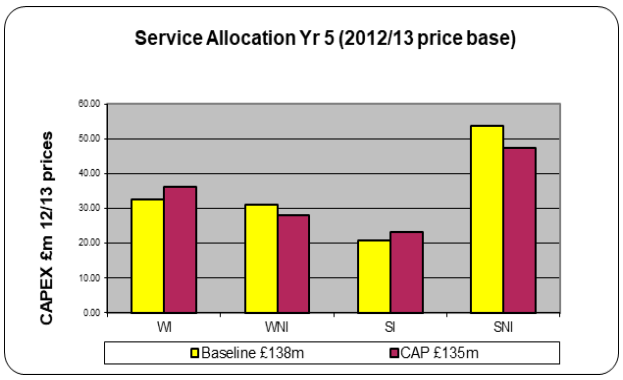
Figure 2 is an extract of the Regulatory Dashboard for period to end of June 2019/20. Only graphs that are currently meaningful have been included. 2012/13 prices are used in the graphs and the following is a summary of the main points to note:

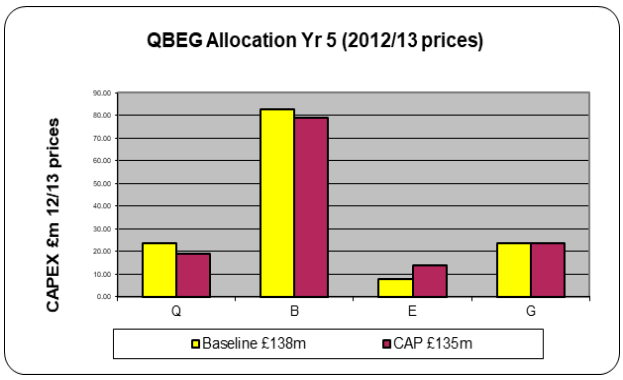
- Graph 1: Total Annual Expenditure. The Graph shows a £3.33m decrease in 2019/20 funding available, when the baseline funding and Current Actual Projected are stated in 2012/13 terms.
- Graph 2: Service allocation. Service allocation for 2019/20 shows an element of imbalance between water and wastewater: Water Infrastructure (WI) is currently slightly above the Baseline whereas Water Non-infrastructure (WNI) is currently below the baseline. Sewerage Infrastructure (SI) is above the baseline and Sewerage non-infrastructure (SNI) is below the baseline profile.

Graph 3: QBEG. 2019/20 indicates £78.77m actual expenditure on base against a £82.77m baseline. This £4.00m variance shows an ongoing improvement and is the result of a concerted effort to realign the Base Expenditure across the PC15 Profile.

Figure 2: 2019-20 Q2 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.

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 balanced 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. No additional solar installations were progressed in 19/20 FY.

Dunore WTW - Solar Photo Voltaic (5MW)
Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £7.9
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 best and final offer (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 EC 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 (£635k final benefits) 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

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. No further work was completed on this initiative in the 19/20 FY.

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 completed for both the Private Wire and Virtual PPA arrangements by the end of the 20/21 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 the Water Pumping programme is being developed taking into account the learnings of Phase 1 (under JI069). Energy audits were completed at two WPS sites to assist in identifying further WPS efficiencies – these audits were funded under JI075.

Further work on pump efficiency has taken place in 19/20 FY to identify poor performing sites so as corrective action can be taken. Audits have taken place at over 20 sites to understand efficiency performance and determine if capital investment is required. An energy performance dashboard is in development to help better understand site performance and where pump improvement work needs to be targeted.

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.

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. 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. By implementing ToD pumping at 9 No sites in 19/20 FY savings of c£25k will be achieved.

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 Performance staff will be highlighting sites that have poor pump performance.

Source Optimisation

Source Optimisation work commenced in 19/20 FY which entails maximising the use of our raw water at our upland sources (when conditions allow) which reduces the volume of raw water pumping at our low level sources. This approach has allowed NIW to maximise energy savings at a number of low level WTW's in the 19/20 FY with further savings to be realised in 20/21 FY.

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 £7k in 19/20 FY. No further investment was made in this initiative 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 and these have been progressed under NA061 in 19/20 FY.

Optimising pumping at WwPS (NA061)
M&G Funding was secured during 19/20 FY to optimise pumping at WwPS sites. To the end of March, 8 No. sites had Best Efficiency Point (BEP) pumping control installed where pumps had PLC modifications that allowed them to 'search' for the most efficient point to pump at for any given flow. Early indications for this work are positive with plans to roll out at additional sites once the Covid 19 essential work restrictions are lifted.

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.

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, 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 have undertaken 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. To the end of March 2020 – RTC technology was installed at 8 No. WwTW's, with a further 5 No. sites to go live once Covid 19 restrictions are lifted. Process Control measures were implemented at 7 No WwTW's with pump refurbishment work completed at one large WwPS. Financial benefits, with regard to a reduction in kWh/M3 treated, will be captured for this work during the 19/20 & 20/21 FY's.

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 a 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. During the 20/21 FY the PPP Energy Gains report recommendations will be rolled out at a number of Omega sites where energy efficiency savings will be realised as a result of this work.

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 completed a programme of work at Screw Pumps to reduce consumption (kWh) at Belfast & Culmore WwTWs. The total benefits realisation from this work is outlined as c£115k.

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 – this was achieved in November 2019. 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. NIW achieved this accreditation in the 19/20 FY.
- 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. The eSight application is now being used in NI Water as an MM&T analysis tool with Power BI also being used to review multiple sites across the portfolio.
- 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.

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."

3.2. 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.

3.2.1. 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.

3.2.2. 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.

4. 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 invested c. £825k in energy efficiency initiatives in the 19/20 FY relating to Water & Wastewater efficiency projects.

NI Water is seeing encouraging results from these investments. Overall electricity consumption within NI Water has out turned at 290GWhh in 17/18 and 286GWh in 18/19 FY. The outturn in 19/20 was **291GWh.**

Up to 31 March 2020, cumulative energy efficiency benefits over the PC15 period amount to circa £3.7m with further efficiencies to be realised in the final year of PC15.

5. 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 reduced use and increased income to ensure the PC15 Energy Efficiency target of £4.1m is achieved.

6. 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	0.003	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	0.003	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	EP017	Electricity generation from wind power or alternative green energy solution	2.176	1.188	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

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	BE017	Energy M&G	0.000	0.008	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
Cleanwater	JI032	Buildings, water treatment sites - water regulation compliance & energy efficiency	1.822	0.217	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 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.	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
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	0.043	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 efficient pumping practices and reduce overall costs.			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
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	0.008	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 and therefore reduced investment required. 5 Wastewater sites completed under KI514 with energy benefits estimated at £40k with investment of £32k.	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
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 outcome of outcome of trends from data and success of data verification.	0	0	100	0
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

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	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	8.122	N	Completion of MW solar farm at Dunore Point WTW in 17/18 FY.	0	0	100	0
Wastewater	KI626	Energy Audit Implementation	0	1.275	N	Implementation capital funding following Water & Wastewater Audits	0	0	100	0
Water & Wastewater Efficiency	NA061	RTC and Pumping Efficiency	0	£0.5	N	Implementation of RTC at 2 No WwTW sites and Water & Wastewater Pumping efficiency			100	
Total			**7.671**	**12.485**						

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 expenditure, nominal (£m)	20/21 onwards forecast spend nominal (£m)
Renewable	JI040	Recovering energy within the water distribution syst	0.003	0	0	0	0	0
Renewable	JI041	Hydro power from raw water	0.009	0	0.03	-0.009	0	0
Renewable	EP017	Electricity generation from wind power or alternativ	0.003	1.173	0.018	-0.011	0.005	0
Renewable	BE017	Energy M&G	0.012	-0.002	-0.002	0	0	0
Cleanwater	JI032	Buildings, water treatment sites - water regulation c	0.022	0.028	0.133	0.037	-0.003	0
Cleanwater	JI032	Water regulation compliance	0	0	0	0	0	0
Cleanwater	JI032	Energy efficiency	0	0	0	0	0	0
Cleanwater	JI069	WPS Pump Efficiency Capital Investment Phase 1	0.432	0.064	0.006	0	0	0
Cleanwater	JI075	WPS Pump Efficiency Capital Investment Phase 2	0.037	0	0.006	0	0	0
Cleanwater	JI071	Electrical Sub-meters (water)	0.007	0	0	0	0	0
Wastewater	KI514	Buildings, wastewater treatment sites - water reg. cc	0	0	0	0.034	-0.026	0
Wastewater	KI514	Water regulation compliance	0	0	0	0	0	0
Wastewater	KI514	Energy efficiency	0.023	0.061	0.001	0	0	0
Wastewater	KI517	Appraisal of Energy Efficiency at Waste Water Pump	0.003	0	0	0	0	0
Wastewater	KI553	Energy efficiency at wastewater pumping stations	0	0	0	0	0	0
Wastewater	KI545	Electrical Sub-meters (wastewater)	0.011	0	-0.001	0	0	0
Wastewater	PL005	Energy Efficiency - Process Optimisation	0.176	0.072	0.004	0.001	0	0
Wastewater	BN048	Energy Efficiency - Process Optimisation	0	0.1	0	0	0	0
Renewable	JA312	Dunore Point WTW Renewable Energy	0	0	7.53	0.592	0	0
Wastewater	KI626	PC21 Energy Efficiency Programme	0	0	0	0.300	0.846	0.129
Total			**0.982**	**1.54**	**7.862**	**0.944**	**0.822**	**0.129**

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	0.032	0.228	0.259				0.259
2	Water treatment works	£m	3		2.959	2.959				2.959
3	Water distribution mains	£m	3	19.487	1.661	21.148				21.148
4	Service reservoirs and water towers	£m	3		8.774	8.774				8.774
5	Pumping stations	£m	3		1.206	1.206				1.206
6	Water management and general	£m	3	0.900	0.932	1.833				1.833
7	Sewerage	£m	3				57.620	1.649	59.269	59 269
8	Sea outfalls and headworks	£m	3				0.010	0.026	0.035	0.035
9	Sewage treatment works	£m	3					21.190	21.190	21.190
10	Sludge treatment works	£m	3					0.495	0.495	0.495
11	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
12	In-line pumping stations	£m	3					5.344	5.344	5.344
13	Terminal pumping stations	£m	3					0.217	0.217	0.217
14	Sewerage management and general	£m	3				1.104	2.549	3.653	3.653
15	Total infrastructure additions (Enhancement)	£m	3	20.419		20.419	58.734		58.734	79.153
16	Total non-infrastructure additions (Enhancement)	£m	3		15.760	15.760		31.470	31.470	47 230
17	Total additions (Enhancement)	£m	3	20.419	15.760	36.178	58.734	31.470	90.204	126 382
B	NIW BASE SERVICE PROVISION									
18	Water resource facilities	£m	3	0.866	0.089	0.955				0.955
19	Water treatment works	£m	3		3.782	3.782				3.782
20	Water distribution mains	£m	3	18.481	0.038	18.518				18 518
21	Service reservoirs and water towers	£m	3		3.844	3.844				3.844
22	Pumping stations	£m	3		2.276	2.276				2.276
23	Water management and general	£m	3	2.833	7.169	10.002				10 002
24	Sewerage	£m	3				10.491	0.005	10.496	10.496
25	Sea outfalls and headworks	£m	3				0.000	0.001	0.001	0.001
26	Sewage treatment works	£m	3					25.727	25.727	25.727
27	Sludge treatment works	£m	3					0.605	0.605	0.605
28	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
29	In-line pumping stations	£m	3					5.379	5.379	5.379
30	Terminal pumping stations	£m	3					0.255	0.255	0.255
31	Sewerage management and general	£m	3				3.809	6.936	10.745	10.745
32	Total infrastructure renewals (Base)	£m	3	22.180		22.180	14.300		14.300	36.479
33	Total non-infrastructure expenditure (Base)	£m	3		17.198	17.198		38.908	38.908	56.106
34	Total expenditure (Base service provision)	£m	3	22.180	17.198	39.378	14.300	38.908	53.208	92 586

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.

NOR HERN IRELAND WA ER LIMI ED ANNUAL INFORMA ION RE URN

ANNUAL NFORMA ION RE URN ABLE 33 FINANCIAL MEASURES (HIS OR C COS ACCOUN ING)
DEPRECIA ON CHARGE BY ASSE YPE (NIW Only)

	1	2	3		5	6	6	7		9	10	11	12	13	1	15	15	16		18	19	20	21	22	23	2	2	25		27
	Water Service										Sewerage Service										otal									
DESCRIP ION	UNI S	DP	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
A DEPRECIA ION CHARGE FOR HE YEAR																														
1 HCD as at 31 March of the year	£m	3	80.086	7.905	33. 76	38.517	16.635	16.839	28.222		B3		66.802	83.520	66.627	67.861	35.670	36.1 1	5.5 9		B3		1 6.886	131. 25	100.103	106.378	52.305	52.980	73.771		B3	
2 HCD on additions (enhancement assets) post 1 April 201	£m	3								0.172	B3									0.586	B3									0.758	B3	
3 HCD on additions (MNI assets) post 1 April 201	£m	3								0 707	B3									1 271	B3									1.978	B3	
Total deprec ation charge for the year	£m	3								0 879	B3									1.857	B3									2.736	B3	
5 Total deprec ation charged	£m	3	80.086	7.905	33. 76	38.517	16.635	16.839	28.222	29 363	B3		66.802	83.520	66.627	67.861	35.670	36.1 1	5.5 9	6.333	B3		1 6.888	131. 25	100.103	106.378	52.305	52.980	73.771	75.696	B3	

	1	2	3		5	6	6	7		9	10	11	12	13	1	15	15	16		18	19	20	21	22	23	2	2	25		27
	Water Service										Sewerage Service										otal									
DESCRIP ION	UNI S	DP	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
B EXPENDI URE AND PROVISION																														
6 Infrastructure renewa s expenditure	£m	3	22.593	22.391	23.055	11.13	19. 97	17.015	17.726	22 299	B2		8.775	7.727	8.502	9.010	10. 3	13.235	1 .86	1 .280	B2		31 368	30.118	31.557	20.1	29.931	30.250	32.590	36.579	B2	
7 Infrastructure renewa s charges	£m	3	19.902	23.935	22. 88	1 . 10	10.253	1 .679	15.077	15 325	C5		10.859	9. 7	9.821	10.876	1 .755	11.078	11.379	11.586	C5		30 761	33. 09	32.309	25.286	25.008	25.757	26. 56	26.891	C5	
8 Infrastructure renewa s prepayment/ (accrual)	£m	3	12.13	10.590	11.157	7.881	17.125	19. 62	22.111	29 085	C5		-10.312	-12.059	-13.378	-15.2	-19.565	-17. 08	-13.923	-11.209	C5		1 822	-1. 69	-2.221	-7.363	-2. 0	2.05	8.188	17.876	C5	

NOR HERN RELAND WA ER L MI ED ANNUAL INFORMA ON RE URN

ANNUAL INFORMA ON RE URN ABLE 33 FINANCIAL MEASURES (H S ORIC COS ACCOUN ING)
DEPRECIA ION CHARGE BY ASSE YPE (PPP Only)

	DESCR P ION	UNI S	DP	1	2	3		5	6	6	7		9
				Water Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
A	DEPRECIA ION CHARGE FOR HE YEAR												
1	HCD as at 31 March of the year	£m	3	007	033	.082	.1 6	3. 07	3. 2	3.80		B3	
2	HCD on addi ions (enhancement assets) post 1 April 201	£m	3								0.000	B3	
3	HCD on addi ions (MNI assets) post 1 Apr l 201	£m	3								0.081	B3	
	Total depreciation charge for the year	£m	3								0.081	B3	
5	Total depreciation charged	£m	3	007	033	.082	.1 6	3. 07	3. 2	3.80	3.891	B3	

	DESCR P ION	UNI S	DP	10	11	12	13	1	15	15	16		18
				Sewerage Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
A	DEPRECIA ION CHARGE FOR HE YEAR												
1	HCD as at 31 March of the year	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	590		B3	
2	HCD on addi ions (enhancement assets) post 1 April 201	£m	3								0.000	B3	
3	HCD on addi ions (MNI assets) post 1 Apr l 201	£m	3								0.113	B3	
	Total depreciation charge for the year	£m	3								0.113	B3	
5	Total depreciation charged	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	590	.687	B3	

	DESCR P ION	UNI S	DP	19	20	21	22	23	2	2	25		27
				otal									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
A	DEPRECIA ION CHARGE FOR HE YEAR												
1	HCD as at 31 March of the year	£m	3	.007	.033	.082	.1 6	3. 07	3. 2	8.39		B3	
2	HCD on addi ions (enhancement assets) post 1 April 201	£m	3								0.000	B3	
3	HCD on addi ions (MNI assets) post 1 Apr l 201	£m	3								0.19	B3	
	Total depreciation charge for the year	£m	3								0.19	B3	
5	Total depreciation charged	£m	3	.007	.033	.082	.1 6	3. 07	3. 2	8.39	8.578	B3	

	DESCR P ION	UNI S	DP	1	2	3		5	6	6	7		9
				Water Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
B	EXPENDI URE AND PROVISION												
6	Infrastructure renewals expend ture	£m	3	0 000	0 000	0.000	0.000	0.000	0.000	0.000	0.000	B2	
7	Infrastructure renewals charges	£m	3	0 000	0 000	0.000	0.000	0.000	0.000	0.000	0.000	C5	
8	Infrastructure renewals prepayment/ (accrual)	£m	3	1 519	1 519	1.519	1.519	1.519	1.519	1.519	1.519	C5	

	DESCR P ION	UNI S	DP	10	11	12	13	1	15	15	16		18
				Sewerage Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
B	EXPENDI URE AND PROVISION												
6	Infrastructure renewals expend ture	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0 000	0.000	B2	
7	Infrastructure renewals charges	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0 000	0.000	C5	
8	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	0.000	0.000	0.000	0.000	0 000	0 000	0.000	C5	

	DESCR P ION	UNI S	DP	19	20	21	22	23	2	2	25		27
				otal									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
B	EXPENDI URE AND PROVISION												
6	Infrastructure renewals expend ture	£m	3	0.000	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	0.00	C5	
8	Infrastructure renewals prepayment/ (accrual)	£m	3	1.519	1.519	1.519	1.519	1.519	1.519	1.519	1.519	C5	

NOR HERN RELAND WA ER L MI ED ANNUAL INFORMA ON RE URN

ANNUAL INFORMA ON RE URN ABLE 33 FINANCIAL MEASURES (H S ORIC COS ACCOUN ING)
DEPRECIA ION CHARGE BY ASSE YPE (otal)

	DESCR P ION	UNI S	DP	1	2	3		5	6	6	7		9	10	11	12	13	1	15	15	16		18	19	20	21	22	23	2	2	25		27
				Water Service										Sewerage Service										otal									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
A	DEPRECIA ION CHARGE FOR HE YEAR																																
1	HCD as at 31 March of the year	£m	3	8 .093	51 938	37 558	2.663	20.0 .2	20.281	32.026		B3		66.802	83.520	66.627	67.861	35 670	36.1 .1	50.139		B3		150.895	135. 58	10 .185	110.52	55.712	56. .22	82.165		B3	
2	HCD on addi ions (enhancement assets) post 1 April 201	£m	3								0.172	B3									0.586	B3									0.758	B3	
3	HCD on addi ions (MNI assets) post 1 Apr l 201	£m	3								0.788	B3									1.38	B3									2.172	B3	
	Total depreciation charge for the year	£m	3								0.960	B3									1.970	B3									2.930	B3	
5	Total depreciation charged	£m	3	8 .093	81 938	37 558	2.663	20.0 .2	20.281	32.026	33.25	B3		66.802	83.520	66.627	67.861	35 670	36.1 .1	50.139	51.020	B3		150.895	135. 58	10 .185	110.52	55.712	56. .22	82.165	8 .27	B3	

	DESCR P ION	UNI S	DP	1	2	3		5	6	6	7		9	10	11	12	13	1	15	15	16		18	19	20	21	22	23	2	2	25		27
				Water Service										Sewerage Service										otal									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21
B	EXPENDI URE AND PROVISION																																
6	Infrastructure renewals expend ture	£m	3	22.593	22 391	23 055	11.13	19. 97	17.015	17.726	22.295	B2		8.775	7.727	8.502	9 010	10. 3	13.235	1 .86	1 .280	B2		31.368	30.118	31.557	20.1	29.931	30.250	32 590	36 579	B2	
7	Infrastructure renewals charges	£m	3	19.902	23 935	22. 88	1 . 10	10.253	1 .679	15.077	15.325	C5		10.859	9. 7	9.821	10.876	1 755	11.078	11.379	11.566	C5		30.761	33. 09	32.309	25.286	25.008	25.757	26. 56	26 891	C5	
8	Infrastructure renewals prepayment/ (accrual)	£m	3	13.653	12.109	12 676	9. 00	18.6	20.981	23.630	30.60	C5		-10.321	-12.059	-13.378	-15.2	-19 565	-17. 08	-13.923	-11.209	C5		3.3 1	0.050	-0.702	-5.8	-0.921	3 573	9 707	19 395	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 £174,776.96 were decommissioned in 2019/2020 – 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 2019/20 (2018/19: [redacted]). Deprecation for Omega in 2019/20 is [redacted] (2018/19: [redacted]) and Kinnegar [redacted] (2018/19: [redacted]).

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 £174,776.96 were included within the current year depreciation charge.

	Water (19/20)	Sewerage (19/20)	Total (19/20)
IFRS Depreciation in year	£33,254,166	£50,845,025	£84,099,191
Accelerated Depreciation		£174,777	£174,777
Total (2019/2020)	£33,254,166	£51,019,802	£84,273,968

	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

Infrastructure Renewals accounting

The IRC calculation for 19/20 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 I RE forms part of the PC 15 capital expenditure plans.

The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

2019-2020 IRC

The IRC for 2019-2020 based on PC15 can be summarised as follows:

Water - £15.325m
Sewerage - £11.566m
Total - £26.891m

The out-turn IRE for 2019-2020 can be shown as follows:

Water - £22.299m
Sewerage - £14.280m
Total - £36.579m

The accrual at 31 March 2020 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	22.299	14.280	36.579
IRC	(15.325)	(11.566)	(26.891)
In year prepayment / (accrual)	6.974	2.714	9.688
c/f prepayment / (accrual)	23.630	(13.923)	9.707
Cumulative prepayment / (accrual)	30.604	(11.209)	19.395

At the end of the year to 31 March 2020 a prepayment balance of £19.395m was evident. This balance arose as the in-year prepayment of £9.688m for 2019-20 was added to the cumulative brought prepayment balance of £9.707m, which existed at 31st March 2019.

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 2020 will be monitored to ensure that the level of IRC charged in the future 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 20 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

				1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	17		18
	DESCRIPTION	UNITS	DP	Water Service										Sewerage Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	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	0.031	B2		-0.005	0.473	0.088	0.071	0.156	-0.001	0.025	0.043	B2	
2	Short	£m	3	2.457	3.136	2.779	1.154	2.954	2.858	1.710	1.921	B2		3.923	3.506	4.763	4.272	1.908	2.049	4.274	5.731	B2	
3	Medium	£m	3	2.610	2.425	7.433	2.279	1.536	7.662	3.562	6.407	B2		10.142	9.775	9.873	4.251	6.604	6.082	8.813	10.114	B2	
4	Medium long	£m	3	0.000	0.383	0.014	0.000	0.000	-0.003	0.000	0.111	B2		0.000	0.000	0.010	0.002	0.001	0.012	-0.003	0.001	B2	
5	Long	£m	3	2.640	1.566	4.926	2.715	2.094	3.405	7.858	7.250	B2		14.217	13.256	10.907	6.455	9.202	9.578	9.093	14.158	B2	
6	Land	£m	3	0.000	0.000	0.007	0.000	0.009	0.695	0.230	0.215	B2		0.102	0.050	0.021	0.261	0.340	0.538	0.201	-0.041	B2	
7	Land Disposals	£m	3	-0.111	-0.351	-0.066	-0.164	-0.166	-0.128	0.046	0.000	B2		-0.160	-0.190	-0.079	-0.251	-0.120	-0.114	0.049	0.000	B2	
8	Total	£m	3	7.704	7.861	15.229	6.061	6.626	14.520	13.425	15.937	B2		28.219	26.870	25.583	15.060	18.091	18.144	22.452	30.005	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	1.774	B2		1.916	1.886	2.390	0.811	1.780	1.143	1.071	2.092	B2	
10	Short	£m	3	3.285	5.839	3.416	4.524	4.585	4.186	6.558	6.413	B2		4.859	6.151	5.762	4.545	4.560	4.781	9.834	7.272	B2	
11	Medium	£m	3	6.817	3.874	7.652	10.926	12.066	11.994	10.006	5.668	B2		24.145	30.514	14.642	22.828	25.713	23.372	19.223	19.412	B2	
12	Medium long	£m	3	0.000	0.134	0.506	0.380	0.481	0.149	0.053	0.034	B2		0.000	0.250	0.137	0.092	0.164	0.084	0.166	0.119	B2	
13	Long	£m	3	3.688	5.029	5.366	5.701	4.368	4.159	4.398	3.676	B2		10.338	12.185	7.153	14.523	14.031	13.473	13.574	10.934	B2	
14	Total	£m	3	15.909	16.825	17.891	23.235	23.543	21.992	21.974	17.564	B2		41.258	50.986	30.084	42.799	46.247	42.854	43.868	39.830	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	2019 20	CG	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	CG	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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	0.000	n/a		0.000	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 2019/20 against each project, excluding land acquisition, with a full CIDA output.
    - CIDA lands – This reports the accrual in 2019/20 against land acquisition and the associated CIDA output.
b) CWP AIR reporting Model – The model developed in Excel for AIR19 and subsequent years has been adopted for AIR20 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 2019/20.

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.

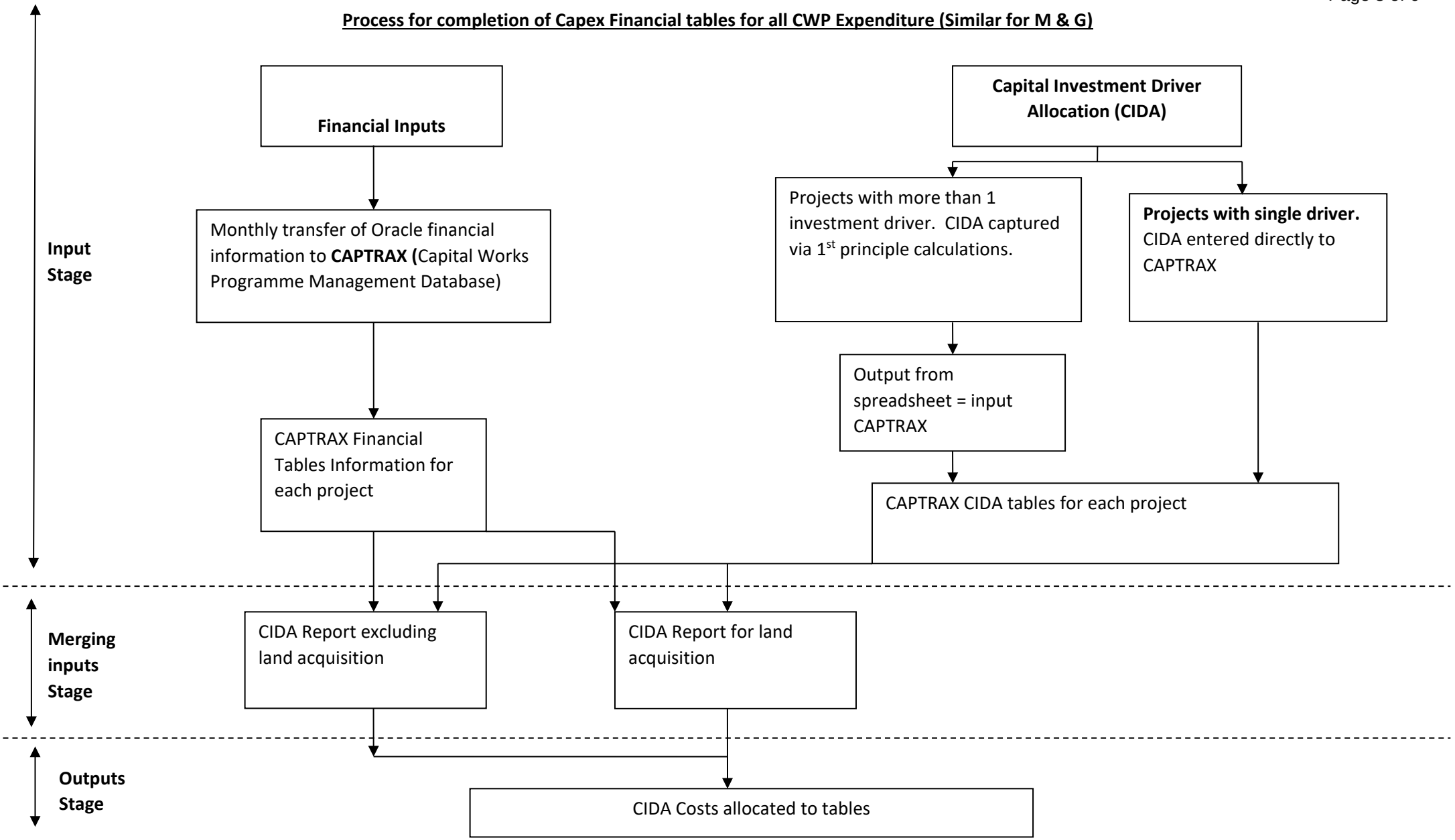
This has been used in AIR20 for completion of Table 40. Unfortunately the system needs further refinement to enable reporting information for Tables 32, 34, 36 and 36a accurately as there are a significant number of contracts within each project with combinations of a number of service areas, asset types and financial categories. For reporting in AIR20, 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

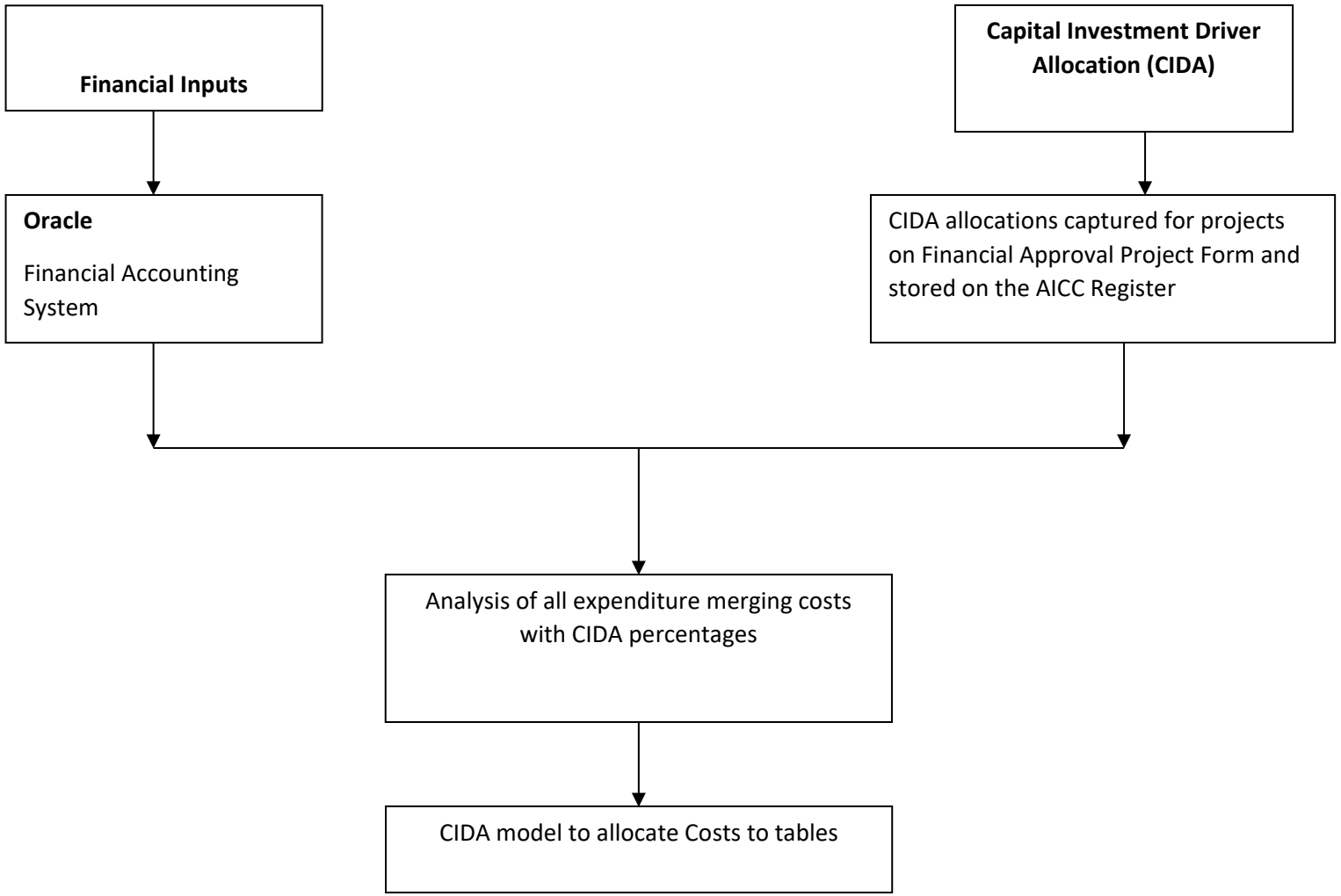
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. The small rounding figure of CWP expenditure (due 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 AIR20. 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 20 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 AIR20 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 2019/20. 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

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 20 with zero Net Book Value (NBV) is £162,867,982.23.

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	153.441	
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	0.000	
6	*Further adjustments.....*	£m	3	0.000	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	0.000	
6b	Rounding	£m	3	0.000	0.013	-0.006	-0.001	0.000	-0 003	0.002	-0.009	
6c	Decapitalised assets	£m	3	0.000	0.000	0.238	0.005	0.000	0.000	0.000	0.000	
6d	Project Clear: Aquistion of Alpha PPP	£m	3						-29.179	0 000	0.000	
7	Capital grants and contributions	£m	3	0.000	6.586	7.331	7.985	11.550	14.009	14 005	25.970	
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	-1.457	
9	NI Water gross capital budget	£m	3	0.000	167.566	158 898	143.691	154.337	152.620	171.135	172.366	

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 was only confirmed by DfI at the October monitoring round at £146.5m (split £143.9m baseline plus £2.6m LWWP). This was £24.5m short of that assumed within the PC15 FD. This is set out in the table below and shows that the £24.5m reduction in capital DEL is equivalent to a £8.7m drop in gross capital expenditure, once other capital allocations are taken into account. It should be noted, the £164.0m included £13.3m Interreg expenditure and also included a £1.2m IFRS repairs adjustment as we have moved to IFRS reporting. On a like for like basis, the variance between the PC15 FD and the agreed budget was therefore £20.8m.

	Final Determination	Budget	Variance
	2019-20	2019-20	2019-20
	£M	£M	£M
PE Capital DEL Acquisitions	171.0	146.5	(24.5)
Alpha PPP maintenance / capex	[redacted]	[redacted]	[redacted]
Residual interest in off balance sheet PPP	[redacted]	[redacted]	[redacted]
IFRS infrastructure renewal charge adjustment	1.1	-	(1.1)
Capital grants and contributions	7.0	24.2	+17.2
Capital grants and contributions transferred to deferred credits	(0.8)	(1.3)	+0.5
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 £4.0m in the October Monitoring Round and again by £2.0m in Mar-20. There were also additional allocations due to SBRI and LWWP funding.

The PE capital DEL funding (DEL Acquisitions) at the end of the reporting year is therefore as follows:

	2019/20
	£m
PE Capital DEL budget at start of year (confirmed at Oct MR)	146.500
October MR allocation	4.000
SBRI funding	0.290
Additional LWWP funding	0.700
March allocation	2.000
Final DfI budget available	**153.490**

Taking into account these and other movements, gross capital expenditure available to NI Water was £153.5m, £17.5m lower than assumed in the PC15 FD.

	Final Determination	Final Outturn	Variance
	2019-20	2019-20	2019-20
	£M	£M	£M
PE Capital DEL Acquisitions	[redacted]	[redacted]	[redacted]
Alpha PPP maintenance / capex			
Residual interest in off balance sheet PPP	[redacted]	[redacted]	[redacted]
IFRS infrastructure renewal charge adjustment	1.1	-	(1.1)
Capital grants and contributions	7.0	26.0	+19.0
Capital grants and contributions transferred to deferred credits	(0.9)	(1.5)	(0.6)
NI Water gross capital budget	[redacted]	[redacted]	[redacted]

NI Water was subject to Public Expenditure capital budget reductions in the first four years of PC15, receiving approximately £64m less Capital DEL funding than was assumed in the Utility Regulator's PC15 final determination.

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. Allowing for the lower than expected inflation, this funding 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.

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, actual spend was in line with available 'Capital DEL Acquisitions'.

Note the PE capital used has been agreed to our 2019/20 'provisional outturn' return submitted to DfI on the 28th April 2020. The 2019/20 '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.

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.

	2019/20
Kinnegar Residual Interest	[redacted]
Omega Residual Interest	[redacted]
Total	[redacted]

Due to the move to IFRS, entries to this line no longer reconcile directly to AIR20 Table 42. This is due to Omega and Kinnegar remaining off balance sheet for Government reporting.

Line 5 – IFRS infrastructure renewals charge adjustment

No longer required as this adjustment is included within gross capital expenditure within AIR20 Table 36.

Line 6 – Further adjustments

Rounding difference of £0.009m 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 AIR20 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 2019/20. 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 AIR20 Table 37 line 18.

Line 9 – NI Water gross capital expenditure

Represents gross capital expenditure as per AIR20 Table 36. This line now incorporates the IRRS repairs adjustment which was previously reported in Table 35 Line 5.

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	17.198	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	22.280	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	10.372	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	9.088	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	16.718	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	7.716	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	2.535	B3		
5c	Capex - security of supply	£m	3	9.214	9.842	B3	16 099	B3	8.436	B2	2 625	B3		B3	4 890	B3	6.447	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	0.020	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	75.657	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	38.908	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	14.310	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	24.448	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	7.292	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	11.752	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	11.064	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	0.687	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	96.710	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	172.366	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	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	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	46.713	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	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	46.713	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	22.180	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	14.300	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	36.479	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	53.376	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	129.112	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	182.489	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.

NOR HERN IRELAND WA ER LIMI ED ANNUAL INFORMA ON RE URN

ANNUAL INFORMA ION RE URN ABLE 36A FINANCIAL MEASURES
CAPI AL NVES MEN GROSS CAPI AL INVES MEN VARIANCE

				1	2	3		5	6	7	8	9	10	11	12	13	1	15	16	17	18	19	20	21	22	23	2	25	26	27	28
				PC15 OU URN (£M)							PC15 FINAL DE ERMINA ION (£M)							PC15 VARIANCE FROM FD (£M)							PC15 VARIANCE FROM FD (%)						
	DESCR P ION	UNI S	DP	REPOR ING YEAR 2015 16	REPOR ING YEAR 2016 17	REPOR ING YEAR 2017 18	REPOR ING YEAR 2018 19	REPOR ING YEAR 2019 20	REPOR ING YEAR 2020 21	O AL O DA E PC15	REPOR ING YEAR 2015 16	REPOR ING YEAR 2016 17	REPOR ING YEAR 2017 18	REPOR ING YEAR 2018 19	REPOR ING YEAR 2019 20	REPOR ING YEAR 2020 21	O AL O DA E PC15	REPOR ING YEAR 2015 16	REPOR ING YEAR 2016 17	REPOR ING YEAR 2017 18	REPOR ING YEAR 2018 19	REPOR ING YEAR 2019 20	REPOR NG YEAR 2020 21	O AL O DA E PC15	REPOR ING YEAR 2015 16	REPOR ING YEAR 2016 17	REPOR ING YEAR 2017 18	REPOR NG YEAR 2018 19	REPOR ING YEAR 2019 20	REPOR ING YEAR 2020 21	O AL O DA E PC15
A	**Water service**																														
1	Non-infrastructure maintenance (gross of gran s and contributions)	£m	3	23.235	23.5 3	21.992	21. 15	17.198		107.38	22.576	23 060	23 673	2 .292	2 .691		118.292	-0 659	-0. 83	1.680	2.877	7. 93		10.908	-2.9	-2.1	7.1	11.8	30.3		9 2
2	Infrastructure renewals expend ture (gross)	£m	3	11.133	19. 97	16.687	17 725	22 280		87.32	1 .012	1 .313	1 693	15.077	15.325		73. 20	2 879	-5.18	-1.99	-2.6 8	-6.956		-13.903	20.5	-36.2	-13.6	-17.6	- 5.		-18 9
3	Capital expend ture - qua ity enhancement programme	£m	3	1 .6 6	1 .177	7.3 7	11 233	10 372		57.775	13.810	1 .106	19 365	19.283	15.269		81.83	-0 835	-0 071	12.018	8.050	.897		2 .059	-6.0	-0.5	62.1	1.7	32.1		29.
	Capital expend ture - customer service	£m	3	1.19	3.175	11.30	5.068	9 088		29.829	.036	.123	3 707	3. 59	3.768		19.093	2 8 .2	0.9 .7	-7.597	-1.609	-5.319		-10.736	70.	23.0	-20 .9	- 6.5	-1 1.2		-56 2
5	Capital expend ture - supply demand balance	£m	3	13.791	7.393	5.55	1 867	16 718		58.323	1 .109	1 . 11	15 309	15. 10	19.301		78.5 0	0 318	7.018	9.755	0.5 3	2.582		20.217	2.3	8.7	63.7	3.5	13.		25 7
6	Gross capi al expenditure - water service	£m	3	63.999	67.786	62.885	70 308	75 657		3 0.635	68.5	70 013	76 7 8	77.520	78.35		371.179	5 5	2.227	13.863	7.213	2.697		30.5	6.6	3.2	18.1	9.3	3.		8 2
B	**Sewerage Service**																														
7	Non-infrastructure maintenance (gross of gran s and contributions)	£m	3	2.799	6.2 7	2.85	3 019	38 908		213.827	36.1 3	36 918	37 899	38.889	39.528		189.377	-6 656	-9 329	- 955	- .130	0.620		-2 .50	-18.	-25.3	-13.1	-10.6	1.6		-12 9
8	Infrastructure renewals expend ture (gross)	£m	3	9.010	10. 3	10. 75	1 86	1 310		59.09	10.575	10 802	11 089	11.379	11.566		55. 11	1 565	0.368	0.61	-3. 85	-2.7		-3.682	1 .8	3.	5.5	-30.6	-23.7		-6 6
9	Capital expend ture - qua ity enhancement programme	£m	3	13.851	13.559	16.305	19 301	2 . 8		87. 63	20.380	20 817	1 . 89	17.616	16.793		90.09	6 529	7.258	-1.815	-1.685	-7.655		2.631	32.0	3 .9	-12.5	-9.6	- 5.6		2 9
10	Capital expend ture - customer service	£m	3	. 06	5.359	7.518	10 517	7 292		35.092	8.802	8.991	10 080	5.95	5.855		39.682	396	3.632	2.561	- .563	-1. 37		.590	9.9	0.	25.	-76.6	-2 .5		11 6
11	Capital expend ture - supply demand balance	£m	3	9.626	10.951	12.58	13.127	11 752		58.0 0	8.016	8.188	8. 7	11. 11	12.513		8.602	-1 610	-2 76	- .110	-1.716	0.761		-9. 38	-20.1	-33.8	- 8.5	-15.0	6.1		-19.
12	Gross capi al expenditure - sewerage service	£m	3	79.692	86.551	89.735	100 828	96 710		53.516	83.917	85 715	82 031	85.2 9	86.255		23.167	225	-0 836	-7.70	-15.579	-10. 55		-30.3 9	5.0	-1.0	-9.	-18.3	-12.1		-7 2
C	**Gross capital expenditure total**																														
13	Gross capi al expenditure lo al	£m	3	1 3.691	15 .337	152 620	171.135	172.366		79 .150	152. 61	155 728	158.779	162.769	16 .608		79 .3 6	8 770	1.391	6.159	-8.366	-7.758		0.196	5.8	0.9	3.9	-5.1 0	- .713		0 0
D	**CAPI AL CON RIBU IONS NE OF DEFERRED CREDI S**																														
1	Capital contributions for new connections	£m	3	7.782	11. 83	13.917	25 859	25 859		8 .899	.17	.263	. 31	.575	.679		22.122	-3 608	-7 220	-9. 86	-21.28	-21.180		-62.777	-86.	-169.3	-21 .1	- 65.2	- 52.7		-283.8
15	Other capital contributions	£m	3	0.203	0.067	0.092	0.111	0.111		0.585	1.226	1.253	1 300	1.109	1.133		6.021	1 023	1.186	1.208	0.998	1.022		5. 36	83.	9 .7	92.9	90.0	90.2		90 3
16	Total cap tal contributions net of deferred credits	£m	3	7.985	11.550	1 .009	25 970	25 970		85. 8	5. 00	5.516	5 731	5.68	5.812		28.1 3	-2 585	-6 03	-8.278	-20.286	-20.158		-57.3 1	- 7.9	-109.	-1 .	-356.9	-3 6.8		-203.7
E	**O AL CAPI AL EXPENDI URE (NE)**																														
17	Total cap tal expend ture (net)	£m	3	135.706	1 2.787	138 611	1 5.165	1 6.397		708.668	1 7.061	150 212	153.0 8	157.085	158.796		766.203	11 355	7. 25	1 . 37	11.920	12. 00		57.536	7.7	.9	9.	7.6	7.8		7 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	0.000	
2	Infrastructure renewals grants and contributions.	£m	3	0.079	0.114	0 033	0.203	0.067	0.078	0.146	0.101	
3	Total maintenance grants and contributions	£m	3	0.079	0.114	0 033	0.203	0.067	0.078	0.146	0.101	
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	2.589	
5	Enhancement requisitions, grants and contributions	£m	3	2.031	2.054	2 387	2.553	4.038	3.339	4.575	3.722	
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	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	6.310	
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	0.777	
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	0.000	
10	Infrastructure renewals grants and contributions.	£m	3	0.166	0.095	0 064	0.000	0.000	0.014	0.003	0.010	
11	Total maintenance grants and contributions	£m	3	0.166	0.095	0 064	0.000	0.000	0.014	0.003	0.010	
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	2.269	
13	Enhancement requisitions, grants and contributions	£m	3	1.443	2.015	2 226	1.914	3.164	5.737	4.770	17.279	
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	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	19.548	
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	0.681	
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	25.970	
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	1.457	

Table 37 – Capital Investment - Capital Grants and Contributions

Line 1 – Water service MNI – grants and contributions

Nil for 2019-20.

Line 2 – Water service maintenance grants and contributions

This line shows £0.101m and represents contributions from developers towards the cost of watermains diversions.

Line 4 – Water service infrastructure charge receipts - new connections

This line shows £2.589m 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	£ 3.503m
Water requisitions	£ 0.005m
Grants	£ 0.214m
Total Line 5	**£ 3.722m**

Line 6 – Water service other categories of capital grants and contributions

Nil for 2019-20.

Line 8 – Water service deferred credits

This line shows £0.777m and represents 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 £2.589m x 30% = £0.777m

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 2019-20.

Line 10 – Sewerage service - maintenance grants and contributions

This line shows £0.010m and represents contributions from developers towards the cost of realignment of sewers.

Line 12 – Sewerage service - Infrastructure charge receipts - new connections

This line shows £2.269m 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	£ 1.436m
Sewerage requisitions	£ 2.054m
Sewers for adoption –application fees	£ 0.928m
Grants	£12.861m
Total Line 13	**£17.279m**

Line 14 – Sewerage service - other categories of capital grants and contributions

Nil for 2019-20.

Line 16 – Sewerage service deferred credits

This line shows £0.681m 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 £2.269m x 30% = £0.681m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to non-infrastructure growth.

Comparison of 2019-2020 to PC15*

The following table shows a comparison of the actual contributions for 2019-20 compared to PC15.

	2019-20 Actual £m	**2019-20 PC15 £m**	**2019-20 Variance £m**	**2019-20 Variance %**
Water				
Infrastructure – base	0.0	0.0	0.0	N/A
Infrastructure charges - gross	2.6	1.6	1.0	62.5%
Connections	3.5	2.3	1.2	52.2%
Requisitions	0.0	0.1	-0.1	-100.0%
Grants	0.2	0.0	0.2	N/A
Total	**6.3**	**4.0**	**2.3**	**57.5%**
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	2.3	1.3	1.0	76.9%
Connections	1.4	1.0	0.4	40.0%
Requisitions	2.1	0.2	1.9	950.0%
Sewers for adoption	0.9	0.5	0.4	80.0%
Grants	12.9	0.0	12.9	N/A
Total	**19.6**	**3.0**	**16.6**	**553.3%**
Included in the gross Infrastructure charges above the non infrastructure element - 30%	0.7	0.4	0.3	75.0%
Total contributions	**25.9**	**7.8**	**18.1**	**232.1%**
Which includes: *non-infrastructure contributions*	**1.5**	**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	0 000	
2	Additional OPEX arising from Sewerage Service projects	£m	3		1.483	0.403	0.003	-0.021	0.025	0 065	-0 024	
3	Total additional OPEX	£m	3		1 698	0.407	0.030	0.005	0.047	0 094	-0 024	

Table 38 - Capital investment - Additional Opex from Capex

A list of sites with CAR IDs is obtained and the Opex costs for 2019/20 are calculated for these sites through various reports.

The Opex from Capex costs have been calculated by taking the difference between the total 2019/20 costs and the 2018/19 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 £0.000M which is comparable to the PC15 submission amount for 2019-20. Work done on the projects detailed in the PC15 submission has been either 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 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 and for 2019/20 there is a is a reduction of costs of £0.024M. This is mainly due to work done at various sites which has substantially reduced power costs i.e. Dungannon WWTW Nereda Plant. This is less than what was forecast in the PC15 submission for 2019-20. Work done on the projects detailed in the PC15 submission has been either 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 a reduction of costs of £0.024M. This is less than what was forecast in the PC15 submission amount for 2019-20. Work done on the projects detailed in the PC15 submission has been either 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.

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e e a										ase e M es e a es							ase e e v e s A a			
So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date	Base ine Se v ce A locat on Wa e n ast uctu e	Basel ne Se vice Al ocat on Wate Non- In ast uc u e	Base ine Se v ce A loca ion Sewe age n ast uctu e	Basel ne Se vice Al ocat on Sewe age Non- In ast uc u e
	2	3	4	5	6	7	8	9	0		2	3	4	5	6	7	8	9	20	2
	20 9_20 Q4	799	Eb ng on Squa e imavady Road ondnde y Wate main Extension	06			03	23												
2	20 9_20 Q4	KV226	D omo e St eet Banb idge oul Sewe Extension	00	KI55		07	24												
3	20 9_20 Q4	A3 5	Bel augh W S	06			05	0												
4	20 9_20 Q4	KR684	Sho e Road Newtownabbey &S Extension	00	KI55		07	24												
5	20 9_20 Q4	K 550	Coneyv l e Coney Rd Culmo e De y oul & Sto m Sewe Ex ens on	06	KI55		07	24												
6	20 9_20 Q4	KR679	Abbey V ew G Newtowna ds Rd Bango S o m Sewe	00	KI55		07	24												
7	20 9_20 Q4	KI605	Sto m wa e sepa at on p lot study phase 2	06	KI555		07	2												
8	20 9_20 Q4	KA290	Dunad y Rd Dunad y St aidbal ymo s S o m Sewe	06	KI58		07	24												
9	20 9_20 Q4	KA294	Deven sh D ive Monkstown &S Sewe	00	KI58		07	24												
0	20 9_20 Q4	KA295	Shanes Cast e SE o No 2 Cas le Rd Ant im oul Sewe	00	KI58		07	24												
	20 9_20 Q4	KR703	C 5 ea 5 Ww W Base Ma ntenance - East Reg on	06			09	02												
2	20 9_20 Q4	K 436	Ches nut odge D umbo oul Sewe Extension	06	KI55		07	24												
3	20 9_20 Q4	KB537	39 & 45-5 Cas le St eet Bal ymena Sto m sewe ex ens on	06			07	24												
4	20 9_20 Q4	KC488	D umavoley Road Bal ycastle ou Sewe	00	KI58		07	24												
5	20 9_20 Q4	K 409	intona Road C oghe pump ng main	00	KI58		07	24												
6	20 9_20 Q4	K 4 3	Roskeen Rd Moygashel Dungannon &S Sewe	00	KI58		07	24												
7	20 9_20 Q4	KG222	u gan Road Moi a S o m Sewe Ex ens on	06	KI58		07	24												
8	20 9_20 Q4	KG228	76 Glenavon ane u gan oul & Sto m Sewe Extension	06	KI58		07	24												
9	20 9_20 Q4	KC475	55 Mountsandel Road Cole a ne S o m Sewe	00	KI58		07	24												
20	20 9_20 Q4	K 558	Naza e h House de y Sto m Sewe	00	KI58		07	24												
2	20 9_20 Q4	KN675	Academy 6 De y Rd Sto m Sewe Ex ens on	06	KI55		07	24												
22	20 9_20 Q4	KR690	Adj G enmachen Rd Bel ast S o m Sewe Ex ens on	06	KI58		07	24												
23	20 9_20 Q4	K 556	Glenshane Rd B aidwa e oul Sto m	06	KI58		07	24												
24	20 9_20 Q4	KR706	8 Deno o on a k Bel ast Sto m & oul Sewe	00	KI58		07	24												
25	20 9_20 Q4	KR500	KR500 G eys own Avenue & Uppe Malone Road ood Al eviat on - Glenmac	00			07	2	DRD											
26	20 9_20 Q4	N488	Aghya an Road Booste S ation	06	R349		05	08												
27	20 9_20 Q4	KR660	3 Bango Rd New owna ds Sto m Sewe Requis t on	00	KI55		07	24												
28	20 9_20 Q4	KC478	he Clois e s Bushmi ls	06	KI55		07	24												
29	20 9_20 Q4	K 433	25 Old Dundonald Road Dundonald oul & Sto m sewe ex ens on	06	KI55		07	24												
30	20 9_20 Q4	KR388	Bal ywa te Ww W Inte im So u ion	0	KS 3		09	5	NIEA			4 03 2008	04 09 20 2		04 09 20 2	04 09 20 3	0	0	0	0
3	20 9_20 Q4	KS927	Wh techu ch Road Ba lywal e Sewage Scheme	00	KS 3		07	24	DRD											
32	20 9_20 Q4	C398	No th Ga vagh SR Re u bishment	06	I050		04	07												
33	20 9_20 Q4	604	Cast eh ll SR Re u b shment	06	I050		04	07												
34	20 9_20 Q4	N536	K l yc oghe No 2 S Re u b shment	06	I050		04	07												
35	20 9_20 Q4	KC480	B022604 Co e aine Ente p se zone p o ect Sewe pumping ma n	06	KI55		07	24												
36	20 9_20 Q4	KV23	75 K lkeel Rd Anna ong S o m Sewe Ex ens on	00	KI58		07	24												
37	20 9_20 Q4	KV220	Wa enpoint looding nvest gations	00			07	2												
38	20 9_20 Q4	A300	A3 Maghe a elt By- ass Wate ma n D ve sions	00			03	23	DRD											
39	20 9_20 Q4	A30	Nib ock Road Ant m Wate ma n Ex ens on	00			03	23	DRD											
40	20 9_20 Q4	KC474	Dun uce Road ood A levia ion	06			07	2	UR											
4	20 9_20 Q4	A308	A6 Cas ledawson to Randa stown	00			03	23												
42	20 9_20 Q4	A3 0	W IM hase 2 Duno e East W	06			03	08												
43	20 9_20 Q4	A3	W IM hase 2 Duno e oint W	06			03	08												
44	20 9_20 Q4	A3 2	Duno e o nt W W Renewab e Ene gy	06			06	0												
45	20 9_20 Q4	A3 3	Ant m No h WIIM 2 Wo k ackage	06			03	08												
46	20 9_20 Q4	A3 4	Ant m South W IM 2 Wo k ackage	06			03	08												
47	20 9_20 Q4	KR622	McC intock St eet Bel ast Sto m Sewe Extension	00			07	24												
48	20 9_20 Q4	A3 9	Do is and Wtw t ea ab l ty ecommended mp ovemen s	06			02	04												
49	20 9_20 Q4	A326	St les Way Ant m 560mm St ategic Wa e main Mi igat on	06			03	23												
50	20 9_20 Q4	A329	McC ae s B ae Wh tehead Wa e main Ex ens on	06			03	23	DRD											
5	20 9_20 Q4	KS973	No th Rd New owna ds S o m Sewe Ex ens on	06	KI55		07	24												
52	20 9_20 Q4	B67	Glenlough ump ng S at on & umping Ma n	0			03	0	DWI								60	40	0	0
53	20 9_20 Q4	KN669	Omagh I S oul & S o m	00	KI55		07	24												
54	20 9_20 Q4	KB549	Adj 22 West and Road Cookstown oul Sewe	00	KI58		07	24												
55	20 9_20 Q4	KR609	o me V steon Si e Bel ast oul & S o m Sewe Extens on	00	KI538		07	24	DRD											
56	20 9_20 Q4	B704	Dese tc eat Road ndsayvi le Road Cookstown Rep acement Wate ma n	00			03	23	DWI											
57	20 9_20 Q4	B706	A26 Dua l ng G a y o d to A44 (D ones Road) unct on - Wate main ep ace	00			03	23	DRD											
58	20 9_20 Q4	B709	ough ea CWB Capaci y Inc ease	06			04	06	DWI				30 09 20 9				33	67	0	0
59	20 9_20 Q4	KA277	he O d Stat on Dunad y Sto m sewe	00	KI55		07	24												
60	20 9_20 Q4	KR657	Glenb yn a k Bel ast - S o m Sewe	00	KI55		07	24												
6	20 9_20 Q4	B723	Moyo a W W to Mu aghaboy SR unk Main Replacement	06			03	23												
62	20 9_20 Q4	KB547	Un on St eet Maghe a elt S o m Sewe Extension	06	KI58		07	24												
63	20 9_20 Q4	B725	W IM hase 2 ough ea W	06			03	08												
64	20 9_20 Q4	B726	W IM hase 2 Moyo a Maghe a e t W	06			03	08												
65	20 9_20 Q4	B727	W IM hase 2 Al nah nch Bushmi ls W	06			03	08												
66	20 9_20 Q4	KV227	D umalane Rd New y S o m and oul Sewe s	00	KI55		07	24												
67	20 9_20 Q4	B735	Cent al Zone Resi ience	06			0	05												
68	20 9_20 Q4	B737	algot evy Road Maghe a Wa e main Replacement	06			03	08												
69	20 9_20 Q4	KR676	he A ds House Bel ast Rd New owna ds Sewage Scheme oul&S o m	06	KI58		07	24												
70	20 9_20 Q4	C386	C aigpa k SR Capaci y Ex ens on	06			04	06	DWI								0	0	0	0
7	20 9_20 Q4	C387	agava a SR Capac ty Extension	06			04	06	DWI								0	0	0	0
72	20 9_20 Q4	C390	Rathl n Island Bo eho e eas b l ty S udy	00			0	04	DRD											
73	20 9_20 Q4	R490	Wes land House Recep ion and AD Bui d ng Upg ade	00			5	20												
74	20 9_20 Q4	B732	K l yane to C osshi l SR M Rep acement S age 4 nc uding 25mm d st but	06			03	23												
75	20 9_20 Q4	C399	W IM hase 2 Bal in ees mavady W	06			03	08												
76	20 9_20 Q4	C400	W IM hase 2 Al nah nch Bushmi ls 2 W	06			03	08												
77	20 9_20 Q4	C40	Royal o t ush - Open 20 9 Wa e mains	06			03	23												
78	20 9_20 Q4	C402	a y Road A moy Wa e main Replacement	06			03	23												
79	20 9_20 Q4	C403	A54 Ag vey Road K l ea	06			03	23												
80	20 9_20 Q4	C404	Go tycavan W S o Sconce Hi l SR Wate ma n	06			03	23												
8	20 9_20 Q4	D343	Bal ybo len Road Ahogh ll - Wate ma n Ex ens on	0			03	23												
82	20 9_20 Q4	007	Seagahan Zone Wa e main mp ovemen s	00			03	08		26 04 2006		4 0 2008	29 09 2008		29 09 2008	29 09 2009	0	0	0	0
83	20 9_20 Q4	606	W IM hase 2 C ay ake Keady W	06			03	08												
84	20 9_20 Q4	607	Do is and Impound ng Rese v o	06			02	03												
85	20 9_20 Q4	608	C aigavon W IM 2 Wo k ackage	06			03	08												
86	20 9_20 Q4	6 0	Southe n Zone Resi ience	06			0	05												
87	20 9_20 Q4	6 3	Stewa tstown Road Coal sland Wate ma n Dive s on	06			03	23												
88	20 9_20 Q4	K 334	Chu chv ew A magh Rd Moy WW S Upg ade	00			2	02	UR								0	0	0	0
89	20 9_20 Q4	KR675	263-285 Bee sb dge Rd oul and S o m Sewe new	06	KI55		07	24												
90	20 9_20 Q4	K 546	Dalys B ae D umahoe	06	KI55		07	24												
9	20 9_20 Q4	G080	C anny ane o tadown Wate ma n Ext	00			03	23	DRD											
92	20 9_20 Q4	G082	De yola B idge Road C a gavon Rep acement Wate ma n	00			03	23	DRD											
93	20 9_20 Q4	V882	ul ymu y New y SR Rehab l tat on	06	I050		04	07												
94	20 9_20 Q4	B722	Go taclady SR Rehab l ta ion	00	I050		04	07												
95	20 9_20 Q4	G087	Casto Bay W W o Ba lydougan SR Upg ade	00			03	05	DWI											
96	20 9_20 Q4	003	Wa e Ma ns Rehab l ta ion New and Rep acement incl S	00			03	08	DWI								0	0	0	0
97	20 9_20 Q4	K 425	St ame s a k H l sbo ough Sto m Sewe	00			07	24												
98	20 9_20 Q4	KR504	o ta e y Road N A ds WW S Upg ade	00	KI469		2	2	DRD								0	0	0	00
99	20 9_20 Q4	005	Base Main enance (Wate)	00			02	0	UR								4	86	0	0
00	20 9_20 Q4	R484	G avi y Ant m Rd unk Main va ve eplacemen s	06	I083		03	23												
0	20 9_20 Q4	020	Assessment o equi ements at W Ws to ope ate e ect vely n ext eme co d	00	I005		02	0	DRD								0	00	0	0
02	20 9_20 Q4	KR644	2 24 Sho e Road G een sland Sto m Sewe	00	KI55		07	24												
03	20 9_20 Q4	K 43	St awbe y Hi l Ba lynahinch Road sbu n	00	KI55		07	24												
04	20 9_20 Q4	KR652	emplepat ick Road Ba lyc a e oul Sewe	00	KI55		07	24												
05	20 9_20 Q4	KG2 2	A magh Rd o tadown oul Sewe Requ sit on	00	KI55		07	24												
06	20 9_20 Q4	B695	Buckna W S Upg ade - Ba lymena low Op im sation	03			05	0	DRD											
07	20 9_20 Q4	0 0	SEMD Su veys C 0 Wate	0			02	04	UR								0	0	0	0
08	20 9_20 Q4	KS935	Col ege Ave Shandon D ve Bango - Sto m Sewe Requis t on	00	KI538		07	24	DRD											
09	20 9_20 Q4	0 7	Cap tal nvestment - W S ump E ciency	0			05	0	UR			3 03 20	28 03 20 4		28 03 20 4	28 03 20 5	0	0	0	0
0	20 9_20 Q4	G086	Cleomack SR Rehab l tat on	06	I050		04	07												
	20 9_20 Q4	KR697	Ga denmo e Rd w nb ook &S Sewe	00	KI58		07	24												
2	20 9_20 Q4	KG226	Union St eet u gan S ORM Sto m Sewe Extension	06	KI55		07	24												
3	20 9_20 Q4	KV207	Why e Ac es - Banb idge	00			07	2	DRD											
4	20 9_20 Q4	027	MIM Cent al (Majo Inc dent Mi igat on oject Cent al Reg on) eeze haw	00			03	08	DRD				30 03 20 4				00	0	0	0
5	20 9_20 Q4	028	MIM East Majo Incident Mi igat on o ect East Reg on) eeze haw Imp	00			03	08	DRD				30 03 20 5				99		0	0
6	20 9_20 Q4	029	Se v ce Rese voi Assessments - Si e Access	00			04	0	UR								0	00	0	0
7	20 9_20 Q4	KS9 6	ying Ho se Rd Downpat ick Sewe Extension	00	KI55		07	24	DRD								0	0	0	0
8	20 9_20 Q4	035	mpound ng Rese voi u u e Use Assessment	00			0	03	DRD								0	0	0	0
9	20 9_20 Q4	KR649	Du ham St eet Bel ast Sto m Sewe Ex ens on	00	KI55		07	24												
20	20 9_20 Q4	038	Se v ce Rese voi Secu ty hase	02			04	07	DRD			09 05 20 3	20 2 20 6		20 2 20 6	20 2 20 7	0	00	0	0
2	20 9_20 Q4	K 392	8 20 S oans St eet Dungannon Sto m Sewe Extens on	00	KI538		07	24												
22	20 9_20 Q4	040	Recove ng Ene gy W th n the Wate D st bution System	00			02	0	DRD								0	00	0	0
23	20 9_20 Q4	04	Hyd o owe om Raw Wate - eas bi i y Study	00			02	0	DRD								0	00	0	0
24	20 9_20 Q4	605	Seagahan CWB Re u bishment	06	I050		04	07												
25	20 9_20 Q4	KA285	B03 428 ands Opp 42 Uppe Road G eenis and oul sewe ex ens on	06	KI55		07	24												
26	20 9_20 Q4	KR654	B ookmount St eet Bel ast - S o m Sewe Ex ens on	00	KI55		07	24												
27	20 9_20 Q4	048	App aisal o NIW in ast uctu e at Ra lways DRD Road & ipe B dges	00			03	23	DRD											
28	20 9_20 Q4	050	Se v ce Rese voi Rehab (a en)	00			04	07	DWI								0	00	0	0
29	20 9_20 Q4	KS958	Bango DA Wo ks ackage 5 Clandeboye St eam UIDs hase 2	03			07	2	NIEA								0	0	0	0
30	20 9_20 Q4	N5 4	Cast e own Ko am W S Upg ade	06			03	23	DRD											
3	20 9_20 Q4	R500	Bal ywona d No SR Rehabi tat on	06	I050		04	07												
32	20 9_20 Q4	KA282	K l imo ie Bel aghy Rd Dun oy oul sewe extension	06	KI55		07	24												
33	20 9_20 Q4	KR484	Sa ety imp ovements on out o se v ce pumping s a ions n Bel ast	00			2	02	UR								0	0	0	0
34	20 9_20 Q4	V883	Mi l Road SR Rehabi i at on	06	I050		04	07												
35	20 9_20 Q4	782	amneymo e SR Rehab l tat on	06	I050		04	07												
36	20 9_20 Q4	K 40	Southe n Reg onal Co lege Banb idge Sto m Sewe	00	KI55		07	24												
37	20 9_20 Q4	K 586	Clabby Ww Ws	06			4	6				30 06 20 3	30 09 20 5		3 2 20 4	3 2 20 5	0	0	0	00
38	20 9_20 Q4	N533	Glenchu l SR Re u bishment	06	I050		04	07												
39	20 9_20 Q4	KC477	Bal ycai n Ww s Sc ew pump No2	06			2	02												
40	20 9_20 Q4	KC487	o t ush a n Stat on Eg inton St Sto m Sewe Extens on	06	KI55		07	24												
4	20 9_20 Q4	009	Se v ce Rese voi Rehab	00	I050		04	07	DWI								0	0	0	0
42	20 9_20 Q4	780	Ca money CWB 3 and 4 Re u bishment	03	I050		04	07												
43	20 9_20 Q4	KR650	B ookha l oul Sewe Extension	00	KI55		07	24												
44	20 9_20 Q4	N532	Bel eek Meenac oybane St ategic Main Replacement	06			03	23												
45	20 9_20 Q4	KG209	sn sky ane o tadown oul Sewe Ex ens on	00	KI538		07	24												
46	20 9_20 Q4	758	Rese voi Rehab l tat on og amme hase 3	00	I009		04	07	DWI	02 02 2009	09 02 2009	06 04 2009	8 05 2009		8 05 2009	8 05 20 0	0	0	0	0
47	20 9_20 Q4	K 423	Mossva e Rd D omo e oul Sewe Requ sit on	00			07	24												
48	20 9_20 Q4	KB524	20&22 Old Ant im Road Bal ymena ood A lev a ion	06			07	2	UR											
49	20 9_20 Q4	K 396	Mil o d WW S A magh Upg ade	06			2	2	NIEA											
50	20 9_20 Q4	B728	Mo meal No th SR Rehabi i a ion	06	I050		04	07												
5	20 9_20 Q4	KS967	4 High Bango Rd Donaghadee - oul Sewe Requis t on	00	KI55		07	24												
52	20 9_20 Q4	KS963	Skippe stone Road Bango oul & S o m Sewe Requis tion	00	KI55		07	24												
53	20 9_20 Q4	KR6 2	Olymp a eisu e Cent e W ndso a k S o m Sewe Requ si ion	00	KI55		07	24												
54	20 9_20 Q4	KB529	Cast e owe Spec al School os an Avenue Bal ymena	00	KI55		07	24												
55	20 9_20 Q4	N525	Bote a SR Rehabi ita ion	00	I050		04	07												
56	20 9_20 Q4	KG2 4	and agee Road u gan - oul Sewe	00	KI55		07	24												
57	20 9_20 Q4	V853	Camlough Impounding Rese voi Dam Su vey (Cond t on Assessment)	00			0	03	DRD								00	0	0	0
58	20 9_20 Q4	690	Syon in W S o Dungo an SR 50mm DI Wa e main Rep acement	06			03	23												
59	20 9_20 Q4	037	ood Resi ience at NIW Wa e Supp y Si es - App aisal S udy	02			02	0	DRD								0	00	0	0
60	20 9_20 Q4	KN652	smou ne ace St abane oul Sewe Ex ens on o Invest NI	00	KI464		07	24	DRD								0	0	0	0
6	20 9_20 Q4	KA260	Muckamo e WW S Upg ade	06			2	2	NIEA								0	0	00	0
62	20 9_20 Q4	KN668	K l ynu e Wood Ennisk l en S o m sewe	00			07	24												
63	20 9_20 Q4	V880	Camly Command SR Re u b shment	06	I078		04	07												
64	20 9_20 Q4	KA26	Mi l own Road WW S Upg ade	06			2	2	NIEA								0	0	00	0
65	20 9_20 Q4	KV233	Canal St New y - S o m Sewe Ex ens on	06	KI55		07	24												
66	20 9_20 Q4	A309	ul y Hi l South SR Rehab ita ion	00	I050		04	07												
67	20 9_20 Q4	V877	Camlough De y Beg CWB Rehabi i a ion	00	I050		04	07												
68	20 9_20 Q4	R488	Dunanney SR Bui ding mp ovemen s	00			04	07												
69	20 9_20 Q4	R476	snab eeny Road SR and SR2 Rehab l tat on	03	I050		04	07	DRD											
70	20 9_20 Q4	KV2 4	ol ymo e Rd Newcast e oul & Sto m Sewe	00	KI538		07	24												
7	20 9_20 Q4	KS854	G een Road Conl g Sto m Sewe Extens on	00	KI538		07	24	NIEA								0	0	0	0
72	20 9_20 Q4	689	De y in SR Rehab l ta ion	00	I050		04	07												
73	20 9_20 Q4	05	Wa e mains Rehabi tat on New and Replacement incl S - o ess onal Se	00			03	08	DRD											
74	20 9_20 Q4	052	W Ws ve ea ab l ty App aisal S ud es	03			02	04	DWI				3 2 2020				0	00	0	0
75	20 9_20 Q4	053	Wa e Ma ns Rehab l ta ion (anned)	03			03	08	UR				3 03 20 4				94	6	0	0
76	20 9_20 Q4	R492	Bal yhowne SR Rehabi i at on	00	I050		04	07												
77	20 9_20 Q4	K 520	37 mavady Road De y Sto m Sewe Ext	00	KI538		07	24	DRD											
78	20 9_20 Q4	A2 0	a d ee Zone WM mps	02	I053		03	08	DRD	5 06 2009	23 06 2009	2 08 2009	27 04 20		27 04 20	26 04 20 2	0	0	0	0
79	20 9_20 Q4	KC482	Ba lymena Rd Ba lymoney Sto m Sewe Extension Requ sit on	06	KI55		07	24												
80	20 9_20 Q4	A283	A8 Bel ast to a ne Dual Ca ageway – Wate main & sewe eplacements	00	I053		03	23	DRD											
8	20 9_20 Q4	N53	Ba avey SR Rehab l tat on	00	I050		04	07												
82	20 9_20 Q4	KB528	os an Avenue Ba lymena oul Sewe Extension	00	KI55		07	24												
83	20 9_20 Q4	K 540	oyle Col ege imavady Road De y Sto m Sewe	00	KI55		07	24												
84	20 9_20 Q4	043	ough B adan W W & Al aveedan SR Sludge agoons	00			02	0	DRD								0	0	0	0
85	20 9_20 Q4	KB542	a kmo e D ve Ba lymena S o m Sewe Ex ens on	06	KI55		07	24												
86	20 9_20 Q4	KR686	Avonda e D ive Bal yc a e oul & S o m Sewe Ex ens on	06	KI55		07	24												
87	20 9_20 Q4	KS944	Glena d Road Newtowna ds oul Sewe Extension	00			07	24	DRD											
88	20 9_20 Q4	C350	Bal ycas le Zone Wm Imp ovements	00	I053		03	08		26 02 2009	20 03 2009	06 04 2009	28 04 20		28 04 20	27 04 20 2	0	0	0	0
89	20 9_20 Q4	C35	Bal ynahone Zone Wm Imp ovements	00	I053		03	08		26 09 2007	08 0 2007	2 04 2007	29 09 2008		29 09 2008	29 09 2009	0	0	0	0
90	20 9_20 Q4	KB5	Ahogh ll WW S Replacement	03			2	2	NIEA											
9	20 9_20 Q4	KR700	ama ca St eet Bel ast &S Sewe	00			07	24												
92	20 9_20 Q4	693	Ci yside Zone Wa e main Imp ovements	00	I053		03	08				8 07 2005	9 06 2006		9 06 2006	9 06 2007	0	0	0	0
93	20 9_20 Q4	R486	B eda SR Rehab l tat on	00	I050		04	07												
94	20 9_20 Q4	N530	ou a Road Ma ns Rep acement	00			03	23												
95	20 9_20 Q4	KG 92	Donaghcloney WW S - eas bi i y Study	00			2	2	NIEA								0	0	0	0
96	20 9_20 Q4	V873	New own SR Rehab l tat on	00	I050		04	07												
97	20 9_20 Q4	K 398	Mi l St eet B dge St eet Hi den isbu n S o m Sewe Ex ens on	00			07	24	NIEA	22 03 20	3 03 20	3 20 0	3 08 20		3 08 20	30 08 20 2	0	0	0	0
98	20 9_20 Q4	KN636	E ganagh WW S Replacement	00	KI469		2	2	DRD								0	0	0	0
99	20 9_20 Q4	685	K l yhev in W W Hypo S o age ank Rep acement	03			02	0												
200	20 9_20 Q4	KN666	Be yh ll Rd A t ga van Sewe Remed at on	06			07	2												
20	20 9_20 Q4	R439	Ca ck e gus Zone Wa e main mp ovemen s hase	00	I053		03	08	UR	9 05 20	0 06 20	9 0 20	6 20 2		6 20 2	6 20 3	0	0	0	0
202	20 9_20 Q4	KC484	St and Road o t ush Sto m Sewe	00	KI55		07	24												
203	20 9_20 Q4	KR698	ands Adj o McKinney House Musg ave k &S Sewe	00	KI55		07	24												
204	20 9_20 Q4	N544	Dooch ock to D umkee an Wa e main Upg ades	06			03	23												
205	20 9_20 Q4	K 538	Shee in a k ood A levia ion	06			07	2	UR											
206	20 9_20 Q4	KR634	Ha be ton a k Kings Ha l S o m Sewe Extension	00			07	24												
207	20 9_20 Q4	K 699	South West Col ege Old E ne Hosp tal Si e) oul & S o m sewe extension	06	KI55		07	24												
208	20 9_20 Q4	KR663	Holywood Road Newtowna ds ood A lev a ion	06			07	2												
209	20 9_20 Q4	K 420	Knockb acken Road Newtowna ds oul Sewe Ext	00	KI538		07	24												
2 0	20 9_20 Q4	KA228	Bi ch H ll Road Ant im oul & S o m Sewe Ex ens ons	00	KI538		07	24	NIEA								0	0	0	0
2	20 9_20 Q4	R487	G eate Bel ast unkmain Valve Replacement	06	I083		03	23												
2 2	20 9_20 Q4	K 4 4	K l uney Ga dens A magh S o m Sewe	00	KI55		07	24												
2 3	20 9_20 Q4	KS980	37-45 Downpat ck St eet C ossga sto m sewe	00	KI55		07	24												
2 4	20 9_20 Q4	KA247	C um in own WW S Upg ade - easib l ty S udy	00	KI469		2	2	DRD								0	0	00	0
2 5	20 9_20 Q4	K 345	K l uney Road A magh oul and Sto m Sewe Extens ons	00	KI538		07	24	NIEA								0	0	0	0
2 6	20 9_20 Q4	779	Ca money CWB and 2 Re u bishment	03	I050		04	07												
2 7	20 9_20 Q4	054	Wa e Ma ns New and Renewed inc ud ng S Unplanned)	06			03	23	UR								99	0		0
2 8	20 9_20 Q4	KC485	2- 3 he C escent o ts ewa t S o m Sewe	00	KI55		07	24												

		ase e x e e e m2 2- es)										ase e seA a				e A a e e M es e a es							e A a e e e v e s A a			
So t Re	o ect D Re e ence	Basel ne CA EX 20 0- £m	Basel ne CA EX 20 - 2 £m	Base ine CA EX 20 2 3 £m	Basel ne CA EX 20 3- 4 £m	Basel ne CA EX 20 4- 5 £m	Base ine CA EX 20 5- 6 £m	Base ine CA EX 20 6- 7 £m	Basel ne CA EX 20 7- 8 £m	Basel ne CA EX 20 8- 9 £m	Base ine CA EX 20 9 20 £m	asel ne u pose Al ocat on Qua i y	Base ne u pos Al ocat on Base	Base ine u pose Al ocat on ES	Basel ne u pos Al ocation G owt	Cu ent Actua o o ec ed A Da e	Cu ent Ac ual o ojec ed oject App oval Date	Cu ent Ac ua o o ected Sta t on Si e Date	Cu ent Actua o o ected Bene cial Use Date	Cu ent Actual o ojec ed Regula o y sign-o Date	Cu ent Ac ual o ojected Comp et on o Const uc ion Da e	Cu ent Ac ua o o ected End o Ma ntenance e iod Date	Cu ent Actual o ojec ed Se vice Al ocat on Wate In ast uc u e	Cu ent Ac ual o o ected Se v ce Al oca ion Wa e Non- In ast uctu e	Cu ent Actual o ojec ed Se vic A locat on Sewe age n ast uctu e	Cu ent Actual o o ected Se v ce Al oca ion Sewe age Non- In ast uc u e
		22	23	24	25	26	27	28	29	30	3	36	37	38	39	40	4	42	43	44	45	46	47	48	49	50
	799															5 0 20 9	30 0 20 9	0 0 2020			3 03 2020		00	0	0	0
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7	KI605																						0	0	00	0
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3	KS927															0 08 20 8	03 08 20 8						0	0	70	30
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52	B67	0	0	0	0 248044554	0	0	0	0	0	0	0	20	0	80	6 02 20 5	8 02 20 5	0 08 20 6	27 02 20 8		5 2 20 7		0	00	0	0
53	KN669															23 08 20 7	23 08 20 7		27 0 20 8			25 05 20 8	0	0	00	0
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56	B704																						00	0	0	0
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58	B709	0	0	0	0	0	0	0	0	958 2 98	480835567	0	4	0	59	28 0 20 6	02 02 20 6	0 0 20 8	24 03 2020		0 04 2020		2	98	0	0
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67	B735																						00	0	0	0
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70	C386	0	0	0	0	0	0	0	0	0	0	0	0	0	0								0	00	0	0
7	C387	0	0	0	0	0	0	0	0	0	0	0	0	0	0								50	50	0	0
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8	D343																						00	0	0	0
82	007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26 04 2006							00	0	0	0
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87	6 3															06 0 2020	07 0 2020	24 02 2020			30 04 2020		00	0	0	0
88	K 334	0	0	0	0	0	0	0	0	0	0	0	0	0	0	04 2 20 2	2 20 2	09 0 20 7	28 2 20 7		3 03 20 7	27 06 20 8	0	0	0	00
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90	K 546															06 09 20 7	06 09 20 7	3 2 20 7	6 02 20 8		6 02 20 8	09 20 8	0	0	00	0
9	G080															2 06 20 4	24 06 20 4						00	0	0	0
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93	V882															4 20 6	4 20 6	27 20 7	5 2 20 7		30 03 20 8	27 20 8	0	00	0	0
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95	G087																						80	20	0	0
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97	K 425															6 05 20 9	03 06 20 9	07 0 20 9	02 2 20 9		04 2 20 9		0	0	00	0
98	KR504	0	0	0	0	0	0	0	0 939009 62	0 933375 07	0	55	45	0	0	6 04 20 8	7 04 20 8	05 20 8	2 0 20 9		29 20 9	9 02 2020	0	0	0	00
99	005	0	0	0	2 62775304	3 7452905	0	0	0	0	0	3	87	0	0								0	00	0	0
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2	KG226															0 07 20 9	0 07 20 9	6 09 20 9	2 0 20 9		22 0 20 9		0	0	00	0
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4	027	0	0 67	062	9	0	0	0	0	0	0	0	9	9	0	5 0 20 2	25 0 20 2	05 05 20	28 03 20 4				00	0	0	0
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38	N533															20 6	20 6	07 06 20 7	30 0 20 7		5 09 20 7	30 0 20 8	0	00	0	0
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48	KB524															4 0 20 6	25 0 20 6	0 0 20 8	07 08 20 7				0	0	00	0
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57	V853	0	0	0	0	0	0 6 38 7365	0 6 0 3446	0	0	0	0	00	0	0	29 0 20 5	30 0 20 5	02 05 20 6	6 06 20 7		6 06 20 7		00	0	0	0
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60	KN652	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 0 20 3	28 0 20 3	03 03 20 4	04 04 20 7		24 02 20 4	8 0 20 7	0	0	00	0
6	KA260	0	0	0	0	0	0 00	0 4	0 02	0	0	73	6	0		2 20 5	4 2 20 5	3 0 20 6	24 03 20 7		28 04 20 7		0	0	0	00
62	KN668															28 20 6	5 2 20 6	06 02 20 7	26 05 20 7		3 03 20 7	0 0 20 9	0	0	00	0
63	V880															8 08 20 6	8 08 20 6	04 0 20 6	7 0 20 7		02 02 20 7	5 02 20 7	0	00	0	0
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65	KV233															25 07 20 8	25 07 20 8	4 08 20 8	9 0 20 8			0 20 9	0	0	00	0
66	A309															05 02 20 6	05 02 20 6	22 08 20 6	5 2 20 6		5 2 20 6		0	00	0	0
67	V877															05 02 20 6	05 02 20 6	9 2 20 6	09 05 20 7		2 04 20 7	25 05 20 7	0	00	0	0
68	R488															08 02 20 6	08 02 20 6	04 0 20 7	26 04 20 7		3 08 20 7	05 03 20 8	0	00	0	0
69	R476															25 20 5	0 2 20 5	04 0 20 6	28 0 20 6		8 20 6		0	00	0	0
70	KV2 4															07 07 20 5	07 07 20 5	30 05 20 6	24 06 20 6		0 07 20 6	08 2 20 6	0	0	00	0
7	KS854	0	0	0	0	0	0	0	0	0	0	0	0	0	0	06 07 20 5	07 07 20 5	7 0 20 5	09 03 20 7				0	0	99	
72	689															8 0 20 6	8 0 20 6	06 02 20 7	26 04 20 7		29 03 20 7		0	00	0	0
73	05															0 03 20 3	03 20 3						89		0	0
74	052	0	0	0	0	0	0 255 0269	0	0	0	0	34	66	0	0	25 06 20 8	25 06 20 8						0	00	0	0
75	053	0	0	0	7 0 4	2 785	0	0	0	0	0	37	47	3	3								94	6	0	0
76	R492															8 0 20 6	8 0 20 6	06 06 20 6	26 04 20 7		04 05 20 7	5 06 20 7	0	00	0	0
77	K 520															8 02 20 6	8 02 20 6	04 04 20 6	7 06 20 6			26 08 20 6	0	0	00	0
78	A2 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 06 2009	23 06 2009						97	3	0	0
79	KC482															5 05 20 8	5 05 20 8	8 06 20 8	06 07 20 8			05 20 8	0	0	00	0
80	A283															3 0 20 3	05 02 20 3						90		0	0
8	N53															02 02 20 6	02 02 20 6	24 0 20 6	6 02 20 7		23 02 20 7	23 05 20 7	0	00	0	0
82	KB528															2 0 20 7	2 0 20 7	03 04 20 7	07 04 20 7			26 09 20 7	0	0	00	0
83	K 540															5 20 6	5 20 6	23 0 20 7	07 04 20 7			05 05 20 7	0	0	00	0
84	043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03 09 20 5	07 09 20 5	23 2 20 5	3 0 20 7		28 07 20 7	20 06 20 7	0	00	0	0
85	KB542															29 0 20 8	29 0 20 8		4 0 20 9		6 0 20 9		0	0	00	0
86	KR686															8 06 20 9	8 06 20 9		2 20 9		04 0 20 9		0	0	00	0
87	KS944															22 05 20 5	02 06 20 5	04 04 20 6	06 06 20 6				0	0	00	0
88	C350	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26 02 2009	20 03 2009						00	0	0	0
89	C35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26 09 2007	08 0 2007						00	0	0	0
90	KB5															0 06 20 6	0 06 20 6	0 0 20 6	8 0 20 7		3 03 20 7		0	0	0	00
9	KR700															08 05 20 9	20 05 20 9	9 08 20 9	9 09 20 9		20 09 20 9		0	0	00	0
92	693	0	0	0	0	0	0	0	0	0	0	0	0	0	0								00	0	0	0
93	R486															27 04 20 5	30 04 20 5	2 0 20 5	02 06 20 6		3 05 20 6	0 08 20 6	0	00	0	0
94	N530															6 03 20 6	8 03 20 6		03 04 20 7				00	0	0	0
95	KG 92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 05 20 4	6 05 20 4	29 06 20 5	4 2 20 6			03 02 20 7	0	0	0	00
96	V873															8 0 20 6	8 0 20 6	0 08 20 6	09 2 20 6		2 0 20 7		0	00	0	0
97	K 398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22 03 20	3 03 20	06 03 20 7	3 03 20 7		3 03 20 7	3 08 20 7	0	0	00	0
98	KN636	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03 06 20 4	20 06 20 4	05 0 20 5	30 03 20 7		2 03 20 6	30 03 20 7	0	0	0	00
99	685															04 08 20 5	05 08 20 5	8 0 20 6	27 03 20 7		29 07 20 6		0	00	0	0
200	KN666															26 0 20 6	28 0 20 6	04 07 20 6	30 20 6		30 20 6		0	0	00	0
20	R439	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9 05 20	0 06 20	0 04 20 3	26 07 20 3				93	7	0	0
202	KC484															0 05 20 9	0 05 20 9	03 09 20 9	20 09 20 9		7 09 20 9		0	0	00	0
203	KR698															0 07 20 9	0 07 20 9	05 08 20 9	30 08 20 9		6 09 20 9		0	0	00	0
204	N544															29 06 20 8	03 08 20 8		06 05 20 9		06 09 20 9		00	0	0	0
205	K 538															0 09 20 6	02 09 20 6	03 0 20 6	23 03 20 7		07 04 20 7		0	0	00	0
206	KR634															25 02 20 9	2 03 20 9	0 03 20 9	30 20 9		3 08 20 9	05 02 2020	0	0	00	0
207	K 699															2 05 20 9	2 05 20 9		9 2 20 9		30 08 20 9	3 0 2020	0	0	00	0
208	KR663															29 05 20 9	2 06 20 9	05 08 20 9	09 09 20 9		30 08 20 9	06 03 2020	0	0	00	0
209	K 420															24 07 20 5	24 07 20 5		23 03 20 7		6 0 20 7		0	0	00	0
2 0	KA228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30 20 6	5 2 20 6	5 04 20 9	2 08 20 9		23 08 20 9		0	0	00	0
2	R487															07 06 20 6	09 06 20 6	05 09 20 6	0 03 20 7		3 03 20 7		00	0	0	0
2 2	K 4 4															07 06 20 9	07 06 20 9	05 08 20 9	6 08 20 9		9 08 20 9		0	0	00	0
2 3	KS980															02 05 20 9	02 05 20 9	24 06 20 9	02 09 20 9		9 08 20 9		0	0	00	0
2 4	KA247	0	0	0	0	0	0 008	0 0 5	0 267	0 6 5	0 086	54	7	0	29	5 2 20 7	29 2 20 7	04 06 20 8	30 07 20 9		24 07 20 9	07 20 9	0	0	0	00
2 5	K 345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 09 20 4	2 0 20 4	04 07 20 6	25 0 20 6		9 0 20 6	28 03 20 7	0	0	00	0
2 6	779															26 20 4	5 0 20 5	8 04 20 6	2 0 20 6		2 0 20 6	05 09 20 7	0	00	0	0
2 7	054	0	0	0	3 4736 624	2 7332459	0	0	0	0	0	5	62	0	23								00	0	0	0
2 8	KC485															0 05 20 9	0 05 20 9	24 06 20 9	09 07 20 9		08 07 20 9		0	0	00	0

		e A a e e a a x e e e mm e e a)											e A a e e seA a %)				e A a e e %)		m ae s e)
So t Re	o ect D Re e ence	Cu ent Actua o o ected CA EX ea to da e £m	Cu ent Actua o o ec ed CA EX 20 0 £m	Cu ent Ac ual o ojec ed CA EX 20 - 2 £m	Cu ent Ac ua o o ected CA EX 20 2- 3 £m	Cu ent Actua o o ected CA EX 20 3- 4 £m	Cu ent Actual o ojec ed CA EX 20 4- 5 £m	Cu ent Ac ual o ojected CA EX 20 5- 6 £m	Cu ent Ac ua o o ected CA EX 20 6- 7 £m	Cu ent Actua o o ec ed CA EX 20 7 8 £m	Cu ent Actual o ojec ed CA EX 20 8- 9 £m	Cu ent Ac ua o o ected CA EX 20 9- 20 £m	Cu ent Ac ual o o ected u pose A oca ion Qual t	Cu ent Actual o ojec ed u pose A locat on Base	Cu ent Actual o o ected u pose A loca ion ES	Cu ent Actual o ojec ed u pose A locat on G ow h	Cu ent Ac ual o o ected RE A loca ion Wa e	Cu ent Actual o o ec ed IRE Al ocat on Sewe age	Nom na ed Ou put
		5	52	53	54	55	56	57	58	59	60	6	66	67	68	69	70	7	72
	799	0 099	0	0	0	0	0	0	0	0	0	0 099	0	0	0	00	0	0 0	
2	KV226	-0 00	0	0	0	0	0	0	0	0 0 7	0	-0 00	0	0	0	00	0	0 0	
3	A3 5	0 0	0	0	0	0	0	0	0	0 03	0 269	0 0	0	00	0	0	7	0	
4	KR684	-0 027	0	0	0	0	0	0	0	0	0 7	-0 027	0	0	0	00	0	0	
5	K 550	0	0	0	0	0	0	0	0	0	0 055	0	0	0	0	00	0	0	
6	KR679	0	0	0	0	0	0	0	0	0	0 049	0	0	0	0	00	0	0	
7	KI605	0 0 4	0	0	0	0	0	0	0	0 078	0 092	0 0 4	0	00	0	0	0	00 0	
8	KA290	0 0 6	0	0	0	0	0	0	0	0	0	0 0 6	0	0	0	00	0	0 0	
9	KA294	0 06	0	0	0	0	0	0	0	0	0	0 06	0	0	0	00	0	0 0	
0	KA295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0 0	
	KR703	2 078	0	0	0	0	0	0	0	0	0	2 078	0	00	0	0	0	0 0	
2	K 436	0 045	0	0	0	0	0	0	0	0	0 002	0 045	0	0	0	00	0	0	
3	KB537	0 03	0	0	0	0	0	0	0	0	0	0 03	0	0	0	00	0	0	
4	KC488	0 033	0	0	0	0	0	0	0	0	0	0 033	0	0	0	00	0	0 0	
5	K 409	0 038	0	0	0	0	0	0	0	0	0	0 038	0	0	0	00	0	0 0	
6	K 4 3	0 029	0	0	0	0	0	0	0	0	0	0 029	0	0	0	00	0	0 0	
7	KG222	0 005	0	0	0	0	0	0	0	0 00	0	0 005	0	0	0	00	0	0	
8	KG228	0 055	0	0	0	0	0	0	0	0	0	0 055	0	0	0	00	0	0 0	
9	KC475	0 04	0	0	0	0	0	0	0	0	0	0 04	0	0	0	00	0	0 0	
20	K 558	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0 0	
2	KN675	0 47	0	0	0	0	0	0	0	0	0	0 47	0	0	0	00	0	0	
22	KR690	0 045	0	0	0	0	0	0	0	0	0	0 045	0	0	0	00	0	0 0	
23	K 556	0 022	0	0	0	0	0	0	0	0	0	0 022	0	0	0	00	0	0	
24	KR706	0 0 9	0	0	0	0	0	0	0	0	0	0 0 9	0	0	0	00	0	0 0	
25	KR500	0 278	0	0	0	0	0	0 08	0 056	0 839	2 50	0 278	0	9	9	0	0	9 0	
26	N488	0	0	0	0	0	0	0	0	-0 00	0	0	0	0	00	0	0	0	
27	KR660	0	0	0	0	0	0	0	0	0 047	0 004	0	0	0	0	00	0	0 0	
28	KC478	-0 00	0	0	0	0	0	0	0	0 054	0 003	-0 00	0	0	0	00	0	0 0	
29	K 433	0	0	0	0	0	0	0	0	0	0 043	0	0	0	0	00	0	0 0	
30	KR388	0 052	0 0 3	0 004	0 0 3	0 0 2	0 0 2	0 03	0 026	0 0 4	0 028	0 052	36	39	0	25	0	09	
3	KS927	0 0 2	0	0	0	0 035	0 0	-0 00	0	0	0	0 0 2	00	0	0	0	0	0 0	
32	C398	0	0	0	0	0	0	0	0	0 08	0 002	0	0	00	0	0	0	0 0	
33	604	0	0	0	0	0	0	0	0	0 69	0 003	0	0	00	0	0	0	0 0	
34	N536	0	0	0	0	0	0	0	0	0 04	0 008	0	0	00	0	0	0	0 0	
35	KC480	0	0	0	0	0	0	0	0	0 074	0	0	0	0	0	00	0	0 0	
36	KV23	0 054	0	0	0	0	0	0	0	0	0	0 054	0	0	0	00	0	0 0	
37	KV220	0	0	0	0	0	0 003	0 42	0 0 6	0 082	-0 04	0	0	00	0	0	0	00 0	
38	A300	-0 004	0	0	0	0	0 0 5	0 06	0 005	-0 002	0 002	-0 004	0	94	0	6	94	0 0	
39	A30	0	0	0	0	0	0	0	0	0	0 00	0	0	0	0	00	0	0	
40	KC474	0 006	0	0	0	0	0	0	0	0 002	0 045	0 006	0	40	60	0	0	40 0	
4	A308	0 096	0	0	0	0	0	0 049	0 089	0 99	0 96	0 096	0	69	0	3	4	28 0	
42	A3 0	822	0	0	0	0	0	0	0 2	0	0 72	822	57	43	0	0	43	0 0	
43	A3	0 09	0	0	0	0	0	0	422	05	332	0 09	62	38	0	0	38	0 0	
44	A3 2	0	0	0	0	0	0	0	0 69	7 058	0 592	0	0	0	00	0	0	0 0	
45	A3 3	0 227	0	0	0	0	0	0	0 045	0 45	0 9	0 227	59	4	0	0	4	0 0	
46	A3 4	0 089	0	0	0	0	0	0	0 045	0 005	0	0 089	22	76	2	0	76	0 0	
47	KR622	-0 0	0	0	0	0	0	0	0	0 05	053	-0 0	0	49	0	5	0	49 0	
48	A3 9	0	0	0	0	0	0	0	0	0 035	0	0	00	0	0	0	0	0 02	
49	A326	0 0 6	0	0	0	0	0	0	0	0	0	0 0 6	0	00	0	0	00	0 0	
50	A329	0 02	0	0	0	0	0	0	0	0	0	0 02	0	30	35	35	30	0 0	
5	KS973	0	0	0	0	0	0	0	0	0	0 065	0	0	0	0	00	0	0 0	
52	B67	0	0	0	0	0 02	0	0 006	0 2 8	0 505	0 005	0	0	0	0	00	0	0 0	
53	KN669	0	0	0	0	0	0	0	0	0 043	0 00	0	0	0	0	00	0	0 0	
54	KB549	0 0 8	0	0	0	0	0	0	0	0	0	0 0 8	0	0	0	00	0	0 0	
55	KR609	0 2 2	0	0	0	0	0	0	0	0 004	0 004	0 2 2	0	0	0	00	0	0 0	
56	B704	0	0	0	0	0 003	0 022	-0 004	0	0	0 00	0	00	0	0	0	0	0 0	
57	B706	0	0	0	0	0 0 6	0 002	0 5	0 0 8	0 0	0	0	0	94	0	6	94	0 0	
58	B709	9 2	0	0	0	0	0 038	0	0 076	0 3	3 04	9 2	0	6	0	94	0	0 02	
59	KA277	0	0	0	0	0	0	0	0	0 02	0 002	0	0	0	0	00	0	0 0	
60	KR657	0	0	0	0	0	0	0	0	0 06	0 00	0	0	0	0	00	0	0 0	
6	B723	0 026	0	0	0	0	0	0	0 024	0 03	0 035	0 026	0	00	0	0	00	0 0	
62	KB547	0 002	0	0	0	0	0	0	0	0	0 05	0 002	0	0	0	00	0	0 0	
63	B725	-0 008	0	0	0	0	0	0	0 963	2 7	0 368	-0 008	37	62		0	62	0 0	
64	B726	0 776	0	0	0	0	0	0	0 8	0 99	027	0 776	32	68	0	0	68	0 0	
65	B727	0 286	0	0	0	0	0	0	0 575	09	0 84	0 286	40	60	0	0	60	0 0	
66	KV227	0 077	0	0	0	0	0	0	0	0	0	0 077	0	0	0	00	0	0 0	
67	B735	0 0 7	0	0	0	0	0	0	0	0 0 2	0 075	0 0 7	0	0	20	70	0	0	
68	B737	0	0	0	0	0	0	0	0	0	0	0	0	70	5	5	70	0 0	
69	KR676	0 04	0	0	0	0	0	0	0	0	0	0 04	0	0	0	00	0	0	
70	C386	0	0	0	0	0 003	0	0	-0 003	0	0	0	0	0	0	00	0	0	
7	C387	0	0	0	0	0 003	0	0	-0 003	0	0	0	0	0	0	90	0	0	
72	C390	0 9 6	0	0	0	0	0	0	0	0	0 95	0 9 6	0	4	86	0	0	0 0	
73	R490	0 00	0	0	0	0	0	0 0 7	-0 007	0 043	0 00	0 00	0	00	0	0	0	0 0	
74	B732	0 0 2	0	0	0	0	0	0	0	0 09	0 7 6	0 0 2	0	00	0	0	00	0 0	
75	C399	863	0	0	0	0	0	0	0 207	0 06	0 835	863	70	30	0	0	30	0 0	
76	C400	0 029	0	0	0	0	0	0	5 5	0 82	0 258	0 029	57	37	6	0	37	0 0	
77	C40	0 339	0	0	0	0	0	0	0	0	0 894	0 339	0	20	49	3	20	0	
78	C402	0 03	0	0	0	0	0	0	0	0	0 33	0 03	0	75	25	0	75	0 0	
79	C403	0 0 2	0	0	0	0	0	0	0	0	0	0 0 2	0	00	0	0	00	0 0	
80	C404	0 055	0	0	0	0	0	0	0	0	0	0 055	0	30	0	70	30	0	
8	D343	0	0	0	0	0	0	0	0	-0 00	0	0	0	0	0	00	0	0	
82	007	0	0	0 38	0 027	0	0	-0 027	0	0	0	0	0	89	0	0	89	0 0	
83	606	0 27	0	0	0	0	0	0	554	0 47	0 284	0 27	7	83	0	0	83	0 0	
84	607	0 606	0	0	0	0	0	0	0 006	0 079	0 003	0 606	0	00	0	0	00	0	
85	608	2	0	0	0	0	0	0	0	0 04	0 9	2	30	70	0	0	70	0 0	
86	6 0	0 02	0	0	0	0	0	0	0	0 0	0 065	0 02	0	0	20	70	0	0	
87	6 3	0 00	0	0	0	0	0	0	0	0	0	0 00	0	00	0	0	00	0	
88	K 334	-0 00	0	0 0	0 002	-0 00	0	0 007	0 095	0 0 6	0 002	-0 00	4	86	0	0	0	0 0	
89	KR675	0 23	0	0	0	0	0	0	0	0 00	0 00	0 23	0	0	0	00	0	0	
90	K 546	0	0	0	0	0	0	0	0	0 065	0	0	0	0	0	00	0	0 0	
9	G080	0	0	0	0	-0 009	0 009	-0 002	0	0	0	0	0	0	0	00	0	0 0	
92	G082	0	0	0	0	0 00	0 002	-0 003	0	0	0	0	0	00	0	0	00	0 0	
93	V882	0	0	0	0	0	0	0	0	0 04	0 006	0	0	00	0	0	0	0 0	
94	B722	0	0	0	0	0	0	0	0 0 7	0	0	0	0	00	0	0	0	0 0	
95	G087	0 026	0	0	0	0	0	0	0	0 03	0 068	0 026	0	7		92	0	0 0	
96	003	0	0	0	0 424	-0 084	0	0	0	0	0	0	26	44	3	27	38	0	
97	K 425	0 3	0	0	0	0	0	0	0	0	0	0 3	0	0	0	00	0	0 0	
98	KR504	322	0	0	0 03	0 082	0 00	0 066	0 002	0 0 3	0 9 2	322	28	58	0	4	0	0 02	
99	005	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	
00	R484	-0 00	0	0	0	0	0	0 75	0 032	0 076	0 0 6	-0 00	0	00	0	0	00	0 0	
0	020	0 05	0	0	0 006	0 027	0 0 4	0 036	0 368	983	0 06	0 05	0	00	0	0	0	0 02	
02	KR644	0	0	0	0	0	0	0	0	0 027	0 008	0	0	0	0	00	0	0 0	
03	K 43	0	0	0	0	0	0	0	0	0	0 044	0	0	0	0	00	0	0 0	
04	KR652	0	0	0	0	0	0	0	0	0	0 3	0	0	0	0	00	0	0 0	
05	KG2 2	-0 00	0	0	0	0	0	0	0	0 7	0	-0 00	0	0	0	00	0	0 0	
06	B695	-0 003	0	0	0	0 006	0 002	0 0 5	0 02	0 264	0 2 8	-0 003	0	00	0	0	0	0 0	
07	0 0	0 233	0	0	0	0 067	0 07	0 535	0 007	0 04	2 653	0 233	00	0	0	0	0	0 0	
08	KS935	0	0	0	0	0	0	0	0	0	0 295	0	0	0	40	60	0	0 0	
09	0 7	0	0 02	0 022	0 0 8	0 0 4	0	0	0	0	0	0	0	00	0	0	0	0	
0	G086	0	0	0	0	0	0	0	0	0 092	0 00	0	0	00	0	0	0	0 0	
	KR697	0 04	0	0	0	0	0	0	0	0	0	0 04	0	0	0	00	0	0 0	
2	KG226	0 036	0	0	0	0	0	0	0	0	0	0 036	0	0	0	00	0	0 0	
3	KV207	0	0	0	0	0	0 005	-0 00	0 0	0 25	0 006	0	0	00	0	0	0	00 0	
4	027	0 3	0	0 67	0 89	0 356	0 49	-0 00	0	-0 066	-0 2	0 3	0	99	0		99	0 08	
5	028	0 007	0	0 87	0 33	967	0 343	0 066	0	0	0 05	0 007	0	95	0	5	95	0 08	
6	029	0	0	0	0	0 05	0 082	0 688	0 094	-0 004	0 0 8	0	0	50	0	50	0	0 0	
7	KS9 6	0	0	0	0 002	0 002	0 00	0	0 0 3	0	0	0	0	0	0	00	0	0 0	
8	035	0	0	0	0	0 0 6	0 054	-0 002	0	0	0	0	0	00	0	0	00	0	
9	KR649	0	0	0	0	0	0	0	0	0	0 082	0	0	0	0	00	0	0 0	
20	038	0 08	0	0	0 003	0 082	0 446	0 492	356	0 984	0 299	0 08	97	3	0	0	0	0 0	
2	K 392	0	0	0	0	0	0	0	0 3	0	0	0	0	0	0	00	0	0 0	
22	040	0	0	0	0	0 025	0 0 5	0 003	-0 002	0	0	0	0	0	00	0	0	0 0	
23	04	0	0	0	0	0 023	0 026	0 009	0 00	0 03	-0 0	0	0	0	00	0	0	0 0	
24	605	0	0	0	0	0	0	0	0	0 42	0 062	0	0	00	0	0	0	0 0	
25	KA285	0 02	0	0	0	0	0	0	0	0 00	0	0 02	0	0	0	00	0	0	
26	KR654	0	0	0	0	0	0	0	0	0 024	0	0	0	0	0	00	0	0 0	
27	048	094	0	0	0	0 0 8	0 0 2	0 493	697	403	232	094	0	00	0	0	80	20 0	
28	050	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	
29	KS958	0	0	0	0	0	0 264	30	0 32	0 2	0 024	0	00	0	0	0	0	0 02	
30	N5 4	0	0	0	0	0	0 0 5	0 005	0 306	0 339	0	0	0	47	44	9	2	0 0	
3	R500	0	0	0	0	0	0	0	0	0 278	0 00	0	0	00	0	0	0	0 0	
32	KA282	0	0	0	0	0	0	0	0	0 035	0	0	0	0	0	00	0	0	
33	KR484	0	0	0	0	0 037	0 004	0 647	0 33	0 0 4	0	0	0	00	0	0	0	0 0	
34	V883	0	0	0	0	0	0	0	0	0 039	0 00	0	0	00	0	0	0	0 0	
35	782	0	0	0	0	0	0	0	0	0 2 5	0	0	0	00	0	0	0	0 0	
36	K 40	0	0	0	0	0	0	0	0	0	0 067	0	0	0	0	00	0	0 0	
37	K 586	0	0	0 0 2	0 024	0	0	0 05	0 06	845	0 5	0	45	5	0	40	0	0 02	
38	N533	0	0	0	0	0	0	0	0	0 083	0	0	0	00	0	0	0	0 0	
39	KC477	0	0	0	0	0	0	0	0	0 064	0 005	0	0	00	0	0	0	0 0	
40	KC487	-0 00	0	0	0	0	0	0	0	0	0 045	-0 00	0	0	0	00	0	0	
4	009	0	0	0	0 003	0 05	0	0 09	0	0 069	0 0 6	0	0	00	0	0	0	0 0	
42	780	0	0	0	0	0	0	0	0 2	0 3	0	0	0	00	0	0	0	0 0	
43	KR650	-0 00	0	0	0	0	0	0	0	0 02	0 008	-0 00	0	0	0	00	0	0 0	
44	N532	0	0	0	0	0	0	0	0 903	0 588	0 0 3	0	0	84	0	6	68	0 0	
45	KG209	0	0	0	0	0	0	0	0	0 84	0	0	0	0	0	00	0	0 0	
46	758	0	0 0	-0 05	0	0	0	-0 0	0	0	0	0	0	00	0	0	0	0 0	
47	K 423	0	0	0	0	0	0	0	0	0 04	0	0	0	0	0	00	0	0 0	
48	KB524	0	0	0	0	0	0	0 0 2	0 0	0 23	0 00	0	0	0	00	0	0	0 0	
49	K 396	0	0	0	0	0	0	0 0 8	0 287	0 208	0 008	0	63	33	0	4	0	0 06	
50	B728	0	0	0	0	0	0	0	0	0 06	0	0	0	00	0	0	0	0 0	
5	KS967	0	0	0	0	0	0	0	0 028	0 037	0	0	0	0	0	00	0	0 0	
52	KS963	0	0	0	0	0	0	0	0 009	0 065	0 024	0	0	0	0	00	0	0 0	
53	KR6 2	0	0	0	0	0	0	0	0 544	0 226	0 00	0	0	39	0	6	0	39 0	
54	KB529	0	0	0	0	0	0	0	0 065	-0 007	0 00	0	0	0	0	00	0	0 0	
55	N525	0	0	0	0	0	0	0 045	0	0	0	0	0	00	0	0	0	0 0	
56	KG2 4	0	0	0	0	0	0	0	0	0	0 063	0	0	0	0	00	0	0 0	
57	V853	0	0	0	0	0 044	0 352	0 45	865	0 307	0	0	0	00	0	0	00	0 0	
58	690	0	0	0	0	0	0	0	0 6 4	0 84	0 003	0	0	90	0	0	65	0 0	
59	037	0	0	0	0 006	0 025	0	0 006	0 8	-0 0 3	0 002	0	0	00	0	0	0	0 0	
60	KN652	0	0	0	0 00	0 035	0 034	0 003	-0 005	-0 00	0 004	0	0	0	0	00	0	0 0	
6	KA260	0	0	0	0	0 003	0 0 7	0 00	0 433	0 004	0 005	0	73	6	0		0	0 06	
62	KN668	0	0	0	0	0	0	0	0 063	0 004	0	0	0	0	0	00	0	0 0	
63	V880	0	0	0	0	0	0	0	0 6	0	0	0	0	00	0	0	0	0 0	
64	KA26	0	0	0	0	0 002	0 022	0	0 87	0 029	0	0	55	20	0	25	0	0 06	
65	KV233	0	0	0	0	0	0	0	0	0	0 069	0	0	0	0	00	0	0	
66	A309	0	0	0	0	0	0	0	0 04	0	0	0	0	00	0	0	0	0 0	
67	V877	0	0	0	0	0	0	0	0 075	0 004	0	0	0	00	0	0	0	0 0	
68	R488	0	0	0	0	0	0	0 02	0 055	0 082	0	0	0	00	0	0	0	0 0	
69	R476	0	0	0	0	0	0	0 9	0 3 2	0	0	0	0	00	0	0	0	0 0	
70	KV2 4	0	0	0	0	0	0	0	0 057	0	0	0	0	0	0	00	0	0 0	
7	KS854	0	0 006	0	0	0 0 4	0	0 72	0 534	-0 283	0 002	0	0	0	0	00	0	0 0	
72	689	0	0	0	0	0	0	0	0 05	-0 00	0	0	0	00	0	0	0	0 0	
73	05	0	0	0	0	742	872	8	0 038	-0 088	0	0	26	44	3	27	38	0 0	
74	052	0	0	0	0	0 2	0 075	0 376	0 068	0 26	0	0	00	0	0	0	0	0 02	
75	053	0	0	0	0	0	0	0	0	0	0	0	30	5	3	6	47	0	
76	R492	0	0	0	0	0	0	0	0 068	0 046	0	0	0	00	0	0	0	0 0	
77	K 520	0	0	0	0	0	0	0	0 087	0	0	0	0	0	0	00	0	0 0	
78	A2 0	0	2 08	7	0 55	0 35	0 009	0 0 9	0 005	0 02	0 0 4	0	4	2	3	35	20	0 0	
79	KC482	0	0	0	0	0	0	0	0	0	0 043	0	0	0	0	00	0	0	
80	A283	0	0	0	0 006	0 2	0 37	0 0 4	0 064	-0 0 3	0 008	0	0	00	0	0	90	0 0	
8	N53	0	0	0	0	0	0	0	0 028	0 00	0	0	0	00	0	0	0	0 0	
82	KB528	0	0	0	0	0	0	0	0	0 005	0	0	0	0	0	00	0	0 0	
83	K 540	0	0	0	0	0	0	0	0 2	0 0 9	0	0	0	0	0	00	0	0 0	
84	043	0	0	0	0	0 008	0	0 003	0	0 002	0 002	0	0	00	0	0	0	0 0	
85	KB542	0	0	0	0	0	0	0	0	0	0 026	0	0	0	0	00	0	0	
86	KR686	0 022	0	0	0	0	0	0	0	0	0	0 022	0	0	0	00	0	0	
87	KS944	0	0	0	0	0	0	0	0 047	0	0	0	0	0	0	00	0	0 0	
88	C350	0	303	0 062	-0 02	0 00	0 053	-0 007	0	0	0	0	27	32	32	9	32	0 0	
89	C35	0	0 0 9	0 04	0	-0 027	0	-0 0	0	0	0	0	7	6	77	0	6	0 0	
90	KB5	0	0	0	0	0	0 0 3	-0 00	0 2 2	0 006	0 002	0	20	5	0	29	0	0 03	
9	KR700	0 063	0	0	0	0	0	0	0	0	0	0 063	0	0	0	00	0	0 0	
92	693	0	0	0 0	0	0	0	0	0	0 04	0	0	0	00	0	0	00	0	
93	R486	0	0	0	0	0	0	0 5 8	0 08	0	0	0	0	00	0	0	0	0 0	
94	N530	0	0	0	0	0	0	0 03	0 094	-0 039	0	0	0	00	0	0	00	0 0	
95	KG 92	0	0	0	0 003	0 008	0 005	0 68	0 083	0	0 003	0	0	0	0	00	0	0 03	
96	V873	0	0	0	0	0	0	0	0 03	0	0 00	0	0	00	0	0	0	0 0	
97	K 398	0	0 002	0 00	0	0	0	0 002	0 04	-0 004	0	0	0	0	0	00	0	0 0	
98	KN636	0	0	0 007	0 028	0 007	0 004	0 302	0 27	-0 003	0	0	0	32	0	68	0	0 03	
99	685	0	0	0	0	0	0 0 2	0 343	0 76	-0 0 5	0	0	0	00	0	0	0	0 0	
200	KN666	0	0	0	0	0	0 006	0 0 2	0 228	-0 045	0 004	0	0	8	86	6	0	8 0	
20	R439	0	0 265	863	0 77	0 065	0 24	0 045	0 05	-0 083	0 032	0	38	35	6	2	35	0 0	
202	KC484	0 023	0	0	0	0	0	0	0	0	0	0 023	0	0	0	00	0	0 0	
203	KR698	0 077	0	0	0	0	0	0	0	0	0	0 077	0	0	0	00	0	0 0	
204	N544	0 30	0	0	0	0	0	0	0 002	0 082	0 65	0 30	0	0	0	00	0	0 0	
205	K 538	0	0	0	0	0	0	0	0 072	-0 007	0	0	0	40	60	0	0	40 0	
206	KR634	0 365	0	0	0	0	0	0 004	0 004	0	0 052	0 365	0	0	0	00	0	0 0	
207	K 699	0 039	0	0	0	0	0	0	0	0	0	0 039	0	0	0	00	0	0	
208	KR663	0 034	0	0	0	0	0	0	0	0	0 022	0 034	0	30	70	0	0	30	
209	K 420	0	0	0	0	0	0	0	0 062	-0 00	0	0	0	0	0	00	0	0 0	
2 0	KA228	0 244	0 00	0 00	0	0 002	0 002	0 0 5	0	0	0	0 244	0	0	0	00	0	0 0	
2	R487	0	0	0	0	0	0	0 03	0 608	-0 0 3	0	0	0	00	0	0	00	0 0	
2 2	K 4 4	0 0 9	0	0	0	0	0	0	0	0	0	0 0 9	0	0	0	00	0	0 0	
2 3	KS980	0 3	0	0	0	0	0	0	0	0	0 002	0 3	0	0	0	00	0	0	
2 4	KA247	0 306	0	0 00	0 003	0	0	0 008	0 0 6	0 079	0 735	0 306	54	7	0	29	0	0 06	
2 5	K 345	0	0	0 003	0 007	0	0 03	0 0 2	0 075	-0 002	0 00	0	0	25	0	75	0	25 0	
2 6	779	0	0	0	0	0	0	0	0 259	0	0 00	0	0	00	0	0	0	0 0	
2 7	054	0	0	0	0	0	0	0	0	0	0	0	5	62	0	23	62	0	
2 8	KC485	0 025	0	0	0	0	0	0	0	0	0	0 025	0	0	0	00	0	0	

So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date
2 9	20 9_20 Q4	KB544	Oppos te 249 O i o Road Cookstown Sto m Sewe Ex ens on	06			07	24								
220	20 9_20 Q4	KA286	e a d Meadow Ant m oul Sewe	00	KI55		07	24								
22	20 9_20 Q4	B693	Ca land o Cookstown St ategic unk Ma n	04			03	05	DRD				3 03 202			
222	20 9_20 Q4	KS937	Annsbo ough WW S Upg ade	06			07	2	NIEA							
223	20 9_20 Q4	K 389	Maghe alave Road sbu n oul Sewe Ex ens on	00	KI538		07	24	NIEA	6 07 2009	03 08 2009	24 08 2009	09 0 2009		09 0 2009	09 0 20 0
224	20 9_20 Q4	069	W S ump E c ency Capi al Inves ment hase	00	I0 7		05	0	DRD							
225	20 9_20 Q4	R454	Bal ygoma t n South hase Wate Mains mp ovemen s	00	I053		03	08	UR							
226	20 9_20 Q4	G076	Co nak nnega Road u gan Wate Main Extension	00	I054		03	23	DRD	20 02 20 2	27 02 20 2	04 04 20 2	28 09 20 2		28 09 20 2	28 09 20 3
227	20 9_20 Q4	023	A5 Weste n anspo t Co ido	00	I054		03	23	DRD							
228	20 9_20 Q4	KG20	De yt asna Road u gan oul umping Ma n Extens on	00	KI538		07	24	DRD							
229	20 9_20 Q4	058	Rec ea ional S tes App aisals o ubl c Access	04			06	03								
230	20 9_20 Q4	059	Wa e owe Repo ts demol t on o seven	03			04	07	DRD							
23	20 9_20 Q4	06	mpound ng Rese voi s On-si e Action ans (Rese voi s Bi l)	03			0	03	DRD							
232	20 9_20 Q4	062	ead ipe Rep acement og amme	03			03	23	DWI							
233	20 9_20 Q4	063	nspect on o Ai Valves	03			03	23								
234	20 9_20 Q4	065	C 3 Base Main enance Wate ea ment Wo ks - No th East	03			02	0	DRD							
235	20 9_20 Q4	066	C 3 Base Main enance Wate ea ment Wo ks - Sou h West	03			02	0	DRD							
236	20 9_20 Q4	067	Supp y insta lat on and commiss on ng o elemet y Scann ng Dig tal Radios	00			03	08	DRD							
237	20 9_20 Q4	068	C 3 Base Main enance Wate umping Sta ions	03			05	0	DRD							
238	20 9_20 Q4	07	Sub Mete ng at Selec ed C ean Wa e Sites	06			06	0	DRD							
239	20 9_20 Q4	072	C 5 Wa e Ma ns Rehab l ta ion amewo k	06			03	08	UR							
240	20 9_20 Q4	073	C 5 Wa e Ma ns Mino Wo ks amewo k	06			03	23	UR							
24	20 9_20 Q4	074	Wa e mains Rehabi tat on New & Rep acement Inco po at ng i st me Se v	06			03	08	UR							
242	20 9_20 Q4	075	W S ump E c ency Capi al Inves ment hase 2	00			05	0								
243	20 9_20 Q4	076	Rep acement Wate ma ns 20 4 5 - Reac ive Bundle 2	03			03	08								
244	20 9_20 Q4	078	C 5 Se v ce Rese voi Rehab l ta ion (a ent Code)	00			04	07								
245	20 9_20 Q4	079	C 5 Abst ac ion Moni o ing	00			0	03								
246	20 9_20 Q4	080	C 5 Se v ce Rese voi Samp e aps	00			04	07								
247	20 9_20 Q4	K 385	Coa s and Road Dungannon Sto m Sewe Extension	00	KI538		07	24								
248	20 9_20 Q4	082	C 5 ead Commun cation pe Replacement og amme	00			03	23	DWI							
249	20 9_20 Q4	083	C 5 unk Ma n Rehabi i a ion og amme (a ent)	00			03	23								
250	20 9_20 Q4	R474	Mi lmount V l age Dundonald Wa e Ma n Upg ades	00	I054		03	23	DRD							
25	20 9_20 Q4	K 39	sbu n DA S age	00			07	2	NIEA			30 06 20 3	0 0 20 5		0 0 20 5	0 0 20 6
252	20 9_20 Q4	N550	ough ea to Kinsgmi ls M Rep acement (a t)	06			03	23								
253	20 9_20 Q4	79	Caugh Hi l CWB Rehabi i at on	06	I078		04	07								
254	20 9_20 Q4	084	Wa e eatment Wo ks ea ab ity S udy	06			02	0								
255	20 9_20 Q4	086	C 5 ubl c Rea m & Roads Wa e)	00			03	23								
256	20 9_20 Q4	087	C 5 Wa e mains Rehabi tat on W - o any No th sbu n South	00			03	08								
257	20 9_20 Q4	088	C 5 Wa e mains Rehabi tat on W 2 o ked B idge Dunmu y	00			03	08								
258	20 9_20 Q4	089	C 5 Wa e mains Rehabi tat on W 3 Ki ly ane	00			03	08								
259	20 9_20 Q4	092	C 5 Wa e mains Rehabi tat on W 6 Dungonne l	00			03	08								
260	20 9_20 Q4	K 387	D el ncou t A magh Sewe Netwo k Upg ade	03			07	2								
26	20 9_20 Q4	093	C 5 Wa e mains Rehabi tat on W 7 Ca ick e gus	00			03	08								
262	20 9_20 Q4	KC48	C 5 ea 4 Ww W Base Ma ntenance – No h Region	06			09	02								
263	20 9_20 Q4	K 434	D umnake y Wwps S o m sewe extension	06	KI55		07	24								
264	20 9_20 Q4	099	W IM Netwo ks Wo kpackages Development and Ve i icat on	04			06	08								
265	20 9_20 Q4	I 00	C 5 Cap tal Ma n enance lanning	04			06	20								
266	20 9_20 Q4	I 0	C 5 Se v ce Rese voi Condi ion Assessments	04			04	07								
267	20 9_20 Q4	I 02	C 5 RA Rev ew o E Wa e Ma ns Rehab Wo k ackages	04			03	08								
268	20 9_20 Q4	I 04	C 5 ea Base Main enance - Chlo ine Dos ng S tes	00			04	0								
269	20 9_20 Q4	I 05	W W Cond t on Assessments	00			02	0								
270	20 9_20 Q4	I 06	SR By ass Schemes hase 2	00			03	06								
27	20 9_20 Q4	I 08	C 5 ea - Asset e o mance Miscel aneous Solut ons Development	06			06	07								
272	20 9_20 Q4	I 09	Casto Bay Ou age easib l ty Studies	06			03	04								
273	20 9_20 Q4	I 0	mpound ng Rese voi Audi s	06			0	03								
274	20 9_20 Q4	I 2	C 5 Wa e mains Rehabi a ion a ent	06			03	08								
275	20 9_20 Q4	I 4	C 5 S (Wate) a ent E	06			03	23								
276	20 9_20 Q4	I 5	C 5 App aisal o NIW in ast uctu e at Ra lways DRD Road & ipe B dges	06			03	23								
277	20 9_20 Q4	KA254	Nutts Co ne Road C uml n S o m Sewe Extension	00	KI464		07	24	DRD							
278	20 9_20 Q4	I 8	Se v ce Rese voi Condi ion Assessment(C 5 ea 2)	00			04	07								
279	20 9_20 Q4	KR6 9	Sydenham WW S Sc een app a sal	06			3	02								
280	20 9_20 Q4	I 20	W IM Netwo ks Wo k ackages & Ve i ca ion(C 5 ea 2)	00			06	08								
28	20 9_20 Q4	I 2	Hyd au c Model Rebu lds & oject Management(C 5 ea 2)	00			06	20								
282	20 9_20 Q4	I 22	RA s o Rehab Wo k ackages 20 6 7	06			03	08								
283	20 9_20 Q4	I 23	NIW H sto c Es ate Condi ion Assessmen s	06			06	03								
284	20 9_20 Q4	I 26	C 5 ea 3 W S Base Ma ntenance	06			05	0								
285	20 9_20 Q4	I 27	W IM Netwo ks Wo kpackages and Ve i icat on 20 7 20 8	06			06	08								
286	20 9_20 Q4	I 28	Clean Wate Netwo k Hyd au ic Model Rebu lds and Ad -Hoc Analysis 20 7	06			06	20								
287	20 9_20 Q4	I 29	Miscel aneous Risk and Consequence Update and Clean Wate Netwo k Ana	06			06	23								
288	20 9_20 Q4	I 30	Se v ce Rese voi Condi ion Assessment C 5	06			04	07								
289	20 9_20 Q4	I 3	RAs o Rehab Wo k ackages C 5	06			03	08								
290	20 9_20 Q4	I 32	unk St a eg c Ma n Investigat on 20 7-20 8	06			03	23								
29	20 9_20 Q4	I 33	DG3 Management mp ovemen s	06			06	08								
292	20 9_20 Q4	I 34	Upda e to Standa dised Eng nee ng D awings	06			06	20								
293	20 9_20 Q4	I 35	eakage Inves igat ons to n o m WI M Wo k ackage development	06			06	0								
294	20 9_20 Q4	I 36	Deve opment and Imp emen at on o Risk-Based Cond t on Assessment Me h	06			0	0								
295	20 9_20 Q4	I 37	CM - Dete o at on and R sk & Rel abi i y Mode l ng o C2	06			4	20								
296	20 9_20 Q4	I 38	C 5 ea 4 SR (M&E main y & Ch o ine Gas asse s) Base Maintenance	00			04	0								
297	20 9_20 Q4	I 39	C 5 ea 4 W S Base Ma ntenance	00			0	0								
298	20 9_20 Q4	I 4	unk St a eg c Wate Main Inves igat ons C 5	00			03	23								
299	20 9_20 Q4	I 42	Compi ing o i ised ead Comms pe Wo kpackages hase 2	00			03	23								
300	20 9_20 Q4	I 43	Clean Wate Netwo k Hyd au ic Model Rebu lds and Ad -Hoc Analys s 20 8-2	06			06	20								
30	20 9_20 Q4	I 44	o ess onal Se vices amewo k Wa e mains Netwo k C 5	06			03	08								
302	20 9_20 Q4	I 45	Review bene ts o UV D s n ect on t ea ment with n N W c ean wate	06			06	04								
303	20 9_20 Q4	I 46	Upda e to D nk ng Wate Sa e y plans (DWS s) Risk Assessments	06			06	04								
304	20 9_20 Q4	I 47	SR Rehab ita ion	06			04	07								
305	20 9_20 Q4	I 49	easibi ty Study o using G oundwa e Abst act on	06			06	03								
306	20 9_20 Q4	I 5	A pha W w eatab l ty Studies	06			02	0								
307	20 9_20 Q4	I 52	Clean Wate Netwo k Hyd au ic Model Rebu lds and Ad Hoc Ana ysis 20 9 -	06			06	20								
308	20 9_20 Q4	I 53	I 53 W W yea 5 and 6 Base Ma ntenance 9 2	06			02	0								
309	20 9_20 Q4	I 56	W S Base Ma ntenance ea 6 20 2	00			05	0								
3 0	20 9_20 Q4	I 57	epa at on o n t al Wo kpackages o C2	06			03	08								
3	20 9_20 Q4	I 58	Cont ol ed Se vice Rese voi s - anel Eng nee Inspec ions	06			0	03								
3 2	20 9_20 Q4	I 59	eakage Detect on Resou ces	06			06	23								
3 3	20 9_20 Q4	I 60	mpound ng Rese voi s Sect on 0 Inspec ion Ou pu s	06			0	03								
3 4	20 9_20 Q4	I 6	C2 Dig tal & Benchma king Assessmen s	06			06	20								
3 5	20 9_20 Q4	7 3	K l yhev in o ough B adan nk Wate ma n	02			03	05	DWI							
3 6	20 9_20 Q4	7 5	Caugh Hi l Ca money to St abane St ateg c ink Wate ma n	02			03	05	DWI				3 0 20 9			
3 7	20 9_20 Q4	KV225	Newpoint S i e - Odou Cont ol	00			3	02								
3 8	20 9_20 Q4	KR480	Holywood Sewe Netwo k mp ovemen s	00	KI537		07	2	NIEA	9 0 20 2	23 0 20 2	5 0 20 3	0 0 20 5		0 0 20 5	0 0 20 6
3 9	20 9_20 Q4	768	Caugh Hi l W W AS Sto age	00			02	04	DRD							
320	20 9_20 Q4	770	Caugh Hi l W W - Upg ade o Wash Wate ea ment aci i ies easibi i y Stu	02			02	04	DRD							
32	20 9_20 Q4	772	W W - eatab l ty App aisal o Caugh Hi l W W	00			02	04	DRD				3 0 20 9			
322	20 9_20 Q4	773	Ca money W W DA p ocess Opt m sa ion	00			02	04	DWI							
323	20 9_20 Q4	KR590	Bal ygowan Road Bel ast S o m Sewe Ex ens on	00	KI538		07	24	DRD							
324	20 9_20 Q4	78	A29 Ki lytoney Rea ignment Wate ma n D ve sions	00			03	23								
325	20 9_20 Q4	785	A6 Dung ven D umahoe	06			03	23	DRD							
326	20 9_20 Q4	786	Ca money Wtw eatabi i y Recommended Imp ovements	06			02	04								
327	20 9_20 Q4	787	aughan RW S Res l ence Scheme	06			05	0								
328	20 9_20 Q4	788	C eggan SR Ove low	00			04	0								
329	20 9_20 Q4	789	Ca money W W Abst action oint Rev ew	06			0	03								
330	20 9_20 Q4	790	No the n WRZ Res l ence	06			0	05								
33	20 9_20 Q4	792	Bal ynameen B dge Claudy	00			03	23								
332	20 9_20 Q4	795	Bal in ees W W MC A t ea ment nves igat ons	06			02	04								
333	20 9_20 Q4	798	Mobuoy Remed ation og amme	06			0	2								
334	20 9_20 Q4	KN670	B024994 Gae sco l na gC ann(schoo) Omagh	06	KI55		07	24								
335	20 9_20 Q4	802	Go t c oss Rd et e shendoney Rd D umahoec Wa e mains	06			03	23								
336	20 9_20 Q4	803	A tikee agh & Ba l n ees Dam Inspec ion Act ons	06			0	03								
337	20 9_20 Q4	805	B gwood Road A dmo e Wate mains Rep acement	06			03	23								
338	20 9_20 Q4	806	Dunc un Road Mag l igan Wa e main Rep acemen	06			03	23								
339	20 9_20 Q4	807	C escent nk unk Main	06			03	05								
340	20 9_20 Q4	808	Bunc ana Road Skeoge ink unk Ma n	06			03	05								
34	20 9_20 Q4	KA27	y eh ll Road emp epat ick oul Sewe Extension	00	KI55		07	24								
342	20 9_20 Q4	V875	Stu gan SR Rehab l tat on	00	I050		04	07								
343	20 9_20 Q4	N483	Glenho dial W W expansion o exis ing sludge plant	06			02	04								
344	20 9_20 Q4	N509	De g W W - Upg ade o l e s and Chem cal Dos ng	06			02	04	DRD							
345	20 9_20 Q4	N5 0	St u e Rive Omagh unk Wate Ma n Repai	00			03	23								
346	20 9_20 Q4	N5	South Sou h East Zonal S udy South East hase Wo k ackages	03			03	08	DRD							
347	20 9_20 Q4	N5 2	Omagh hase 2 Wate ma n Rehab	03			03	08	UR							
348	20 9_20 Q4	KR597	Bal ynu e Road Bal ycla e Sto m Sewe Extension	00	KI538		07	24	DRD							
349	20 9_20 Q4	774	aughan S - Bandsc een upg ade	00			05	0								
350	20 9_20 Q4	R49	Bal yg ainey SR Rehab l tat on	00	I050		04	07								
35	20 9_20 Q4	KR6 6	72 No th Road Ca ick e gus S o m Sewe Ext	00	KI538		07	24								
352	20 9_20 Q4	KC469	Society St eet Cole a ne S o m Sewe Extension	00	KI538		07	24								
353	20 9_20 Q4	N534	W IM hase 2 oughmac o y W	06			03	08								
354	20 9_20 Q4	N535	W IM hase 2 ough B aden D umqu n W	06			03	08								
355	20 9_20 Q4	N538	De g W W MC A EO Unde ak ngs	06			02	04								
356	20 9_20 Q4	N54	C 5 ea 3 W W Capital Ma n enance - West Reg on	06			02	0								
357	20 9_20 Q4	KB543	Bal ee D ive Bal ymena oul & Sto m Sewe Ex ens on Requis t on	06	KI55		07	24								
358	20 9_20 Q4	N545	A leyhi l to Dooch ock Wate ma n	06			03	23								
359	20 9_20 Q4	N546	y one Sou h WI M 2 Wo k ackage	06			03	08								
360	20 9_20 Q4	N547	y one No th W IM 2 Wo k ackage	06			03	08								
36	20 9_20 Q4	N548	e managh South WIIM 2 Wo k ackage	06			03	08								
362	20 9_20 Q4	N549	y one West WIIM 2 Wo k ackage	06			03	08								
363	20 9_20 Q4	K 55	5- 23 Main St eet Dung ven Sto m Sewe Ex ens on Requis tion	06			07	24								
364	20 9_20 Q4	N55	Co namuck Road Rea ignment	00			03	23	DRD							
365	20 9_20 Q4	N553	Wes e n WRZ Res l ence	06			0	05								
366	20 9_20 Q4	N555	Go t n Road Omagh - Road Widening	06			03	23								
367	20 9_20 Q4	N56	Glenho dial to Ki yb ack M	06			03	23								
368	20 9_20 Q4	63	K l yhev in Clea Wa e ank	02			04	06	DWI				30 09 20 7			
369	20 9_20 Q4	650	K l yhev in W W mp ovemen s to s udge se t ement system	04			02	04								
370	20 9_20 Q4	KB5 5	Bal ymoney Road(No 285) DG5 Solu ions Study	06			07	2	UR							
37	20 9_20 Q4	KV2 5	26 C ossga Road Sa nt eld oul and sto m sewe	00	KI538		07	24								
372	20 9_20 Q4	680	South Sou h East Zonal S udy South hase Wo k ackages	03			03	08	DRD							
373	20 9_20 Q4	K 382	Rock Rd A magh S o m Sewe Ex ens on	00	KI538		07	24	DRD							
374	20 9_20 Q4	684	Glenchu l A ea ow essu e A lev ation	03			03	23								
375	20 9_20 Q4	KR592	QUB Medical Cent e Un ve si y e ace S o m Sewe Ex ens on	00	KI538		07	24	DRD							
376	20 9_20 Q4	688	C 5 ea 2 W W Base Main enance – West Region	00			02	0								
377	20 9_20 Q4	KV235	ound H ll D omo e - Sto m Sewe Ex ens on	06	KI55		07	24								
378	20 9_20 Q4	69	e managh No h WI M 2 Wo k ackage	06			03	08								
379	20 9_20 Q4	693	K l yhev in W w t eatabi i y ecommended imp ovements	06			02	04								
380	20 9_20 Q4	694	Rathmo e SR Be leek e oute ou let	06			03	23								
38	20 9_20 Q4	695	Upg ade o Ki lyhevl n W W s	06			02	04								
382	20 9_20 Q4	696	C 5 ea 4 W W Base Main enance	06			02	0								
383	20 9_20 Q4	697	K l yhev in Ou let Mains Replacement	06			03	23								
384	20 9_20 Q4	699	Enniski en R Wate ma ns Replacements	06			03	08								
385	20 9_20 Q4	V878	Camly New SR Rehabi i at on	00	I050		04	07								
386	20 9_20 Q4	KV223	Ca nagat Road New y oul & S o m Sewe Requ si ion	00	KI55		07	24								
387	20 9_20 Q4	KS387	Manse Road Sea o de S o m Sewe Extension	00	KI538		07	24	NIEA	09 04 2009	27 04 2009	0 02 20	25 02 20		25 02 20	25 02 20 2
388	20 9_20 Q4	KA275	Abbo s Road Wh teabbey	06	KI55		07	24								
389	20 9_20 Q4	KC460	Hope ie d Road o t ush Sto m Sewe Ex ens on	00			07	24	DRD							
390	20 9_20 Q4	KV 94	Banb idge WW W s hase 2 Base Ma ntenance	00			09	02	DRD							
39	20 9_20 Q4	V87	New y Depot p em ses upg ade	06			5	20								
392	20 9_20 Q4	R465	enchpa k Raw Wate Condu t App aisal Study	00			0	03	DWI							
393	20 9_20 Q4	N523	K l yb ack SR Rehabi i at on	00	I050		04	07								
394	20 9_20 Q4	KI5 3	elemet y ns al a ion at Ww S	00			2	20	DRD							
395	20 9_20 Q4	KV 29	Old New y Road Banb idge oul Sewe Ext	00	KI538		07	24	NIEA							
396	20 9_20 Q4	R485	o me V steon ac o y - wa e main ex ens on	00			03	23								
397	20 9_20 Q4	K 493	A iga van WW W	06	KI469		4	6	NIEA			0 05 20 3	9 0 20 5		30 03 20 5	30 03 20 6
398	20 9_20 Q4	KR59	37- 4 O meau Road Bel ast S o m Sewe Extension	00	KI538		07	24	DRD							
399	20 9_20 Q4	R494	W IM hase 2 Bel ast Ba lygoma in No th W	06			03	08								
400	20 9_20 Q4	R499	Do is and Aquaduct Su vey	06			0	03								
40	20 9_20 Q4	R504	ough Is and Reavy Scou u i isat on D ought Management	06			0	03								
402	20 9_20 Q4	R505	Stockmans Way M Replacement App a sal	06			03	23								
403	20 9_20 Q4	R508	C 5 ea 4 W W Base Ma ntenance – East Region	06			02	0								
404	20 9_20 Q4	R5	sbu n Road 0" wa e main eplacement	00			03	08								
405	20 9_20 Q4	R5 2	Ca ydu St ateg c wate main epai	00			03	23								
406	20 9_20 Q4	R5 4	Kyle St eet NIR C oss ng Wate ma n	06			03	23								
407	20 9_20 Q4	R5 5	o k St eet Bel ast Inte change - Wate ma n D ve sions	06			03	23								
408	20 9_20 Q4	KR422	Me sey St eet Bel ast S o m Sewe	00	KI538		07	24	NIEA	05 08 20	25 08 20	05 05 2008	05 04 20 2		05 04 20 2	05 04 20 3
409	20 9_20 Q4	KA265	Sta ion oad Ant im S o m & oul Sewe Ext	00	KI538		07	24	DRD							
4 0	20 9_20 Q4	S274	D uma oad W W C ea Wate ank	0			02	06	DWI				3 03 202			
4	20 9_20 Q4	KG2 6	Mountha l G ange Clonmaka e Rd Sto m Sewe	00	KI55		07	24								
4 2	20 9_20 Q4	603	Ben aw SR Rehabi i a ion	00	I050		04	07								
4 3	20 9_20 Q4	KR608	Ravenh ll Road Bel ast unk Sewe Invest ga ions and Eme gency Repai s	05			07	2								
4 4	20 9_20 Q4	N529	Coleb ook a k Road Ma ns Replacement	00			03	23								
4 5	20 9_20 Q4	S3	Sampsons S one SR Scou ipe Dive s on	06			04	07								
4 6	20 9_20 Q4	S3 2	C 5 ea 2 W W Base Main enance – East Reg on	00			02	0								
4 7	20 9_20 Q4	A32	Donego e SR Rehab l ta ion	06	I078		04	07								
4 8	20 9_20 Q4	S320	o anny D ought Mi igat on - ough Shannagh to o anny empo a y pe ine	06			0	03								
4 9	20 9_20 Q4	S32	No the n I eland D ought M t ga ion	06			0	03								
420	20 9_20 Q4	S324	7-23 Bal y eagh Rd A ds Wate Main Extension	06			03	23								
42	20 9_20 Q4	S326	A24 Ba lynahinch Bypass	06			03	23	DRD							
422	20 9_20 Q4	V876	Babylon H l SR Rehab ita ion	00	I050		04	07								
423	20 9_20 Q4	S3 5	Russe l Qua te SR Scou Ove low a angement	06			04	0								
424	20 9_20 Q4	260	Boome s Dam- lood A tenua ion	06			0	03								
425	20 9_20 Q4	26	C 5 ea 3 W W Capital Ma n enance - East Region	06			02	0								
426	20 9_20 Q4	262	u gan Moi a WI M 2 Wo k ackage	06			03	08								
427	20 9_20 Q4	264	eathemstown IR Scou Va ve Rese voi Scou valve ault	06			04	07								
428	20 9_20 Q4	KC43	Mi l own Road Ba lymoney oul Sewe Ex ens on	00			07	24	DRD							
429	20 9_20 Q4	777	Ca money W W - Old CW Ou let pewo k	00	I050		04	07	DRD							
430	20 9_20 Q4	V854	S lent Val ey ec eat onal ac l t es app a sal	06			0	03								
43	20 9_20 Q4	KR659	Glenview Rd Ho ywood - oul Sewe Extens on	06	KI55		07	24								
432	20 9_20 Q4	KB536	Sou hi l Road Ba lymena Sto m Sewe	06	KI55		07	24								
433	20 9_20 Q4	V870	S lent Val ey oject H3	00			0	03								
434	20 9_20 Q4	KR66	Woodbu n ima y School Ca ck e gus	06	KI55		07	24								
435	20 9_20 Q4	V88	W IM hase 2 Ca an H ll C ossmag en W	06			03	08								
436	20 9_20 Q4	V885	ough Ross Raw Wa e ump ng S at on	06			02	0								
437	20 9_20 Q4	V886	Banb idge Sou h A magh WIIM 2 Wo k ackage	06			03	08								
438	20 9_20 Q4	V887	New y West W S i e damage	06			06	0								
439	20 9_20 Q4	V889	K l eavy Castle Wa e Dist ibut on Imp ovements	06			03	23								
440	20 9_20 Q4	V892	Ca nbane Wps ump Repai ep acement	06			05	0								
44	20 9_20 Q4	V893	W IM 2 2 o anny Sou h Wo k ackage	00			03	08								
442	20 9_20 Q4	V897	Sustainable and Management in the Mou nes Ca chment A ea	06			0	20								

So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date	Base ine Se v ce A locat on Wa e n ast uctu e	Basel ne Se vice Al ocat on Wate Non- In ast uc u e	Base ine Se v ce A loca ion Sewe age n ast uctu e	Basel ne Se vice Al ocat on Sewe age Non- In ast uc u e
		3	4	5	6	7	8	9	0		2	3	4	5	6	7	8	9	20	2
443	20 9_20 Q4	V898	Bal ymageogh Road K lkeel Wate ma n Rep acement	06			03	23												
444	20 9_20 Q4	V899	New ine H l town Wate ma n Replacement	06			03	23												
445	20 9_20 Q4	Z005	Wa e Resou ce and Supp y Res l ence lan	06			0	03	DRD				3 03 20 7				50	50	0	0
446	20 9_20 Q4	Z006	Hyd au c Model Rebu lds and oject Managment 20 5-20 6	06			06	20												
447	20 9_20 Q4	Z007	Asset e o mance CC V Su veys 20 5 6	06			07	2	UR											
448	20 9_20 Q4	B692	Rathl n s and SR a ional sa ion	00			03	06	DRD											
449	20 9_20 Q4	60	A dglena G ove A ea Dungannon Wate ma n Real gnment	06	I083		03	23												
450	20 9_20 Q4	G083	Bal yva y O d SR Rehabi i at on	06	I050		04	07												
45	20 9_20 Q4	KR605	Uppe Newtowna ds Road Bel ast Sewe Upg ade o Add ess DG5 ope t	04			07	2	UR											
452	20 9_20 Q4	KV 97	Mon e th Road Annaclone oul & Sto m Sewe Extens ons	00	KI55		07	24	DRD								0	0	0	0
453	20 9_20 Q4	K 373	Dungannon WW W Heal h & Sa e y Issues	00			09	02	DRD											
454	20 9_20 Q4	KA256	a ne WW W s eas bi i y Study	04			09	6	NIEA								0	0	0	00
455	20 9_20 Q4	039	Wa e Supp y West - u bidi y Moni o Upg ade	00			02	0	DRD											
456	20 9_20 Q4	769	Glened a Wate Intake Re u bishment & Access Road Repai	00			0	03	DRD											
457	20 9_20 Q4	KA259	Doagh WW S Replacement	03			2	02	NIEA											
458	20 9_20 Q4	V869	Sen ty H ll SR Rehab l tat on	00	I050		04	07												
459	20 9_20 Q4	KG 89	Co nak nnega Road u gan oul & Sto m Sewe Extens on	00	KI538		07	24	DRD								0	0	0	0
460	20 9_20 Q4	KA262	sland eagh WW S Upg ade	06			2	2	NIEA								00	0	00	0
46	20 9_20 Q4	KA263	Dunad y WW S Upg ade	06			2	2	NIEA								0	0	00	0
462	20 9_20 Q4	G078	Bal ydougan Command 2B 3A 3B SR Rehabi i a ion	00	I050		04	07	DRD											
463	20 9_20 Q4	KA270	Nei lsb ook Ww S Upg ade App a sal	06			2	2												
464	20 9_20 Q4	KA279	ownpa ks south Wwps Ant im	06			2	2												
465	20 9_20 Q4	KA280	Ma t ns own Ww W Inlet Wet We l Bu lding MCC & systems e oca ion	06			09	02												
466	20 9_20 Q4	KA284	Randa stown S(S0 425) Sc een unde capac ty	06			2	02												
467	20 9_20 Q4	KA289	240 242 isnevenagh Road Ant im DG5 sewe s udy	06			07	2												
468	20 9_20 Q4	KA292	he G ange WW W Catchment Sewe age invest ga ions	06			07	02												
469	20 9_20 Q4	KB269	oome (C eagh) Sewe age Scheme	0			09	5	NIEA			07 09 2009	24 0 20		24 0 20	24 0 20 2	0	0	0	0
470	20 9_20 Q4	KB279	Stewa tstown Ww W mp ovemen s	0			09	5	NIEA			0 06 2009	7 05 20 0		7 05 20 0	7 05 20	0	0	0	0
47	20 9_20 Q4	K 383	K l yman St eet Moy S o m Sewe Extension	00			07	24	DRD											
472	20 9_20 Q4	N524	B ookebo ough S R Rehabi tat on	00	I050		04	07												
473	20 9_20 Q4	KB3 6	Dese tma in Ww W	00			09	6									0	0	0	0
474	20 9_20 Q4	KB400	Mu lanahoe Road A dboe oul Sewe	00			07	24		9 06 2008	09 07 2008	06 0 2008	29 2 2008		29 2 2008	29 2 2009	0	0	0	0
475	20 9_20 Q4	KB4 3	Dunnamo e Road Dunnamo e Sto m Sewe Ext	00			07	24												
476	20 9_20 Q4	KR57	D umbeg Road Sto m Sewe Extension	03	KI538		07	24	DRD											
477	20 9_20 Q4	KB436	Wh tehead Ba lyst ude & Ba lyca y Rat ona isat on	0			08	5	NIEA			07 04 2008	5 2 20		5 2 20	4 2 20 2	0	0	0	0
478	20 9_20 Q4	KB459	Maghe a WW W Upg ade hase 2	0			09	6	NIEA			4 0 20 3	28 0 20 5		28 06 20 3	28 06 20 4	0	0	0	00
479	20 9_20 Q4	KB474	Bal y onan WW W easib l ty Study	06			4	6	NIEA								0	0	0	0
480	20 9_20 Q4	KB475	De yc n WW W eas bi i y S udy	06			4	6	NIEA								0	0	0	0
48	20 9_20 Q4	KB476	K l ygonlan Mul anahoe)Ww W Upg ade	06			4	6	NIEA								0	0	0	0
482	20 9_20 Q4	B7 0	K l y ane CWB Re u bishment	03	I009		04	07												
483	20 9_20 Q4	KI508	UWW W MCER comp iance	05			09	6	DRD			28 06 20 3	0 2 20 4		28 03 20 5	28 03 20 6	0	0	0	00
484	20 9_20 Q4	KB483	Moo ie d WW W eas b l ty S udy	06			4	6	NIEA								0	0	0	0
485	20 9_20 Q4	KB490	Ma oon WW S Cooks own Access mp ovemen s	00			2	02	NIEA								0	0	0	0
486	20 9_20 Q4	KB49	o tg enone WW S Access Road Culve t ng and Upg ading o S te Secu i y	00			05	02	DRD											
487	20 9_20 Q4	KB492	Go ta ow y a k Cooks own Sewe Netwo k M sconnec ions	0			07	2	NIEA								0	0	0	0
488	20 9_20 Q4	KA258	Ant m DC Addi ional i e Escape	03			5	20												
489	20 9_20 Q4	G084	Seagoe Re u bishment	06			5	20												
490	20 9_20 Q4	KS939	Cent al omenade Newcast e CSO Upg ade (a tons B idge)	03	KS848		07	2	NIEA								0	0	00	0
49	20 9_20 Q4	KN65	B dge St eet WW S St abane - easibi i y Study	00	KI464		3	2	DRD								0	0	0	0
492	20 9_20 Q4	KA248	Bal yga ly Sewe Rehabi i a ion	00	KI537		07	2	DRD								0	0	0	0
493	20 9_20 Q4	K 52	Clooney Ww S Upg ade Magi l gan	06			2	2	DRD											
494	20 9_20 Q4	KB508	Stewa tstown WW Ws App a sal	04			09	6	NIEA											
495	20 9_20 Q4	KG 82	Ma t ns a d Gil o d pe B idge Condi ion Su vey	00	KI537		07	24	NIEA	02 03 20	0 03 20	20 06 20	9 09 20 2		9 09 20 2	9 09 20 3	0	0	0	0
496	20 9_20 Q4	KS909	DG5 57a & 55 G oomspo t Road Bango Addit onal Studies	00			07	2	NIEA								0	0	0	0
497	20 9_20 Q4	686	Rathmo e SR Rehab l ta ion	00	I050		04	07												
498	20 9_20 Q4	KB522	oome Road ood Al eviat on	00			07	2	DRD											
499	20 9_20 Q4	KB5 3	Dese tma in Road ul ynagee Road Moneymo e Sto m and oul M Ex en	00	KI538		07	24	DRD											
500	20 9_20 Q4	597	Dooch ock West SR Rehab l tat on	00	I009		04	07	DRD											
50	20 9_20 Q4	KB532	59 Ma ket Road Ba lymena S o m Sewe	00			07	24												
502	20 9_20 Q4	KB535	C 5 ea 3 Ww W Capi al Maintenance – No h Region	06			09	02												
503	20 9_20 Q4	KG2 8	8- 0 u gan Road C uml n	06	KI55		07	24												
504	20 9_20 Q4	KB540	she s own Ca gan-Bank upt Deve opment si e	06			07	24												
505	20 9_20 Q4	KI595	i e Sa ety Regu ation Compl ance	06			5	20												
506	20 9_20 Q4	KB550	Bal ymena DA easib l ty Stud es (Incl Spencestown S)	06			3	02												
507	20 9_20 Q4	KC296	Bal ycas le Ww W	06			09	6	NIEA				0 0 20 7				0	0	0	90
508	20 9_20 Q4	KV205	Cou tney Hi l New y S o m Sewe Extension	00	KI538		07	24	DRD											
509	20 9_20 Q4	KC302	Bal in oy Ww W	0			09	6	NIEA				3 0 20 7				0	0	0	00
5 0	20 9_20 Q4	KC4 5	Bal ysa y CSO Cole a ne - Wo ks ackage	00			07	2	NIEA								0	0	00	0
5	20 9_20 Q4	KC427	Bal yvoy Ww W	06			4	6	NIEA								0	0	0	0
5 2	20 9_20 Q4	KN66	Be agh S o m umping Sta ion Des gn	03			2	2	DRD											
5 3	20 9_20 Q4	KB5 0	Agha an Road Newmi ls S o m sewe Ex ens on	00	KI538		07	24	DRD											
5 4	20 9_20 Q4	KC450	Macosquin Ww W C 5	00			09	6	DRD								0	0	0	0
5 5	20 9_20 Q4	KB5 6	Bal y onan Road Maghe a elt S o m Sewe Ex ens on	00	KI538		07	24	DRD											
5 6	20 9_20 Q4	KC459	K l ea WW Ws App a sal	04			09	6	NIEA											
5 7	20 9_20 Q4	KA278	he Squa e Ba lyc a e	06	KI55		07	24												
5 8	20 9_20 Q4	KC463	Bal ybogy Ww W	04			09	6	NIEA				3 0 202				0	0	0	00
5 9	20 9_20 Q4	KC467	Bal ycai n CSO Co e aine Upg ade	03			07	2	NIEA											
520	20 9_20 Q4	KC472	C 5 2 Ww W Base Main enance No h egion	06			09	02												
52	20 9_20 Q4	KS952	Quo le C escent Downpat ick oul and S o m Sewe Replacement	00	KI538		07	2												
522	20 9_20 Q4	B662	anel Eng nee Recommendat ons - No th hase	00	I006		0	03	DWI	5 02 20	25 02 20	4 2 20	28 05 20 2		28 05 20 2	28 05 20 3	0	0	0	0
523	20 9_20 Q4	KC479	Ma n St eet Ba lykel y – Sto mwate Sepa at on	06			07	2												
524	20 9_20 Q4	K 426	De aghy Rd sbu n - Sto m Sewe Extension	00	KI55		07	24												
525	20 9_20 Q4	KC489	C 5 ea 5 Ww W Base Ma ntenance - No th Reg on	06			09	02												
526	20 9_20 Q4	KC490	WW W ea 6 Base Main enance - No h Region	06			09	02												
527	20 9_20 Q4	KD999	Sewe Maintenance	00			07	2												
528	20 9_20 Q4	KS372	Ma ket St eet S S Upg ade Downpat ick	00	KI537		07	2	NIEA	6 0 2007	05 02 2007	03 09 20 2	28 02 20 4		28 02 20 4	28 02 20 5	0	0	57	43
529	20 9_20 Q4	KS876	Old Bel ast Road Bango - Sto m Sewe Ex ens on	00	KI538		07	24	NIEA								0	0	0	0
530	20 9_20 Q4	B7 7	C aigyh ll Bungalows a ne ead Supp y pe Replacement lot	00			03	23												
53	20 9_20 Q4	R469	Wh teabbey Uppe Se vice Rese voi Ou let ipe Rep acement o Repai	00			04	07	DWI											
532	20 9_20 Q4	KB509	Sta ion Road Annaghmo e Road Cast edawson Sto m Sewe extens on	00	KI538		07	24	DRD											
533	20 9_20 Q4	K 070	Egl sh (Dungannon) Ww W upg ade	06			09	6	NIEA								0	0	0	00
534	20 9_20 Q4	KR573	Mi l Road Newtownabbey Sto m Sewe Extension	00	KI538		07	24	DRD											
535	20 9_20 Q4	KR578	e y Qua te Sho e Road St ang o d oul and s o m sewe	00	KI538		07	24	DRD											
536	20 9_20 Q4	K 346	Rob nsons own WW W eas bi i y S udy	06			4	6	NIEA			4 0 20 4	0 0 2020		3 03 20 5	3 03 20 6	0	0	0	00
537	20 9_20 Q4	K 349	oyntzpass WW W easib l ty Study	06			4	6	NIEA								0	0	0	0
538	20 9_20 Q4	K 350	Dungannon Ww W phase 2	00			4	6	DRD				0 0 202				0	0	0	00
539	20 9_20 Q4	K 35	Ca ckaness Road Benbu b Sto m Sewe Extens on	00			07	24	DRD								0	0	0	0
540	20 9_20 Q4	KS95	Ches e Avenue Bango S o m Sewe Ex ens on	00	KI538		07	24												
54	20 9_20 Q4	A289	y eh ll W S emp epat ick S te Secu i y Imp ovements	00			05	0	DRD											
542	20 9_20 Q4	KR493	Bal y obe t Road Ba lyc a e S o m Sewe Ex ens on	00	KI538		07	24	NIEA								0	0	0	0
543	20 9_20 Q4	K 376	Moy WW W App aisal Study	04			09	6	NIEA											
544	20 9_20 Q4	K 430	Hul s ane sbu n sto m sewe ex ens on	00	KI55		07	24												
545	20 9_20 Q4	K 378	Clonmo e Road Clonmo e Sewe age Scheme	00			07	2	DRD											
546	20 9_20 Q4	K 379	Da kley WW W easib l ty Study	04			09	6	NIEA											
547	20 9_20 Q4	K 380	Cab agh WW W easib l ty Study	04			09	6	NIEA											
548	20 9_20 Q4	K 38	Aughnacloy WW W easib l ty Study	04			09	6	NIEA											
549	20 9_20 Q4	KB455	75-85 Cushenda l Road Bal ymena Sto m and oul Sewe Ext	00	KI538		07	24	NIEA								0	0	0	0
550	20 9_20 Q4	K 693	ul ynaga n WW S eas bi ity S udy	00			2	2	DRD											
55	20 9_20 Q4	K 39	D umman Mo e Mel i ont WW S Upg ade	06			2	2	UR											
552	20 9_20 Q4	KA233	B ackcave Ca chment a ne - Netwo ks Repai s	00	KI537		07	2	UR	30 09 20	05 0 20	28 20	06 03 20 2		06 03 20 2	06 03 20 3	0	0	0	0
553	20 9_20 Q4	K 397	K l y ea Road WW S A magh Upg ade	06			2	2	NIEA											
554	20 9_20 Q4	K 398	C 5 ea 2 WW W Base Main enance – Sou h Region	06			09	02												
555	20 9_20 Q4	K 403	Keenaghan wwps upg ade	06			07	02												
556	20 9_20 Q4	K 404	Moy Road Dungannon (o me Oak in Hotel S te)	00			07	24												
557	20 9_20 Q4	K 405	Annagh New Wwps Res o a ion o asse s	06			07	02												
558	20 9_20 Q4	K 406	Dungannon Ww W eme gency Capi al Wo ks	06			09	6												
559	20 9_20 Q4	K 408	C 5 ea 4 Ww W Base Ma ntenance – South Reg on	06			09	02												
560	20 9_20 Q4	K 4 5	C 5 ea 5 Ww W Base Ma ntenance - Sou h Region	06			09	02												
56	20 9_20 Q4	K 4 7	WW W ea 6 Base Main enance - South Reg on	06			09	02												
562	20 9_20 Q4	KG04	Maghabe y Ww W	06			09	6									0	0	57	43
563	20 9_20 Q4	KR443	Sydenham WW S Remed al Wo ks	0	KI469		3	02	UR	25 08 20	26 08 20	9 09 20	2 2 20 2		2 2 20 2	2 2 20 3	0	0	0	0
564	20 9_20 Q4	R482	Mu de sle gh H ll SR Rehab l tat on	03	I009		04	07												
565	20 9_20 Q4	K 547	Belt Road A tnage vin oul Sewe ep acement	06	KI55		07	24												
566	20 9_20 Q4	KB506	Hi lmount C escent obe mo e Sto m Sewe	00	KI464		07	24	DRD											
567	20 9_20 Q4	KG 83	o tadown D a nage A ea Ne wo k mp ovemen s - Meadow ane and Bann :	00			07	2	NIEA			30 09 20 4	0 0 20 5		0 03 20 5	0 03 20 6	0	0	93	7
568	20 9_20 Q4	KG 74	4 ake St eet u gan oul & Sto m Sewe Extensions	00	KI538		07	24	NIEA											
569	20 9_20 Q4	KG 9	Dobb n WW S - eas bi i y S udy	0			2	02	DRD								0	0	0	0
570	20 9_20 Q4	KN 55	B eady	0			09	24												
57	20 9_20 Q4	KG 94	Ga land Avenue u gan Sewe Extension	00			07	24	DRD								0	0	0	0
572	20 9_20 Q4	V866	Deehommed High evel SR Rehabi i a ion	03	I009		04	07												
573	20 9_20 Q4	KG 98	Hun e s M l Annesbo ough Road u gan S o m Sewe Ex ens on	00			07	24	DRD											
574	20 9_20 Q4	KG200	Wa ngstown WW W s eas bi i y Study	04			09	6	NIEA											
575	20 9_20 Q4	KS877	Bango DA Wo ks ackage 5 - C andeboye St eam UIDs	0			07	2	NIEA			05 0 20 4	9 0 20 5		9 0 20 5	9 0 20 6	0	0	00	0
576	20 9_20 Q4	KG203	o tadown DA S o age at Seagoe WW S)	06			07	2	NIEA											
577	20 9_20 Q4	KG205	Seagoe Depot Gene ato S o e	00			5	20	DRD											
578	20 9_20 Q4	KG2 0	Ga vaghy Road o tadown unk Sewe and Syphons Base Ma n enace an	00			07	2												
579	20 9_20 Q4	KG2 5	Mahon Ave R p ey e ace Sto m Sewe o tadown	06			07	2												
580	20 9_20 Q4	KG2 7	C 5 ea 3 Ww W Capi al Maintenance - Sou h Reg on	06			09	02												
58	20 9_20 Q4	KG225	D umc ee Road S S	06			07	24												
582	20 9_20 Q4	KI464	Sewe age Rehab New and Rep acement ncl S	00			07	2	NIEA								0	0	7	29
583	20 9_20 Q4	K 384	Old Caul eld Rd Sto m Sewe Extens on Castlecaul ield Dungannon	00	KI538		07	24	DRD											
584	20 9_20 Q4	G035	Bal ydougan to New y Main nk Re n o cement	02			03	05	DWI	0 0 2009	26 0 2009	07 2 2009	28 08 20 5		28 02 20 5	28 02 20 6	82	8	0	0
585	20 9_20 Q4	683	Hal c aig oad Enn sk l en WM Ext	00			03	23	DRD											
586	20 9_20 Q4	KC465	snab agh Road Ha pu s Hi l Co e aine oul Sewe	00	KI538		07	24	DRD											
587	20 9_20 Q4	V867	Mou ne Condu t Su vey	00	I083		06	03												
588	20 9_20 Q4	N556	Ramaley Road C abby Road Wa e mains Rep acement	00	I 2		03	08												
589	20 9_20 Q4	N557	Swan inba Road Wa e main Rehab	00	I 2		03	23												
590	20 9_20 Q4	N558	Old Coach Road Sess agh ane wa e main ep acement	00	I 2		03	23												
59	20 9_20 Q4	S3 8	Sta ion Road Saint ie d Mains Replacement	06	I 2		03	23												
592	20 9_20 Q4	KS88	Cloughey South Ww S Re u bishment	0			2	02	DRD											
593	20 9_20 Q4	R48	Bal y d ey New SR Rehab l tat on	03	I009		04	07												
594	20 9_20 Q4	KR535	New Hol and WW W s hase 2 Base Ma n enance	00			09	02	DRD								0	0	0	0
595	20 9_20 Q4	N522	Omagh hase 2 Se vice Rese voi Inne Wo ks	04	I050		03	07												
596	20 9_20 Q4	KA238	3 Doagh Road Bal ycla e S o m Sewe Extension	00	KI538		07	24	DRD	08 02 20 2	4 02 20 2	28 07 20	3 05 20 2		3 05 20 2	3 05 20 3	0	0	0	0
597	20 9_20 Q4	KI469	Base Main enance (Sewe age)	00			09	02	UR								0	0		89
598	20 9_20 Q4	KG 99	B eagh Rd o tadown - S o m Sewe	00	KI464		07	24	DRD											
599	20 9_20 Q4	C396	Cha ham Road A moy Wate main Rep acement	00	I054		03	23	DWI											
600	20 9_20 Q4	KR63	C aw o dsbu n Way Newtowna ds - Sto m Sewe Extens on	00			07	24												
60	20 9_20 Q4	B7 3	Rep acement Wate ma ns 20 4 5 - Reac ive Bundle	03			03	08	DWI											
602	20 9_20 Q4	KB470	Sevensp ngs Bal yhampton Rd a ne Sto m Sewe	00	KI538		07	24	NIEA	28 09 20	03 0 20	0 03 20	29 02 20 2		29 02 20 2	28 02 20 3	0	0	0	0
603	20 9_20 Q4	KR540	Mi l Rd New ownabbey oul and Sto m Sewe	00			07	24	DRD								0	0	0	0
604	20 9_20 Q4	KR553	he Cai n Go denv ew Downview - G eenis and oul & sto m sewe extensior	00	KI464		07	24	DRD											
605	20 9_20 Q4	KR567	B oke stown Road isbu n Sto m Sewe	00	KI464		07	24	DRD											
606	20 9_20 Q4	KS375	Downpat ck	00	KI464		2	2	NIEA								0	0	0	0
607	20 9_20 Q4	S3 0	Manse Road Bal ygowan wa e ma n eplacement	04			03	23												
608	20 9_20 Q4	KS887	Bal yc anbeg WW W	02	KS		09	6	NIEA			0 04 20 3	3 2 20 3		30 03 20 4	30 03 20 5	0	0	5	95
609	20 9_20 Q4	K 496	eeny Ww W Rep acement o Seconda y ea ment	05			09	6	DRD			03 2 20 2	0 2 20 3		3 03 20 4	30 03 20 5	0	0	0	00
6 0	20 9_20 Q4	K 5 4	Clooney a k West De y S o m Sewe Ext	00	KI464		07	24	DRD											
6	20 9_20 Q4	KB5 9	Moneyneany WW W Base Main enance hase 3	05			09	02	DRD											
6 2	20 9_20 Q4	KN656	Cast e A chdale WW W	04			09	6	NIEA								0	0	0	00
6 3	20 9_20 Q4	KB460	M&E Cap tal Main enance u lyga ey WW W	0	KI469		09	02		9 20 0	23 20 0	4 09 20	4 09 20 2		4 09 20 2	4 09 20 3	0	0	0	0
6 4	20 9_20 Q4	S309	A dv ew Road Ki inchy Wate ma n Replacement	00			03	23												
6 5	20 9_20 Q4	KB478	Devenagh Bu n WW S - eas b ity S udy	00	KI469		07	02	DRD								0	0	0	0
6 6	20 9_20 Q4	KB485	Knock ough m WW W easib l ty Study	02	KI469		09	6	NIEA								0	0	0	0
6 7	20 9_20 Q4	KI542	Sma l Ru al WW W og amme C 3	00			09	7	NIEA								0	0	0	00
6 8	20 9_20 Q4	KA245	Nei sb ook WW S Upg ade	00	KI469		2	02	DRD								0	0	0	0
6 9	20 9_20 Q4	KC434	De vock WW W eas b l ty S udy	06	KI469		4	6	NIEA								0	0	0	0
620	20 9_20 Q4	KI502	umping Stat on Ma n enence - A Re l y	00	KI469		2	02	DRD								0	0	0	0
62	20 9_20 Q4	KC436	A moy WW W easib l ty Study	06	KI469		4	6	NIEA								0	0	0	0
622	20 9_20 Q4	KC438	Moss s de WW W eas b ity S udy	02	KI469		09	6	NIEA								0	0	0	0
623	20 9_20 Q4	KC440	St and Road WW S and Ne wo k App aisal S udy	00	KI469		2	2	DRD								0	0	0	0
624	20 9_20 Q4	KB505	oome Road Bal ymena Out o Sewe ood ng	00			07	2	DRD											
625	20 9_20 Q4	KS892	K l y eagh WW W Upg ade	00	KI469		09	02	DRD	07 06 20	0 06 20	6 09 20	30 03 20 2		30 03 20 2	30 03 20 3	0	0	0	0
626	20 9_20 Q4	KI488	Removal o In et Sc eens and Instal at on o Sol d Handl ng umps at 27 WW	00			2	02	UR	20 05 20	07 06 20	3 0 20	28 03 20 4		28 03 20 4	28 03 20 5	0	0	0	0
627	20 9_20 Q4	KR469	Meadowbank a k Reavi le Dundona d lood A lev a ion	00	KI469		07	2	NIEA								0	0	0	0
628	20 9_20 Q4	KN660	sna agh Road Donemana oul sewe Extension	00	KI538		07	24	DRD											
629	20 9_20 Q4	KA252	Glynn WW S Re oca ion o Ove low pe	00			2	02	DRD								0	0	0	0
630	20 9_20 Q4	K 355	Ma ke hi l WW W eas bi i y	06	KI469		4	6	NIEA								0	0	0	0
63	20 9_20 Q4	K 359	B ompton a k WW S and De yha e WW S eas bi i y S udy	02	KI469		2	2	DRD								0	0	0	0
632	20 9_20 Q4	K 362	Annva e S S Upg ade - eas b l ty S udy	00	KI469		07	2	DRD								0	0	0	0
633	20 9_20 Q4	KG 40	Wa ng e d S S Upg ade	0	KI469		2	2	UR								0	0	0	0
634	20 9_20 Q4	KB482	Chapel H ll Ww S Upg ade	00			2	02	DRD								0	0	0	0
635	20 9_20 Q4	K 487	Nixons Co ne ondonde y WW W	06	KI469		4	6	NIEA			30 06 20 3	30 09 20 4		28 2 20 4	28 2 20 5	0	0	0	00
636	20 9_20 Q4	K 394	D umsu n Ww W	06			09	6				0 07 20	28 02 20 5		3 03 20 5	30 03 20 6	0	0	0	00
637	20 9_20 Q4	KA264	Bal ycla e WW W - Memb ane Base Maintenance	03			09	02												
638	20 9_20 Q4	KV203	Sca va St eet oughb ick and umping Ma n	00	KI538		07	24	DRD											
639	20 9_20 Q4	KI504	Sewe s St uctu al Rehab l ta ion C 5 ea s 5 & 6	00	KI469		07	2	DRD								0	0	0	0
640	20 9_20 Q4	KI505	Sewe St uc u al Rehab l tat on ackage 3	00	KI469		07	2	DRD								0	0	0	0
64	20 9_20 Q4	K 544	Ca money Cou t Egl nton Sto m Sewe	00	KI55		07	24												
642	20 9_20 Q4	KR523	24-30 Red o t D ve Ca ck e gus DG5 Study	00			07	2	UR								0	0	0	0
643	20 9_20 Q4	G079	egaho y C a gavon Replacement Wa e mains	00			03	23	DWI											
644	20 9_20 Q4	K 486	Bonnanabo gh WW W Upg ade	00	KI469		09	6	DRD	07 06 20	0 06 20	30 09 20	30 03 20 2		30 03 20 2	30 03 20 3	0	0	0	0
645	20 9_20 Q4	KS382	C ossga Sewage ump ng S a ion mp ovemen s	00	KI469		2	02	UR	07 09 20	4 09 20	3 08 20 2	30 05 20 3		30 05 20 3	30 05 20 4	0	0	0	0
646	20 9_20 Q4	K 488	Aghan oo WW W easib l ty Study	06	KI469		4	6	NIEA								0	0	0	0
647	20 9_20 Q4	K 489	Bal yke y Ww W	06	KI469		4	6	NIEA				3 03 20 7				0	0	0	00
648	20 9_20 Q4	KR529	a k a ade O meau Embankment Bel ast Sto m Sewe Ex ens on	00			07	24	DRD								0	0	0	0
649	20 9_20 Q4	K 494	St a h oyle Sewe age Syphons Upg ade	00	KI469		07	2	DRD								0	0	0	0
650	20 9_20 Q4	K 495	Boval y WW S Upg ade	00	KI469		2	2	DRD								0	0	0	0
65	20 9_20 Q4	KV2 9	Newpoint WW S Sc een upg ade	04			3	2												
652	20 9_20 Q4	KR53	a k Road Bel ast Sewe Rep acement	00			07	2	DRD								0	0	0	0
653	20 9_20 Q4	K 366	Hami tonsbawn WW W (ump ns al a ion)	00			09	02	DRD	23 05 20 2	29 05 20 2	20 08 20 2	20 02 20 3		20 02 20 3	20 02 20 4	0	0	0	0
654	20 9_20 Q4	KN640	D omo e y one WW W eas b l ty S udy	06	KI469		4	6	NIEA			30 09 20 4	9 0 20 5		23 03 20 5	23 03 20 5	0	0	0	00
655	20 9_20 Q4	K 585	Ga son Ww Ws	06	KI469		09	6									0	0	0	0
656	20 9_20 Q4	096	C 5 Wa e mains Rehabi tat on W 0 Bel ast No h	00			03	08												
657	20 9_20 Q4	K 67	D umgal on WW S Upg ade	00	KI469		07	2	DRD								0	0	0	0
658	20 9_20 Q4	K 673	Bel eek WW W easib l ty	06	KI469		4	6	NIEA								0	0	0	0
659	20 9_20 Q4	K 675	am aght WW W Upg ade	06	KI469		09	6	DRD											
660	20 9_20 Q4	K 676	vemi e own WW W eas bi i y S udy	06	KI469		4	6	NIEA								0	0	0	0
66	20 9_20 Q4	K 370	Moy WW Ws hase 2 Base Maintenance	00			09	02	DRD								0	0	0	0

So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed
	2	3	4	5	6	7	8	9	0
662	20 9_20 Q4	KR438	Glenmachan St eet WW S e u b shment	06	KI469		3	02	UR
663	20 9_20 Q4	R420	anel Eng nee Recommendat ons - East hase	00	I006		0	03	DWI
664	20 9_20 Q4	KR444	Sydenham WW S St ateg c Invest ga ions	06	KI469		07	2	UR
665	20 9_20 Q4	KB496	Ga vagh WW W s hase 2 Base Main enance	00			09	02	DRD
666	20 9_20 Q4	R460	G avi y ll McVe ghs well o O d a k SR	02	I005		03	05	DRD
667	20 9_20 Q4	KI528	hase 2 - Ae at on Opt m sa ion E ic ency og amme	00			07	02	DRD
668	20 9_20 Q4	KR524	Roddens C escent Sewe Upg ades DG5)	00	KI537		07	2	NIEA
669	20 9_20 Q4	K 5 9	Culda Ga dens De y S o m Sewe Extension	00	KI538		07	24	DRD
670	20 9_20 Q4	KR397	B ooke Ha l Cai nshi l Bel ast oul Sewe Ex ens on	00	KI538		07	24	NIEA
67	20 9_20 Q4	KA274	Cla e a k C a e Road Ba lycast e oul Sewe Ext	00	KI55		07	24	
672	20 9_20 Q4	KR5 0	ul ynak ll Road WW W easib l ty	06	KI469		4	6	NIEA
673	20 9_20 Q4	KR593	Glenmachan St eet Bel ast Sto m Sewe o McDonalds	00	KI538		07	24	DRD
674	20 9_20 Q4	KI47	SEMD Su veys C 0 Wastewa e	0			09	6	UR
675	20 9_20 Q4	KI482	MBR lants - ong e m So ut ons	0			09	02	UR
676	20 9_20 Q4	A27	K l y ane W W	02			06	0	DWI
677	20 9_20 Q4	KI487	Backsyphonage Risks at NIW Si es	0			09	6	UR
678	20 9_20 Q4	KR502	G een sland WW W s Re u bishment	00	KI469		09	02	DRD
679	20 9_20 Q4	KI507	WW W - Assessment o equi emen s at WW Ws o eeze haw	00			09	02	DRD
680	20 9_20 Q4	KB5 8	Mu laghboy C escent Maghe a e t oul Sewe Ex ens on	00	KI538		07	24	DRD
68	20 9_20 Q4	KI509	App aisal o DG5 at sk egis e oca ions hase 2	00			07	2	UR
682	20 9_20 Q4	KI5 2	Wes e n A ea e emet y Needs	00			2	20	DRD
683	20 9_20 Q4	KC448	No th Coast WW W hase 2 Base Ma ntenance	00			09	02	DRD
684	20 9_20 Q4	KI5 5	DG5 easibi i y Repo - Mino Wo ks	00			07	2	NIEA
685	20 9_20 Q4	KR5 9	Mi lbay WW S ow Su vey	00			07	2	NIEA
686	20 9_20 Q4	KI5 7	App aisal o Ene gy E ciency at Was e Wate ump ng Sta ions	00			2	02	DRD
687	20 9_20 Q4	KI5 9	Was ewate umping Stat ons Ove low Moni o ing og amme	00			2	2	UR
688	20 9_20 Q4	KI526	Compl ance wi h the Qua i y o Bath ng Wa e Regu ations NI) 2008 - easibi	00			09	6	DRD
689	20 9_20 Q4	KI527	S te D ainage & o Chem cal S o age Diag ams o Ww Ws & Ww S	00			09	02	DRD
690	20 9_20 Q4	KB48	Chamb e a k Ww S	00			2	02	DRD
69	20 9_20 Q4	KI529	App aisal o DG5 a -R sk Reg ste ocat ons (M tigat on hase 3)	00			07	2	DRD
692	20 9_20 Q4	KR55	Ande sons own Road Bel ast Sto m Sewe Ex ens on	00	KI464		07	24	DRD
693	20 9_20 Q4	KI53	App aisal o DG5 At R sk Regis e ocations Mi igat on hase 4)	00			07	2	DRD
694	20 9_20 Q4	R463	Do is and W W - GAC eas bi i y S udy	0			02	04	DRD
695	20 9_20 Q4	KI533	nteg ated o u ion even ion Cont ol at Wastewa e eatment Wo ks I C	03			02	6	
696	20 9_20 Q4	KI534	elemet y Aud t Ac ions	00			07	02	DRD
697	20 9_20 Q4	KI536	C 5 Sewe Rehab l at on Unplanned	00			07	2	
698	20 9_20 Q4	KI537	Sewe age Rehabi i ation (lanned)	03			07	2	UR
699	20 9_20 Q4	K 4 3	O cha d Annahi t WW S - eas bi i y Study	00			2	02	DRD
700	20 9_20 Q4	KC457	Bal ymac ea Road o t ush oul Sewe Ex ens on	00	KI464		07	24	DRD
70	20 9_20 Q4	KS890	Coney Island DAS	00	KI469		07	2	DRD
702	20 9_20 Q4	KS900	Ww S Upg ades at G oomspo t Ki inchy & C a gavad	00			2	2	DRD
703	20 9_20 Q4	KS899	St ang o d Sewe Ne wo k Sal ni y Reduct on	00	KI469		07	2	
704	20 9_20 Q4	V830	C eve Se v ce Rese voi	0			04	06	DWI
705	20 9_20 Q4	KR538	Dunmu y WW W s hase 2 Base Maintenance	00			09	02	DRD
706	20 9_20 Q4	KG 97	Wa ngstown WW Ws hase 2 Base Ma ntenance	00			09	02	DRD
707	20 9_20 Q4	58	Clay ake - Remedial Wo k	00	I005		02	0	UR
708	20 9_20 Q4	032	Wa e eatment S tes - Wate Regu at on Compl ance & Ene gy E ciency	0	KI487		02	0	DRD
709	20 9_20 Q4	KI5 4	Ww Ws Wa e Regu a ion Compl ance & Ene gy E ciency og amme	0	KI487		09	02	DRD
7 0	20 9_20 Q4	KR549	Nett ehi l Road sbu n - Sto m Sewe	00			07	24	DRD
7	20 9_20 Q4	KA2 3	Sewe s St uctu al Rehab l ta ion ackage Mi l own K l yneese & o tglenone	00	KI537		07	2	NIEA
7 2	20 9_20 Q4	KA222	G ange s Mi l Muckamo e Was ewate umping Ma n Re oca ion	00	KI537		07	2	NIEA
7 3	20 9_20 Q4	KA224	D umsough Road Randalstown Sewa age Scheme	00	KI537		09	2	NIEA
7 4	20 9_20 Q4	KS934	Moss Road Bal ygowan ump ng Stat on Rat ona isat on	00	KI538		07	24	DRD
7 5	20 9_20 Q4	KA234	Glenavy Road C uml m WW S Site Inves igat on	06	KI537		07	2	NIEA
7 6	20 9_20 Q4	KS839	G ansha Road Bango unk Sewe ep acement	00	KI537		07	2	NIEA
7 7	20 9_20 Q4	KS374	Hun e s M ll Sto m A tenua ion and Ne wo k mp ovemen s Downpat ck	00	KI537		07	2	NIEA
7 8	20 9_20 Q4	KV 72	St udes Ga dens Rost evo lood Al ev at on	00	KI537		07	2	NIEA
7 9	20 9_20 Q4	047	High o i y Wate ma ns hase 2 Wo k ackage	00			03	08	DRD
720	20 9_20 Q4	KB423	Wes land Rd Cookstown - S S Upg ade	00	KI537		07	2	NIEA
72	20 9_20 Q4	KB472	Bel aghy Sewe age Scheme	00	KI537		07	2	DRD
722	20 9_20 Q4	KB486	Galgo m WW S Upg ade - eas b l ty S udy	06	KI537		2	2	DRD
723	20 9_20 Q4	KC425	Donaghb ook Bal ymoney - looding Al eviat on	00	KI537		07	2	NIEA
724	20 9_20 Q4	KR64	336-344 O dpa k Road Bel ast &S sewe eq	00	KI55		07	24	
725	20 9_20 Q4	R466	McVeigh s Well Ra ional sa ion o ipewo k	00			03	08	UR
726	20 9_20 Q4	B724	K l y ane W W to C osshi l SR unk Main Replacement (pa t)	06			03	23	
727	20 9_20 Q4	KG 73	o tadown DA Stage	00	KI537		07	2	
728	20 9_20 Q4	KG 77	o tadown DA Stage 2	00	KI537		07	2	NIEA
729	20 9_20 Q4	KS879	Bango DA Wo k ackage 4 Bango Ma ina U Ds	0			07	2	NIEA
730	20 9_20 Q4	KG 85	Oak G ange Wa ingstown ood Al eviat on	0	KI537		4	2	DRD
73	20 9_20 Q4	R480	Wa wicks Row Ca ck e gus Wate ma n Extension	00			03	23	DRD
732	20 9_20 Q4	K 447	ondonde y DA oy e Road Wo k ackage CSO Ra iona isa ion	00	KI537		07	2	NIEA
733	20 9_20 Q4	K 668	sna ick WW W easib l ty Study	06			09	6	NIEA
734	20 9_20 Q4	KR560	O cha dvi le and inaghy Road No th Bela st Sewe Rehab l tat on	00			07	2	DRD
735	20 9_20 Q4	K 460	oyle Sp ngs De y lood Al ev at on	00	KI537		07	2	NIEA
736	20 9_20 Q4	K 469	Maydown WW S Rep acement	00	KI537		2	2	UR
737	20 9_20 Q4	KN 43	Cast ede g	00	KI537		07	2	NIEA
738	20 9_20 Q4	KN595	B ookmount Road - Hun e s C esent Sewe Rep acement	00	KI537		07	2	NIEA
739	20 9_20 Q4	KO 28	Bal y oney Road Rath i and S o m Sewe	00	KI537		07	2	DRD
740	20 9_20 Q4	KN599	Donaghmo e Ww W Upg ade	06			4	6	NIEA
74	20 9_20 Q4	KI532	Bango & Ho ywood ubl c Rea m CC V Su vey	00			07	24	DRD
742	20 9_20 Q4	C39	Ma ine Apa tments Ba lycast e W main ext	00			03	23	DRD
743	20 9_20 Q4	KR4 7	O meau Avenue Sewe age upg ade o pol ution eso ut on	00	KI537		4	2	NIEA
744	20 9_20 Q4	255	sbu n ubl c Rea m	00			03	23	DRD
745	20 9_20 Q4	KR433	Bouche Road Bel ast Hyd au ic Upg ades	00	KI537		07	2	NIEA
746	20 9_20 Q4	A293	u gan Road G enavy Wa e main Extens on	00			03	23	DRD
747	20 9_20 Q4	R438	New ownabbey Zone Wa e main Imp ovements hase	00	I053		03	08	UR
748	20 9_20 Q4	KB50	e n sky Road Kel s - S o m Sewe	00	KI538		07	24	DRD
749	20 9_20 Q4	KR456	D umglass a k isbu n Road Bel ast Sto m Sepe at on	00	KI537		07	2	NIEA
750	20 9_20 Q4	K 329	A d ess WW S oposed Rep acement	03	KI469		2	6	NIEA
75	20 9_20 Q4	KV089	Dunba Road Banb dge S S Upg ade	0	KI469		2	02	UR
752	20 9_20 Q4	K 685	Ma n st eet Belcoo Sto m sewe ext	00	KI464		07	24	DRD
753	20 9_20 Q4	KR489	Glenmachan St ategic o ect hase a Sic ly & Ma gue i e a k ood A levi	00	KI537		07	2	UR
754	20 9_20 Q4	K 374	Woodlawn a k Dungannon Sto m & oul sewe	00	KI464		07	24	DRD
755	20 9_20 Q4	KS875	Bango DA Wo ks ackage 6 ukes oint WW S UID	0			07	2	NIEA
756	20 9_20 Q4	K 403	D umbeg D ive isbu n WW S Enhancement	0	KI537		07	2	NIEA
757	20 9_20 Q4	K 354	De nagh WW S Upg ade	00	KI469		07	02	DRD
758	20 9_20 Q4	KS895	A dnava ley Combe Sewe umping Ma n Extension	00	KI538		07	24	DRD
759	20 9_20 Q4	KN628	Ca ckmo e WW S Upg ade Including Rep acement o ump ng Main	00			2	02	
760	20 9_20 Q4	KR574	Ant m Road Glengo mley S o m & oul Sewe Ex ens on	00	KI538		07	24	DRD
76	20 9_20 Q4	K 386	Go tnahey Ww W	05			09	6	
762	20 9_20 Q4	026	MIM No h (Ma o Inc dent M tigat on oject No h Region) eeze haw m	00			03	08	DRD
763	20 9_20 Q4	KS807	K lkeel Ha bou S S and Sewe age Imp ovements	00	KI537		07	2	NIEA
764	20 9_20 Q4	S306	Mou ne Wa l owe s	03			0	03	
765	20 9_20 Q4	KR454	DG5 - Sou h a ade Bel ast	0	KI469		07	2	
766	20 9_20 Q4	KS834	Sewe s St uctu al Rehab l ta ion ackage 2	00	KI537		07	2	NIEA
767	20 9_20 Q4	KA257	V c o ia Road Bal ycla e oul Sewe Extension	00			07	24	DRD
768	20 9_20 Q4	KR557	B ans We l Road oleg ass oul Sewe Extens on	00			07	24	DRD
769	20 9_20 Q4	653	Enniski en New Hospital Wate ma n Ext	00			03	23	
770	20 9_20 Q4	KS842	K lkeel DA hase	00	KI537		07	2	NIEA
77	20 9_20 Q4	KA239	Mu lans Ww W (Ant m)	04			09	6	NIEA
772	20 9_20 Q4	C385	Monaclogh SR Capac ty Ex ens on	06			04	06	DWI
773	20 9_20 Q4	KS872	Bango DA Wo k ackage Ca nalea St eam U D	0	KI537		07	2	NIEA
774	20 9_20 Q4	KI538	Sewe age New and Renewed ncluding S (Unp anned)	03			07	24	UR
775	20 9_20 Q4	KR530	Bel ast WW W Base Maintenance - hase 2	00			09	02	DRD
776	20 9_20 Q4	KV 54	New y Road Sewage umping Sta ion Wa enpo nt Upg ade	00	KI469		3	2	NIEA
777	20 9_20 Q4	KV063	New y Sewe age Netwo ks Imp ovements	00	KI537		07	2	NIEA
778	20 9_20 Q4	KV 96	Hi l own WW W hase 2 Base Ma ntenance	00			09	02	DRD
779	20 9_20 Q4	KB494	Moneymo e WW W hase 2 Base Ma ntenance	00			09	02	DRD
780	20 9_20 Q4	KS880	Ki kis own No th Ww S Re u bishment	0			2	2	DRD
78	20 9_20 Q4	K 4 6	Annah lt WW W hase 2 Base Main enance	00			09	02	DRD
782	20 9_20 Q4	KR389	Bal yha be t Ww W In e im So u ion	0	KS		09	5	NIEA
783	20 9_20 Q4	KV 7	Rai way D ain New y – Desi t ng cond t on su vey & assoc a ed civ l wo k	0	KI537		07	24	NIEA
784	20 9_20 Q4	K 26	Stoney o d Ww W	06			09	6	NIEA
785	20 9_20 Q4	KV 99	Dub n Road New y Out o Sewe looding	00	KI537		07	2	NIEA
786	20 9_20 Q4	R400	A2 Sho e Road Re a ignment - G een sland	00	KI538		07	24	NIEA
787	20 9_20 Q4	K 506	Donnyb ewe WW W s hase 2 Base Ma ntenance	00			09	02	DRD
788	20 9_20 Q4	KI559	C 5 ea WW W Base Main enance - East Region	06			09	02	
789	20 9_20 Q4	KA235	Rashee D ve Ba lyc a e S o m Sewe Ex ens on & Upg ade	00	KI538		07	24	NIEA
790	20 9_20 Q4	KR533	Sp ng ield C escent Bel ast Sto m Sewe Ex ens on	00	KI538		07	24	DRD
79	20 9_20 Q4	K 402	Dunmu y WW W Sludge ac l ty	05			0	6	DRD
792	20 9_20 Q4	KR5 2	Bank Squa e Bel ast Envi onmen al Imp ovements Scheme	00			07	2	DRD
793	20 9_20 Q4	KR50	Ca ck e gus WW W Upg ade	00	KI469		09	02	DRD
794	20 9_20 Q4	KV 89	Mi l u n WW S - eas bi ity S udy	00			2	02	DRD
795	20 9_20 Q4	KR390	Cloughy Ww W nte m Solut on	0	KI469		09	02	UR
796	20 9_20 Q4	N226	St u e n ake o De g W W	0			0	03	DWI
797	20 9_20 Q4	KC456	Sta ion Co tages De vock Sto m Sewe	00			07	24	DRD
798	20 9_20 Q4	KV 6	Cast ewel an DA S age	00	KI537		07	2	NIEA
799	20 9_20 Q4	KB3 4	Gul adu Ww W	0			09	6	NIEA
800	20 9_20 Q4	KA237	4 S eep e Road Ant m oul and S o m Sewe Ex ens ons	00	KI538		07	24	NIEA
80	20 9_20 Q4	KB504	Cloneen C ew Rd Maghe a Sto m Culve t Repl	00	KI538		07	24	DRD
802	20 9_20 Q4	KA20	Bal yeas on Sewage System Upg ade	0			2	2	NIEA
803	20 9_20 Q4	KC435	sco man WW W Upg ade	00	KI469		09	02	DRD
804	20 9_20 Q4	KS850	Qua y He ghts New owna ds oul and Sto m Sewe Extension	00	KI538		07	24	NIEA
805	20 9_20 Q4	K 4	Hi lsbo ough Ww W	0			2	6	NIEA
806	20 9_20 Q4	KB5 7	ONe ll a k Ba lymaguigan oul & Sto m Sewe Extension	00	KI538		07	24	DRD
807	20 9_20 Q4	KC455	Ashley D ve Ba lymoney Sto m Sewe	00	KI464		07	24	DRD
808	20 9_20 Q4	KB523	57 a ne Road Ba lymena oul Sewe Ext	00	KI538		07	24	
809	20 9_20 Q4	KR562	S c ly a k Bel ast Sewe D ve sions om Sto m Cu ve t	00			07	2	DRD
8 0	20 9_20 Q4	KR536	New ownb eda WW W s hase 2 Base Main enance	00			09	02	DRD
8	20 9_20 Q4	KC468	Haze bank Rd Cole a ne oul Sewe Extension	00	KI538		07	24	
8 2	20 9_20 Q4	669	K l yhev in W W - GAC	00			02	04	DWI
8 3	20 9_20 Q4	KR3 0	New ownb eda Ww W	0			09	5	NIEA
8 4	20 9_20 Q4	KR542	Cyp us Avenue Bel ast Sewe Rehab l tat on	00			07	2	DRD
8 5	20 9_20 Q4	KG 80	Knockshane WW S u gan Upg ade	0	KI469		2	02	UR
8 6	20 9_20 Q4	KB457	ong e d Road Dese ma t n S o m Sewe Extension	00	KI538		07	24	NIEA
8 7	20 9_20 Q4	KS848	Newcast e Waste Wate ea ment Wo ks	0			09	6	NIEA
8 8	20 9_20 Q4	K 479	Ci cu a Road De y Sto m sewe ex ens on	00	KI538		07	24	DRD
8 9	20 9_20 Q4	G085	Mi lennium Way u gan (New Road Const uct on)	00			03	23	
820	20 9_20 Q4	KI50	umping Stat on Ma n enance - R McC ea	00	KI469		2	02	DRD
82	20 9_20 Q4	K 4 7	Mount Eag es isbu n oul Sewe	00	KI538		07	24	DRD
822	20 9_20 Q4	KN639	Cast e A chdale WW S Upg ade	00	KI469		2	02	DRD
823	20 9_20 Q4	KB499	Go tat ay WW Ws hase 2 Base Maintenance	00			09	02	DRD
824	20 9_20 Q4	KS844	Bal yho nan Out a l Sc een	05			09	6	NIEA
825	20 9_20 Q4	03	O ices & Depots -Wate Regu at on Compl ance & Ene gy E ciency og am	0			06	20	DRD
826	20 9_20 Q4	KG204	ncess Way o tadown Sto m Sewe Extension	00	KI538		07	24	DRD
827	20 9_20 Q4	KG206	D umnag oon Ke nan Hi l Rd C a gavon oul & S o m Sewe	00	KI538		07	24	
828	20 9_20 Q4	KG207	Obins St eet o adown S o m Sewe Ex ens on	00	KI538		07	24	DRD
829	20 9_20 Q4	KN645	De y Road St abane	00	KI538		07	24	DRD
830	20 9_20 Q4	K 376	Glenga iagh ump ng S a ion and umping Ma n	00	KI538		07	24	NIEA
83	20 9_20 Q4	K 4 2	Bal ynah nch ubl c Rea m Sewe & Wa e main Rehab l tat on	00			07	24	DRD
832	20 9_20 Q4	K 474	G ace ie d Road Maghe a elt Sto m Sewe Extension	00	KI538		07	24	DRD
833	20 9_20 Q4	K 350	Benone A ea Sewe age	0			09	6	NIEA
834	20 9_20 Q4	0 5	Enhanced Si e Secu ty	0			06	04	UR
835	20 9_20 Q4	K 4	Edgewate WW S H&S Upg ade - easib l ty Study	00	KI537		2	2	DRD
836	20 9_20 Q4	KR534	Ca owdo e WW W - hase 2 Base Ma n enance	00			09	02	DRD
837	20 9_20 Q4	K 468	St a h oyle ondonde y Siphon In et Sc een	00	KI469		07	2	UR
838	20 9_20 Q4	V857	New y West SR Rehab l tat on	03	I050		04	07	DRD
839	20 9_20 Q4	KV 67	Ma n St eet Sca va S o m Sewe Ex ens on	00	KI538		07	24	NIEA
840	20 9_20 Q4	08	C 5 - SCEMD Wa e)	00			02	04	
84	20 9_20 Q4	KB452	Cushendall Road (72- 78) Ba lymena Sto m Sewe Ex ens on	00	KI538		07	24	NIEA
842	20 9_20 Q4	K 667	Aghad umsee New ma y School oul & Sto m Sewe Extension	00	KI538		07	24	DRD
843	20 9_20 Q4	K 678	Coa Road Ennisk l en S o m Sewe Ext	00	KI538		07	24	DRD
844	20 9_20 Q4	KV 25	o khi l WW W	0			09	6	NIEA
845	20 9_20 Q4	KS85	Ma n St eet Cloughey ump ng main oul and S o m Sewe Ex ens ons	0	KI538		07	24	NIEA
846	20 9_20 Q4	B679	he G ens Zone Wa e main mp ovemen s	00	I053		03	08	UR
847	20 9_20 Q4	KR429	o k St eet Bel ast n e change	00	KI538		07	24	NIEA
848	20 9_20 Q4	I 7	W W Resi ience Imp ovement	00			02	04	
849	20 9_20 Q4	K 33	G ange a k Dungannon WW S Upg ade	00	KI469		2	02	UR
850	20 9_20 Q4	KS373	Chu ch St eet S S Upg ade Downpat ick	00	KI537		07	2	NIEA
85	20 9_20 Q4	KG 84	o tadown D a nage A ea Ne wo k mp ovemen s - Obins St eet and a k Rc	00			07	2	NIEA
852	20 9_20 Q4	C388	Rasha k n Zone Wa e main Imp ovements hase 2	00	I053		03	08	UR
853	20 9_20 Q4	KR457	adyb ook Bel ast Sewe nvest gat on St uctu a)	00	KI537		07	2	NIEA
854	20 9_20 Q4	KR490	Donegal Avenue Whi ehead oul Sewe Extension	00	KI538		07	24	NIEA
855	20 9_20 Q4	KA242	Bal ycla e WW W Upg ade	00	KI469		09	02	DRD
856	20 9_20 Q4	KR509	Ca ck e gus ub ic Realm Sewe s	00	KI538		07	24	DRD
857	20 9_20 Q4	N505	Omagh Wate ma n Imp ovements	00	I053		03	08	UR
858	20 9_20 Q4	KR235	Knock Va ley Rel e Sewe	00			07	24	
859	20 9_20 Q4	KR543	Ebo St eet Sto m Sewe	00			07	24	DRD
860	20 9_20 Q4	KS840	C aigda agh Rd o Seahi l Rd Sewe Replacement	00	KI537		07	2	NIEA
86	20 9_20 Q4	KR577	65 G oomspo t Rd Bango - Sto m Sewe Upg ade	00	KI538		07	24	DRD
862	20 9_20 Q4	KN622	Omagh WW W - Nut ent Reduct on	0			09	6	NIEA
863	20 9_20 Q4	KR582	o ens a k Bel ast Sto m Sewe	00	KI538		07	24	DRD
864	20 9_20 Q4	KR583	V c o ia Road Bel ast - oul Sewe Extension and S o m Sepa at on Inves iga	00	KI538		07	24	DRD
865	20 9_20 Q4	KR584	Glenvi le Rd New ownabbey - S o m Sewe	00	KI538		07	24	DRD
866	20 9_20 Q4	750	Bal in ees o imavady ondonde y Supp y Augmen a ion	0			03	05	DWI
867	20 9_20 Q4	KB287	Swat agh Was ewate ea ment Wo ks	03			09	6	NIEA
868	20 9_20 Q4	K 485	obe mo e WW W Upg ade	00	KI469		09	02	DRD
869	20 9_20 Q4	K 684	Dannys Mi l Road Enn sk l en Sewe Rehabi i at on	00			07	2	DRD
870	20 9_20 Q4	B680	Dungonne l Zone Wa e main mp ovemen s	00	I053		03	08	UR
87	20 9_20 Q4	KC430	Dun oy WW W Upg ade	00	KI469		09	02	DRD
872	20 9_20 Q4	K 330	A magh DA Stage	00	KI537		07	2	NIEA
873	20 9_20 Q4	S307	D uma den Road o ta e y	03	I054		03	23	DRD
874	20 9_20 Q4	KR6 5	530 Sho e Road Bel ast	00	KI538		07	24	
875	20 9_20 Q4	K 482	amnahe in WW W eas bi i y Study	04			09	6	NIEA
876	20 9_20 Q4	I 9	Cap tal Ma n enance lanning unk Ma n Condi ion G ading (C 5 ea 2)	00			03	23	
877	20 9_20 Q4	090	C 5 Wa e mains Rehabi tat on W 4 Bal ymena h	00			03	08	
878	20 9_20 Q4	KS824	Sp n ied Road o avogie S o m Sewe Extension	00	KI538		07	24	NIEA
879	20 9_20 Q4	N355	No th y one Zone Wa e main Imp ovements	00	I053		03	08	
880	20 9_20 Q4	N528	C aw o ds H ll Ma ns Rep acement	00			03	08	
88	20 9_20 Q4	KC429	Rasha k n WW W Upg ade	00	KI469		09	02	DRD
882	20 9_20 Q4	KC44	Eastbu n C escent Bal ymoney oul Sewe	00	KI469		07	2	DRD
883	20 9_20 Q4	KS835	South St eet Newtowna ds WW S Re u bishment	00	KI537		2	2	NIEA
884	20 9_20 Q4	KI494	Base Main enance WW W No h IWWW	00	KI469		09	02	DRD
885	20 9_20 Q4	KR486	M&E Cap tal Main enance Whi ehouse WW W	0	KI469		09	02	UR

So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date	Base ine Se v ce A locat on Wa e n ast uctu e	Basel ne Se vice Al ocat on Wate Non- In ast uc u e	Base ine Se v ce A loca ion Sewe age n ast uctu e	Basel ne Se vice Al ocat on Sewe age Non- In ast uc u e
	2	3	4	5	6	7	8	9	0		2	3	4	5	6	7	8	9	20	2
886	20 9_20 Q4	KR36	Ca ow eagh Road Dundonald S o m Sewe	00	KI538		07	24	NIEA	2 03 2009	24 03 2009	2 05 20 2	24 09 20 2		24 09 20 2	24 09 20 3	0	0	0	0
887	20 9_20 Q4	K 45	ondonde y DA St a h oy e & D umahoe Wo k package CSO Abandonme	00	KI537		07	2	NIEA	07 07 20	07 20	09 0 20 2	25 09 20 2		25 09 20 2	25 09 20 3	0	0	0	0
888	20 9_20 Q4	KS893	Maghe aknock Road Ba lynahinch Sto m Sewe Ex ens on	00	KI538		07	24	DRD	04 0 20 2	2 0 20 2	07 05 20 2	27 07 20 2		27 07 20 2	27 07 20 3	0	0	0	0
889	20 9_20 Q4	K 477	Stee s own Road ondonde y oul and S o m Sewe Extensions	00	KI538		07	24	NIEA	9 04 20 2	0 05 20 2	06 20 2	25 09 20 2		05 09 20 2	05 09 20 3	0	0	0	0
890	20 9_20 Q4	B458	Duno e West Zone Wa e main Imp ovements	00	I053		03	08		02 04 20 0	22 04 20 0	06 20 0	07 08 20 2		07 08 20 2	07 08 20 3	0	0	0	0
89	20 9_20 Q4	KR439	Mi l sle DA Stage 2	00	KI537		07	2	NIEA	22 02 20	02 03 20	30 09 20 3	0 0 20 5		0 03 20 5	0 03 20 6	0	0	92	8
892	20 9_20 Q4	KS947	t le Enle Combe - oul Sewe Ex ens on	00	KI538		07	24												
893	20 9_20 Q4	R450	Queens o t Road Wa e main Upg ade	00	I053		03	23	DRD	20 02 20 2	27 02 20 2	04 04 20 2	25 04 20 2		25 04 20 2	25 04 20 3	0	0	0	0
894	20 9_20 Q4	094	C 5 Wa e mains Rehabi tat on W 8 Bel ast South h	00			03	08												
895	20 9_20 Q4	KS956	Mi lb ook Bal ynah nch Sto m Sewe Extens on	00	KI538		07	24												
896	20 9_20 Q4	KS960	Adj 89 Donaghadee Rd Bango - oul Sewe	00	KI538		07	24												
897	20 9_20 Q4	K 343	Annaghmakeown Road Castlecau e d Sto m Sewe Extension	00	KI538		07	24	NIEA	20 02 20 2	2 02 20 2	6 04 20 2	29 06 20 2		29 06 20 2	05 09 20 2	0	0	0	0
898	20 9_20 Q4	K 350	Bal inaleck - RBC Ins a la ions West & South	0			07	24	UR			05 02 2007	4 07 2008		4 07 2008	4 07 2009	0	0	0	0
899	20 9_20 Q4	K 028	Keady Ww W	0			09	6	NIEA			3 09 20 0	2 03 20 2		2 03 20 2	2 03 20 3	0	0	0	0
900	20 9_20 Q4	K 396	B a is Road sbu n Sto m Sewe Ex ens on	00	KI538		07	24	NIEA								0	0	0	0
90	20 9_20 Q4	K 400	W low Ga dens Dunmu y Sewe Ex ens on	00	KI538		07	24	NIEA								0	0	0	0
902	20 9_20 Q4	KA 97	he la ns Bu ns de Road Doagh oul Sewe Extension	00	KI538		07	24	NIEA	0 08 20 0	20 08 20 0	2 09 20 0	6 20 0		6 20 0	8 02 20	0	0	0	0
903	20 9_20 Q4	S297	B oody B dge Wa e ump ng S at on & New nk Ma n o Majo Incident Mit	00	I005		03	23	DRD	22 02 20 2	4 03 20 2	26 09 20	28 09 20 2		28 09 20 2	28 09 20 3	0	0	0	0
904	20 9_20 Q4	K 4 8	D omo e Road Hi lsbo ough umping Sta ion	00	KI538		2	24	DRD											
905	20 9_20 Q4	KR44	Mon gome y Rd lood A lev ation	0			07	2	NIEA	5 20 0	9 20 0	7 0 20	3 07 20 2		3 07 20 2	3 07 20 3	0	0	0	0
906	20 9_20 Q4	K 455	ondonde y DA Sewe s Rehab hase	0			07	2	NIEA	3 0 20 0	27 0 20 0	08 02 20 0	03 0 20		03 0 20	02 0 20 2	0	0	0	0
907	20 9_20 Q4	V025	ough Ross Zone Wate ma n Imp ovements	00	I053		03	08		02 04 20 0	26 04 20 0	06 09 20 0	30 07 20 2		30 07 20 2	30 07 20 3	0	0	0	0
908	20 9_20 Q4	KA2 6	Ca nlough WW S Sep ic ty Dosing	00	KI469		2	02	UR	02 03 20 0	9 03 20 0	29 07 20	5 03 20 2		5 03 20 2	5 03 20 3	0	0	0	0
909	20 9_20 Q4	KB526	Maghe a e t own Cent e Sto mwate Management o ect	06			07	2	DRD											
9 0	20 9_20 Q4	KS866	Bal yd umman Road e t m oul Sewe Extension	0	KI538		07	24	NIEA	4 06 20	24 06 20	0 04 20 2	28 09 20 2		28 09 20 2	28 09 20 3	0	0	0	0
9	20 9_20 Q4	KA 9	B ack Cave & Uppe Roddens Sewage Imps a ne	0			3	2	NIEA			0 02 20	5 03 20 2		5 03 20 2	5 03 20 3	0	0	0	0
9 2	20 9_20 Q4	KS328	Del nv l a ane Dund um Sto m Sewe	00			07	24	NIEA			4 09 2009	5 04 20		5 04 20	4 04 20 2	0	0	0	0
9 3	20 9_20 Q4	KV 70	Glassd umman Road Annalong oul Sewe Ex ens on	00	KI538		07	24	NIEA	02 2 20	08 2 20	0 04 20 3	0 06 20 3		0 06 20 3	0 06 20 4	0	0	0	0
9 4	20 9_20 Q4	KI539	C 5 o ec s - C us e o Sept c anks caus ng o lut on	04			09	6	NIEA											
9 5	20 9_20 Q4	KV064	u gana e Ww W	0			07	5	NIEA			30 2009	0 0 20 0		0 0 20 0	0 0 20	0	0	0	0
9 6	20 9_20 Q4	KA 96	Glena m Sewage umping Stat on	00	KI469		3	02		02 2009	20 02 2009	23 03 2009	3 03 20 0		3 03 20 0	3 03 20	0	0	0	0
9 7	20 9_20 Q4	KR255	Bel ast Sewe s o ect	00	KI537		07	2	NIEA	5 2004	5 2005	06 2009	8 02 20 0		8 02 20 0	27 0 20 2	0	0	0	0
9 8	20 9_20 Q4	C349	o tba l nt ae Zone Wm mp ovemen s	00	I053		03	08		26 09 2007	08 0 2007	05 2007	5 09 2008		5 09 2008	5 09 2009	0	0	0	0
9 9	20 9_20 Q4	KI544	Non UWW W MCe t Comp iance	04			09	6	NIEA								0	0	0	00
920	20 9_20 Q4	KI545	Sub Mete ng at se ected Ww W	00			07	02	DRD								0	0	0	00
92	20 9_20 Q4	KI547	CSO Moni o ing C 5	04			07	2	UR								0	0	0	00
922	20 9_20 Q4	KI549	Non In ast uctu e Ma o Wo ks	04			09	6												
923	20 9_20 Q4	KI55	S and Mino Sewe age - o essional Se v ces (C 5)	00			07	24												
924	20 9_20 Q4	KR3 3	sba net Ww W	0			09	5	NIEA			4 03 2008	26 02 20 0		26 02 20 0	3 08 20 2	0	0	0	0
925	20 9_20 Q4	K 377	Knockmoy a k A ea Coal sland Ww S Replacement	00			2	2	DRD								0	0	0	00
926	20 9_20 Q4	592	G anvi le Dungannon Invest NI Wa e main Extension	00	I003		03	23	DRD								0	0	0	0
927	20 9_20 Q4	KS8 2	G eyabbey DA hase	0	KI537		07	2	NIEA	8 07 20	0 08 20	0 0 20	24 09 20 2		24 09 20 2	24 09 20 3	0	0	0	0
928	20 9_20 Q4	KV208	au el G ove New y oul Sewe Extension	00	KI538		07	24	DRD											
929	20 9_20 Q4	KV2 2	e cy odge D omo e Sto m Sewe	00	KI538		07	24	DRD											
930	20 9_20 Q4	KV2 3	Calmo V ew is ea - Sto m Sewe Extension	00	KI538		07	24												
93	20 9_20 Q4	KR39	o tavogie Ww W In e im So u ion	0	KS		07	5	NIEA			30 2009	25 09 20 2		25 09 20 2	25 09 20 3	0	0	0	0
932	20 9_20 Q4	B460	Moyo a Zone Wa e main mp ovemen s	00	I053		03	08		02 04 20 0	26 04 20 0	20 09 20 0	3 03 20 2		3 03 20 2	3 03 20 3	0	0	0	0
933	20 9_20 Q4	KV2 8	Old Road Mayob idge oul & Sto m Sewe	00	KI538		07	24	DRD											
934	20 9_20 Q4	KV222	Caiseal Cou t Bal yho land New y Sto m Sewe Ex ens on	00	KI538		07	24												
935	20 9_20 Q4	KI530	Compl ance wi h Su ace Wate s (Shell sh)(Classi icat on (Amendment) Regu	02			09	2	NIEA											
936	20 9_20 Q4	KA272	Hi lhead Road Ba lycla e oul & S o m Sewe	00	KI55		07	24												
937	20 9_20 Q4	A290	K l y ane Duno e East hase	00			03	08	DRD											
938	20 9_20 Q4	R342	St a eg c nk - Casto Bay o Bel ast	0			03	05	DWI			0 06 20 3	30 2 20 4		28 02 20 5	28 02 20 6	85	5	0	0
939	20 9_20 Q4	KA276	Go tgole Road o tg enone	06	KI55		07	24												
940	20 9_20 Q4	KI486	Sma l WW W ea 2 og amme C 0 - 20 2	00			09	7	NIEA			0 06 20	20 08 20 2		20 08 20 2	24 08 20 2	0	0	0	0
94	20 9_20 Q4	KS838	Downpat ck St eet C ossga S o m sewe	00	KI538		07	24	NIEA	02 03 20	5 03 20	08 04 20	09 02 20 2		09 02 20 2	08 02 20 3	0	0	0	0
942	20 9_20 Q4	KA28	2 Glove s own Road oomeb idge Sto m sewe	06	KI55		07	24												
943	20 9_20 Q4	K 472	Chapel Road Dung ven oul Sewe Ex ens on	00	KI538		07	24	NIEA	26 09 20	03 0 20	23 0 20 2	22 02 20 2		22 02 20 2	2 02 20 3	0	0	0	0
944	20 9_20 Q4	KA283	Bi ch H ll Road Ant m oul & S o m Sewe Extension	06	KI55		07	24												
945	20 9_20 Q4	K 504	ondonde y DA Bunc ana Road Wo k ackage S age 2	02			07	2	NIEA								0	0	46	54
946	20 9_20 Q4	K 037	Annaghe Sewage ump ng Stat on and Ris ng Main	00	KI537		3	2	NIEA	05 04 20 2	0 05 20 2	0 02 20 3	30 04 20 4		3 0 20 4	3 0 20 5	0	0	32	68
947	20 9_20 Q4	KA287	Ca nbank emp epat ick Sewage scheme	06	KI55		07	24												
948	20 9_20 Q4	KA288	Clements Hall Bal ycla e oul sewe	06	KI55		07	24												
949	20 9_20 Q4	KB527	obe mo e Rd Maghe a e t Sto m Sewe	00	KI55		07	24												
950	20 9_20 Q4	KS377	Downs Road Cast e a k Sewe Upg ade At enuat on	00	KI537		07	2	NIEA	7 09 2007	20 09 2007	30 09 20 0	03 02 20 2		03 02 20 2	02 02 20 3	0	0	0	0
95	20 9_20 Q4	KB465	Maghe a e t ma y School S o m Sewe Extension	00	KI538		07	24	NIEA	20 02 20 2	2 02 20 2	26 04 20 2	9 07 20 2		9 07 20 2	28 08 20 2	0	0	0	0
952	20 9_20 Q4	KB530	Bal ymena Showg ounds S C &S sewe extension	00	KI55		07	24												
953	20 9_20 Q4	KB53	Glen avel Rd Ca gan Bal ymena &S sewe ext	00	KI55		07	24												
954	20 9_20 Q4	K 428	Bal ymacash Road sbu n lood Al ev at on	06			07	2	UR											
955	20 9_20 Q4	KB538	297-303 Ba lymoney Rd Ba lymena Sto m sewe ex ens on	06	KI55		07	24												
956	20 9_20 Q4	007	W W E luent Qua i y	00			02	04	DWI								0	00	0	0
957	20 9_20 Q4	KG202	Aghaga lon WW W - MBBR ial	03			09	6	NIEA								0	0	0	00
958	20 9_20 Q4	KC47	au el H ll Cole a ne Sto m Sewe Extension	00	KI55		07	24												
959	20 9_20 Q4	N430	A leyhi l Zone Wm Imp ovements	00	I053		03	08		0 04 20 0	26 04 20 0	24 06 20 0	3 0 20 2		3 0 20 2	2 0 20 3	0	0	0	0
960	20 9_20 Q4	K 443	ondonde y DA Duke St eet Wo k package	00	KI537		07	2	NIEA	09 2009	6 2009	06 04 2009	0 02 20 2		0 02 20 2	09 02 20 3	0	0	0	0
96	20 9_20 Q4	K 473	M&E Cap tal Main enance - Culmo e WW W	0			09	02	UR	2 06 20	04 07 20	03 0 20	25 09 20 2		25 09 20 2	25 09 20 3	0	0	0	0
962	20 9_20 Q4	KV229	Ben C om lace K lkeel - Sto m Sewe Extension	00	KI55		07	24												
963	20 9_20 Q4	KR555	apw ng Newtowna ds - A t cle En o cement S te	00	KI55		07	24	DRD											
964	20 9_20 Q4	KR432	Beechmount Avenue Go t n St eet Hyd au ic Upg ade	00	KI537		07	2	NIEA	03 2 20 0	2 0 20	3 03 20	0 20 2		0 20 2	0 0 20 3	0	0	0	0
965	20 9_20 Q4	KR473	Hamel D ve lood Al ev at on East Bel ast	00	KI537		07	2	NIEA	08 0 20 0	04 20 0	7 0 20	23 06 20		23 06 20	23 06 20	0	0	0	0
966	20 9_20 Q4	K 394	Coleb ooke Rd vemi e own Sto m Sewe	00	KI55		07	24												
967	20 9_20 Q4	KA243	Sho e Road G ynn a ne Sto m Sewe and oul ump ng Main Ex ens on	00	KI538		07	24	DRD								0	0	0	0
968	20 9_20 Q4	K 324	C ossdened Row Keady Sto m Sewe Ex ens on	00	KI538		07	24	NIEA	24 08 20	26 08 20	02 0 20 2	27 0 20 2		27 0 20 2	26 0 20 3	0	0	0	0
969	20 9_20 Q4	KO 70	ough Road u gan	0			07	24												
970	20 9_20 Q4	K 402	Rea o - 3 u gan Rd Banb d ge oul Sewe	00	KI55		07	24												
97	20 9_20 Q4	K 669	Clabby Road WW S eas b l ty S udy	00	KI469		2	2	DRD								0	0	0	0
972	20 9_20 Q4	KG 29	oughga l Road o adown S o m and oul Sewe Ex ens ons	00	KI55		07	24	NIEA											
973	20 9_20 Q4	KG2	Edwa d St o tadown oul & Sto m Sewe	00	KI55		07	24												
974	20 9_20 Q4	670	Rosslea Wate Supply	0	I053		03	23	DRD	6 09 20	20 09 20	9 09 20	03 09 20 2		03 09 20 2	03 09 20 3	0	0	0	0
975	20 9_20 Q4	KV 56	C eve Road New y oul & S o m Sewe Extensions	00	KI538		07	24	NIEA	6 08 20 0	08 09 20 0	3 0 20	7 02 20 2		7 02 20 2	6 02 20 3	0	0	0	0
976	20 9_20 Q4	K 695	Rosso y WW S ump ng Main Extension and Rep acement	06			07	2												
977	20 9_20 Q4	KR607	Galway a k & Galway D ve Dundonald Sto m Sewe	00	KI538		07	24												
978	20 9_20 Q4	KG224	Sol tude Demense u gan S o m & oul Sewe	06	KI55		07	24												
979	20 9_20 Q4	KI563	Base Main enance Assoc a ed to DG5 nves igat ons	00			07	2												
980	20 9_20 Q4	K 534	S on Mi ls S ab e B ock oul Sewe	00	KI55		07	24												
98	20 9_20 Q4	K 535	No th and Road ondonde y S o m and oul Sewe Ex ens ons	00	KI55		07	24												
982	20 9_20 Q4	KV 2	Camlough Road New y Sto m and oul Sewe	00	KI537		07	2	NIEA	5 04 20	06 05 20	3 20 0	26 0 20 2		26 0 20 2	8 07 20 2	0	0	0	0
983	20 9_20 Q4	256	sbu n South Ru al hase & Dunmu y wa e main imp ovements	00			03	08	DRD											
984	20 9_20 Q4	KV 74	Ca nagat Road New y oul Sewe Ex ens on	00	KI538		07	24	NIEA	0 08 20	2 08 20	6 0 20 2	06 04 20 2		06 04 20 2	06 04 20 3	0	0	0	0
985	20 9_20 Q4	A306	Ca ck e gus Road a ne Wate Qua ty Schemes	00			03	08												
986	20 9_20 Q4	K 548	B0 0499 Nixons Co ne B aehead ondonde y oul sewe	06	KI55		07	24												
987	20 9_20 Q4	KV 47	Ma n St eet D omo e St eet Rath i and Sewe Rep acement	0	KI537		07	2	UR	9 0 20 0	9 20 0	20 06 20	02 20		02 20	25 0 20 2	0	0	0	0
988	20 9_20 Q4	KA23	ul y Road G ena m Sc een House Re u bishment	00	KI469		09	02	UR	7 0 20	3 0 20	29 07 20	04 09 20 2		04 09 20 2	04 09 20 3	0	0	0	0
989	20 9_20 Q4	KB507	Bal ymena WW W ABS H gh Speed B owe s Upg ade	00			09	02	DRD											
990	20 9_20 Q4	KN67	D umnaki ly Road Omagh oul & Sto m Sewe	00	KI55		07	24												
99	20 9_20 Q4	KN673	B0 6820 Mounta nv ew D ve isnaskea	00	KI55		07	24												
992	20 9_20 Q4	046	W 34 H gh io ty Wa e Ma ns h	00			03	08	DRD											
993	20 9_20 Q4	KN678	eamb esl n Enn ski len Rd isbel aw	00	KI55		07	24												
994	20 9_20 Q4	R444	New ownabbey Zone Wa e main Imp ovements hase 3	00	I003		03	08	UR											
995	20 9_20 Q4	KR5	Ravenh ll Road Bel ast - S o m Sewe Extens on	00	KI55		07	24	DRD								0	0	0	0
996	20 9_20 Q4	R449	Oldpa k Wate main mp ovemen s	00			03	08	UR								0	0	0	0
997	20 9_20 Q4	KR452	Ba oda St eet O meau a k Bel ast CSO	00	KI537		07	2	NIEA	07 08 2009	4 08 2009	07 09 2009	07 09 20		07 09 20	06 09 20 2	0	0	0	0
998	20 9_20 Q4	KR6 7	Glen Road Bel ast - Sto m Sewe Extension	00	KI55		07	24												
999	20 9_20 Q4	K 386	Old Omagh Road hase Ba lygaw ey S o m Sewe	00	KI538		07	24	DRD											
000	20 9_20 Q4	KR638	Rava a Ga dens Bango oul Sewe	00	KI55		07	24												
00	20 9_20 Q4	KR639	nce And ew Way Ca ck e gus oul Sewe	00	KI55		07	24												
002	20 9_20 Q4	C397	K l aughts Road Bal ymoney Wa e Ma n Rep acement	03			03	23	DRD											
003	20 9_20 Q4	KR643	ashoda St Bel ast Sto m Sewe Requis t on	00	KI55		07	24												
004	20 9_20 Q4	K 604	Empi e Meats d De nawi t Road Ross ea Sewage ump ng Ma n Ex ens on	00	KI538		07	24	NIEA	8 04 20	04 05 20	06 06 20	24 08 20		24 08 20	24 08 20	0	0	0	0
005	20 9_20 Q4	C3 4	ai view ane A t c ave - Wa e main Ext	0	I054		03	23				02 08 20 0	05 08 20		05 08 20	04 08 20 2	0	0	0	0
006	20 9_20 Q4	R32	B eda No th Zone Wa e main Imp ovements	00	I053		03	08		02 04 20 0	26 04 20 0	5 06 20 0	4 08 20 2		4 08 20 2	4 08 20 3	0	0	0	0
007	20 9_20 Q4	KR65	Cast e St Combe - oul and sto m sewe equis t on	00	KI55		07	24												
008	20 9_20 Q4	S229	Mou ne Coast Zone Wate ma n Imp ovements	00	I053		03	08		2 07 2009	03 08 2009	07 06 20 0	26 0 20 2		26 0 20 2	26 0 20 2	0	0	0	0
009	20 9_20 Q4	KS2 6	Dunmo e Sewe age - EC Compl ance	03			07	6	NIEA			0 20 0	25 20		25 20	24 20 2	0	0	0	0
0 0	20 9_20 Q4	KS864	Donaghadee Road Newtowna ds S o m Sewe Ex ens on	00	KI538		07	24	NIEA	22 07 20	29 07 20	0 0 20	23 20		23 20	22 20 2	0	0	0	0
0	20 9_20 Q4	KR658	tz oy Ave Bel ast Sto m Sewe Extension	00	KI55		07	24												
0 2	20 9_20 Q4	B694	ul y Rehab Wo k ackages	03			03	08	DRD											
0 3	20 9_20 Q4	N390	ough B adan W Ws Upg ade	0			02	04	DWI	3 03 2009	27 04 2009	3 08 2009	03 03 20		03 03 20	02 03 20 2	0	0	0	0
0 4	20 9_20 Q4	R453	Bal ygoma t n No h hase Wa e main mp ovemen s	00	I053		03	08	UR								0	0	0	0
0 5	20 9_20 Q4	KR666	St Be nadette School Bel ast Sto m Sewe	00	KI55		07	24												
0 6	20 9_20 Q4	V844	W 0 New y hase2	00	I053		03	08	DWI	03 20	08 20	02 08 20	2 06 20 3		2 06 20 3	2 06 20 4	0	0	0	0
0 7	20 9_20 Q4	N482	K l ymo e Road Go t n ump ng Stat on	00	I005		03	0		6 08 2007	7 08 2007	0 2 2007	23 05 2008		23 05 2008	23 05 2009	0	0	0	0
0 8	20 9_20 Q4	KR680	Cast e a k Bango - Sto m Sewe	00	KI55		07	24												
0 9	20 9_20 Q4	KS389	Bal yma t n & Black ock Ww Ws	05			09	6	NIEA			3 03 20 5	3 03 20 6		30 06 20 6	30 06 20 7	0	0	0	00
020	20 9_20 Q4	KR685	288 Bee sb idge Road Bel ast Sto m Sewe Extension	06	KI55		07	24												
02	20 9_20 Q4	600	Ca ve Rd Qui ly Rd Mu laghbawn Wate ma n Replacement	03	I054		03	23	DWI											
022	20 9_20 Q4	KR687	4A New o ge ane Bel ast oul Sewe Ex ens on	06	KI55		07	24												
023	20 9_20 Q4	593	A tmo e hase 2 Wate ma n Rehab a ion	00	I053		03	08	DRD											
024	20 9_20 Q4	KR704	Mov l a Road New owna ds Sewe Upg ade	06	KI55		07	2												
025	20 9_20 Q4	KR705	Cast eh ll a m Bal ygowan Rd Cast e eagh oul Sewe	00	KI55		07	24												
026	20 9_20 Q4	KN627	Meadowva e Dub in Rd N ownstewa t oul Sewe Extension	00	KI538		07	24	DRD								0	0	0	0
027	20 9_20 Q4	KS96	C onstown Road Newtowna ds S o m Sewe Upg ade	00	KI55		07	24												
028	20 9_20 Q4	KV 5	Ca ckdes and Bu en oul Sewe Extension	00	KI538		07	24	NIEA	02 07 2009	07 07 2009	3 08 2009	22 02 20 0		22 02 20 0	2 20 0	0	0	0	0
029	20 9_20 Q4	K 025	amnamo e Mu lenaki l Clontyc ay - RBC Insta lat ons West & Sou h	0	KI469		09	02	UR			0 09 2004	3 03 2008		3 03 2008	3 03 2009	0	0	0	0
030	20 9_20 Q4	KS969	Glen o d G ove New owna ds - oul & S o m Sewe Extension	00	KI55		07	24												
03	20 9_20 Q4	KS970	SEC- 833 Hunte s Mi l Downpat ck A t	00	KI55		07	24												
032	20 9_20 Q4	KS855	Donaghadee Road G oomspo t - Sto m Sewe Extension	00	KI538		07	24	NIEA	07 0 20	2 0 20	27 06 20	20 08 20		20 08 20	9 08 20 2	0	0	0	0
033	20 9_20 Q4	R455	Wh te ock hase Wa e mains Imp ovements	00	I053		03	08	UR								0	0	0	0
034	20 9_20 Q4	KI503	umping Stat on Ma n enance - B McNe ll	00	KI469		2	02	DRD								0	0	0	0
035	20 9_20 Q4	K 427	u gan Road Moi a - Sto m Sewe Extension	00	KI55		07	24												
036	20 9_20 Q4	K 429	W ndmi l ane Ba lynah nch S o m Sewe Requis tion	00	KI55		07	24												
037	20 9_20 Q4	KN596	BA MAGORR Ww Ws	06			4	6				0 04 20 3	9 0 20 5		28 03 20 5	28 03 20 6	0	0	0	00
038	20 9_20 Q4	KB454	K lmascal y Road A dboe oul and Sto m Sewe Extension	00	KI538		07	24	NIEA	5 20 0	9 20 0	8 04 20	30 06 20		30 06 20	29 06 20 2	0	0	0	0
039	20 9_20 Q4	K 432	52-58 Ma n St eet G enavy s o m sewe extension	06	KI55		07	24	DRD											
040	20 9_20 Q4	KI554	Ene gy E ciency at Ww W s Sc ew umps	00			09	02												
04	20 9_20 Q4	KI555	Sto mwate Sepe at on og amme o C 5	04			07	2	DRD											
042	20 9_20 Q4	KI556	Sma l Ru al WW W og amme - C 5(20 5-202)	04			09	7	NIEA								0	0	0	00
043	20 9_20 Q4	KI557	C 5 ea WW W Base Main enance – West Region	06			09	02												
044	20 9_20 Q4	KI558	Enginee ing Speci cations Standa ds	04			5	20												
045	20 9_20 Q4	KS225	A dglass Ww W	0			09	5	NIEA	7 0 2006	25 0 20 2	0 04 20 3	03 0 20 5		03 04 20 5	03 0 20 6	0	0	0	00
046	20 9_20 Q4	KI560	C 5 ea WW W Base Main enance – Sou h Region	06			09	02												
047	20 9_20 Q4	KI56	C 5 ea WW W Base Main enance – No th Reg on	06			09	02												
048	20 9_20 Q4	KI562	C 5 ea Ww S Base Main enance	06			2	02												
049	20 9_20 Q4	KS905	K lmo e & Annac oy Ww W	06			4	6	NIEA			0 03 20 3	3 2 20 5		0 02 20 4	0 02 20 4	0	0	0	00
050	20 9_20 Q4	KI564	App aisal o DG5 At R sk Regis e ocations Mi igat on hase 5)	04			07	2	DRD											
05	20 9_20 Q4	KI565	C 5 SCEMD (Sewe age)	00			09	6									0	0	0	00
052	20 9_20 Q4	KI568	oluted Sto mwate Out a l Solu ions - hase 2	00			07	2												
053	20 9_20 Q4	KI57	Asset Resi ience hase 3-Coas al Wastewa e eatment Wo ks	06			09	02												
054	20 9_20 Q4	KI573	DG5 og amme - a ent Code	00			07	2	UR								0	0	00	0
055	20 9_20 Q4	KI575	C 5 Sub og amme 2) Bath ng Wate and She l ish Wa e compl ance im	06			07	2									0	0	00	0
056	20 9_20 Q4	KI576	C 5 Sub og amme 6) Bath ng Wate and She l ish Wa e compl ance im	06			09	6									0	0	0	00
057	20 9_20 Q4	KI577	C 5 UID og amme a ent	06			07	2									0	0	52	48
058	20 9_20 Q4	KI578	C 5 App aisal o NIW in ast uctu e at Ra lways DRD Road & ipe B dges	06			07	24									0	0	00	0
059	20 9_20 Q4	KI58	C 5 S (Sewe age) a ent E	06			07	24									0	0	00	0
060	20 9_20 Q4	KI582	C 5 ubl c Rea m (Sewe age) a ent E	06			07	24									0	0	00	0
06	20 9_20 Q4	KI583	C 5 mplementa ion o C 3 Odou & I C St a egy	06			0	6	UR								0	0	0	00
062	20 9_20 Q4	KI584	C 5 Review o Sludge I C and Odou St ateg es	06			0	02	UR								0	0	0	00
063	20 9_20 Q4	KI585	Was ewate Ma ine nvestment Scop ng S udy	06			09	6												
064	20 9_20 Q4	KI586	C 5 ea 2 Ww S Base Main enance	06			2	02												
065	20 9_20 Q4	KI589	CM oject Imp oving Capab l ty n Cap tal Maintenance ann ng du ing	06			5	20	UR											
066	20 9_20 Q4	KI59	tch ib e Sewe Replacement	00			07	2												
067	20 9_20 Q4	KI592	Sampl ng and Analys s o Ww W C 5	00			4	02												
068	20 9_20 Q4	KI593	ndependent Rev ew o Annsbo ough Ww W o lut on Incident	06			4	02												
069	20 9_20 Q4	KI594	C 5 ea 3 Ww S Base Main enance	06			2	02												
070	20 9_20 Q4	V859	Wa e main mp ovemen s New y hase 3	03			03	08	DRD											
07	20 9_20 Q4	KI596	CSO Moni o ing W th n She l sh and Ba h ng Wate A eas	06			07	2												
072	20 9_20 Q4	KI597	Ma ine Model ing Ba h ng Wate s Ww W and Sewe age System)	06			09	6												
073	20 9_20 Q4	KI598	Ma ine Model ing Shell sh Wate s Exc ud ng Bel ast ough (Ww W and Sew	06			09	6												
074	20 9_20 Q4	KI599	Ma ine Model ing Shell sh Wate s Including Bel ast ough (Ww W and Sew	06			09	6												
075	20 9_20 Q4	KI60	St a eg c Sewe age Ne wo k Mode l ng Ba hing Wate s Exc ud ng Bel ast ou	06			07	2												
076	20 9_20 Q4	KI603	St a eg c Sewe age Ne wo k Mode l ng She l ish Wate s Exc ud ng Bel ast c	06			07	2												
077	20 9_20 Q4	KI604	St a eg c Sewe age Ne wo k Mode l ng She l ish and Ba hing Wate s Bel ast	06			07	2												
078	20 9_20 Q4	KI607	NI ong e m S udge St a egy	06				02												
079	20 9_20 Q4	KI608	og amme and Cost Management	06			5	0												
080	20 9_20 Q4	KI609	Integ a ed Del ve y Se vices	06			5	09												
08	20 9_20 Q4	KI6 0	Asset e o mance Se v ce	06			4	02												
082	20 9_20 Q4	KI6	Miss ng Data om CAR	06			5	20												
083	20 9_20 Q4	KI6 3	C2 epa edness and Assistance n Cost Se ting	06			07	20												
084	20 9_20 Q4	KI6 4	WW S base Maint s 4 5 & 6	06			2	02												
085	20 9_20 Q4	KI6 6	GR eas bi i y study	06			5	02												
086	20 9_20 Q4	KI6 8	ade E luent Consent ng o aunde e tes	06			07	2												
087	20 9_20 Q4	KI62	nves ment lanning and Cos ing Se vices	00			5	02												
088	20 9_20 Q4	KI626	C2 Ene gy E ciency og amme	06			07	02	UR											
089	20 9_20 Q4	KI627	ov s on o p o ess onal se v ces o St ategic Cl ent	00			4	20												
090	20 9_20 Q4	KI628	NIAM 5 o ect Suppo t	06			5	20												
09	20 9_20 Q4	KI629	i st me Se vices og amme	06			07	24												
092	20 9_20 Q4	KI630	Was ewate mode l ng o new deve opment	06			07	24												
093	20 9_20 Q4	KI63	Appoin ment o echnical Specia ist o CNI A a m Systems Review	00			06	02												
094	20 9_20 Q4	KI632	Review o condi ion o suppo ed s eel walkways and pe manent ve ical ladd	06			4	02												
095	20 9_20 Q4	KI633	Asbes os Su veys o NIW Si es	06			5	20												
096	20 9_20 Q4	KI635	St a eg c Sewe age Ne wo k Mode l ng	06			07	2												
097	20 9_20 Q4	KI636	Sewe Maintenance and CC V og amme 20 9 2	06			07	2												
098	20 9_20 Q4	KI637	Ope a ional R sk and A o dabi ity Invest ga ions	06			5	20												
099	20 9_20 Q4	KI638	B o e mentat on o ect Concept oposal	06			09	6												
00	20 9_20 Q4	KI640	Ww W So utions o be bui t by Develope s	00			09	24												
0	20 9_20 Q4	KI64	nteg ated Envi onmental Model	00			07	6												
02	20 9_20 Q4	KI642	C2 Ea y S a t – D anage A ea ans	06			4	2												
03	20 9_20 Q4	KI643	aci i ies Management Rev ew	06			5	20												
04	20 9_20 Q4	KI644	Enhanced Capaci y at Was ewate ea ment Wo ks	06			09	20												
05	20 9_20 Q4	KR482	No th Howa d St eet Bel ast S o m Sewe Ex ens on	00	KI538		07	24	NIEA	5 2 20 0	2 0 20	28 02 20	22 06 20		22 06 20	2 06 20 2	0	0	0	0
06	20 9_20 Q4	KS862	C ewh ll A dg ass Sto m Sewe Ex ens on	00	KI538		07	24	NIEA	0 02 20	7 02 20	6 05 20	0 06 20		0 06 20	3 05 20 2	0	0	0	0
07	20 9_20 Q4	KS379	Mu lough S S Upg ade & Ne wo k mp ovemen s	00	KI537		07	2	NIEA	2 2009	2 2 2009	26 04 20 0	03 20		03 20	03 20	0	0	0	0
08	20 9_20 Q4	K 35	Caw Deve opment	06			07	24												
09	20 9_20 Q4	KR487	Donegall Road Sewe Replacement - Eme gency Wo k	00	KI469		07	2	NIEA			5 20 0	29 04 20		29 04 20	28 04 20 2	0	0	0	0

So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date	Base ine Se v ce A locat on Wa e n ast uctu e	Basel ne Se vice Al ocat on Wate Non- In ast uc u e	Base ine Se v ce A loca ion Sewe age n ast uctu e	Basel ne Se vice Al ocat on Sewe age Non- In ast uc u e
	2	3	4	5	6	7	8	9	0			2	3	4	5	6	7	8	9	20	2
0	20 9_20 Q4	S220	Bango Oute Zone Wa e main mp ovemen s	00			03	08				4 0 2008	22 09 2008		22 09 2008	22 09 2009	0	0	0	0
20	20 9_20 Q4	K 394	Mount Eag es Stewa stown Road isbu n	00	KI538		07	24	NIEA	5 20 0	2 0 20	0 04 20	06 06 20		06 06 20	05 06 20 2	0	0	0	0
2	20 9_20 Q4	R46	Bal ystocka d Qua y main epai	00			03	05	DRD	3 0 20 2	07 02 20 2	25 07 20	08 02 20 2		08 02 20 2	29 02 20 2	0	0	0	0
2	20 9_20 Q4	KR477	Cai nsh ll Ca ydu Sto m Sewe Extension	00	KI538		07	24	NIEA	5 2 20 0	2 0 20	08 03 20	05 20		05 20	0 05 20 2	0	0	0	0
4	20 9_20 Q4	KB46	M&E Cap tal Main enance - a ne WW W	0	KI469		09	02	UR	9 20 0	23 20 0	5 02 20	09 05 20 2		09 05 20 2	09 05 20 3	0	0	0	0
5	20 9_20 Q4	S 79	Bal ykine G avity D st bu ion	0			04	06	DWI	05 05 993	23 06 993	05 04 20 0	20 04 20		20 04 20	9 04 20 2	0	0	0	0
6	20 9_20 Q4	A270	Bel ah ll Ba lyca y Co Ant im WM Replacement	00	I053		03	08		24 06 2009	07 07 2009	2009	0 05 20		0 05 20	0 07 20	0	0	0	0
7	20 9_20 Q4	K 480	aughan C escent WW S ondonde y umping s ation and umping ma n	0			2	2	NIEA								0	0	0	0
8	20 9_20 Q4	K 48	Dung ven WW W Inlet Sewe Hyd au ic Assessment Upg ade				07	6									0	0	0	0
9	20 9_20 Q4	KB353	Maghe a A ea Sewe s	00	KI537		07	24	NIEA	9 07 2004		7 03 2008	06 0 20 2		06 0 20 2	05 0 20 3	0	0	0	0
20	20 9_20 Q4	KS337	Ca nesu e a k Combe oul Sewe Rep acement	00	KI537		07	2	NIEA			04 06 2007	30 06 2009		30 06 2009	30 06 20 0	0	0	0	0
2	20 9_20 Q4	K 503	Benone Upg ade o Vacuum Sewe age Ne wo k & oul Vacuum Sta ion	00			07	2	DRD								0	0	78	22
22	20 9_20 Q4	R464	Ca ck e gus hase 3 Wa e mains mp ovemen s	00			03	08												
23	20 9_20 Q4	K 505	A d Na Smoll Dung ven Sto m Sewe Extension	00			07	24	DRD								0	0	0	0
24	20 9_20 Q4	KV 42	Chance lo s Road New y oul Sewage umping Ma n Extension	00	KI538		07	24	NIEA	6 09 20 0	9 20 0	4 03 20	02 20		02 20	02 20	0	0	0	0
25	20 9_20 Q4	K 5	oyle St eet ondonde y eas b l ty S udy	00			07	2	DRD											
26	20 9_20 Q4	K 5 2	Benone WW W Model ng o Out all Discha ge	02			08	6									0	0	0	00
27	20 9_20 Q4	K 5 5	De na law WW Ws eas bi ity S udy	04			09	6	NIEA											
28	20 9_20 Q4	K 5 6	Queens Quay CSO Extension	00			07	2	DRD											
29	20 9_20 Q4	K 5 8	Bal ynaga d De y Culmo e unk Sewe S ab l zation	00			07	2	DRD											
30	20 9_20 Q4	K 424	Maghe amason Ww Ws	06	KI469		4	6				30 06 20 3	3 0 20 4		3 0 20 5	3 0 20 6	0	0	0	00
3	20 9_20 Q4	K 524	B eachg een WW S ondonde y Upg ade Rep acement	04			2	2	NIEA								0	0	00	0
32	20 9_20 Q4	K 525	Dun ie d e ace ondonde y D op Sha t Rehab l a ion	00			07	02												
33	20 9_20 Q4	K 527	Mano wood WW S Rep acement	06			07	2									0	0	00	0
34	20 9_20 Q4	K 533	Cottage Row Egl n on WW S Upg ade Rep ace	06			2	2												
35	20 9_20 Q4	K 537	Glencaw a k De y ood Al eviat on eas b l ty S udy	06			07	2	UR											
36	20 9_20 Q4	K 392	2A Seymou St isbu n Sto m Sewe Extension	00	KI538		07	24	NIEA	23 06 20 0	28 06 20 0	0 20 0	26 03 20		26 03 20	06 09 20 2	0	0	0	0
37	20 9_20 Q4	K 539	C aigavon B idge M Enhancement	06			07	02												
38	20 9_20 Q4	K 54	sna in wwps	06			2	02												
39	20 9_20 Q4	K 542	Bal ymago y Wwps	06			2	02												
40	20 9_20 Q4	K 543	mavady Catchment Upg ade o Add ess New Deve opment And Exte nal	06			07	2												
4	20 9_20 Q4	K 549	Gelv n G ange N E upg ade	06			5	20												
42	20 9_20 Q4	KS867	Cope and Road Combe ank Sewe	0	KI537		07	2	NIEA								0	0	0	0
43	20 9_20 Q4	K 553	DA INGRESS - oy e estua y	00			07	02												
44	20 9_20 Q4	K 554	Skeoge ands - G engal iagh S	06			07	24												
45	20 9_20 Q4	KR470	Glenavna Mano Newtownabbey Sto m Sewe Upg ade	00	KI538		07	24	NIEA	07 07 20 0	28 07 20 0	29 20 0	5 03 20		5 03 20	4 03 20 2	0	0	0	0
46	20 9_20 Q4	KV 66	Uppe D omo e Road Wa enpo nt - Upg ade o S o m Sewe	00	KI538		07	24	NIEA	3 06 20	30 06 20	22 08 20	26 0 20 2		26 0 20 2	25 0 20 3	0	0	0	0
47	20 9_20 Q4	V856	New y ubl c Rea m hase 2	00			03	23	DRD											
48	20 9_20 Q4	KR468	Roden St eet Bel ast oul & S o m Sewe Ex ens on	00	KI538		07	24	NIEA	07 04 20 0	07 05 20 0	07 06 20 0	26 02 20		26 02 20	2 08 20	0	0	0	0
49	20 9_20 Q4	KR475	Glenda e he Mano B acks Road Bel ast oul&S o m Sewe s	00	KI538		07	24	NIEA	3 08 20 0	3 08 20 0	25 0 20 0	3 2 20 0		3 2 20 0	3 2 20	0	0	0	0
50	20 9_20 Q4	KR587	Glenwe l Rd New ownabbey Sto m Sewe	00	KI538		07	24	DRD											
5	20 9_20 Q4	KN630	D umquin WW W easibi ty Study	02			09	6	NIEA								0	0	0	0
52	20 9_20 Q4	K 407	C eevy Road sbu n Sto m Sewe Ex ens on	00	KI538		07	24	DRD								0	0	0	0
53	20 9_20 Q4	KN655	Mount ie d WW W s App aisal S udy	04			09	6	NIEA											
54	20 9_20 Q4	A29	Bal ycla e Road G engo m ey Wate ma ns Upg ade	00	I054		03	23	DRD											
55	20 9_20 Q4	KI540	Was ewate t eatment wo ks be ong ng to bank upt deve ope s wh ch NI Wate	04			07	7	NIEA											
56	20 9_20 Q4	KN658	A dst aw WW W eas bi i y Study	04			09	6	NIEA											
57	20 9_20 Q4	K 428	ondonde y Sewe Imps S age 2 - Duke St S G oup Schemes	0			07		NIEA	0 20 0	25 0 20 0	03 05 20 0	28 03 20		28 03 20	27 03 20 2	0	0	0	0
58	20 9_20 Q4	K 456	ondonde y DA Sewe s Rehab hase2	0			07		NIEA	09 2009	6 2009	0 03 20 0	28 03 20		28 03 20	27 03 20 2	0	0	0	0
59	20 9_20 Q4	KN667	St a h oy ink Road Omagh	00			03	23												
60	20 9_20 Q4	KC299	Bushmi ls + o ba l nt ae Ww W	0			09	5	NIEA			8 02 2009	06 2 20 0		06 2 20 0	05 09 20 2	0	0	0	0
6	20 9_20 Q4	KS809	Ca owdo e Sewe Replacement	00	KI537		07	2	NIEA	20 2007	03 2 2007	27 0 2008	8 0 20		8 0 20	7 0 20 2	0	0	0	0
62	20 9_20 Q4	KR402	oymount Ca ck DA hase	00	KI537		07	2	NIEA	3 03 2009	26 03 2009	07 04 2009	4 04 20 0		4 04 20 0	4 04 20	0	0	0	0
63	20 9_20 Q4	KI54	Sewe age n ast uc u e App a sa (s) o adopt on om bank upt deve ope s	04			07	24	NIEA											
64	20 9_20 Q4	KN6 0	D um egagh Sto m Sewe Ex ens on	00	KI538		07	24	NIEA	3 2008	25 2008	20 07 2009	25 09 2009		25 09 2009	25 09 20 0	0	0	0	0
65	20 9_20 Q4	KR440	Bal ywa te DA Stage	00	KI537		07	2	NIEA	02 02 20 0	09 02 20 0	5 03 20 0	0 0 20 0		0 0 20 0	0 0 20 0	0	0	0	0
66	20 9_20 Q4	K 677	am aght Road WW S Omagh easib l ty Study	00			2	2	DRD								0	0	0	0
67	20 9_20 Q4	K 680	Rosso y WW S Upg ade easib l ty Study	00			07	2	DRD								0	0	0	0
68	20 9_20 Q4	R367	Se v ce Rese voi Enhanced Secu i y	0	I005		04	07	UR			28 0 2008	3 0 20 0		3 0 20 0	3 0 20	0	0	0	0
69	20 9_20 Q4	K 687	Monea WW Ws App a sal	04			09	6	NIEA											
70	20 9_20 Q4	K 689	Bal ygawley WW Ws easibi i y Study	04			09	6	NIEA											
7	20 9_20 Q4	S293	No th Down Bango hase 2 Wa e main mp ovemen s	00	I053		03	08	UR	7 0 20	9 0 20	02 08 20	26 03 20 3		26 03 20 3	26 03 20 4	0	0	0	0
72	20 9_20 Q4	R440	New ownabbey Zone Wa e main Imp ovements hase 2	00	I053		03	08	UR	05 07 20	06 07 20	02 02 20	07 20 2		07 20 2	07 20 3	0	0	0	0
73	20 9_20 Q4	K 696	Enniski en DA Stage 4	06			07	2	UR								0	0	78	22
74	20 9_20 Q4	K 697	C 5 ea 2 WW W Base Main enance – West Region	06			09	02												
75	20 9_20 Q4	K 698	C 5 ea 3 Ww W Capi al Maintenance - West Region	06			09	02												
76	20 9_20 Q4	K 700	C 5 ea 4 Ww W Base Ma ntenance – West Reg on	06			09	02												
77	20 9_20 Q4	K 70	C 5 ea 5 Ww W Base Ma ntenance - West Region	06			09	02												
78	20 9_20 Q4	K 702	WW W ea 6 Base Main enance - West Reg on	06			09	02												
79	20 9_20 Q4	KV0 4	Cast ewel an Ww W	0	KI469		09	02	UR	06 06 2005		0 0 2006	9 08 20 0		9 08 20 0	9 08 20 0	0	0	0	0
80	20 9_20 Q4	K 450	ondonde y DA St a h oy e & D umahoe Wo k package Caw S	0			07		NIEA	06 2009	6 2009	4 2 2009	0 07 20 0		0 07 20 0	3 03 20	0	0	0	0
8	20 9_20 Q4	KR458	287 Bal ygoma in Road Bel ast oul Sewe Extension	00	KI538		07	24	NIEA	04 05 20 0	07 05 20 0	4 06 20 0	2 20 0		2 20 0	9 05 20	0	0	0	0
82	20 9_20 Q4	KI543	ump Away Scheme Removal App aisal	00			05	02	DRD											
83	20 9_20 Q4	B687	Cooks own hase 2 Wa e main Imp ovements	00	I053		03	08	UR	6 09 20	20 09 20	03 05 20	2 2 20 2		2 2 20 2	2 2 20 3	0	0	0	0
84	20 9_20 Q4	K 393	he Ho lows u gan - S o m Sewe Requ st on	00	KI55		07	24												
85	20 9_20 Q4	KR442	Glenmachan St eet WW S St ategic Inves igat ons	00			4	02	UR								0	0	0	0
86	20 9_20 Q4	R437	South Bel ast U ban	00	I053		03	08		07 09 20 0	27 09 20 0	0 20	05 2 20		05 2 20	05 2 20	0	0	0	0
87	20 9_20 Q4	KR494	East Bel ast CSOs Sc een ngs	0			07	2	NIEA				0 0 20 7				0	0	0	0
88	20 9_20 Q4	252	sbu n No h Ru al hase 2 Wa e main Imp ovements	00	I053		03	08	NIEA	03 20	08 20	02 08 20	24 06 20 3		24 06 20 3	24 06 20 4	0	0	0	0
89	20 9_20 Q4	KR507	Comme c al Way New ownabbey DG5 At R sk Regis e	00			07	2	UR								0	0	0	0
90	20 9_20 Q4	K 449	ondonde y DA St a h oy e & D umahoe Wo k package D umahoe O d S	0			07		NIEA	7 09 2009	25 09 2009	0 06 2009	02 09 20 0		02 09 20 0	3 03 20	0	0	0	0
9	20 9_20 Q4	024	MIM West (Majo Inc dent M tigat on oject West Reg on) eeze haw Imp	00			03	08	DRD				30 03 20 4				93	7	0	0
92	20 9_20 Q4	KV0 3	Rost evo Sewe age Scheme	00			2	2	NIEA			28 05 2007	6 09 20		6 09 20	5 09 20 2	0	0	0	0
93	20 9_20 Q4	KR527	G een sland WW W E luent Discha ge pe - easib l ty Study	00			09	02	DRD											
94	20 9_20 Q4	K 395	avou Royal Road Aughe oul Sewe	00	KI55		07	24												
95	20 9_20 Q4	S226	Downpat ck Zone WM Imps	00	I053		03	08		2 07 2009	03 08 2009	07 06 20 0	26 0 20 2		26 0 20 2	26 0 20 2	0	0	0	0
96	20 9_20 Q4	K 320	Bush Ww Ws	0	KI469		07	6	NIEA			07 09 2009	04 06 20 0		04 06 20 0	04 06 20	0	0	0	0
97	20 9_20 Q4	KG 57	Maghabe y ood Al eviat on ojects	0			07		NIEA	26 02 2009	23 04 2009	22 06 2009	27 05 20 0		27 05 20 0	27 07 20 0	0	0	0	0
98	20 9_20 Q4	KB387	Chu ch St eet Cookstown	00	KI537		07	2	NIEA			02 02 2009	3 03 2009		3 03 2009	3 03 20 0	0	0	0	0
99	20 9_20 Q4	A264	C osskennan SR Ant im Wa e ump ng Stat on	00			05	06	DWI	26 02 20 0	2 04 20 0	3 05 20 0	28 04 20		28 04 20	27 04 20 2	0	0	0	0
200	20 9_20 Q4	V707	D umnaha e D st Imps	00	I053		03	08				0 06 2000	0 0 200		0 0 200	0 0 2002	0	0	0	0
20	20 9_20 Q4	KR539	Money eagh WW Ws hase 2 Base Maintenance	00			09	02	DRD											
202	20 9_20 Q4	KV094	Why e Ac es Banb dge S S Upg ade	00			2	02	UR	06 2009	6 2009	04 0 20 0	27 04 20 0		27 04 20 0	27 04 20	0	0	0	0
203	20 9_20 Q4	KS378	Bu en Rive S S Upg ades & Netwo ks mp ovemen s	0	KI537		07	2	NIEA	2 07 2008	23 07 2008	29 09 2008	20 04 20 0		20 04 20 0	2 20 0	0	0	0	0
204	20 9_20 Q4	KV 52	Abbey G amma School S o m Sewe Ex ens on	00	KI538		07	24	NIEA	2 04 2009	05 05 2009	06 07 2009	5 20 0		5 20 0	5 20	0	0	0	0
205	20 9_20 Q4	KC4 3	Glebe Road Rasha kin - Sewage Scheme	00	KI538		07	24	NIEA	8 08 2009	20 08 2009	20 0 2009	04 0 20 2		04 0 20 2	04 0 20 3	0	0	0	0
206	20 9_20 Q4	KR556	Compl ance wi h he Su ace Wa e s (Shell sh (C assi cat on) Amendment)	02			09	6	NIEA											
207	20 9_20 Q4	KS362	Sta ion Road C ossga Rep acement Sewe	00	KI537		07	2	NIEA	22 0 2007	3 02 2007	8 02 2008	25 02 20 0		25 02 20 0	08 06 20 0	0	0	0	0
208	20 9_20 Q4	K 399	3A he Squa e Moy oul Sewe Ext	00	KI55		07	24												
209	20 9_20 Q4	KR56	O cha dvi le WW S App a sal o umped Ove low and Inlet Sewe Upg ade	00			07	2	DRD								0	0	00	0
2 0	20 9_20 Q4	KG 8	C um in Road S o m Sewe Extension	00	KI538		07	24	NIEA	0 09 2008	5 09 2008	0 2 2008	6 20 0		6 20 0	6 20	0	0	0	0
2	20 9_20 Q4	KR568	ough ies WW Ws App a sal	04			09	6	NIEA											
2 2	20 9_20 Q4	KR626	Bal ydu Road Newtownabbey S o m Sewe Ext	00	KI55		07	24												
2 3	20 9_20 Q4	KR576	Bel ast WW W C Upg ade	03			09	02	DRD											
2 4	20 9_20 Q4	KR586	Ma yvi le Avenue Bel ast DG5 App a sal	06			07	2	UR								0	0	00	0
2 5	20 9_20 Q4	KR588	Ravenh ll Avenue Bel ast ood A levia ion	06			07	2	UR											
2 6	20 9_20 Q4	KR594	Sp ngwe l a k G oomspo t	00			07	2									0	0	00	0
2 7	20 9_20 Q4	KR599	Bel ast Ww W App aisal Study	06			09	6	NIEA											
2 8	20 9_20 Q4	KI5 6	Sma l WW W ea 3 og amme C 0 - 20 2 3	00			09	7	NIEA			0 06 20 2	29 03 20 3		29 03 20 3	29 03 20 4	0	0	0	0
2 9	20 9_20 Q4	KR606	East e gh Da e asadena Ga dens Bel ast Sewe Upg ade o DG5 emova	06			07	2	UR											
220	20 9_20 Q4	KG068	K ln Road S S Upg ade [u gan]	00			2	02	UR	06 2009	02 07 2009	05 0 2009	25 02 20 0		25 02 20 0	25 02 20	0	0	0	0
22	20 9_20 Q4	KR6 4	G eencast e Ww S - umping Ma n B each	03			07	24												
222	20 9_20 Q4	025	MIM Sou h (Ma o nc dent M t ga ion oject South Region) eeze haw n	00			03	08	DRD	05 2 20	08 2 20	07 09 20	8 06 20 3		8 06 20 3	8 06 20 4	94	6	0	0
223	20 9_20 Q4	R44	Bal ysi lan Zone Wa e main Imp ovements	00	I053		03	08	UR	05 07 20	06 07 20	9 0 20	3 0 20 3		3 0 20 3	3 0 20 4	0	0	0	0
224	20 9_20 Q4	KR623	Queens B dge Bel ast Siphons Upg ade	06			07	2												
225	20 9_20 Q4	KR624	East Be ast Back D a nage Study	06			07	2												
226	20 9_20 Q4	KR625	Was ewate He i age and Educa ion Cent e	06			4	20												
227	20 9_20 Q4	KR627	C 5 ea 2 WW W Base Main enance – East Reg on	06			09	02												
228	20 9_20 Q4	KR629	Mi ebush a k Ca ck e gus lood Al ev at on	06			07	2	UR											
229	20 9_20 Q4	R442	Bal ywona d Zone Wa e main Imp ovements	00	I053		03	08	UR	22 04 20	06 05 20	7 0 20	25 07 20 2		25 07 20 2	25 07 20 3	0	0	0	0
230	20 9_20 Q4	KR632	Sydenham Ww S Rep acement	06			3	2	NIEA											
23	20 9_20 Q4	KR633	East Bel ast nteg ated Ca chment Model ing	06			4	2												
232	20 9_20 Q4	KR409	Money eagh Ww W	05			07	6	NIEA			24 09 20 2	05 07 20 3		05 07 20 3	05 07 20 4	0	0	60	40
233	20 9_20 Q4	KR635	Uppe H ghtown Road New ownabbey Sto m Sewe	00			07	24												
234	20 9_20 Q4	KR640	Holywood Sewe Netwo k mp ovemen s- hase 2	06			07	2												
235	20 9_20 Q4	KR642	aganbank Sewe nves igat on Bel ast	00			07	2												
236	20 9_20 Q4	KN647	ough Mac o y WW W- easib l ty Study	06			4	6	NIEA								0	0	0	0
237	20 9_20 Q4	KR647	Bal y obe t Bango Wwps Upg ade	06			2	02												
238	20 9_20 Q4	KR648	G eencast e Wwps sto m sc eens	06			07	02												
239	20 9_20 Q4	KR656	Holywood A and B wwps	06			2	02												
240	20 9_20 Q4	KN63	St abane WW W s Re u b shment	00	KI469		09	02	DRD	02 09 20	07 09 20	30 09 20	4 04 20 3		4 06 20 3	4 06 20 4	0	0	0	00
24	20 9_20 Q4	KR665	Gi nahi k Road lood Al ev at on	06			07	2												
242	20 9_20 Q4	KR667	Cooks Cove Wwps	06			2	2												
243	20 9_20 Q4	KR668	St uc u al su vey o Bel ast Sto mwate unnel	06			07	2												
244	20 9_20 Q4	KR67	Hende son Avenue ood Al eviat on	06			4	2												
245	20 9_20 Q4	KR672	o w l iam Oakmount sto m pumping sta ion nves igat on	06			4	02												
246	20 9_20 Q4	KR673	Bel ast St eets Ahead (Royal Avenue)	06			07	24												
247	20 9_20 Q4	KR677	Moya d a k Bel ast - Sto m Sewe Extension	06			07	24												
248	20 9_20 Q4	KR682	C 5 ea 4 Ww W Base Ma ntenance – East Region	06			09	02												
249	20 9_20 Q4	KR683	Sydenham Ww M Repai at Ai po t Road Holywood Exchange	06			07	2												
250	20 9_20 Q4	KR688	My ady s M le ood A levia ion	06			07	2	UR											
25	20 9_20 Q4	KR689	Holywood A o K nnega M	00			07	2												
252	20 9_20 Q4	KR692	6 Edenva e a k DG5 sewe s udy	06			07	2												
253	20 9_20 Q4	KR693	St Ninians Wh tewe l Road New ownabbey S o m Sewe Ex ens on	06			07	24												
254	20 9_20 Q4	KS846	High St eet A dglass Sewe Real gnment	00	KI537		07	2	NIEA								0	0	0	0
255	20 9_20 Q4	KR70	Cambe we l e ace ood Al eviat on	06			07	2												
256	20 9_20 Q4	KB502	C a gmo e Road Maghe a oul Sewe Extension	00			07	24	DRD											
257	20 9_20 Q4	KR707	Bel ast Ww W Inte m upg ade	06			09	6												
258	20 9_20 Q4	KR7 4	Cast eh ll looding nvest gations	06			07	2												
259	20 9_20 Q4	KR7 5	WW W ea 6 Base Main enance - East Region	06			09	02												
260	20 9_20 Q4	KR7 6	St ames a k Bel ast lood Al ev at on	06			07	2												
26	20 9_20 Q4	KR7 7	47 al s Road Bel ast lood Al ev at on	06			07	2												
262	20 9_20 Q4	KR7 8	Wh tehouse Sho e Envi onmental Imp ovements- n e im So ut on	06			07	2	NIEA											
263	20 9_20 Q4	KR7 9	o h R ve Envi onmental Imp ovement	06			07	2												
264	20 9_20 Q4	KS	A ds South o avogie Ba lyhalbe t C oughey Ki k stown	05			07	6	NIEA				3 03 20 7				0	0	85	5
265	20 9_20 Q4	KA 43	A de g ove Sewe age Scheme	00	KI537		07	2	NIEA	09 2008	0 0 2008	20 0 2008	5 06 2009		5 06 2009	5 06 20 0	0	0	0	0
266	20 9_20 Q4	S299	Seaside Road K lyleagh Wate ma n Extension	00			03	23	DRD											
267	20 9_20 Q4	K 435	G aham Ga den s isbu n - S o m Sewe Ex ens on	06	KI55		07	24												
268	20 9_20 Q4	KS 3	A ds No th Ca owdo e Bal ywa te Ba lyhaskin	05			09	6	NIEA			05 04 20 0	3 2 20 9		0 02 2008	3 0 2009	0	0	56	44
269	20 9_20 Q4	KV 77	50 K lb oney Road Rost evo Sto m Sewe Extens on	00	KI538		07	24	NIEA			23 07 20 2	03 09 20 2		03 09 20 2	03 09 20 3	0	0	0	0
270	20 9_20 Q4	G036	Casto Bay o Dungannon St ateg c unk Mains	0			03	05	DWI	2 2008	23 2 2008	4 09 2009	24 05 20		24 05 20	23 05 20 2	0	0	0	0
27	20 9_20 Q4	KN574	Bal yb ack Road oul Sewe Extens on	00			07	24				02 2009	2 02 20 0		2 02 20 0	2 02 20 0	0	0	0	0
272	20 9_20 Q4	KS30	Dund um Ww W	00	KI469		09	02				0 04 2008	22 0 20 0		22 0 20 0	22 0 20	0	0	0	0
273	20 9_20 Q4	N495	C eggan Road Ca ickmo e Wa e main Extension	00	I054		03	23		04 08 2008	03 07 2009	07 2 2009	22 0 20 0		22 0 20 0	22 0 20	0	0	0	0
274	20 9_20 Q4	V024	Bal in emp e Zone Wa e main Imp ovements	00	I053		03	08		7 20	8 20	23 05 20	06 05 20 3		06 05 20 3	06 05 20 4	0	0	0	0
275	20 9_20 Q4	KS235	Bal ygowan Ww W	03			09	6	NIEA			0 03 20	28 02 20 7		3 05 20 0	3 05 20	0	0	57	43
276	20 9_20 Q4	KB428	D ape stown DA	0			07		NIEA	02 06 2009	23 06 2009	23 2009	03 07 20 0		03 07 20 0	30 03 20	0	0	0	0
277	20 9_20 Q4	KG 68	yndale Mano o adown oul Sewe Extens on	00	KI538		07	24	NIEA	20 08 2009	03 09 2009	03 2009	20 0 20 0		20 0 20 0	6 03 20 0	0	0	0	0
278	20 9_20 Q4	B688	Cooks own hase 3 Wa e main Imp ovements	00	I053		03	08	UR	7 0 20	9 0 20	27 05 20	5 04 20 3		5 04 20 3	5 04 20 4	0	0	0	0
279	20 9_20 Q4	KW830	and agee Ww W	0	KI469		09	02	UR			26 09 2005	27 05 20 0		27 05 20 0	27 05 20	0	0	0	0
280	20 9_20 Q4	KR203	Kensington Ga dens lood Re ie	00	KI537		07	2	NIEA	29 09 2008	27 2008	09 03 2009	08 0 20 0		08 0 20 0	08 0 20	0	0	0	0
28	20 9_20 Q4	KS873	Bango DA Wo k ackage 2 Rathmo e St eam UIDs	0			07	2	NIEA			0 04 20 4	0 0 20 5		0 0 20 5	0 0 20 6	0	0	00	0
282	20 9_20 Q4	KS874	Bango DA Wo ks ackage 3 - Bel ast ough UIDs	0			07	2	NIEA								0	0	30	70
283	20 9_20 Q4	K 0 2	Moygashel Ww W	0			07	5	NIEA			2 0 2009	02 04 20 0		02 04 20 0	02 04 20	0	0	0	0
284	20 9_20 Q4	V84	o anny Banb dge Zone Wate ma n Imp ovements hase 2	00	I053		03	08	UR	24 05 20	0 06 20	2 0 20	6 05 20 2		6 05 20 2	6 05 20 3	0	0	0	0
285	20 9_20 Q4	KB409	ssan Road Cookstown Replacement Sto m Sewe	00	KI537		07	2	NIEA	06 0 2009	28 0 2009	05 0 2009	8 03 20 0		8 03 20 0	8 03 20	0	0	0	0
286	20 9_20 Q4	KG 2	Uppe Edwa d St eet New y	00			07	2	NIEA	02 02 2009	09 02 2009	04 05 2009	25 02 20 0		25 02 20 0	25 02 20	0	0	0	0
287	20 9_20 Q4	KN657	V c o ia B dge WW Ws easib l ty Study	04			09	6	NIEA											
288	20 9_20 Q4	KR570	Sydenham WW S App aisal	03			3	02	DRD											
289	20 9_20 Q4	KS902	Dund um DA UIDs Upg ades	02			07	2	NIEA			3 03 20 4	9 0 20 5		30 03 20 5	30 03 20 5	0	0	00	0
290	20 9_20 Q4	KS903	Anna ong DA U Ds Upg ades	02			07	2	NIEA								0	0	00	0
29	20 9_20 Q4	KS347	C ossga Road Ba lynah nch S o m Sewe	00	KI538		07	24	NIEA	23 07 2009	02 09 2009	05 09 20	06 20 2		06 20 2	06 20 3	0	0	0	0
292	20 9_20 Q4	KS908	K l inchy WW W - easib l ty Study	06			4	6	NIEA								0	0	0	00
293	20 9_20 Q4	K 345	Donnyb ewe Ww W	0			09	5	NIEA			3 03 2009	5 2 2009		5 2 2009	5 2 20 0	0	0	0	0
294	20 9_20 Q4	KS9 2	G eyabbey WW S Catchment ow and oad ng Su vey	0			07	2	DRD								0	0	0	0
295	20 9_20 Q4	KS9 3	Uppe C escent WW S Upg ade	00			3	2	DRD								0	0	0	0
296	20 9_20 Q4	KS9 4	Sc abo Road New owna ds WW S Upg ade	02			2	2	NIEA								0	0	0	0
297	20 9_20 Q4	KS9 8	G eyabbey WW W	00			09	6	DRD				3 03 202				0	0	38	62
298	20 9_20 Q4	KS92	Ki cubb n WW W hase 2 Base Maintenance	00			09	02	DRD											
299	20 9_20 Q4	KS930	Mi l sle DA Stage 2 hase 2	02			07	2	NIEA								0	0	7	83
300	20 9_20 Q4	KS933	Ki cubb n DA CSO Upg ade	04			07	2	NIEA											
30	20 9_20 Q4	KR645	S udge Disposal St a egy Ma ket App a sal	06				2												
302	20 9_20 Q4	KS938	G ange Road K lkeel Out o Sewe ood ng eas b l ty S udy	03			07	2	DRD											
303	20 9_20 Q4	K 027	Benbu b Mi l own - RBC Insta lat ons West & Sou h	0			09	5	NIEA			24 03 2008	07 0 20 0		07 0 20 0	07 0 20	0	0	0	0
304	20 9_20 Q4	KS946	Mou nev ew Newcast e ood A leviat on	04			07	2	UR											
305	20 9_20 Q4	699	mavady Zone Wate ma n Imp ovements	00	I053		03	08		04 2008	2 2008	29 2 2008	2 0 20		2 0 20	2 0 20 2	0	0	0	0
306	20 9_20 Q4	KS962	Dund um Ww W	06			09	6	UR				3 2 20 7				0	0	4	59
307	20 9_20 Q4	KS964	06 G eencast e Road K lkeel Sto m Sewe Ex ens on	00			07	24												
308	20 9_20 Q4	KS965	K l y eagh Rd C ossga oul Sewe Ex ens on	00			07	24												
309	20 9_20 Q4	KS968	Saint ie d Road Bal oo Sto m Sewe	00			07	24												
3 0	20 9_20 Q4	KS97	Cotton Wwps	06			2	02												
3	20 9_20 Q4	KS972	Bal ystocka t Combe - Netwo k Invest ga ion	06			07	2												
3 2	20 9_20 Q4	KS974	C 5 ea 3 Ww W Capi al Maintenance - East Reg on	06			09	02												
3 3	20 9_20 Q4	KS975	D umaness Ww W MBR	06			09	6												
3 4	20 9_20 Q4	KS983	Adj 0 Saul Road Downpat ick &S Sewe	00			07	24												
3 5	20 9_20 Q4	KV079	McShanes Road Bessb ook oul Sewe Ex ens on	00			07	24				0 04 2008	25 0 20 2		25 0 20 2	24 0 20 3	0	0	0	0
3 6	20 9_20 Q4	KS273	Combe Rd o a e y Rd Newtowna ds S S	0	KI469		2	02	UR	22 0 2008	04 2008	08 2 2008	03 03 20 0		03 03 20 0	20 07 20	0	0	0	0
3 7	20 9_20 Q4	S227	South Down Zone WM mps	00	I053		03	08		2 07 2009	03 08 2009	27 09 20	3 03 20 2		3 03 20 2	3 03 20 3	0	0	0	0
3 8	20 9_20 Q4	K 3 9	Annaghmo e Ww Ws	0			09	5	NIEA			2 09 2009	27 09 20 0		27 09 20 0	27 09 20	0	0	0	0
3 9	20 9_20 Q4	KS326	Commons Road Ba lykin a Sto m Sewe	00			07	24				0 08 2009	03 03 20 0		03 03 20 0	03 03 20	0	0	0	0
320	20 9_20 Q4	KA 58	Mi l own Ant m Ww W	0			09	5	NIEA			30 07 2007	2 02 20 0		2 02 20 0	02 2 20	0	0	0	0
32	20 9_20 Q4	K 076	Go estown Road Sewe age Scheme	00	KI537		2	2	NIEA	29 08 2007	06 09 2007	0 03 2008	2 08 20 2		2 08 20 2	2 08 20 3	0	0	0	0
322	20 9_20 Q4	KS224	Downpat ck Ww W	0			09	5	NIEA			07 07 2008	5 2 2009		5 2 2009	5 2 20 0	0	0	0	0
323	20 9_20 Q4	K 42	Sta ion Road ambeg Sewe Upg ade (DG5)	03			07	2	UR											
324	20 9_20 Q4	KV 45	Cha lot e St eet New y Road Wa enpo nt oposed Sewe Imp ovements	00	KI537		07	2	NIEA	0 09 2008	5 09 2008	24 2008	25 0 20 2		25 0 20 2	25 0 20 2	0	0	0	0
325	20 9_20 Q4	KA206	Sma l Ww Ws io ty Upg ades	00			09	7				28 07 2008	30 04 2009		30 04 2009	30 04 20 0	0	0	0	0
326	20 9_20 Q4	R348	Duno e to Hydepa k umping Ma n Rep acement	0			03	05				7 0 2005	3 0 20 2		3 0 20 2	2 0 20 3	0	0	0	0
327	20 9_20 Q4	KU 3	Bal ysi lan Road Bel ast Sewe age Scheme	0			07	24												
328	20 9_20 Q4	K 052	G een ie ds Ba l nahonemo e	0			07	24												
329	20 9_20 Q4	KG 53	Gil o d Road o adown Sewe age Upg ades	0			07	2	NIEA	07 02 2008	02 2008	29 09 2008	4 06 20		4 06 20	3 06 20 2	0	0	0	0
330	20 9_20 Q4	K 0 4	Cla e V l age Sewe age Scheme	00			07	2			07 08 2006	23 07 2007	26 04 20 0		26 04 20 0	26 04 20	0	0	0	0
33	20 9_20 Q4	B656	Maghe a e t Road obe mo e Wate main Extension	00	I054		03	23		06 05 2009	8 05 2009	2 0 2009	2 04 20 0		2 04 20 0	2 04 20	0	0	0	0
332	20 9_20 Q4	KV 22	High St eet Gil o d Sewe Replacement	00			07	2				5 09 2008	25 0 20 2		25 0 20 2	24 0 20 3	0	0	0	0
333	20 9_20 Q4	KR323	gon el Sewe age Scheme	00			07	2				29 06 2007	0 02 2008		0 02 2008	3 0 2009	0	0	0	0

e e a									
So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed
	2	3	4	5	6	7	8	9	0
334	20 9_20 Q4	K 457	ondonde y DA Sto m Sc eening	0	KI537		07	2	NIEA
335	20 9_20 Q4	KV074	Camb ook S S to G een Road	00	KI537		07	2	NIEA
336	20 9_20 Q4	KV 78	C an e d Ww W easib l ty Study	03			4	6	NIEA
337	20 9_20 Q4	KV 86	K lkeel WW W easibi ty Study	06			4	6	NIEA
338	20 9_20 Q4	K 299	Enniski en Ww W	0			09	5	NIEA
339	20 9_20 Q4	K 325	D umahoe Sewe age Scheme M & G av ty Sewe s	00			07	2	NIEA
340	20 9_20 Q4	KV 7	Sp ng Meadows R ve e ds Wa enpoint oul Sewe Extension	00			07	24	
34	20 9_20 Q4	KV200	D umsesk Wastewa e Heade ank - easib l ty Study	00			07	2	DRD
342	20 9_20 Q4	KV20	Moneyslane WW Ws App a sal	04			09	6	NIEA
343	20 9_20 Q4	KV202	Me gh WW W eas b l ty S udy	04			09	6	NIEA
344	20 9_20 Q4	KS2 3	G eyabbey Ki cubbin	06			09	5	
345	20 9_20 Q4	KV048	Suga ls and & ls and Bank Catchment Sewe age Scheme	00			2	2	NIEA
346	20 9_20 Q4	R096	Aqua ius	0			03	05	
347	20 9_20 Q4	KV224	he Slopes Ra h land Wwps app aisal	06			2	2	
348	20 9_20 Q4	C293	Bal in ees Cent al Zone Wate main mp ovemen s	00	I054		03	23	
349	20 9_20 Q4	KV230	C an e d Ca chment Ki keel Sto m Sepe at on	00			07	2	
350	20 9_20 Q4	KV236	Sheemo e C escent Hanwood Way Ki keel ou &Sto m Sewe Extens on	06			07	24	
35	20 9_20 Q4	KV24	Wa enpoint Ww W hase 2	06			09	6	
352	20 9_20 Q4	KZ002	Cap tal Wo ks og amme ocu ement	0			4	02	UR
353	20 9_20 Q4	KZ007	Sto m Wate Sepa at on	06			07	2	
354	20 9_20 Q4	KZ008	Was ewate Netwo ks Mode l ng Su veys	06			4	20	
355	20 9_20 Q4	S 000	Cap ta ised Sala es and On-Cos s	00			5	00	
356	20 9_20 Q4	S 00	C 5 Base Main enance (Wa e) a ent W W p io t sed p og amme)	00			02	0	
357	20 9_20 Q4	S 002	C 5 Base Main enance (Wa e) a ent W S p o i ised p og amme)	00			05	0	
358	20 9_20 Q4	S 005	Ww W base maintenance (p o i ised p og amme)	00			09	02	
359	20 9_20 Q4	S 006	Ww S base ma ntenance p io t sed p og amme)	00			2	02	
360	20 9_20 Q4	S 0 3	Base balancing ine	00			5	99	
36	20 9_20 Q4	S 0 4	Addi ional enhancement	00			5	22	
362	20 9_20 Q4	S 0 5	Sto m Wate Sepa at on	06			07	2	
363	20 9_20 Q4	S 0 6	MG CW Basel ne	06			5	20	
364	20 9_20 Q4	S 0 7	Wa e Ca chment Basel ne	00			0	03	
365	20 9_20 Q4	K 672	empo WW W eas bi i y S udy	06	KI469		4	6	NIEA
366	20 9_20 Q4	K 332	Stewa ts Hi l A magh oul & S o m Sewe Extension	00	KI538		07	24	NIEA
367	20 9_20 Q4	K 529	St ete s High School Re-Development &S Sewe	00	KI538		07	24	
368	20 9_20 Q4	KR579	22 Uppe isbu n Rd Bel ast Sto m Sewe	00			07	24	
369	20 9_20 Q4	xx999	E Management Ad us ment					99	
370	20 9_20 Q4	AM086	CAR ME Se ve	00			5	20	
37	20 9_20 Q4	AM089	osi ional mp ovement OSNI)	04			5	20	
372	20 9_20 Q4	AM090	Cost Base and Capex Compa at ve E ciency	03			5	20	UR
373	20 9_20 Q4	AM093	C 5 M&G a ent	06			5	20	
374	20 9_20 Q4	AM094	Co po ate GIS oject	06			5	20	
375	20 9_20 Q4	AM096	Wes land - Main Bui d ng Kitchen Co ee ounge Extension	06			5	20	
376	20 9_20 Q4	A 036	CC V Su veys Asset e o mance 20 - 20 2	00			07	02	DRD
377	20 9_20 Q4	A 055	Cond t on Assessment	05			06	20	
378	20 9_20 Q4	A 059	Netownb eda MBV	02			4	20	DRD
379	20 9_20 Q4	A 066	Ca ck MBV	03			4	20	DRD
380	20 9_20 Q4	A 084	ov s on o Inte m B dg ng Se v ces (eviously K 522)	00			06	20	DRD
38	20 9_20 Q4	A 089	Netwo k Model Upda es	03			06	20	DRD
382	20 9_20 Q4	A 093	Sewe ne wo k mode s- Cushenda l Ba lykel y Dung ven	03			4	20	
383	20 9_20 Q4	A 094	Se v ce Rese voi Condi ion Assessments lot S udy	05			06	20	
384	20 9_20 Q4	A 096	Base Main enance io t sation	03			5	20	
385	20 9_20 Q4	A 00	C 3 Netwo k Model ing Suppo t Se v ces	03			06	20	
386	20 9_20 Q4	A 0	Sto m Ana ysis Repo ts	03			4	20	
387	20 9_20 Q4	A 02	ov s on o RA Repo s	03			03	20	
388	20 9_20 Q4	A 03	nves igat on o ol uted S o mwa e Out al s	03			07	20	
389	20 9_20 Q4	A 05	a ne MBV	03			4	20	
390	20 9_20 Q4	A 06	D ainage A ea S udy Speci icat on evis on	03			4	20	
39	20 9_20 Q4	A 07	Sewe Netwo k Model ing Suppo t	03			4	20	
392	20 9_20 Q4	A	a ne Netwo k Invest ga ion	03			4	20	
393	20 9_20 Q4	A 4	Deve opment o C 5 ead ipe Rep acement og amme	04			06	23	DWI
394	20 9_20 Q4	A 20	Asset e o mance CC V su veys - 4 5	03			4	20	
395	20 9_20 Q4	A 22	nves igat on o pol uted sto mwate out a ls - phase	05			07	2	
396	20 9_20 Q4	A 28	unk Ma n Condi ion Assessment 4 5	03			03	20	
397	20 9_20 Q4	A 30	Hyd au c Rev ew + Ve i icat on o Wa e Ne wo k Schemes	03			03	20	DRD
398	20 9_20 Q4	A 42	ov s on o essu e ogging Equ pment	06			06	20	
399	20 9_20 Q4	A 43	SR and CWB R sk and Consequence Model Upda e	06			06	20	
400	20 9_20 Q4	A 50	ov s on o ow Mon to ng Equipment	00			4	20	
40	20 9_20 Q4	BC006	Me e econci ia ion phase 2	0			06	20	DRD
402	20 9_20 Q4	BC007	Debt and Co lect ons phase 2	0			06	20	DRD
403	20 9_20 Q4	BC009	CS Data Qual ty og amme	05			5	20	
404	20 9_20 Q4	BC0 0	Dig tal Custome hase	03			5	20	
405	20 9_20 Q4	BC0 3	CBC mplementat on	04			5	20	
406	20 9_20 Q4	BC0 4	Me e o B l mp ovement	06			06	20	DRD
407	20 9_20 Q4	BC0 6	Cl ck Schedule cences	06			5	20	
408	20 9_20 Q4	BE005	budget p o i e 2 3	06			5	20	
409	20 9_20 Q4	BE006	Vehic e G S	0			5	20	DRD
4 0	20 9_20 Q4	BE0 2	Mon h y ay and O ac e Enhancements	06			5	20	
4	20 9_20 Q4	BE0 6	ant u chas ng o ect (Sho t e m St a egy)	06			06	20	
4 2	20 9_20 Q4	BE0 7	Ene gy M&G	06			09	02	
4 3	20 9_20 Q4	BE020	Addi ional Sola Insta lat ons	06			5	20	
4 4	20 9_20 Q4	BE022	E Sow o IOC	06			5	20	
4 5	20 9_20 Q4	BI 2	Cont acto E l pse Inte ace	02			4	20	
4 6	20 9_20 Q4	BI 39	SCaM Susta nab e Catchment Management an) Mou nes Wate est ct o	00			0	20	
4 7	20 9_20 Q4	BI 5	DG2 Stage 2	06			03	20	
4 8	20 9_20 Q4	BI 52	Nis ans au oma ed inte ace	0			5	20	
4 9	20 9_20 Q4	BI 56	Optimal Cont ol & management System si e su veys	00			4	20	
420	20 9_20 Q4	BI226	Sustainable ocal owe	0			06	20	
42	20 9_20 Q4	BI23	AGGREGA ED GENERA ON	0			5	20	
422	20 9_20 Q4	BI232	nstal at on o Sub E ect ci y Mete s - i ot Study @ K l yhev in W W	0			06	20	
423	20 9_20 Q4	BI240	Deve opment o ICA Standa ds	03			5	20	
424	20 9_20 Q4	BI249	est and Deve opment elemet y Sys em	0			06	20	
425	20 9_20 Q4	BI250	ANSWER Ag cul u al Need o Sustainable Wi low E uent Recycl ng	03			09	20	NIEA
426	20 9_20 Q4	BI254	Netwo k D st but on Systems Cont ol (NDCS) hase	03			04	20	
427	20 9_20 Q4	BI259	Netwo k D st but on cont ol sys em pi ot s tes	0			04	20	
428	20 9_20 Q4	BI272	o ect Manage o the ope ty Add ess C eans ng o ect hase 3 (i ot)	0			06	20	
429	20 9_20 Q4	BI280	CA og amme Manage - evel 3	03			4	20	
430	20 9_20 Q4	BI282	I MS Schneide Ha dwa e & So wa e Suppo t	03			03	20	
43	20 9_20 Q4	BI287	C 5 nnovat on og amme ojects	06			5	20	
432	20 9_20 Q4	BI29	MCC eplacement at Ki lyc oghe SR	03			04	20	
433	20 9_20 Q4	BI295	S udge Dens ty Mon to ng Us ng Co eol is owmete s	03			02	20	
434	20 9_20 Q4	BI30	i WA CH (n el igent Wate Au oma ion e emet y and Cont ol Hyb d) sites	06			03	20	
435	20 9_20 Q4	BI303	Use o the mal and nea in a ed came a s n conjunct on w th an UAV	06			5	20	
436	20 9_20 Q4	BI305	Revis on o Sewe s o Adop ion (N I)	06			4	20	
437	20 9_20 Q4	BI3 3	et Vac Sc eening al	06			07	20	
438	20 9_20 Q4	B 004	elemet y Rad o D gi al Upg ade	00			5	20	
439	20 9_20 Q4	B 005	Scada Se v ces ov sion	00			5	20	
440	20 9_20 Q4	B 0 2	Document Management	0			5	20	
44	20 9_20 Q4	B 02	Enhancement p og am o End o i e equ ptments 7 E he net de ve y o DI	0			5	20	
442	20 9_20 Q4	B 023	HVCA Imp emen ation o ect	0			5	20	
443	20 9_20 Q4	B 026	Business Se vices O ce Signage Requi ements	06			5	20	
444	20 9_20 Q4	CE004	SME suppo t o Cap tal E ciency o t o io	06			5	20	
445	20 9_20 Q4	CE006	n-sou cing Ne wo k Mode l ng Into St ategic Cl ent	06			5	20	
446	20 9_20 Q4	CO00	Comme c al Excel ence	06			5	20	
447	20 9_20 Q4	CS00	Custome Connect ons	02			06	20	
448	20 9_20 Q4	CS007	Account Se vices Case Mgmt	0			5	20	DRD
449	20 9_20 Q4	CS008	Sel Se vice hase 2	0			4	20	DRD
450	20 9_20 Q4	CU00	CEX Mete ng & Bi l ng	06			5	20	
45	20 9_20 Q4	CU002	C 5 CA De ive y - Omagh Cooks own A ea	04	BE0 4		06	20	
452	20 9_20 Q4	CU003	C 5 CA De ive y - Bel ast A ea	06	BE0 4		04	20	
453	20 9_20 Q4	CU004	C 5 CA De ive y - New y A ea	06			06	20	
454	20 9_20 Q4	CU005	C 5 CA De ive y - Enn ski len A ea	06			06	20	
455	20 9_20 Q4	CU006	C 5 CA De ive y - A ds Bango A ea	06			04	20	
456	20 9_20 Q4	CU007	C 5 CA De ive y - De y Co e aine A ea	06			04	20	
457	20 9_20 Q4	CU008	C 5 CA De ive y - i ot Studies	06			06	20	
458	20 9_20 Q4	CU0	Se v ce Incen ive Mechanism (SIM) Imp ovements	06			5	20	
459	20 9_20 Q4	CU0 2	VR	06			5	20	
460	20 9_20 Q4	CU0 3	Sel Se vice Web Enhancements	06			5	20	
46	20 9_20 Q4	CU0 4	Know edge Cent e	06			5	20	
462	20 9_20 Q4	CU0 5	Dig tal C ient S de Suppo t	06			5	20	
463	20 9_20 Q4	CU0 6	Custome nte ace Renewal	06			5	20	
464	20 9_20 Q4	CU0 7	ESRI Netwo k Schema ics	06			5	20	
465	20 9_20 Q4	CU0 9	Dig tal Se v ces	06			5	20	
466	20 9_20 Q4	CU020	Sma t Mete Imp emen at on (hase)	06			5	20	
467	20 9_20 Q4	CU02	Act vat8 Scop ng	06			5	20	
468	20 9_20 Q4	CU023	Robo ic ocess Au omat on (R A) oo o Va ue	06			5	20	
469	20 9_20 Q4	CU024	Business Ana yt cs SBRI und ng	06			02	20	
470	20 9_20 Q4	E 0 3	Cap ta isat on o Esta es Maintenance	00			5	20	
47	20 9_20 Q4	E 0 7	E ect ic ty gene at on om w nd powe o al e na ive g een ene gy solut on	06			09	02	
472	20 9_20 Q4	E 03	ntel igent ump Manage WW West Reg on	02	E 046		2	20	DRD
473	20 9_20 Q4	E 037	Cl mate Change Mit gat on - Reducing Em ssions	02			5	20	
474	20 9_20 Q4	E 038	NIW Head O ce & IOC ac l t es	00			4	20	DRD
475	20 9_20 Q4	E 039	NIW Contam na ed and Remed al o ect	06			5	20	
476	20 9_20 Q4	E 040	Bal ycas le Depot - Remedia ion o Contam na ion	0			5	20	NIEA
477	20 9_20 Q4	E 043	Cap tal Ma n enance 3 4 & 4 5	03			5	20	
478	20 9_20 Q4	E 045	Enniski en A ea ov sion o MI aci i ies	03			06	20	DRD
479	20 9_20 Q4	E 052	C MR mps C 5	06				20	
480	20 9_20 Q4	E 053	Esta es management C 5	06			5	20	
48	20 9_20 Q4	E 056	CA M Netwo k aci i y	06			06	20	
482	20 9_20 Q4	ER002	u achse o Automat c Samp ng Mach nes o E Cha g ng and Compl ance	06			4	20	
483	20 9_20 Q4	ER003	ade E luent Sto e - ul yga ley	06			4	20	
484	20 9_20 Q4	ER005	UKAS Acc ed tat on o ade E luent Sampl ng	06			5	20	
485	20 9_20 Q4	ER006	MS Se ve Upg ade C 5 2	06			5	20	
486	20 9_20 Q4	R0 4	O acle E-business sui e m no enhancements du ng C 3	03			5	20	
487	20 9_20 Q4	R0 5	Cap tal al owance eview	05			5	20	
488	20 9_20 Q4	R0 7	Compu e Assoc ates upg ade ela ed to new O acle E-bus ness su te Cont a	05			5	20	
489	20 9_20 Q4	R0 8	Enhancements o the O acle E-Business Su te and Assoc ated Sys ems	06			5	20	
490	20 9_20 Q4	R020	6 7 Enhancement to O ac e E-Bus Su te and Assoc a ed Sys ems	06			5	20	
49	20 9_20 Q4	R02	Mig at on o O ac e EBS & OBIEE to new OVM nux ha dwa e	06			5	20	
492	20 9_20 Q4	R022	7 8 Mino enhancements to he O acle E bus ness su te and OBIEE	06			5	20	
493	20 9_20 Q4	R024	o ect Alpha ans t on	06			5	04	DRD
494	20 9_20 Q4	R025	8 9 O acle Mino Enhancements	06			5	20	
495	20 9_20 Q4	R026	O acle Upg ade	06			5	20	
496	20 9_20 Q4	R027	9 20 O acle Reac ive Enhancements	06			5	20	
497	20 9_20 Q4	R028	Mak ng ax D g tal o VA	06			5	20	
498	20 9_20 Q4	R029	Mic oso t VM Upg ades	06			5	20	
499	20 9_20 Q4	R030	nven o y Sto es Enhancemen s	06			5	20	
500	20 9_20 Q4	HR002	C eat on o n e ace between NI Wate s pay o l and Capi a Emp oyee Bene i	03			5	20	
50	20 9_20 Q4	HR005	ay oll Changes n ela ion to CARE 20 5 pension nt oduct on	06			5	20	
502	20 9_20 Q4	HR006	O acle O M Change Request	06			5	20	
503	20 9_20 Q4	A00	Data Ana yt cs So ut on	06			5	20	
504	20 9_20 Q4	I 002	ov s on and suppo t o co po a e Au oCAD MA 3D censes	00			4	20	
505	20 9_20 Q4	I 004	C Re esh og amme	0			06	20	
506	20 9_20 Q4	I 0 0	C – e emet y Base Ma ntenance	02			5	20	
507	20 9_20 Q4	I 0 7	Upg ade og amme o the otect on o gh n ng o ect on hase 2	0			5	20	
508	20 9_20 Q4	I 038	MWM oughbook Re esh o ect	03			5	20	
509	20 9_20 Q4	I 039	Mob le Wo k Management (MWM) Cont act Renewal	03			5	20	
5 0	20 9_20 Q4	I 043	n o ma ion lows 2	03			5	20	
5	20 9_20 Q4	I 044	C t cal Secu i y Cont o s	03			5	20	
5 2	20 9_20 Q4	I 050	elecoms n ast uc u e mp ovement	03			5	20	
5 3	20 9_20 Q4	I 052	nte net Web Se ve Re esh	03			5	20	
5 4	20 9_20 Q4	I 053	W ndows Se ve s & Sto age A ay (20 3)	03			5	20	
5 5	20 9_20 Q4	I 055	MC2 mplementat on	03			5	20	DRD
5 6	20 9_20 Q4	I 056	S ieve Ga l on mast s te e u bishment	06			5	20	
5 7	20 9_20 Q4	I 068	S te SCADA Upg ade	03			4	20	
5 8	20 9_20 Q4	I 069	C Base Main enance	05			5	20	
5 9	20 9_20 Q4	I 070	EMCI	03			5	20	
520	20 9_20 Q4	I 07	MC Exit lan	03			5	20	
52	20 9_20 Q4	I 072	mplementa ion o CI DSS	04			5	20	
522	20 9_20 Q4	I 073	EMCI hase 2	04			5	20	
523	20 9_20 Q4	I 076	C Base Main enance 5 6	06			5	20	
524	20 9_20 Q4	I 077	SCADA Se vices ov sion	06			5	20	
525	20 9_20 Q4	I 082	elemet y Se ve Ha dwa e Rep acement	03			5	20	
526	20 9_20 Q4	I 084	End o i e Ha dwa e and So wa e upg ade – Db Autho se invoice scanning	03			5	20	
527	20 9_20 Q4	I 085	Mic oso t En e p se Ag eement	06			5	20	
528	20 9_20 Q4	I 086	C Base Main enance	06			5	20	
529	20 9_20 Q4	I 087	Addi ional Blades and inance Netbackup icenses	06			5	20	
530	20 9_20 Q4	I 089	Co po ate Wi i	06			5	20	
53	20 9_20 Q4	I 090	Mob le hone Re esh 20 6	06			5	20	
532	20 9_20 Q4	I 09	Desktop & ap op Re esh	06			5	20	
533	20 9_20 Q4	I 093	CSD Dashboa d	06			5	20	
534	20 9_20 Q4	I 094	C Base Main enance 7 8	06			5	20	
535	20 9_20 Q4	I 095	Desktop Ha dwa e Re esh	06			5	20	
536	20 9_20 Q4	I 099	elemet y Ou stat on Re esh o ect - hase 2	06			5	20	
537	20 9_20 Q4	I 0	C elemet y and e ecoms Base Ma ntenance	06			5	20	
538	20 9_20 Q4	I 02	MC2 XRM lot	06			5	20	
539	20 9_20 Q4	I 05	Mob le hone Re esh 20 8	06			5	20	
540	20 9_20 Q4	I 06	C Base Main enance 8 9	06			5	20	
54	20 9_20 Q4	I 07	Data Cent e Re esh	06			5	20	
542	20 9_20 Q4	I 09	MC3 Deve opment	06			5	20	
543	20 9_20 Q4	I	Cybe Res l ence og amme	06			5	20	
544	20 9_20 Q4	I 2	e d Dev ce Rep acement 20 9	06			5	20	
545	20 9_20 Q4	I 3	l Ops Base Main enance	06			5	20	
546	20 9_20 Q4	I 4	SI E SCADA U GRADE	06			5	20	
547	20 9_20 Q4	I 5	C elecoms and elemet y Base Ma ntenance	06			5	20	
548	20 9_20 Q4	I 6	elephony Mode n sat on	06			5	20	
549	20 9_20 Q4	I 8	MWM CAR suppo t cont act post Decembe 2020	06			5	20	DRD
550	20 9_20 Q4	I 9	C elemet y & elecoms Base Maintenance 20 2	06			5	20	
55	20 9_20 Q4	I 2	HVCH Updates	06			5	20	
552	20 9_20 Q4	I 23	BC aptops	06			5	20	
553	20 9_20 Q4	I 24	BC -Mob le hones	06			5	20	
554	20 9_20 Q4	C00	S lent Val ey a k Enhancement	0			06	20	
555	20 9_20 Q4	NA004	abo ato y Capital Equ pment	0			5	20	
556	20 9_20 Q4	NA006	NIAM 4 o ect Suppo t	02			5	20	
557	20 9_20 Q4	NA0 8	MS Se ve Upg ade	06			5	20	

So t Re	ase eM es e a es							ase e ev e s A a			
	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date	Base ine Se v ce A locat on Wa e n ast uctu e	Basel ne Se vice Al ocat on Wate Non- In ast uc u e	Base ine Se v ce A loca ion Sewe age n ast uctu e	Basel ne Se vice Al ocat on Sewe age Non- In ast uc u e
		2	3	4	5	6	7	8	9	20	2
334	9 03 2009	20 03 2009	30 03 2009	27 0 2009		27 0 2009	27 0 20 0	0	0	0	0
335	5 09 2008	7 2008	9 0 2009	04 02 20 0		04 02 20 0	04 02 20 0	0	0	0	0
336								0	0	30	70
337								0	0	0	00
338			05 2007	02 20 0		02 20 0	02 20	0	0	0	0
339			23 0 2006	30 2006		30 2006	30 2007	0	0	0	0
340			02 0 2008	8 0 20 2		8 0 20 2	7 0 20 3	0	0	0	0
345			22 2 2005	24 0 2007		24 0 2007	23 0 2008	0	0	0	0
348		22 04 2005	27 07 2009	28 0 20 0		28 0 20 0	28 0 20	0	0	0	0
352		25 09 20 2						0	0	0	0
355								29	2		48
356								0	00	0	0
357								0	00	0	0
358								0	0	0	00
359								0	0	0	00
360								0	0	0	0
36								0	0	0	0
362								0	0	00	0
363								0	46	8	46
364								0	00	0	0
365			0 04 20 3	0 09 20 3		0 2 20 3	0 2 20 4	0	0	0	00
366								0	0	0	0
369								0	0	0	0
373								0	46	8	46
395								0	0	00	0
47								0	0	0	00

So t Re	ase e x e e e m2 2- es)										ase e seA a			
	Basel ne CA EX 20 0- £m	Basel ne CA EX 20 - 2 £m	Base ine CA EX 20 2 3 £m	Basel ne CA EX 20 3- 4 £m	Basel ne CA EX 20 4- 5 £m	Base ine CA EX 20 5- 6 £m	Base ine CA EX 20 6- 7 £m	Basel ne CA EX 20 7- 8 £m	Basel ne CA EX 20 8- 9 £m	Base ine CA EX 20 9 20 £m	asel ne u pose Al ocat on Qua i y	Base ne u pos Al ocat on Base	Base ine u pose Al ocat on ES	Basel ne u pos Al ocation G owt
	22	23	24	25	26	27	28	29	30	3	36	37	38	39
334	0	0	0	0	0	0	0	0	0	0	0	0	0	0
335	0	0	0	0	0	0	0	0	0	0	0	0	0	0
336	0	0 0 660 86	0 0238 9	0 0 844 974	0	0	0	0	0	0	0	00	0	0
337	0	0 00292974	0 04668524	0 023052468	0	0	0	0	0	0	0	00	0	0
338	0	0	0	0	0	0	0	0	0	0	0	0	0	0
339	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	0	0	0	0	0	0	0	0	0	0	0	0	0	0
345	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
352	0	0	0	0	0	0	0	0	0	0	0	0	0	0
355	0	0	0	0	0	26 05258	9 28627	7578696	0653223	03769304	7	55	6	22
356	0	0	0	0	0	3 07994273	2 978892282	2 96000565	2 9422 739	2 925289422	0	00	0	0
357	0	0	0	0	0	0 478057269	0 462 077 8	0 459994349	0 456782609	0 4537 0578	0	00	0	0
358	0	0	0	0	0	5 67738656	5 58332224	5 4898223	5 39688337	5 30450207	0	00	0	0
359	0	0	0	0	0	3 228 88286	3 2088 9 56	3 8956624	3 70428844	3 5 40627	0	00	0	0
360	0	0	0	0	0	4 443563333	0 550 7 93	-0 26542052	0928327	0 476550959	0	00	0	0
36	0	0	0	0	0	6 446 84395	9 862336764	3 39557804	3 87439408	7 0607729	00	0	0	0
362	0	0	0	0	0	0 245268823	0 7 39837 2	0 675722 59	055 4 29	06239534	0	00	0	0
363	0	0	0	0	0	53938883	502880524	49386324	484900062	4757 7355	0	62	38	0
364	0	0	0	0	0	0 604808258	0 60 79409	0 597572332	0 68738 064	0 683256778		46	39	4
365	0	0 00585948	0 0 6 9692	0 304292575	0 044800566	0	0	0	0	0	40	40	0	20
366	0	0	0	0	0	0	0	0	0	0	0	0	0	0
369	0	0	0	0	0	0	0	0	0	0	0	0	0	0
373	0	0	0	0	0	9 0 978 297	8 805867222	8 7530320 9	8 7005 3827	8 646709353	0	62	38	0
395	0	0	0	0	0	0 470429629	0 4549 6254	0 448305325	0 446580029	0 4649930 5	0	00	0	0
47	0	0	0	0	0	0	0	945457309	0	0	0	0	00	0

So t Re	e A a e e M es e a es							e A a e e ev e s A a			
	Cu ent Actua o o ec ed A Da e	Cu ent Ac ual o ojec ed oject App oval Date	Cu ent Ac ua o o ected Sta t on Si e Date	Cu ent Actua o o ected Bene cial Use Date	Cu ent Actual o ojec ed Regula o y sign-o Date	Cu ent Ac ual o ojected Comp et on o Const uc ion Da e	Cu ent Ac ua o o ected End o Ma ntenance e iod Date	Cu ent Actual o ojec ed Se vice Al ocat on Wate In ast uc u e	Cu ent Ac ual o o ected Se v ce Al oca ion Wa e Non- In ast uctu e	Cu ent Actual o ojec ed Se vic A locat on Sewe age n ast uctu e	Cu ent Actual o o ected Se v ce Al oca ion Sewe age Non- In ast uc u e
	40	4	42	43	44	45	46	47	48	49	50
334	9 03 2009	20 03 2009	30 03 2009	03 2 2009		3 0 20		0	0	64	36
335	5 09 2008	7 2008	9 0 2009	23 2009		23 2009	03 02 20 0	2	0	88	0
336								0	0	0	00
337								0	0	0	00
338		25 0 2005	05 2007	06 05 2009		5 06 2009		0	0	0	00
339	2 0 2006	3 0 2006	23 0 2006			27 2006		0	0	00	0
340	29 0 2007	6 02 2007	02 0 2008	4 03 2008		02 07 2008		0	0	00	0
34	30 20 8	30 20 8						0	0	00	0
342								0	0	0	00
343								0	0	0	00
344			0 04 2002			29 09 2003		0	0	0	00
345	9 2 2005		22 2 2005			8 0 2007		0	0	40	60
346	05 03 995	09 03 995	22 0 999			8 0 2002		0	00	0	0
347	24 0 20 6	25 0 20 6						0	0	0	00
348		22 04 2005	27 07 2009	27 0 20 0		5 20 0		00	0	0	0
349								0	0	00	0
350								0	0	00	0
35								0	0	0	00
352		25 09 20 2						25	25	25	25
353	27 03 20 5	20 04 20 5						0	0	00	0
354	7 06 20 5	02 07 20 5						0	0	00	0
355								0	0	0	0
356								0	0	0	0
357								0	0	0	0
358								0	0	0	0
359								0	0	0	0
360								0	0	0	0
36								0	0	0	0
362								0	0	0	0
363								0	0	0	0
364								0	0	0	0
365	09 08 20 3	0 09 20 3	30 06 20 4	06 0 20 5		26 0 20 5		0	0	0	00
366								0	0	00	0
367	04 08 20 5	04 08 20 5						0	0	00	0
368								0	0	00	0
369								0	0	0	00
370	22 03 20 6	22 03 20 6						0	50	0	50
37	26 03 20 4	28 03 20 4						0	50	0	50
372	8 06 20 3	9 06 20 3						25	25	25	25
373								0	46	8	46
374	0 08 20 6	0 08 20 6						0	50	0	50
375	30 03 20 7	30 03 20 7						0	00	0	0
376	3 08 20	07 09 20						0	0	00	0
377	24 0 20 2	3 0 20 2						00	0	0	0
378	0 02 20 3	06 02 20 3						0	0	00	0
379	4 02 20 3	22 02 20 3						0	0	00	0
380	5 02 20 3	22 02 20 3						00	0	0	0
38	23 0 20 3	30 0 20 3						00	0	0	0
382	04 07 20 3	6 07 20 3						0	0	00	0
383	22 03 20 3	26 03 20 3						0	00	0	0
384	22 04 20 3	23 04 20 3						0	40	20	40
385	30 05 20 3	3 05 20 3						00	0	0	0
386	27 06 20 3	28 06 20 3						0	0	00	0
387	09 08 20 3	2 08 20 3						00	0	0	0
388	4 08 20 3	6 08 20 3						0	0	00	0
389	09 20 3	2 09 20 3						0	0	00	0
390	09 08 20 3	2 08 20 3						0	0	00	0
39	4 08 20 3	6 08 20 3						0	0	00	0
392	22 07 20 3	30 07 20 3						0	0	00	0
393	2 07 20 4	25 07 20 4						00	0	0	0
394	0 04 20 4	4 04 20 4						0	0	00	0
395	8 08 20 4	8 08 20 4						0	0	00	0
396	05 08 20 4	08 20 4						00	0	0	0
397	24 07 20 4	25 07 20 4						00	0	0	0
398	5 0 20 6	5 0 20 6						0	00	0	0
399	2 02 20 5	2 02 20 5						0	00	0	0
400	0 03 20 6	0 03 20 6						0	0	0	00
40	8 06 20 2	20 06 20 2						0	00	0	0
402	9 06 20 2	27 06 20 2						0	00	0	0
403	02 09 20 3	2 09 20 3						0	50	0	50
404	23 09 20 3	24 09 20 3						0	00	0	0
405	02 06 20 4	02 06 20 4						0	50	0	50
406	0 09 20 4	7 09 20 4						0	50	0	50
407								0	00	0	0
408								0	50	0	50
409	8 09 20 2	28 09 20 2						0	49	0	5
4 0	24 02 20 6	2 04 20 6						25	25	25	25
4	20 08 20 5	20 08 20 5						0	00	0	0
4 2	29 0 20 5	29 0 20 5						0	9	0	9
4 3								0	50	0	50
4 4								0	50	0	50
4 5	05 2 20	09 2 20						0	49	0	5
4 6	26 0 20	26 0 20						0	00	0	0
4 7								00	0	0	0
4 8	2 0 20	2 0 20						0	70	0	30
4 9								0	0	0	00
420	4 0 20	2 0 20						0	00	0	0
42	5 20	6 20						0	50	0	50
422	3 0 20	09 20						0	00	0	0
423	4 0 20 4	6 0 20 4						0	50	0	50
424	2 2 20 2	07 0 20 3						0	50	0	50
425	02 0 20 3	03 0 20 3						0	0	0	00
426	3 02 20 4	8 02 20 4						0	00	0	0
427	2 2 20 2	3 2 20 2						0	00	0	0
428	04 0 20 3	04 0 20 3						0	00	0	0
429	9 08 20 4	26 08 20 4						0	50	0	50
430	3 09 20 3	2 09 20 3						0	00	0	0
43								0	50	0	50
432	2 20 3	5 2 20 3						0	00	0	0
433	04 02 20 4	07 02 20 4						0	00	0	0
434	6 07 20 5	20 07 20 5						0	00	0	0
435	24 20 5	24 20 5						0	00	0	0
436	28 0 20 6	28 0 20 6						0	0	00	0
437	30 07 20 8	30 07 20 8						0	0	0	00
438	03 03 20	24 03 20						0	49	0	5
439	26 08 20 0	20 09 20 0						0	23	0	77
440	24 03 20	25 03 20						0	50	0	50
44	2 0 20	8 0 20						0	40	0	60
442	02 05 20 2	08 05 20 2						0	50	0	50
443	0 20 8	7 0 20 8						0	50	0	50
444	28 0 20 6	28 0 20 6						25	25	25	25
445	25 0 20 7	6 05 20 7						22	28	22	28
446								0	00	0	0
447	22 09 20	29 09 20						0	50	0	50
448	23 20	5 2 20						0	00	0	0
449	23 20	5 2 20						0	60	0	40
450	22 2 20 5	04 0 20 6						0	00	0	0
45	02 20 6	02 20 6						0	00	0	0
452	7 07 20 7	7 07 20 7						0	00	0	0
453	28 02 2020	28 02 2020						0	00	0	0
454								0	00	0	0
455	28 03 20 8	28 03 20 8						0	00	0	0
456	28 03 20 8	29 03 20 8						0	00	0	0
457								0	00	0	0
458	09 06 20 6	2 06 20 6						0	50	0	50
459	05 06 20 7	05 06 20 7						0	50	0	50
460	05 06 20 7	05 06 20 7						0	50	0	50
46	08 20 7	08 20 7						0	50	0	50
462	0 20 8	2 0 20 8						0	50	0	50
463								0	50	0	50
464	28 20 7	28 20 7						0	00	0	0
465	06 04 2020	06 04 2020						0	50	0	50
466	2 0 20 9	2 0 20 9						00	0	0	0
467	2 20 8	2 20 8						0	50	0	50
468	07 06 20 9	2 06 20 9						0	50	0	50
469								0	00	0	0
470	2 06 20	09 08 20						0	50	0	50
47	02 09 20 0	20 09 20 0						0	20	0	80
472	7 0 20 2	8 0 20 2						0	0	0	00
473	0 09 20 5	02 09 20 5						0	50	0	50
474								0	50	0	50
475								0	50	0	50
476								0	60	0	40
477	4 06 20 3	24 06 20 3						0	50	0	50
478	2 0 20 3	24 0 20 3						0	00	0	0
479	27 05 20 5	29 05 20 5						0	50	0	50
480	0 04 20 5	03 04 20 5						0	50	0	50
48	4 2 20 7	2 2 20 7						0	00	0	0
482	25 02 20 9	25 02 20 9						0	0	0	00
483	4 03 20 9	4 03 20 9						0	0	0	00
484	3 02 2020	4 02 2020						0	0	0	00
485								0	50	0	50
486	8 20 3	02 0 20 4						0	50	0	50
487	27 03 20 4	28 03 20 4						0	50	0	50
488	2 07 20 5	30 09 20 5						0	50	0	50
489	0 09 20 5	30 09 20 5						0	50	0	50
490	9 04 20 6	08 07 20 6						0	50	0	50
49	08 2 20 6	3 03 20 7						0	50	0	50
492								0	50	0	50
493								0	00	0	0
494								0	50	0	50
495								0	50	0	50
496								0	50	0	50
497								0	50	0	50
498	29 0 2020	29 0 2020						0	50	0	50
499								0	50	0	50
500	9 2 20 4	9 2 20 4						0	50	0	50
50	20 08 20 5	09 09 20 5						0	50	0	50
502	7 08 20 5	09 09 20 5						0	50	0	50
503	02 03 20 6	02 03 20 6						0	50	0	50
504	8 07 20	22 07 20						0	49	0	5
505	24 08 20	26 08 20						0	5	0	49
506	5 20 2	9 20 2						0	50	0	50
507	26 07 20 2	03 08 20 2						0	73	0	27
508	30 08 20 3	02 09 20 3						0	5	0	49
509	2 02 20 3	27 02 20 3						0	5	0	49
5 0	08 0 20 3	5 0 20 3						0	50	0	50
5	05 08 20 3	07 08 20 3						0	50	0	50
5 2	0 2 20 3	6 2 20 3						0	50	0	50
5 3	03 09 20 3	06 09 20 3						0	00	0	0
5 4	26 09 20 3	03 0 20 3						0	50	0	50
5 5	26 20 3	02 2 20 3						0	5	0	49
5 6	6 06 20 5	23 06 20 5						0	00	0	0
5 7	7 02 20 4	8 02 20 4						0	49	0	5
5 8	3 05 20 4	3 05 20 4						0	50	0	50
5 9	08 05 20 4	3 05 20 4						0	49	0	5
520	8 06 20 4	9 06 20 4						0	50	0	50
52	9 06 20 4	20 06 20 4						0	55	0	45
522	2 09 20 4	2 09 20 4						0	49	0	5
523	22 05 20 5	26 05 20 5						0	50	0	50
524	24 04 20 5	24 04 20 5						0	49	0	5
525	06 03 20 5	09 03 20 5						0	50	0	50
526	3 03 20 5	3 03 20 5						0	50	0	50
527	08 04 20 5	08 04 20 5						0	50	0	50
528	27 05 20 6	02 06 20 6						0	50	0	50
529	25 0 20 6	25 0 20 6						0	50	0	50
530	02 03 20 6	02 03 20 6						0	50	0	50
53	25 04 20 6	28 04 20 6						0	50	0	50
532	08 20 6	08 20 6						0	50	0	50
533	2 20 6	2 20 6						0	5	0	49
534	04 05 20 7	04 05 20 7						0	50	0	50
535	22 02 20 7	28 09 20 7						0	50	0	50
536	03 03 20 7	08 03 20 7						0	50	0	50
537	06 06 20 7	06 06 20 7						0	50	0	50
538	7 05 20 7	8 05 20 7						0	50	0	50
539	24 04 20 8	0 05 20 8						0	50	0	50
540								0	50	0	50
54	2 2 20 9	2 2 20 9						0	50	0	50
542								0	50	0	50
543	2 2 20 9	2 2 20 9						0	50	0	50
544	07 20 9	23 07 20 9						0	50	0	50
545								0	50	0	50
546	03 05 20 9	09 05 20 9						0	49	0	5
547	09 05 20 9	09 05 20 9						0	50	0	50
548	2 06 20 9	3 06 20 9						0	50	0	50
549								0	50	0	50
550	27 02 2020	27 02 2020						0	50	0	50
55	02 2020	02 2020						0	50	0	50
552								0	50	0	50
553								0	50	0	50
554	8 0 20 3	05 02 20 3						0	00	0	0
555	5 02 20	5 02 20						0	49	0	5
556	23 05 20 3	27 05 20 3						25	25	25	25
557	25 0 20 6	27 0 20 6						0	50	0	50

So t Re	e A a ee a a x e e e mm e e a)											e A a e e seA a %)				e A a e e %)		m ae s e)
	Cu ent Actua o o ected CA EX ea to da e £m	Cu ent Actua o o ec ed CA EX 20 0 £m	Cu ent Ac ual o ojec ed CA EX 20 - 2 £m	Cu ent Ac ual o o ected CA EX 20 2- 3 £m	Cu ent Actua o o ected CA EX 20 3- 4 £m	Cu ent Actual o ojec ed CA EX 20 4- 5 £m	Cu ent Ac ual o ojected CA EX 20 5- 6 £m	Cu ent Ac ua o o ected CA EX 20 6- 7 £m	Cu ent Actua o o ec ed CA EX 20 7 8 £m	Cu ent Actual o ojec ed CA EX 20 8- 9 £m	Cu ent Ac ua o o ected CA EX 20 9- 20 £m	Cu ent Ac ual o o ected u pose A oca ion Qual t	Cu ent Actual o ojec ed u pose A locat on Base	Cu ent Ac ual o o ected u pose A loca ion ES	Cu ent Actual o ojec ed u pose A locat on G ow h	Cu ent Ac ual o o ected RE A loca ion Wa e	Cu ent Actual o o ec ed IRE Al ocat on Sewe age	Nom na ed Ou put
	5	52	53	54	55	56	57	58	59	60	6	66	67	68	69	70	7	72
334	0	0 0 9	0 002	0 003	0	0	0	0	-0 006	0	0	00	0	0	0	0	0	
335	0	-0 026	0 00	0 0	0	0	0	0	-0 006	0	0	0	00	0	0	2	88	
336	0	0	0 0 7	-0 008	0 02	0 05	0	0 0 2	-0 0 2	0	0	44	26	0	30	0	0 03	
337	0	0	0 003	0 0 7	0 06	0 00	0	0 0	0 0	0 006	0	34	26	0	40	0	0 03	
338	0	0 3 7	0 077	-0 003	0	0	0	0	-0 063	0	0	40	34	0	26	0	0	
339	0	0	0	0	0	0	0	0	0	0 002	0	0	20	0	80	0	0	
340	0	0	0	0	0	0	0	0	0	0 003	0	0	00	0	0	0	00	
34	0	0	0	0	0 004	0 0 2	0 00	0 00	0 0 2	0	0	0	00	0	0	0	00 0	
342	0	0	0	0	0 025	0	0	0 029	-0 0 8	0	0	37	60	0	3	0	0 03	
343	0	0	0	0	0 025	0	0	0 003	-0 003	0	0	48	24	0	28	0	0 03	
344	0	0	0	0	0	0	0	0	0	0 052	0	60	20	0	20	0	0	
345	0 003	0	0	0	0	0	0	0	0	0	0 003	25	0	26	49	0	0	
346	0	0	0	0	0	0	0	0	0	0 003	0	0	0	0	00	0	0	
347	0	0	0	0	0	0	0 008	0 007	0	0	0	20	25	0	55	0	0 03	
348	0	0 82	0 00	0 003	0	0	0	-0 002	0	0	0	8	7		74	7	0 0	
349	-0 00	0	0	0	0	0	0	0 058	0 04	0 003	-0 00	0	80	0	20	0	80 0	
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35	0 0	0	0	0	0	0	0	0	0	0	0 0	44	26	0	30	0	0 0	
352	0 023	0 00	0	0	0 087	0 00	0 046	0 057	0 0 9	0 009	0 023	0	00	0	0	25	25 0	
353	0	0	0	0	0	0 006	0 05	0 0 9	-0 0 5	0	0	0	00	0	0	0	00 0	
354	0 728	0	0	0	0	0	0 375	056	239	069	0 728	0	00	0	0	0	00 0	
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36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
365	-0 009	0	0 006	0 0 7	0 067	0 82	0 0	0 0 5	0	0 009	-0 009	27	33	0	40	0	0	C 3 Nominated
366	0	0 005	0 002	0 004	0	0 00	0	0	0	0	0	0	0	0	00	0	0	C 5 Non Nom
367	0	0	0	0	0	0	0 07	0	-0 004	0	0	0	0	0	00	0	0	C 5 Non Nom
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369	2	0	0	0	0	0	0	0	0	0	2	44	34	0	22	0	0	
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37	0	0	0	0	0	0 083	0 38	0	0	0	0	0	00	0	0	0	0	
372	0	0	0	0	0 58	0 09	-0 004	0	0	0	0	0	00	0	0	25	25	
373	0	0	0	0	0	0	0	0	0	0	0	0	63	37	0	0	5	
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377	0	0	0	0	0 498	0 06	-0 0 7	-0 004	0	0	0	0	00	0	0	00	0	
378	0	0	0	0 0 5	0 065	0 0 5	0 002	0	0	0	0	0	00	0	0	0	00	
379	0 003	0	0	0	0 093	0 02	0 027	0 029	0 02	0 006	0 003	0	00	0	0	0	00	
380	0	0	0	0 298	-0 042	0	-0 005	0	0	0	0	0	00	0	0	00	0	
38	0	0	0	0	0 469	0 8	-0 038	0	0	0	0	0	00	0	0	00	0	
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383	0	0	0	0 02	0 422	0 27	-0 00	0	0	0	0	0	00	0	0	0	0	
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387	0	0	0	0	0 226	0 029	-0 0	0	0	0	0	0	00	0	0	00	0	
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389	0	0	0	0	0 035	0 092	-0 00	0	0	0	0	0	00	0	0	0	00	
390	0	0	0	0	0 0 5	0 0	0 004	0	0	0	0	0	00	0	0	0	00	
39	0	0	0	0	0 033	0 063	0 022	0	0	0	0	0	00	0	0	0	00	
392	0	0	0	0	0 0 2	0 02	-0 002	0	0	0	0	0	00	0	0	0	00	
393	0	0	0	0	0	0 7	0 056	0 006	-0 00	0	0	00	0	0	0	0	0 0	
394	0	0	0	0	0	0 249	-0 004	0	0	0	0	0	00	0	0	0	00	
395	0	0	0	0	0	0 097	0	0	0	0	0	0	00	0	0	0	00	
396	0	0	0	0	0	0 242	-0 022	0	-0 002	0	0	0	00	0	0	00	0	
397	0	0	0	0	0	0 4 5	0 83	-0 005	0	0	0	0	00	0	0	00	0	
398	0	0	0	0	0	0	0 02	0 008	-0 00	0	0	0	00	0	0	0	0	
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40	0	0	0	0 2 5	0 0 3	0 0 9	0 00	0	0	0	0	0	0	00	0	0	0	
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403	0	0	0	0	0 264	0 265	-0 0	0	0	0	0	0	0	00	0	0	0	
404	0	0	0	0	0 06	0 0 5	-0 002	0	0	0	0	0	0	00	0	0	0	
405	0 0 3	0	0	0	0	472	0 83	0 535	0	0 285	0 0 3	0	0	00	0	0	0	
406	0	0	0	0	0	0 399	0 03	0	-0 00	0	0	0	50	50	0	0	0	
407	0 066	0	0	0	0	0	0	0	0	0	0 066	0	0	00	0	0	0 0	
408	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	
409	0	0	0	0 95	0	0	0	-0 00	0	0	0	0	00	0	0	0	0	
4 0	0	0	0	0	0	0	0 32	0 8	-0 0 4	0	0	0	0	00	0	0	0	
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4 2	0	0	0	0	0	0	0 97	0 0 2	-0 002	0	0	0	55	45	0	0	0 0	
4 3	0	0	0	0	0	0	0	0	0 248	0 0	0	0	0	0	00	0	0 0	
4 4	0 07	0	0	0	0	0	0	0	0	0 29	0 07	0	30	70	0	0	0	
4 5	0	0	0 064	0 007	0	0	-0 008	0	0	0	0	0	0	00	0	0	0	
4 6	0	0 0 4	0 097	0 08	0 05	0 85	-0 0 3	0	0	0	0	00	0	0	0	0	0	
4 7	0	0	0	0	0	0	0	0	-0 00	0	0	0	0	00	0	0	0	
4 8	0	0 043	0 006	0	0	0	-0 0 7	0	0	0	0	0	00	0	0	0	0	
4 9	0	0	0	0	0	0	-0 006	0	0	0	0	0	0	00	0	0	0	
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42	0	0	0	0 032	0 0 7	0	-0 006	0	0	0	0	0	00	0	0	0	0	
422	0	0	0 02	0	0 004	0	-0 00	0	0	0	0	0	00	0	0	0	0	
423	0	0	0	0	0 039	0 56	0 0 4	0	0	0	0	0	0	00	0	0	0	
424	0	0	0	0 0	0 009	0	-0 009	0	0	0	0	0	00	0	0	0	0	
425	0	0	0	0 00	0 007	0 006	0 005	0	-0 002	0	0	0	0	00	0	0	0	
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427	0	0	0	0 025	0 00	0	-0 006	0	0	0	0	0	0	00	0	0	0	
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430	0	0	0	0	0 0 5	0	-0 008	0	0	0	0	0	0	00	0	0	0	
43	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	
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433	0	0	0	0	0 03	0	-0 002	0	0	0	0	0	00	0	0	0	0	
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437	0	0	0	0	0	0	0	0	0	0 0	0	0	00	0	0	0	0	
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439	0	0 208	0 68	0 67	0 065	0 065	-0 00	0	0	0 00	0	34	26	0	30	0	0	
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44	0	0	0 295	0 38	0 226	0	-0 033	0	0	0	0	0	00	0	0	0	0	
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47	0 005	0 08	0 045	0 028	0 05	0 05	0 003	73	0 0 7	0 0	0 005	0	0	00	0	0	0 0	
472	0	0	0	0 86	0 04	0 0 2	-0 00	0	0	0	0	0	00	0	0	0	0	
473	0	0	0	0 00	0 04	0 003	0 096	0 064	-0 002	0	0	0	00	0	0	0	0	
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477	0	0	0	0	0 236	0 74	-0 008	0	0	0	0	0	00	0	0	0	0	
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504	0 049	0	0 05	0	0	0 045	0	0 059	0	0	0 049	0	00	0	0	0	0	
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5 0	0	0	0	0	0 026	0 008	-0 002	0	0	0	0	0	00	0	0	0	0	
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5 6	0	0	0	0	0	0	0 087	0 52	-0 003	0	0	0	00	0	0	0	0	
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5 9	0	0	0	0	0	0 024	0	-0 008	0	0	0	0	0	00	0	0	0	
520	0	0	0	0	0	0	0 05	-0 022	0	0	0	0	0	00	0	0	0	
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526	0	0	0	0	0	0	0	0	-0 009	0	0	0	00	0	0	0	0	
527	0	0	0	0	0	0	0 777	0	0 245	0	0	0	00	0	0	0	0	
528	0	0	0	0	0	0	0	0 673	0 024	0 00	0	0	00	0	0	0	0	
529	0	0	0	0	0	0	0 9	0	0	0	0	0	00	0	0	0	0	
530	0	0	0	0	0	0	0	0 327	-0 002	0	0	0	0	00	0	0	0	
53	0	0	0	0	0	0	0	0 04	0	0	0	30	30	20	20	0	0	
532	0	0	0	0	0	0	0	0 4 2	-0 006	0	0	0	00	0	0	0	0 0	
533	0	0	0	0	0	0	0	0 038	0	0 00	0	0	00	0	0	0	0	
534	0	0	0	0	0	0	0	0	0 37	0 0	0	0	00	0	0	0	0 0	
535	0 008	0	0	0	0	0	0	0	0 407	0 9	0 008	0	00	0	0	0	0 0	
536	058	0	0	0	0	0	0	0 0	0 996	279	058	0	00	0	0	0	0 0	
537	0 02	0	0	0	0	0	0	0	0 265	0 648	0 02	0	00	0	0	0	0 0	
538	0	0	0	0	0	0	0	0	0 045	0	0	0	00	0	0	0	0 0	
539	0 006	0	0	0	0	0	0	0	0	0 297	0 006	0	00	0	0	0	0 0	
540	0	0	0	0	0	0	0	0	0	0 0	0	0	00	0	0	0	0	
54	0 995	0	0	0	0	0	0	0	0	0	0 995	0	00	0	0	0	0	
542	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	
543	0 865	0	0	0	0	0	0	0	0	0 99	0 865	0	00	0	0	0	0	
544	0 94	0	0	0	0	0	0	0	0	0	0 94	0	00	0	0	0	0	
545	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	
546	0 566	0	0	0	0	0	0	0	0	0	0 566	30	70	0	0	0	0	
547	0 947	0	0	0	0	0	0	0	0	0	0 947	0	00	0	0	0	0	
548	0 7	0	0	0	0	0	0	0	0	0	0 7	0	00	0	0	0	0	
549	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0 02	
550	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	
55	0 022	0	0	0	0	0	0	0	0	0	0 022	0	00	0	0	0	0	
552	0 04	0	0	0	0	0	0	0	0	0	0 04	0	00	0	0	0	0	
553	0 0 7	0	0	0	0	0	0	0	0	0	0 0 7	0	00	0	0	0	0	
554	0	0	0	0 059	-0 003	0 066	0 005	0	0	0	0	0	00	0	0	0	0	
555	0	0 06	0 003	0	0	0	-0 00	-0 00	0	0	0	0	00	0	0	0	0	
556	0	0	0	0 02	0 568	0 354	0 002	0	0	0	0	0	00	0	0	25	25	
557	0	0	0	0	0	0	0	0 067	0 007	0	0	0	00	0	0	0	0	

So t Re	CIM Subm ssion Re e ence	o ect D Re e ence	o ect Name	C oject e od	a ent oject ID	Subs i u e oject ID	ima y Asset Catego y	C 0 og amme	Regu ato y Sign-O Requi ed
558	20 9_20 Q4	NA020	Remote Sample Ha dwa e Re esh	03			5	20	
559	20 9_20 Q4	NA025	Upg ade o IMS AQC Module to Aqc ools	05			5	20	
560	20 9_20 Q4	NA035	u chase o Automat c Samp ng Equipment and Bat e ies	06			4	20	
56	20 9_20 Q4	NA060	MM	06			5	20	
562	20 9_20 Q4	NA06	9 20 Ene gy (d a t)	06			5	20	
563	20 9_20 Q4	NA062	lot on Wi e ess Sub Me e ing	06			5	20	
564	20 9_20 Q4	NA064	Addi ional unctional ty o Ene gy Management So wa e	06			5	20	
565	20 9_20 Q4	NA066	Business Ana yt cs pa tne	06			5	20	
566	20 9_20 Q4	NA068	Ene gy Sto age ~ SBRI	06			06	20	
567	20 9_20 Q4	NA069	mp oving E ic ency in Wastewa e eatment via ocess Eng nee ng	06			4	20	
568	20 9_20 Q4	NA072	mp oving E ic ency in Wate ea ment v a ocess Enginee ng	06			02	20	
569	20 9_20 Q4	O 04	Me e Read ng Hand He d Un ts & So twa e	05			06	20	
570	20 9_20 Q4	O 042	MG - eet u chases 3 4	03			5	20	DRD
57	20 9_20 Q4	O 048	oughbook Re esh oject – C ad e pu chase & ns al ation	03			5	20	DRD
572	20 9_20 Q4	O 058	M&E Sto es Rational sat on	06			5	20	
573	20 9_20 Q4	O 060	MG leet u chases - 5 6	06			5	20	
574	20 9_20 Q4	O 06	Eme gency ann ng 5 6	06			5	20	
575	20 9_20 Q4	O 062	Wa e i t ngs Regu at ons Connect3 System	06			06	20	
576	20 9_20 Q4	O 063	Eme gency Eme gency Holding ne 6 7	06			5	20	
577	20 9_20 Q4	O 064	MG - Vehic e & lant Replacemen s 6 7	06			5	20	
578	20 9_20 Q4	O 065	one Wo ke Re esh	06			5	20	
579	20 9_20 Q4	O 067	MG - V& Requi ements (7 8)	06			5	20	
580	20 9_20 Q4	O 068	MG - V& Requi ements (8 9)	06			5	20	
58	20 9_20 Q4	O 069	MG - V& Requi ements (9 20)	06			5	20	
582	20 9_20 Q4	O 070	MG - V& Requi ements (20 2)	06			5	20	
583	20 9_20 Q4	00	Ops Cont ac s Mate ial es ing	06			5	20	
584	20 9_20 Q4	002	2 2 Was ewate hase	06			5	20	
585	20 9_20 Q4	005	Ene gy E ciency - ocess Optimisat on	06			5	20	
586	20 9_20 Q4	006	Repai & Ma ntenance Review o ect	06			06	20	
587	20 9_20 Q4	009	Wa e oduc ion ine S u ce Va ve & i e Hyd ant Rep acement og amme	06			03	20	
588	20 9_20 Q4	0 0	empo a y OC	06			5	20	
589	20 9_20 Q4	QC0	abo ato y Capital Equ pment 2 3	0			5	20	
590	20 9_20 Q4	QC0 2	abo ato y Equipment 3 4 & 4 5	03			5	20	DWI
59	20 9_20 Q4	QC0 5	De b i lato s o N W depo s & Hubs	03			06	20	
592	20 9_20 Q4	QC0 8	abo ato y Capital 5 6	06			5	20	
593	20 9_20 Q4	QC0 9	20 5 6 SCAM NI (Sustainable Catchment A ea Management lann ng)	06			06	03	
594	20 9_20 Q4	QC020	Wa son Ma low pump - C ypto	06			5	20	
595	20 9_20 Q4	QC02	20 6 7 SCAM NI (Sustainable Catchment A ea Management lann ng)	06			06	03	
1596	2019_20 Q	QC022	Laboratory Cap tal 16/17	06			06	20	
1597	2019_20 Q	QC023	Laboratory Cap tal 17/18	06			06	20	
1598	2019_20 Q	QC02	2017/18 SCAMP NI (Sus ainable Catchment Area Managemen	06			06	03	
1599	2019_20 Q	QC026	Laboratory Cap tal 18/19	06			15	20	
1600	2019_20 Q	QC027	2018/19 SCAMP NI Projec s	06			06	20	
1601	2019_20 Q	QC028	CSOLS AQC Tools UOM Licensing	06			06	20	
1602	2019_20 Q	QC029	Laboratory Cap tal 19/20	06			15	20	
1603	2019_20 Q	QC030	Laboratorys Addi ional Capital 18/19	06			15	20	
160	2019_20 Q	QC031	Laboratory Cap tal 20/21	06			15	20	
1605	2019_20 Q	QC032	Waste Wa er Random Sampling Project 18/19	06			09	20	
1606	2019_20 Q	QC033	2019/20 SCAMP NI Projects	06			01	20	
1607	2019_20 Q	QC035	Laboratorys add tional Capi al 19/20	06			15	20	
1608	2019_20 Q	QC036	Laboratory Cap tal - Addi ional need Part 3 19/20	06			15	20	
1609	2019_20 Q	QC037	Laboratory Cap tal Need	06			15	20	
1610	2019_20 Q	QC038	UPS Systems or Lab s	06			15	20	
1611	2019_20 Q	BN051	PC15 Ops Capital (Sewerage) BSP & SDB Parent	06			07	18	
1612	2019_20 Q	CF11	Instal at on of water me ers and separat ons Baseline	06			03	19	
1613	2019_20 Q	LN13	Leakage Parent PC15	06			03	09	
161	2019_20 Q	WS121	Ops Capi al (Water) BSP & SDB Pa ent PC15	06			03	10	
1615	2019_20 Q	CS020	Capital sed Sa ar es and On-Costs	00				00	
1616	2019_20 Q		Leakage-Detection	00			03	09	
1617	2019_20 Q		Leakage-Repairs	00			03	09	
1618	2019_20 Q		Leakage-Other	00			03	09	
1619	2019_20 Q		Wa er Supply	00			02	10	
1620	2019_20 Q		Wastewater	00			09	18	
1621	2019_20 Q		Customer Field Serv ces	00			03	19	
1622	2019_20 Q		DSCT-Wa er	00			03	10	
1623	2019_20 Q		DSCT-Sewerage	00			07	18	
162	2019_20 Q		M & E	00			09	18	
1625	2019_20 Q		Networks Water	00			03	10	
1626	2019_20 Q		Lead Pipe	00			03	10	
1627	2019_20 Q		Cost of connect ons sewerage	00			07	18	
1628	2019_20 Q		Cost of connnec ions water	00			03	10	
1629	2019_20 Q		Cost of watermains rel gnment	00			03	10	
1630	2019_20 Q		Cost of Sewer rea ignment	00			07	18	
1631	2019_20 Q		FRS Adjustment Line						
1632	2019_20 Q		NTERREG						

So t Re	Base ine A Date	Base ine o ect App oval Dat	Base ine S a t on S te Date	Basel ne Bene ic al Use Date	Base ine Regu ato y sign o Da e	Base ine Complet on o Const uc ion Da e	Basel ne End o Ma ntenance e iod Date	Base ine Se v ce A locat on Wa e n ast uctu e	Basel ne Se vice Al ocat on Wate Non- In ast uc u e	Base ine Se v ce A loca ion Sewe age n ast uctu e	Basel ne Se vice Al ocat on Sewe age Non- In ast uc u e	Basel ne CA EX 20 0- £m	Basel ne CA EX 20 - 2 £m	Base ine CA EX 20 2 3 £m	Basel ne CA EX 20 3- 4 £m	Basel ne CA EX 20 4- 5 £m	Base ine CA EX 20 5- 6 £m	Base ine CA EX 20 6- 7 £m	Basel ne CA EX 20 7- 8 £m	Basel ne CA EX 20 8- 9 £m	Base ine CA EX 20 9 20 £m	asel ne u pose Al ocat on Qua i y	Base ne u pos Al ocat on Base	Base ine u pose Al ocat on ES	Basel ne u pos Al ocation G owt
1611								0	0	23	77						7 3268691	7.2829079	7.2392105	7.1957752	7.1526005	0	91	0	9
1612								0	100	0	0						3.779818	3.708672	3.6 59526	3.5838519	3 5623 88	0	89	0	11
1613								5	55	0	0						2 6868816	2.6871512	2.55 10 9	2.6292809	2 61066 5	0	80	0	20
161								56		0	0						6.199965	6.1627652	6.1257886	6.0890339	6 052 997	5	53	0	3
1615								29	12	11	8						11.283935	11.216232	11 202815	11.135598	11.068785	23	57		15

So t Re	Cu ent Actua o o ec ed A Da e	Cu ent Ac ual o ojec ed oject App oval Date	Cu ent Ac ua o o ected Sta t on Si e Date	Cu ent Actua o o ected Bene cial Use Date	Cu ent Actual o ojec ed Regula o y sign-o Date	Cu ent Ac ual o ojected Comp et on o Const uc ion Da e	Cu ent Ac ua o o ected End o Ma ntenance e iod Date	Cu ent Actual o ojec ed Se vice Al ocat on Wate In ast uc u e	Cu ent Ac ual o o ected Se v ce Al oca ion Wa e Non- In ast uctu e	Cu ent Actual o ojec ed Se vic A locat on Sewe age n ast uctu e	Cu ent Actual o o ected Se v ce Al oca ion Sewe age Non- In ast uc u e
558	0 20 3	22 0 20 3						0	50	0	50
559	04 20 4	06 20 4						0	50	0	50
560	20 02 20 7	20 02 20 7						0	0	0	00
56	0 05 20 8	3 05 20 8						0	40	0	60
562	20 20 9	29 20 9						0	66	0	34
563	3 08 20 8	28 08 20 8						0	50	0	50
564	25 03 20 9	0 04 20 9						0	50	0	50
565								0	55	0	45
566								0	50	0	50
567	3 2 20 9	7 2 20 9						0	0	50	50
568	3 0 2020	4 0 2020						0	00	0	0
569	24 02 20 4	24 02 20 4						0	00	0	0
570	9 09 20 3	23 09 20 3						0	62	0	38
57	30 0 20 3	04 20 3						0	50	0	50
572	23 0 20 6	0 20 6						0	30	0	70
573	08 20 5	8 08 20 5						0	62	0	38
574	2 09 20 5	22 09 20 5						0	00	0	0
575								0	00	0	0
576	7 0 20 6	9 0 20 6						0 00	00 00	0 00	0 00
577	04 07 20 6	05 07 20 6						0 00	62 00	0 00	38 00
578	9 0 20 6	9 0 20 6						0 00	50 00	0 00	50 00
579	6 0 20 8	6 0 20 8						0 00	60 00	0 00	40 00
580	5 0 20 9	5 0 20 9						0 00	50 00	0 00	50 00
58	9 2 20 9	27 2 20 9						0	50	0	50
582								0	50	0	50
583	09 20 5	09 20 5						0	00	0	0
584	0 20 6	0 20 6						0	0	0	00
585	3 0 20 6	3 0 20 6						0	0	0	00
586	30 06 20 7	07 20 7						0	00	0	0
587								00	0	0	0
588	30 0 2020	30 0 2020						0	50	0	50
589	27 0 20 2	03 02 20 2						0	5	0	49
590	05 06 20 3	2 06 20 3						0	5	0	49
59	05 08 20 3	2 08 20 3						0	50	0	50
592	04 06 20 5	04 06 20 5						0	5	0	49
593	08 05 20 5	05 20 5						0	00	0	0
594	5 04 20 5	5 04 20 5						0	00	0	0
595	5 04 20 6	6 04 20 6						0	00	0	0
1596	2579	2579						0	51	0	9
1597	2818	2823						0	51	0	9
1598	2725	2739						0	100	0	0
1599	3213	3213						0	51	0	9
1600	316	3167						0	100	0	0
1601	3236	3236						0	51	0	9
1602	3511	3516						0	51	0	9
1603	3390	3391						0	51	0	9
160								0	51	0	9
1605	3536	3536						0	0	0	100
1606	3556	3557						0	100	0	0
1607	3657	3657						0	9	0	51
1608	3731	3732						0	51	0	9
1609	3832	3832						0	51	0	9
1610	3900	3900						0	51	0	9
1615								27	21	17	35
1616								92	8	0	0
1617								100	0	0	0
1618								7	26	0	0
1619								15	85	0	0
1620								0	0	72	28
1621								0	100	0	0
1622								100	0	0	0
1623								0	0	29	71
162								0	11	0	89
1625								76	23	0	0
1626								100	0	0	0
1627								0	0	100	0
1628								100	0	0	0
1629								100	0	0	0
1630								0	0	100	0
1631								100	0	0	0
1632								0	2	0	98

So t Re	Cu ent Actua o o ected CA EX ea to da e £m	Cu ent Actua o o ec ed CA EX 20 0 £m	Cu ent Ac ual o ojec ed CA EX 20 - 2 £m	Cu ent Ac ua o o ected CA EX 20 2- 3 £m	Cu ent Actua o o ected CA EX 20 3- 4 £m	Cu ent Actual o ojec ed CA EX 20 4- 5 £m	Cu ent Ac ual o ojected CA EX 20 5- 6 £m	Cu ent Ac ua o o ected CA EX 20 6- 7 £m	Cu ent Actua o o ec ed CA EX 20 7 8 £m	Cu ent Actual o ojec ed CA EX 20 8- 9 £m	Cu ent Ac ua o o ected CA EX 20 9- 20 £m
558	0	0	0	0	0 069	0 06	-0 004	0	-0 002	0	0
559	0	0	0	0	0	0 029	-0 00	0 002	0	0	0
560	0	0	0	0	0	0	0	0 02	-0 00	0	0
56	0	0	0	0	0	0	0	0	0	0 044	0
562	0 25	0	0	0	0	0	0	0	0	0	0 25
563	0	0	0	0	0	0	0	0	0	0 024	0
564	0 005	0	0	0	0	0	0	0	0	0	0 005
565	0	0	0	0	0	0	0	0	0	0	0
566	0 5	0	0	0	0	0	0	0	0	0	0 5
567	0 02	0	0	0	0	0	0	0	0	0	0 02
568	0 006	0	0	0	0	0	0	0	0	0	0 006
569	0	0	0	0	0 2 6	0 079	0 0 6	0	0	0	0
570	0	0	0	0	885	0	-0 006	0	0	0	0
57	0	0	0	0	0 45	0 098	0 047	-0 032	0	0	0
572	0	0	0	0	0	0	0	0	0 79	0 46	0
573	0	0	0	0	0	0	0 8 6	-0 005	0	0	0
574	0	0	0	0	0	0	0 058	0	-0 00	0	0
575	0	0	0	0	0	0	0	0	0	0	0
576	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 020	0 000	0 000	0 000
577	0 000	0 000	0 000	0 000	0 000	0 000	0 000	79	0 000	-0 0 6	0 000
578	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 0 2	0 000	0 000	0 000
579	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 590	0 025	0 000
580	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	004	0 000
58	044	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	044
582	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000
583	0 000	0 000	0 000	0 000	0 000	0 000	0 00	0 00	-0 00	0 000	0 000
584	0 088	0 000	0 000	0 000	0 000	0 000	0 088	0 000	0 000	0 000	0 088
585	0 000	0 000	0 000	0 000	0 000	0 000	0 76	0 072	0 004	0 00	0 000
586	0 0 3	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 067	0 4	0 0 3
587	0 020	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 020
588	0 375	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 375
589	0 000	0 000	0 000	0 07	0 000	0 000	-0 004	0 000	0 000	0 000	0 000
590	0 000	0 000	0 000	0 000	0 223	0 234	-0 022	0 087	0 000	0 000	0 000
59	0 000	0 000	0 000	0 000	0 0 5	0 000	-0 003	0 000	0 000	0 000	0 000
592	0 000	0 000	0 000	0 000	0 000	0 000	0 046	0 004	-0 00	0 000	0 000
593	0 000	0 000	0 000	0 000	0 000	0 000	0 50	0 00	-0 002	0 000	0 000
594	0 000	0 000	0 000	0 000	0 000	0 000	0 002	0 000	0 000	0 000	0 000
595	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 207	-0 0 5	0 0 4	0 000
1596	0	0	0	0	0	0	0	0.0 1	0 003	0	0
1597	0	0	0	0	0	0	0	0	0 039	0	0
1598	0	0	0	0	0	0	0	0	0.199	0.028	0
1599	0	0	0	0	0	0	0	0	0	0.065	0
1600	0	0	0	0	0	0	0	0	0	0.128	0
1601	0.002	0	0	0	0	0	0	0	0	0.01	0.002
1602	0.237	0	0	0	0	0	0	0	0	0	0.237
1603	0.013	0	0	0	0	0	0	0	0	0.023	0.013
160	0	0	0	0	0	0	0	0	0	0	0
1605	0 03	0	0	0	0	0	0	0	0	0	0 03
1606	0.133	0	0	0	0	0	0	0	0	0	0.133
1607	0.027	0	0	0	0	0	0	0	0	0	0.027
1608	0.19	0	0	0	0	0	0	0	0	0	0.19
1609	0.026	0	0	0	0	0	0	0	0	0	0.026
1610	0	0	0	0	0	0	0	0	0	0	0
1611		0	0	0	0	0	0	0	0	0	
1612		0	0	0	0	0	0	0	0	0	
1613		0	0	0	0	0	0	0	0	0	
161		0	0	0	0	0	0	0	0	0	
1615	15. 32	0	0	0	11.5 3	11 72	12. 6	12.318	13 957	1 .630	15. 32
1616	0. 91	0	0	0	0.538	0 5 1	0.56	0.51	0. 8	0. 70	0. 91
1617	0.309	0	0	0	0.229	0 229	0.309	0.309	0 309	0.309	0.309
1618	2.80	0	0	0	2. 2	2 309	1.895	1.872	1 629	1.7 1	2.80
1619	1.569	0	0	0	1.97	1. 25	1.80	1.7	1 206	1.233	1.569
1620	.231	0	0	0	.191	3 693	.792	.851	3 901	3.979	.231
1621	1.352	0	0	0	2.301	2. 77	3.250	2.7 7	1 0 5	1.396	1.352
1622	2.208	0	0	0	1. 19	1 211	1.330	1.716	2.170	2.215	2.208
1623	0.375	0	0	0	0. 60	0 561	0.357	0.10	0 250	0.206	0.375
162	6. 75	0	0	0	6.923	6 298	6.56	6.52	5 069	5.265	6. 75
1625	.06	0	0	0	2.300	2.171	2.299	2. 16	1 885	2.6 3	.06
1626	0.097	0	0	0	0.331	0 368	0. 21	0.281	0 370	0.351	0.097
1627	1. 2	0	0	0	0.677	0 827	0.951	0.919	1 679	1.56	1. 2
1628	3.095	0	0	0	1.7 0	1 787	1.722	2.102	2 376	2.515	3.095
1629	0.095	0	0	0	0.110	0 0 5	0.082	0.013	0 0 3	0.133	0.095
1630	0.007	0	0	0	0.096	0 018	0.000	0.015	0 003	0.000	0.007
1631	-1.161										-1.161
1632	13.15										13.15

So t Re	Cu ent Ac ual o o ected u pose A oca ion Qual t	Cu ent Actual o ojec ed u pose A locat on Base	Cu ent Ac ual o o ected u pose A loca ion ES	Cu ent Actual o ojec ed u pose A locat on G ow h	Cu ent Ac ual o o ected RE A loca ion Wa e	Cu ent Actual o o ec ed IRE Al ocat on Sewe age	Nom na ed Ou put
558	0	00	0	0	0	0	
559	0	00	0	0	0	0	
560	0	00	0	0	0	0	
56	0	45	55	0	0	0	
562	0	0	00	0	0	0	
563	0	0	00	0	0	0	
564	35	25	40	0	0	0	
565	55	0	5	30	0	0	
566	0	0	00	0	0	0	
567	25	0	75	0	0	0	
568	50	0	50	0	0	0	
569	0	70	30	0	0	0	
570	0	00	0	0	0	0	
57	0	0	00	0	0	0	
572	0	00	0	0	0	0	
573	0	00	0	0	0	0	
574	0	00	0	0	0	0	
575	0	00	0	0	0	0	
576	0 00	00 00	0 00	0 00	0	0	
577	0 00	00 00	0 00	0 00	0	0	
578	0 00	00 00	0 00	0 00	0	0 0	
579	0 00	00 00	0 00	0 00	0	0 0	
580	0 00	00 00	0 00	0 00	0	0	
58	0	00	0	0	0	0	
582	0	00	0	0	0	0	
583	0	00	0	0	0	0	
584	0	0	00	0	0	0	
585	0	55	45	0	0	0	
586	0	00	0	0	0	0 0	
587	0	00	0	0	00	0	
588	0	0	00	0	0	0	
589	0	00	0	0	0	0	
590	0	00	0	0	0	0	
59	0	0	00	0	0	0	
592	0	00	0	0	0	0	
593	30	20	40	0	0	0	
594	0	00	0	0	0	0	
595	30	20	40	0	0	0	
1596	0	100	0	0	0	0	
1597	0	100	0	0	0	0 01	
1598	0	30	50	20	0	0 01	
1599	0	100	0	0	0	0	
1600	0	30	50	20	0	0	
1601	0	100	0	0	0	0	
1602	0	100	0	0	0	0	
1603	0	100	0	0	0	0	
160	0	100	0	0	0	0	
1605	0	100	0	0	0	0	
1606	0	30	50	20	0	0	
1607	0	100	0	0	0	0	
1608	0	100	0	0	0	0	
1609	0	100	0	0	0	0	
1610	0	100	0	0	0	0	
1615	1	58	10	17			
1616	0	57	0	3			
1617	0	100	0	0			
1618	0	5	0	55			
1619	0	100	0	0			
1620	0	100	0	0			
1621	0	9	0	6			
1622	0	1	0	86			
1623	0	58	0	2			
162	0	100	0	0			
1625	0	99	0	1			
1626	100	0	0	0			
1627	0	0	0	100			
1628	0	0	0	100			
1629	0	100	0	0			
1630	0	100	0	0			
1631	0	100	0	0	100		
1632	98	1	1	1			

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:
    - Capital works Programme
    - Management and General
    - Operations Capital

  The total Capitalised Salaries and overheads were allocated pro rata 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 19.
- 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 20 the reported numbers in these two tables are as follows:
  Table 25 – £75.632m
  Table 36 – £75.657m.

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 2019/20
c) An element of Capital Interest (Total value £5.477m) 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 – £143.378m
  Table 36 – £143.423m.

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 2019/20
f) An element of Capital Interest (Total value £5.477m) 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.

NOR HERN IRELAND WA ER LIMI ED ANNUAL INFORMA ION RE URN

ANNUAL INFORMA ION RE URN ABLE 40A
NOM NA ED OU PU S DELIVERED BY PC15 CAPI AL PRO EC S AND PROGRAMMES OF WORK

A								B																	
Project Information								Project Outputs																	
Project ID Reference	Project Name	PC13 Programme	Qual ty 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 appropria e)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Basel ne							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			5			6	7	8	9	10	11	12	13	1	15	16	17	18		11	12	13	1	15	16	17	18	
	Water reatment Base Ma ntenance																													
JA271	Killylane WTW	1			31/12/201			7	nr					1									1							
	Water reatment Works																													
JN390	Lough Bradan WTWs Upgrade				02/03/2011			7	nr	1																				
JL723	Camoney Water Treatment Works Upgrade				30/03/2011			7	nr	1																				
JP669	Killyhevlin WTW - Enforcement Order				31/03/2015			7	nr					1									1							
JR 63	Dorisland WTW GAC p ant				27/03/2015			7	nr					1									1							
JI052	Glenhord al Treatab lity			30/09/2015	29/01/2016	29/01/2016		7	nr						1									1						
JI052	Dorisland T eatabi ity			31/12/2020	n/a		31/03 2021	7												1								1	
JI052	Killyhelvin Treatab lity			31/12/2020	n/a		31/03 2021	7												1								1	
JL772	Caugh Hi l Treatabil ty			31/01/2019	n/a		31/03 2021	7										1										x	
JC390	Rath in Borehole						29/11 2019	7																			1		
JL795	Bal inrees WTW , MCPA treatment investigations						31/03 2021	7																				1	
JN538	Derg WTW MCPA PEO Undertakings						31/03 2021	7																				1	
	runk Mains																													
JR 16	CTM Extension - Barnetts Park to Purdysburn	5			29/11/2010			6	nr	1																				
JG036	Cas or Bay to Dungannon Strategic Trunk Mains	5			2 /05/2011			6	nr	1																				
JG035	Ballydougan to Newry Main Link Rein orcement Phase 1	5			0 12/2012			6	nr			1																		
JG035	Ballydougan to Newry TM - Phase 2A	5			17/12/2012			6	nr			1																		
JR 60	Gravity ll McVeighs We l to O dpark SR	5			30/11/201			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						
JR3 2	Cas or Bay to Belfast TM	5		27/03/2015	08/05/2015	08/05/2015		6	nr					1										1						
JB693	Carland e Cooks own 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	
	Service Reservoirs																													
JB665	Tu laghans SR, Dunloy, New Reservoir	6			13/08/2010			8	nr	1																				
JC381	Altnahinch WTP, Ba lymoney, New CWB.	6			10/11/2010			8	nr	1																				
JC378	Glenlough SR, Ballymoney, New SR	6			20/12/2010			8	nr	1																				
JR151	West Bel ast/ North Lisburn (Crew Hil)	6			18/01/2011			8	nr	1																				
JB6 8	Dungonnell Command Service Reservoir	6			31/03/2011			8	nr	1																				
JF583	Carland Serv ce Reservoir	6			11/0 /2011			8	nr		1																			
JS179	Ballykine G avity Distribu ion	6			20/0 /2011			8	nr		1																			
JV827	Tu lyhappy SR	6			09/12/2011			8	nr		1																			
JB6 9	Tu ly SR	6			06/12/2012			8	nr			1																		
JV830	Crieve SR	6			27/03/2015			8	nr					1									1							
JS27	Drumaroad WTW Clear Water Tank	6		31/03/2021	n/a		31/03 2021	8												1								1	
JP631	Killyhelvin C ear Water Tank	6		30/09/2017	n/a	29/03/2019	31/05 2020	8									1											1	
JB709	Lough Fea CWB	6		30/09/2019	n/a		2 /03 2020	8											1								1	
	Monaclogh SR (addi ional output in 16 17 draft adjusted outputs submission)	6		n/a	n/a		01/08 2017	8																	1				
	Major Incident Mit gation Water Main Projects																													
JI02	M MP West (Major Incident Mit gat on P oject West Region) Freeze Thaw Improvements	8			1 /02/201			15	nr				1									1							
JI025	M MP South (Major Incident Mi igation Project West Region) Freeze Thaw Improvements	8			2 /01/201			15	nr				1									1							
JI027	M MP Central (Major Inc dent M tigation Project Central Region) Freeze Thaw Improvements	8			28/03/201			15	nr					1								1							
JI028	M MP East (Major Incident Mit ga ion Project East Region) Freeze Thaw Improvements	8			09/02/2015			15	nr				1										1						
JI026	M MP North (Major Incident Mit gat on Project North Region) Freeze Thaw Improvements	8			18/08/201			15	nr					1									1						
	Unsatisfactory nterm tent Discharges																													
KR 03	Whitehouse DAP Phase 1	11			13/0 /2010			12	nr	3																				
KR 02	Joymount WWPS	11			01/06/2010			12	nr	1																				
KR 00	Lukes Point DAP Phase 1	11			23/06/2010			12	nr	1																				
KL 50	Londonder y DAP : Strath oy e & Drmahoe Work Package : Caw WWPS	11			01/07/2010			12	nr	1																				
KB 28	Draperstown DAP	11			02/07/2010			12	nr	2																				
KG153	Gilford Road, Portadown, Sewerage Upgrades	11			10/08/2010			12	nr	3																				
KL 9	Londonder y DAP : Strath oy e & Drmahoe Work Package : Drumahoe Old WWPS	11			02/09/2010			12	nr	1																				
KR 0	Ballywa ter DAP Phase 1	11			30/09/2010			12	nr	1																				
KL 5	Londonder y DAP: V cto ia road Work Package - UID's	11			11 10/2010			12	nr	1		1																		
KL 8	Londonder y DAP : V ctoria Road Work Package : CSO Rational sa ion	11			29/10/2010			12	nr	3																				
KL 28	Londonder y Sewer Imps Stage 2 - Duke St PS Group Schemes - UID's	11			28/03/2011			12	nr	3																				
KR 1	Monlgome y Rd, Flood A levia ion - UID's	11			27/0 /2012			12	nr																					
KS807	Kilkeel Harbour SPS and Sewerage Improvements - UID s	12			0 /06/2012			12	nr			2																		
KS379	Murlough SPS Upgrade & Network Improvements - U D s	12			29/0 /2011			12	nr		8	1																		
KR 52	Baroda Street/Ormeau Park, Belfast CSO	12			07/09/2011			12	nr		2																			
KT138	Beechlawn SPS Hil sborough Upgrade - UID's	12			30/11/2011			12	nr		1																			
KL 3	Londonder y DAP Duke Street Work Package - UID's	12			02 12/2011			12	nr																					
KR 32	Beechmount Avenue/Gortfin Street Be fast Hydrau ic Upgrade. - U D's	12			02/12/2011			12	nr																					
KL	Londonder y DAP, Buncrana Road, Work Package Stage 1- UID's	12			07/05/2012			12	nr			2																		
KL 6	Londonder y DAP, Duke Street Work Package, Flood A leviation	12			13/12/2011			12	nr		3																			
KS377	Downs Road Cast e Park Sewer Upgrade/ Al enuation - UID s	12			23/01/2012			12	nr																					
KC 0	Coleraine DAP Phase 1 - UID s	12			31/01/2012			12	nr		5																			
KR 3	Annada e F ats, Belast	12			30/03/2012			12	nr																					
KS878	Bangor DAP Work Package 7: WWPS - UID'S	12			28/03/2012			12	nr		3																			
KA201	Ballyeaston, Sewerage System Upgrade	12			23/0 /2012			12	nr		1																			
KL 7	Londonder y DAP; Foy e Road Work Package: CSO Rat onalisation - UID s	12			2 /09/2012			12	nr			10																		
KS373	Church Street, SPS Upgrade, Downpatr ck - UID's	12			06/05/2013			12	nr																					
KS373	UID0 6 Meadowlands CSO3	12			06/05/2013			12	nr				1									1								
KS373	UID0 7 Church Street CSO1	12			06/05/2013			12	nr				1									1								
KS373	UID0 8 Scotch Street CSO	12			06/05/2013			12	nr				1									1								
KS373	UID0 9 Scotch Street CSO11	12			06/05/2013			12	nr				1									1								
KS373	UID050 Rathke lair 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																		
KG18	Portadown Drainage Area Network Improvements - Obins Street and Park Road - UID's	12			31/08/2012			12	nr																					
KR 88	Linen Gardens Be fast CSO Screening - UID s	12			01/01/201			12	nr				1									1								
KN595	Brookmount Road, Hunters Cresent, Omagh	12			31/05/2011			12	nr			5																		
KS812	Greyabbey DAP Phase 1 - U D's	12			2 /09/2012			12	nr			2																		
KV01	Cas lewe lan DAP - UIDs	12			19/08/2010			12	nr			2																		
KG178	Annaghanoon Road WWPS, Waringstown	12			05/09/2011			12	nr			1																		
KL 51	Londonder y DAP, Strathfoy e Drumahoe Package: CSO Abandonmen s - UID s	12			2 /09/2012			12	nr			3																		
KR 39	M llisle DAP 1	12			29/11/2012			12	nr			1																		
KV063	Newry Rehab	12			05/09/2011			12	nr			1																		
KV159	Water Street/Homers Lane Rostrevor	12			2 /06/2011			12	nr			1																		
KN6 6	Winters Lane, CSO Upgrade - U D	12			27/03/2013			12	nr			1																		
KT 15	Glenmore WwPS Lisburn CSO upgrade	12						12	nr																					
KT 15	UID065 Glenmore SPS CSO 22	12			25/06/2013			12	nr				1									1								
KS939	Cent al Promenade, Newcastle CSO Upgrade (Paltons Bridge)	12						12	nr																					
KS939	UID259 Pat ons Bridge (B ackrock WwPS	12			31/03/2016	2 /03/2016	2 /03 2016	12	nr					1										1						PC13
KV15	Newry Road SPS Warrenpoint - UID s	12						12	nr																					
KV15	UID095 Newry Road TPS CSO	12			1 /01/201			12	nr					1								1								
KV15	UID23 Drumsesk Road Header Tank CSO	12			1 /01/201			12	nr					1								1								
KS372	Market Street SPS Upgrade, Downpatrick - U D s	12						12	nr																					
KS372	UID0 Market Street SPS Upgrade, Downpatrick - U D's	12			18/12/2015	18/02/2016	18/02 2016	12	nr					1										1						PC13

A								B																				
Project Information								Project Outputs																				
Project ID Reference	Project Name	PC13 Programme	Qual ty 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 appropria e)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Basel ne							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			5			6	7	8	9	10	11	12	13	1	15	16	17	18		11	12	13	1	15	16	17	18	
KF037	Annagher Sewage Pumping Station and Rising Main - UID s	12						12	nr																					
KF037	UID2 5 Annagher SPS	12			28/03/201			12	nr				1									1								
KF037	UID2 6 Campbells Garage WwPS CSO	12			28/03/201			12	nr				1									1								
KF037	UID2 7 Washing bay Road WwPS CSO	12			28/03/201			12	nr				1									1								
KF037	UID359 Canal Quay WWPS (not requi ed)	12			x			12	nr				1									x								
KV161	Cas lewe lan DAP S age 1 - U Ds	12						12	nr																					
KV161	UID033 Mill H ll CSO 0	12			31/03/201			12	nr				1									1								
KV161	UID031 Ba ly ough CSO 0	12			31/03/201			12	nr				1									1								
KV161	UID036 Annesborough Park CSO 01	12			31/03/201			12	nr				1									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
KT 03	Drumbeg Drive, L sburn WWPS Enhancement	12						12	nr																					
KT 03	UID070 Maralin Ave CSO 02	12			30/09/201			12	nr					1									1							
KS875	Bangor DAP Works Package 6: Lukes Point WWPS U Ds	12						12	nr																					
KS875	UID189 Bangor DAP Works Package 6: Lukes Point WWPS U Ds	12			30/09/201			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 Hi den 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 Ant im 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 Ho land 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	UID07 Laws Yard CSO 1	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 Linenha l Street CSO 03	12			30/03/2015			12	nr						1								1							PC15 FD
KT391	UID223 Ant im Street CSO 05	12		22/02/2016	31/10/2016	20/09/2017	31/03 2019	12	nr						1												1			PC15 FD
KT391	UID22 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 Spruce ield WWPS Screen CSO 20	12			30/03/2015			12	nr					1									1							
KT391	UID226 Antrim Road CSO 2 f ooding	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 Ba lynahinch 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	UID 23 Eg antine WWPS CSO 16	12			30/03/2015			12	nr					0									1							
KT391	UID 2 Culcavy WWPS CSO 17	12			30/03/2015			12	nr					0									1							
KT391	UID 25 Ba lindery WWPS CSO 23	12			30/03/2015			12	nr					0									1							
KT391	UID 21 Edgewater WWPS	12		31/03/2015	0 /09/2015	22/02/2016	0 /09 2015	12	nr					1										1						PC13
KT391	UID 22 Hoggs Weir CSO 0	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 Westbu n Cresc. CSO 3A	12		01/03/2015	31/03/2016	27/0 /2017	31/03 2019	12	nr					1													0		1	PC13
KS873	UID01 Crawfordsburn Rd CSO 03B	12		01/03/2015	29/0 /2016	22/05/2017	31/03 2019	12	nr					1													0		1	PC13
KS873	UID015 Crawfordsburn Rd CSO 03C	12		01/03/2015	29/0 /2016	09/05/2017	31/03 2019	12	nr					1													0		1	PC13
KR 80	Holywood Sewer Ca chment Investigations - U Ds	12						12	nr																					
KR 80	UID218 Pa ace Barracks CSO 110	12		31/12/2015	29/06/2016	30/11/2016	07/09 2016	12	nr						1										1					PC15 FD
KR 80	UID219 Jackson Road CSO 52	12			06/10/201			12	nr					1									1							
KR6 0	Holywood Sewer Network Improvements- Phase 2	12						12	nr																					
KR6 0	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	M llisle DAP Stage 2 Phase 2	12						12	nr																					
KS930	UID076 Mill sle SPS CSO 02	12		18/01/2016	31/03/2016	30/03/2017	12/12 2018	12	nr						1													0		1	PC15 FD
KR 17	Ormeau Avenue Sewer investigation and feasibi ity study for pollution resolution - UID s	12						12	nr																					
KR 17	UID191 Cromac Street CSO 95	12		31/03/2017	30/06/2016	31/06/2018	31/03 2019	12	nr							1												1		PC15 FD
KR 17	UID192 Outside Holiday Inn CSO97	12		31/03/2017	30/06/2016	31/06/2018	31/03 2019	12	nr							1												1		PC15 FD
KR 17	UID193 Dublin Road Cinema CSO 96	12		31/03/2017	30/06/2016	31/06/2018	31/03 2019	12	nr							1												1		PC15 FD
KR 17	UID19 Bankmore Street / Dublin Road CSO 81	12		31/03/2017	30/06/2016	31/06/2018	31/03 2019	12	nr							1												1		PC15 FD
KR 17	UID265 Sandy Row CSO 9	12		31/03/2017	30/06/2016	31/06/2018	31/03 2019	12	nr							1												1		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	0 /05/2018	31/03 2021	12	nr								1												1	PC15 FD
KG183	UID082 Meadow Lane CSO 07	12		31/03/2017	27/03/2017	25/05/2018	31/03 2021	12	nr							1													1	PC15 FD
KG183	UID083 Portmore Street CSO 08	12		30/09/2017	27/03/2017	28/09/2018	31/03 2021	12	nr								1												1	PC15 FD
KG183	UID085 Clonavon Avenue CSO 11	12		30/09/2017	27/03/2017	28/09/2018	31/03 2021	12	nr								1												1	PC15 FD
KG183	UID233 Meadow Lane WWPS CSO 32	12		31/03/2017	27/03/2017	06/0 /2018	31/03 2021	12	nr							1													1	PC15 FD
KG183	UID086 Meadow Lane CSO 12	12		30/09/2017	27/03/2017	06/0 /2018	31/03 2021	12	nr								1												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	1 /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 Drumcaim SPS. Scheme 3	12		31/03/2015	30/03/2015			12	nr					1									1							
KF330	UID 31 Ba lycrummy WWPS	12			30/03/2015			12	nr					0									1							
KF330	UID 30 Longstone WWPS	12			30/03/2015			12	nr					0									1							
KF330	UID010 Newry Road SPS	12		31/03/2016	29/0 /2016	31/03/2017	28/0 /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 Gil is Lane CSO	12		31/03/2015	30/03/2015			12	nr					1									1							
KF396	UID008 Milford SPS	12		31/03/2015	30/03/2018	30/0 /2019	0 /08 2017	12	nr					1												1				PC13
KF397	UID009 Ki ly ea SPS	12		31/03/2015	30/03/2018	30/03/2020	29/01 2020	12	nr					1														1		PC13
KS879	Bangor DAP Work Package : Bangor Marina UIDs	12						12	nr																					
KS879	UID018 Somerset Ave. CSO 11	12			27/08/201			12	nr					1									1							
KS879	UID019 Bridge St CSO 13	12			27/08/201			12	nr					1									1							
KS879	UID020 Quay St CSO 1	12			27/08/201			12	nr					1									1							
KS879	UID021 Tennyson CSO 10	12			27/08/201			12	nr					1									1							
KS879	UID022 Queens parade CSO 12	12			27/08/201			12	nr					1									1							
KS877	Bangor DAP Works Package 5 - C andeboye 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 10 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 11 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 V ew Street CSO 8G (not required)	12		31/03/2015	27/10/2016	29/01/2018	31/03 2018	12	nr					1													x			PC13
KS877	UID18 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 Bel ast Road CSO 8C	12		31/03/2015	27/10/2016	29/01/2018	31/03 2018	12	nr					1											1					PC13
KS877	UID26 17 Bel ast 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 St eam UIDs Phase 2	12						12	nr																					
KS958	UID185 Avon ea 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, U D Upgrades - UID's	12						12	nr																					
KS902	UID237 Paroch al House CSO 02	12		31/12/2016	21/08/2017	29/06/2018	31/03 2021	12	nr							1													1	PC15 FD
KS902	UID238 Main Street CSO 0	12		31/12/2016	21/08/2017	29/06/2018	31/03 2021	12	nr							1													1	PC15 FD
KS902	UID239 Flynn's WWPS CSO 05	12		31/12/2016	21/08/2017	05/0 /2019	31/03 2021	12	nr							1													1	PC15 FD
KT11	Hil sborough WWTW	16						12	nr																					
KT11	UID071 Magherageery PS CSO 18	16			18/03/201			12	nr				1									1								
KS8 8	Newcastle WwTW	16						12	nr																					
KS8 8	UID 260 Harbour WwPS	16			09/12/2013			12	nr				1									1								

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Project Information								Project Outputs																		
Project ID Reference	Project Name	PC13 Programme	Qual ty 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 appropria e)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Basel ne							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			5			6	7	8	9	10	11	12	13	1	15	16	17	18		11	12	13	1	15	16	17	18	
KR501	Carrickfergus WWTW Upgrade	2						12	nr																					
KR501	UID272 Carr ck ergus CSO	2			19/03/2015			12	nr					1									1							
KL 68	Strathfoyle, Londonderry Syphon Inlet Screen	12						12	nr																					
KL 68	UID11 Caw Park CSO 023	12		23/05/201	31/03/2016	31/03/2016	21/03 2016	12	nr					1										1						PC13
KL 68	UID380 Gransha Park WwPS No. 2	12		23/05/201	31/03/2016	31/03/2016	22/03 2016	12	nr					1										1						PC13
KC 15	Coleraine	12						12	nr																					
KC 15	UID0 3 Screen Road CSO	12		31/03/2016	30/03/2015			12	nr						1								1							PC15 FD
KC 15	UID0 0 Ba lysally CSO	12		31/03/2016	30/11/2016	31/03/2017	31/03 2018	12	nr						1										1					PC15 FD
KA2 8	Ballygally Sewer Rehabil tat on	12						12	nr																					
KA2 8	UID190 Brustin Lee WWPS	12			30/03/2015			12	nr					1									1							
KA2 8	UID319 Croft Manor WWPS	12			30/03/2015			12	nr					1									1							
KA2 8	UID320 Ba lygal ey Slipway WWPS	12			30/03/2015			12	nr					1									1							
KA2 8	UID321 Ba lygal ey North WWPS	12			30/03/2015			12	nr					1									1							
KA2 8	UID322 Ba lygal ey Coast Road CSO	12			30/03/2015			12	nr					1									1							
KI 88	Removal of In et Screens and Ins al ation of Sol d Handling Pumps	02						12	nr																					
KI 88	UID 00 Braeside WWPS	02			01/08/2013			12	nr				1									1								
KI 88	UID 01 Cloughy Road WWPS	02			01/09/2013			12	nr					1								1								
KI 88	UID 02 Old Mi l Race WWPS	02			01/08/2013			12	nr				1									1								
KI 88	UID 03 Glen Park WWPS	02			01/09/2013			12	nr				1									1								
KI 88	UID 0 Kerr es G en	02			01/01/201			12	nr				1									1								
KI 88	UID 05 Carnesure Terrace WWPS	02			01/0 /201			12	nr					1									1							
KI 88	UID 06 Hil side WWPS	02			01/10/2013			12	nr				1									1								
KI 88	UID 07 Chimera Wood WWPS	02			01/12/2013			12	nr				1									1								
KI 88	UID 08 Ba lystockart WWPS	02			01/11/201			12	nr					1									1							
KI 88	UID 09 Mill own WWPS	02			01/10/201			12	nr					1									1							
KI 88	UID 19 Ratalla WWPS	02			01/0 /2013			12	nr					1								1								
KS37	Hunter's M ll Storm At enuation and Network Improvements	12						12	nr																					
KS37	UID0 5 Downpatrick - Stream St CSO	12			19/02/2015			12	nr					1									1							
KS37	UID12 Hunters Mi l Attenuation Stream Street CSO2	12			19/02/2015			12	nr					1									1							
KA251	Umry Lodge CSO	12						12	nr																					
KA251	UID39 Clotworthy House CSO	12			22/01/201			12	nr				1									1								
KT139	River Road SPS Upgrade	02						12	nr																					
KT139	UID276 River Road WWPS	02			09/0 /201			12	nr					1									1							
KS867	Copeland Road, Comber, Tank Sewer	12						12	nr																					
KS867	UID3 3 Copeland Road CSO 61	12			30/10/201			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	UID 10 Glencra g WWPS	12			01/05/201			12	nr				0										1							
KF35	Dernagh WWPS Upgrade	02						12	nr																					
KF35	UID 16 Dernagh WWPS	02			01/09/201			12	nr					1									1							
KN6	Greenbridge WWPS Upgrade	02						12	nr																					
KN6	UID 17 Greenbridge WWPS	02			1 /11/2013			12	nr				1									1								
KF360	Blackwater Town WWPS Upgrade	02						12	nr																					
KF360	UID 18 Blackwatertown WWPS	02			31/03/201			12	nr				1									1								
KN628	Carrickmore WWPS Upgrade	02						12	nr																					
KN628	UID 27 Carr ckmore WWPS	02			27/08/201			12	nr					0									1							
KL50	Londonder y DAP : Buncrana Road Work Package, Stage 2	12						12	nr																					
KL50	UID273 Knockalla New WWPS	12		31/03/2015	29/02/2016	31/08/2016	13/09 2016	12	nr					1											1					PC13
KL50	UID27 Upper Gal iagh Road WWPS	12		31/03/2015	31/03/2016	31/03/2016	31/03 2016	12	nr					1										1						PC13
KL50	UID275 Glen Road CSO	12		31/03/2015	2 /0 /2015	2 /0 /2015	2 /0 2015	12	nr					1										1						PC13
KL50	UID 33 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 Camalea Golf Club CSO 1	12		30/09/2018	30/07/2018	31/03/2019	31/03 2021	12	nr									1										0	1	PC15 FD
KS872	UID012 Ki laneyWWPS 3	12		30/09/2018	30/07/2018	31/03/2019	31/03 2019	12	nr									1									1			PC15 FD
KS872	UID177 Ki lai e WWPS 1	12		30/09/2018	30/07/2018	31/03/2016	31/03 2016	12	nr									1						1						PC15 FD
KS87	Bangor DAP Works Package 3	12						12	nr																					
KS87	UID016 Maxwell CSO	12		30/09/2016	03/06/2019	29/03/2019	31/03 2021	12	nr							1											0		1	PC15 FD
KS87	UID017 Strick ands Glen WWPS	12		30/09/2016	03/06/2019	29/03/2019	31/03 2021	12	nr							1											0		1	PC15 FD
KS87	UID178 Brompton Road SPS (PS06)	12		30/09/2016	03/06/2019	29/03/2019	31/03 2021	12	nr							1											0		1	PC15 FD
KG177	Portadown DAP S age 2	12						12	nr																					
KG177	UID090 Annagh Catchment CSO 20	12		31/12/2018	0 /12/2017	30/09/2020	31/03 2022	12	nr									1									x			PC15 FD
KG177	UID091 Annagh SPS CSO 20	12		31/12/2018	0 /12/2017	03/0 /2020	31/03 2022	12	nr									1									x			PC15 FD
KG177	UID092 Chambers Park CSO 01	12		31/12/2018	0 /12/2017			12	nr									1									x			PC15 FD
KG177	UID093 Ba lynacor CSO21	12		31/12/2018	0 /12/2017	03/0 /2020	31/03 2022	12	nr									1									x			PC15 FD
KR 89	Glenmachan Strategic Project Phase 1a	12						12	nr																					
KR 89	UID 11 Balmoral Avenue CSO63	12		31/03/2016	19/06/2017			12	nr						1									x						PC15 FD
KR 89	UID 12 Balmoral Court CSO5	12		31/03/2016	19/06/2017			12	nr						1									x						PC15 FD
KR 89	UID 13 L sburn Road Go f Club CSO58	12		31/03/2017	19/06/2017			12	nr							1									x					PC15 FD
KR 89	UID 1 Park Royal CSO57	12		31/03/2017	19/06/2017			12	nr							1									x					PC15 FD
KR 89	UID 15 Priory Park CSO55	12		30/09/2017	19/06/2017	30/09/2017		12	nr								1												x	PC15 FD
KR50	Portaferry Road, N,Ards WWPS Upgrade	12						12	nr																					
KR50	UID351 Por aferry Road WWPS	12		31/03/2019	31/03/2017	31/08/2017	12/10 2019	12	nr									1											1		PC15 FD
KB 86	Galgorm WWPS Upgrade	12						12	nr																					
KB 86	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 Rep acement	12						12	nr																					
KL527	UID 32 Mano wood WWPS	12				31/10/2016	01/12 2016	12	nr																1					PC15 New
KL52	Bleachgreen WWPS, Londonderry, Upgrade/Replacement	12						12	nr																					
KL52	UID 20 Bleachgreen WWPS	12				30/0 /2017	60/06 2017	12	nr																	1	0			PC15 New
KA260	Muckamore WWPS Upgrade	12						12	nr																					
KA260	UID389 Muckamore WwPS	12				0 /0 /2017	0 /0 2017	12	nr																	1				PC15 New
KA261	M llown Road WWPS Upgrade	12						12	nr																					
KA261	UID388 Mill own Road WWPS Upgrade	12					21/03 2017	12	nr																1					PC15 New
KA2 7	Crum in Town WWPS Upgrade	12						12	nr																					
KA2 7	UID387 Crumlin Town WWPS Upgrade	12					30/07 2019	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 reatment Works																													
KT102	Dunmurry WwTW Modif ca ions	15			19/03/2012			13	nr		1																			
KB 36	Whitehead, Ballystruder & Ballycarry Rationa isation	15			16 02/2012			13	nr		1																			
KR389	Ballyhalbert WwTW Interim Solution	15			28/03/2013			13	nr			1																		
KA195	Mullaghboy WWTW	15			0 /0 /2011			13	nr		1																			
KR391	Portavogie WwTW Interim Solu ion	15			2 /09/2012			13	nr			1																		
KS253	Drumaness WwTW	15			31/08/2010			13	nr	1																				
KB282	Magherafe t WwTW	15			28/03/2011			13	nr	1																				
KT125	Hook's Corner WwTW	15			28/03/2011			13	nr	1																				
KL393	Ballymon e WwTW	15			18/03/2011			13	nr	1																				
KB269	Toome (Creagh) Sewerage Scheme	15			22/03/2011			13	nr	1																				
KS307	Loughr es WWTW	15			25/01/2011			13	nr	1																				

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Project Information								Project Outputs																				
Project ID Reference	Project Name	PC13 Programme	Qual ty 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 appropria e)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Basel ne							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	UID Status	2013 14	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	2020 21	
1	2	3			5			6	7	8	9	10	11	12	13	1	15	16	17	18		11	12	13	1	15	16	17	18	
KB281	Maghera WwTW	15			03/02/2011			13	nr	1																				
KL363	Feeny WwTW	15			25/11/2011			13	nr		1																			
KR310	Newtownbreda WwTW	15			0 /02/2011			13	nr	1																				
KG1 5	Derrytrasna WwTW Upgrade	15			29/11/2010			13	nr	1																				
KB333	Cargan WwTW	15			30/11/2010			13	nr	1																				
KC28	Cloughmills WwTW	15			30/11/2010			13	nr	1																				
KB322	Martinstown WwTW	15			13/12/2010			13	nr	1																				
KF005	Coa is and WwTW	15			01/12/2010			13	nr	1																				
KC299	Bushm lls Portbal intrae WwTW	15			06/12/2010			13	nr	1																				
KB279	Stewar stown WwTW Improvements	15			10/11/2010			13	nr	1																				
KB28	Coagh WwTW Improvemen s	15			10/11/2010			13	nr	1																				
KL300	Dungiven WwTW	15			10/11/2010			13	nr	1																				
KV06	Lu ganare 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																				
KS22	Downpatrick WwTW	15			1 /12/2009			13	nr	1																				
KF319	Annaghmore WwTWs	15			27/09/2010			13	nr	1																				
KS225	Ardg ass WWTW	15			20/03/2015			13	nr					1									1							
KT377	New Hol and WwTW	16			28/03/2011			13	nr	1																				
KS37	Darragh Cross WwTW	16			07/09/2010			13	nr	1																				
KC338	Causeway/Aird (New Pumping Station)	16			23/08/2011			13	nr		1																			
KC 16	Glensta l WwTW - Nutrient Reduct on	16			25/02/2013			13	nr			1																		
KN622	Omagh WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																		
KL 65	Limavady WwTW - Nutrient Reduct on	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 Compl ance	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																		
KL 82	Tamnaherin Wwtw	16			28/01/2013			13	nr			1																		
KV105	Newry WwTW Extens on Phase 1	16			28/01/2013			13	nr			1																		
KF060	Brockagh Terrace/Mountjoy WtWT	16			13/08/2012			13	nr			1																		
KV125	Forkhi l WwTW	16			28/03/2013			13	nr			1																		
KV0 5	Mullaghbane WwTW	16			28/03/2013			13	nr			1																		
KB287	Swatragh WwTW	16			21/03/2013			13	nr			1																		
KB31	Gulladu f WwTW	16			16/12/2013			13	nr				1									1								
KT11	Hil sborough WWTW	16			18/03/201			13	nr				1									1								
KS8 8	Newcastle WwTW	16			09/12/2013			13	nr				1									1								
KR501	Carrickfergus WWTW Upgrade	2			31/03/201			13	nr				1									1								
KR530	Bel ast WwTW Base Maintenance Phase 2	2			18/03/201			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	Decomm ssion Benone WwTW & construct WwPS	16			16/09/2013			13	nr				1									1								
KL350	Decomm ssion Drumavelly WwTW & construct WwPS	16			16/09/2013			13	nr				1									1								
KL350	Decomm ssion Aughil WwTW & construct WwPS	16			16/09/2013			13	nr				1									1								
KL350	Decomm ssion MoD WwTW & construct WwPS	16			16/09/2013			13	nr				1									1								
KL350	Decomm ssion NIPS WwTW & construct WwPS	16			16/09/2013			13	nr				1									1								
KL350	Provision of new Magil igan WwTW	16			16/09/2013			13	nr				1									1								
KP672	Tempo WwTW	16			06/01/2015			13	nr					1									1							
KS8	Ballyhoman Outfall - N EA Enforcement	16			31/12/2013			13	nr				1									1								
KL 2	Magheramason Wwtw	16			20/03/2015			13	nr					1									1							
KR 09	Moneyreagh WwTW (Storm Pumping stat on)	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	1				
KN599	Donaghmore Wwtw	16			19/03/2015			13	nr					1									1							
KL 87	Nixon s Corner	16			30/01/2015			13	nr					1									1							
KL386	Gortnahey Wwtw	16			2 /07/201			13	nr					1									1							
KS389	Ballymartin & Blackrock WwTWs	16						13	nr																					
KS389	Ballymar in WwTW	16			31/03/2015			13	nr						0								1							
KS389	B ackrock WwTW	16		31/03/2016	31/03/2016	30/06/2016	20/10 2016	13	nr						1										1					
KS355	Ballynahinch Wwtw	16			21/03/201			13	nr				1									1								
KS905	Kilmore & Annacloy WwTW	16						13	nr																					
KS906	Kilmore WwTW	16			10/03/2015			13	nr					1									1							
KS907	Annac oy WwTW	16			11/03/2015			13	nr						1								1							
KS887	Ards South (Ba lycranbeg WwTW load reduc ion)	16			31/03/2015			13	nr					1									1							
KL 96	Feeny WwTW - Rep acement Secondary Treatment	16			08/08/201			13	nr				1										1							
KF3 6	Robinsons own WwTW	16		01/01/2020	30/06/2019	31/03/2018	31/03 2021	13	nr											1										x
KN596	Ballymagory WWTW	16			30/03/2015			13	nr					1									1							
KL 93	Artigarvin WwTW	16		31/03/2015	21/12/2015	21/12/2015		13	nr					1									1		1					
KN6 0	Dromore (Tyrone) WWTW	16			20/03/2015			13	nr					1									1							
KT 02	Dunmurry WWTW Sludge Facility	16			18/03/201			13	nr				1									1								
KB 59	Maghera WwTW: Phase 2	16			0 /02/201			13	nr				1									1								
KL39	Drumsurn Wwtw	16			16/12/201			13	nr					1									1							
KP668	Lisnarrick Wwtw	16			01/12/201			13	nr					1									1							
KT126	Stoney ord Wwtw	16			28/11/201			13	nr					1									1							
K 508	UWWTR MCERT compliance	16		31/03/2016	31/01/2016	31/01/2016		13	nr					1	1									1						
KC296	Ballycas le Wwtw	16		01/01/2017	30/12/2017	31/03/2018	31/12 2017	13	nr							1									1					
KN656	Cas le Archdale WwTW	16		31/03/2015	30/03/2016	30/03/2016		13	nr					1										1						
KG202	Aghaga lon WwTW	16			31/03/2015			13	nr					1									1							
	Warings ord	16			30/09/201			13	nr					0									1							
KC302	Bal intoy WwTW	16		31/03/2018	31/01/2017	31/01/2018	2 /01 2020	13									1											1		
KS235	Ballygowan/Moneyreagh WwTW	16						13																						
KS235	Ba lygowan WwTW	16		31/03/2018	28/02/2017		31/03 2022	13									1													x
KS235	Moneyreagh WwTW	16		31/03/2018	28/02/2017		31/03 2019	13									1										1			
KS111	Ards South - Cloughey	16		31/03/2017	n/a	31/03/2019	31/03 2019	13								1											1			
KL 89	Ballykelly WwTW	16		31/03/2017	n/a	30/10/2018	31/03 2021	13								1														1
	Dundrum WwTW	16		31/12/2017	n/a		31/03 2019	13									1									0	1			
KS113	Ards North - Carrowdore, Ballywalter, Ba lyhaskin	16						13																						
KS113	Carrowdore WwTW	16		31/03/2021	n/a		31/03 2021	13												1										x
KS113	Ba lywalter WwTW	16		31/03/2021	n/a		31/03 2021	13												1										x
KS113	Ba lyhaskin WwTW	16		31/03/2021	n/a		31/03 2021	13												1										x
KF350	Dungannon WwTW Phase 1	16		01/01/2021	01/01/2021		09/12 2019	13												1									1	
KC 63	Ballybogy WwTW	16		31/01/2021	31/01/2021		31/03 2021	13												1									0	1
KA239	Mullans WwTW (Antrim)	16		31/03/2021	n/a	30/09/2017	29/03 2018	13												1							1			
	Greyabbey WwTW	16		31/03/2021	31/03/2021		31/03 2021	13												1									0	1
	Maghaberry WwTW (addit onal output in 16/17 draft adjusted outpu s submission)	16				02/0 /2018	29/03 2019	13																			1			
	The Loup	16					15/03 2017	13																	1					
	Small Wastewater reatment Works																													
	Sma l Wastewa er Treatment Works - PC10 Programme >250pe to be deta led																													
KI 86	Annahugh WwTW	17			2010/2011			13	nr	1																				
KI 86	Galbally WwTW	17			2010/2011			13	nr	1																				
KI 86	Maghery WwTW	17			2010/2011			13	nr	1																				
KI 86	Montieth WwTW	17			2011/2012			13	nr		1																			
KI 86	Orritor WwTW	17			2011/2012			13	nr		1																			
KI 86	Garvaghy WwTW	17			2011/2012			13	nr		1																			

A								B																					
Project Information								Project Outputs																					
Project ID Reference	Project Name	PC13 Programme	Qual ty 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 appropria e)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Basel ne							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			5			6	7	8	9	10	11	12	13	1	15	16	17	18		11	12	13	1	15	16	17	18	
KI 86	Donagheady WwTW	17			2010/2011			13	nr	1																			
KI 86	Attical Tu lyframe WwTW	17			2011/2012			13	nr		1																		
KI 86	Donagh WwTW	17			2011/2012			13	nr		1											0	0						
KI 86	Glack WwTW	17			2012/2013			13	nr			1																	
KI 86	Teemo e WwTW	17			2011/2012			13	nr		1																		
	Sma l Wastewa er Treatment Works - PC10 Programme <250pe to be deta led	17			2010-2013			1	nr	11	23	1																	
	Sma l Wastewa er Treatment Works - PC13 Programme <250pe to be deta led	17			2013-2015			1	nr				7	18	7	8	7	8	7	8		7	18						
	Sma l Wastewa er Treatment Works - PC15 Programme <250pe to be deta led	17			2015-2021			1	nr																8	3	9	9	

BP 4 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	Complet on of nominated trunk main schemes	6	2	0	2	0	2	1	0	0	1	0	1	0	1	2	1	0	0	0	0
20	Complet on of nominated water treatment works schemes	7	2	0	0	0	3	1	0	0	1	0	2	0	3	1	0	0	0	1	
21	Complet on of nominated improvemen s to increase the capacity of serv ce reservoirs and c ear wa er tanks	8	5	3	1	0	1	0	0	1	0	1	1	0	1	0	0	1	0	1	2

BP 4 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 U Ds as part of a defined programme of work	12	20	3	38	25	59	27	16	5	8	0	0	28	39	26	11	11	8	3	19
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	13	29	1	13	17	18	3			0	1	7	17	18	3	2	1	6	2	3
10	Sma l wastewater treatment works delivered as part of the rural wastewater investment programme	1	11	23	1	7	18	7	8	7	8	7	8	7	18		8	3	9	9	0

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	1,285	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	12,929	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	10,061.48	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	192	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	149.42	A2		
B	**RIDDOR REPORTS**																				
6	Total RIDDOR incidents	nr	0	10	A1	6	25	5	A1	7	A1	4	A1		A1	6	A1	5	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	3.89	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	3.89	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	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		NA			
11	Total days lost due to sickness, accident and occupational ill health	nr	0	No data		No data		NA		NA		NA		NA		NA		NA			
12	Total days lost - rate per 1000 employees	nr	2	No data		No data		No data		No data								NA			
13	Number of incidents of occupational ill health	nr	0	No data		No data		NA		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								NA			
D	**CONTRACTORS' RIDDOR REPORTS**																				
15	Total RIDDOR incidents	nr	0	6	B2	6	B2	5	BX	7	BX	9	BX	6	BX	5	BX	4	BX		
16	RIDDOR - rate per 1000 contractors' employees	nr	2	No data		No data		No data		No data								NA			
17	3-day accident rate per 1000 contractors' employees	nr	0	No data		No data		NA		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		NA			

Table 41 – Health and Safety Information (NIW only)

Lines 1 - 5 - Lost time

In 2019/20 financial year NI Water lost a total of 12,929 working days due to sickness which was equivalent to 10.1 working days lost per employee. The Key Performance Indicator (KPI) attendance in 19/20 was 96.5% and NI Water delivered an actual rate of 95.5%, 1.0% below the target.

HR Advisors, in conjunction with line managers, continue to manage employee absence cases that meet the sick absence trigger points to highlight the importance of good attendance and corrective action taken where appropriate.

Human Resources work in partnership with line managers, the Employee Support Officer, Inspire (our Employee Assistance Programme provider), the occupational health 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 and quarterly 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 differences across directorate level and a year-to-date breakdown of short-term and long-term sickness absence. Actions taken each week with regards to occupational health and physio referrals, clinics and meetings with employees following a long-term sick absence are also included.

Our attendance rate has decreased from 96.0% in 18/19 to 95.5% in 19/20. The Covid-19 pandemic struck right at the end of the 19/20 year during the second half of March and 28 employees contributed to 172 working days lost with related sickness.

Absences also increased due to other cold/flu/respiratory illnesses (excluding Covid-19). 430 working days were lost to these illnesses during 19/20, compared to 301 during 18/19. The flu vaccine was offered to all employees, with 219 employees availing of it in 19/20, c. 17% of the workforce.

There were two deaths in service this year and one medical retirement after a period of long-term absence.

Frontline operatives attended yearly medical assessments for Hand Arm Vibration, audio and working in confined spaces. NI Water also provided medical assessments 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 19/20 at 28.5%. This is a small decrease from 18/19 when the percentage of total working days lost was 29.3%. The number of working days lost though for Psychiatric/psychological absences increased from 3302 in 18/19 to 3686 in 19/20 and reflected a pattern of increased sickness across many categories.

There are a number of Health and Wellbeing initiatives that continued during 19/20, which are as follows:

- Health & Wellbeing annual calendar of activity linked to local and national health campaigns

- Administration of the flu vaccine on a yearly basis during autumn/winter 'Live Well Roadshow'.
- Health and Wellbeing support from Inspire Workplaces with a new wellbeing support hub launched in 2020.
- Dedicated Workplace Counselling on site though Inspire Workplaces, 8 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 accessible by all members of NI Water
- Health awareness campaigns though our dedicated 'Wellbeing Works" intranet site, poster campaigns and targeted employee communications
- Provision of facilities for mindfulness, yoga (International Yoga Day event), Book Club, company choir and NIW Cycling Club and sports teams continued
- Annual Roadshow '4 Ways to Live Well' visited at each of our Hubs during October and November 2019 with healthy eating, sleep well advice, Cancer Focus bookable sessions, mediation and massage and a range of interactive stands
- Suggested walking routes that are close to our sites published for employees
- HR Clinics hosted Benenden Health care talks and successfully signed up over 30 new employees
- The new Live Well, Health & Wellbeing Strategy designed and approved for roll out as soon as possible. Strategy focuses on 4 health pillars- Physical, Mental, and Social & Financial. This will be complimented by an individual employee health questionnaire, annual Live Well roadshow, online wellbeing portal and active network of health and wellbeing champions across NIW.
- Due to Covid-19 health and wellbeing activity has been refocused to prioritise the development of the "Looking after you" employee guide covering key health and home related topics. This will support the wellbeing of employees and signpost support available in a range of circumstances. This guide will be supplemented with videos from relevant experts across NIW who will discuss themes including working from home, good mental health, relaxation techniques, physical health tips and others aligned to coping during the Covid-19 period

NIW has been externally recognised for best practice in employee health and wellbeing:

- 2019 Winner of CIPD Best Health &Wellbeing Initiative
- 2019 Winner of international CSR Awards for Health & Wellbeing
- 2019 Highly commended for Business in the Community (BITC) Wellbeing at Work award
- 2019 Highly commended for Inspire Workplaces Wellbeing award

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 last year, our underperformance against our KPI means improving attendance remains a high priority to both the Executive Committee and NI Water's Board of Directors along with enhancing the programme of initiatives to improve the health and wellbeing 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 5 RIDDOR (greater than) >3 Lost Day reportable incidents within NI Water during 2019/20, all of which resulted in more than 3-day work activity-related absences.

Datix Ref	Date of Incident	Brief Description	Underlying / Root Cause	RIDDOR Classification
NIW3429	16Apr19	Networks Water struck on the back by arm of a mini-digger, after it had been moved following contact from a moving contractor Grab Lorry, during a mains repair.	Failure to follow and manage a safe working area.	> 3 day absence
NIW3692	28Sep19	Networks Water operative suffered back sprain/strain when a valve handle he was operating failed, and broke away from its spindle.	Failure to maintain work equipment and assets.	> 3 day absence
NIW3750	24Oct19	Staff member stumbled hurting his back when attempting to navigate past a number of items on the floor between storage shelves.	Failure to maintain good housekeeping.	> 3 day absence
NIW3882	20Jan20	Operative suffered back injury when attempting to lift a heavy-duty access cover alone.	Failure to follow Manual Handling training.	> 3 day absence
NIW4408	04Mar20	Operative suffered knee strain after slipping on wet ground moss around a tanker delivery point.	Failure to maintain a safe place of work, and good housekeeping.	> 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 1285. This gives the RIDDOR Rate per 1000 employees as 3.89 for 2019/20.

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 2019/20.

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 2019/20 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 2019/20 the total number of RIDDOR related incidents reported to NI Water by all contractors was 4. This was a decrease in reports on the last 2 years when 5 incidents were recorded in 2018/19 and 6 incidents in 2017/18. 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	Incident Date	Brief Description	RIDDOR Classification
NIW3446	25Apr19	Operative over-reached during a lifting operation to adjust lifting chains and reported back pain.	>3 day absence
NIW3777	14Nov19	Operative was reaching through hand railing, when the lower cross-support bar gave way, allowing the operative to fall forward. Injury to shoulder reported as he stopped his fall.	>3 day absence
NIW3844	17Dec19	Operative suffered broken arm after interfering with a load during a lifting operation.	>3 day absence
NIW3935	18Jan20	Operative suffered a low fall on scaffold within a work area.	>3 day absence

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 were no fatal incidents connected with NI Water contractors /sub-contractors, including transient workers, during 2019/20.

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	DESCRIP ION	UNI S	DP	CO	Corresponding Report	Calculation	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	O AL	O AL	O AL	O AL	O AL
A	PRO EC DESCRIP ION																										
1	PPP Concession	text	na		na		Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	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	All	All	All		
3	Name of works	text	na		na		Ballinrees	Castor Bay	Duncrue Point	Moyola	DBFO DM & PKd BDG Cont TK	Ballymoney LM	Limavady LM	Kinnegar	Richh ll	Armagh	Ballynacor	North Down	Ballyr chard	Ballyhaco r Lagoons	Be lynaco r	Duncrue	Sludge Service	Total	Total	Total	Total	Total
	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	2 /05 2001	08/0 /2009	27/08/2009	1 /11/2009	05/05/2008	20/0 /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	2	23	N/A	22	22	22					
6	Service complet on date	date	na		na		30/05/2031	30/05 2031	30/05/2031	30/05/2031	30/05/2031	N/A	N/A	23/0 202	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	PAYMEN O PPP CONCESSIONAIRE																										
7	Unitary Charge Capacity	£m	3		na		[redacted]																				
8	Unitary Charge Variable	£m	3		na																						
9	Unitary Charge Deductions	£m	3		na																						
10	Atypical expenditure	£m	3		na																						
11	Effic ency 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																						
1	Maintenance	£m	3		na																						
16	Atypical payments cap talised	£m	3		na																						
17	Total capital sed (13 to 15)	£m	3		na	Sum 13 to 16																					
18	Total PPP Expensed (12-17)	£m	3		na	Lines 12-17																					
19	Interest	£m	3		na																						
20	Total PPP Opex (18-19)	£m	3		na	Line 18-19																					
C	WA ER DIS RIBU ION DA A																										
21	Distribut on Input	Mld	2	B2	Tab e 10 Line 26		28.01	111.11	10 .82	1 .6													258.58			258.58	
21a	Water Treatment Works Capacity	Mld	0	A1			50	1 7	180	19													396			396	
22	Length of mains	km	2	A2	Tab e 11 Line 12						16. 2	0.00	0.00										16. 2			16. 2	
D	WA ER RESOURCE AND REA MEN DA A																										
23	Turbid ty 95%ile greater or equal to 0.5NTU	1/0	0	A2			0	0	0	0	0												0			0	
2	Turbid ty 95%ile ess than 0.5NTU	1/0	0	A2			1	1	1	1	1												6			5	
25	Source Type	text		A1	Tab e 12 Block A		IR it 2 River	River	River	River	0												2 x I.R. x Rive			2 x I.R. x Rive	
26	Treatment type	text		A1	Tab e 12 Block B		W	W	W	W	0												x W			x W	
27	Average pumping head	m.hd	1	B3	Tab e 12 Block A		127.	138.0	173.0	1 6.5	0												152.1			152.1	
E	SEWERAGE DA A																										
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 cr tical sewer	km	2	B2										0.00	0.00	0.00	10.50	10.63	0.00					0.00	21.13		21.13
F	SEWAGE REA MEN AND DISPOSAL DA A																										
30	Popula on equivalent of total load received	000	0	B3	Table 17b ine 2									8	3	1	1	68	1					8	255		35
31	Load received by STW's	kg BOD/day	0	B3	Table 17d									5056	161	850	8619	061	2 75					5056	16156		21222
32	Suspended solids consent	mg/l	0	A1	Table 17b ine 3									5/150	20/50	20/50	35/-	35/90	10/30								
33	BOD5 consent	mg/l	0	A1	Table 17b ine									25/80	07/30	08/30	25/50	25/50	10/35								
3	COD consent	mg/l	0	A1	Table 17b ine 5									125	125	125	125	125	125								
35	Ammonia consent	mg/l	0	A1	Table 17b ine 6									0.00	02/10	02/10	7.5/32	0.00	0.00								
36	Phospha es consent	mg/l	0	A1	Table 17b ine 7									0.00	0.00	<1 Ann Avg	<1 Ann Avg	0.00	0.00								
37	Classifica on of Treatment Works	text		A1	Table 17b ine 8									SAS	TA1	TA2	TA2	TA2	TA2								
38	Size band of sewage treatment works	nr	0	B3	Table 17c									6		5	6	6	6								
G	SLUDGE REA MEN AND DISPOSAL DA A																										
39	Total sludge imported from NI Water	tds	3	B2										0.000	0.000	0.000	0.000	0.000	0.000	0.000	.838	30.5 9	35.387		0.000	35.387		35.387
0	Sludge produced by the PPP fac l ty	tds	3	B2										0.729	0.068	0.517	2.669	1.727	1.161	0.000	0.003	0.003	6.1 8		0.729	6.1 8		6.877
1	Sludge exported to Duncrue Incinerator	tds	3	B2										0.699	0.066	0.506	2.607	1.687	1.1 0	0.000	0.003	0.003	6.006		0.699	6.006		6.705
2	Sludge exported to other PPP facili es	tds	3	A1										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
3	Sludge exported to NI Water	tds	3	A1										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
	Sludge d sposed of from site to - Farmland Untreated	tds	3	A1	Table 17G Col 1									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
5	Sludge d sposed of from site to - Farmland Convestional	tds	3	A1	Table 17G Col 2									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
6	Sludge d sposed of from site to - Farmland Advanced	tds	3	B3	Table 17G Col 3									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.5 7		0.000	1.5 7		1.5 7
7	Sludge d sposed of from site to - Incineration	tds	3	B2	Table 17G Col									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	39.388		0.000	39.388		39.388
8	Sludge d sposed of from site to - Landfil	tds	3	B3	Table 17G Col 6									0.030	0.002	0.011	0.062	0.0 0	0.021	0.000	0.003	0.003	0.1 1		0.030	0.1 1		0.171
9	Sludge d sposed of from site to - Composted	tds	3	A1	Table 17G Col 7									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
50	Sludge d sposed of from site to - Land Rec amation	tds	3	B3	Table 17G Col 8									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0. 60		0.000	0. 60		0. 60
51	Sludge d sposed of from site to - Other (Wi low Coppice)	tds	3	A1	Table 17G Col 9									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
52	Sludge d sposed of from site - Total	tds	3	B2										0.729	0.068	0.517	2.669	1.727	1.161	0.000	.8 1	30.552	1.536		0.030	1.536		1.566

Table 42 – PPP Reporting

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 42 below remain unaffected by the acquisition and subsequent continuation of the existing commercial arrangements.

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] 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.

- **Kinnegar Financial Model Storage Arrangements**
  The Company and the Contractor have terminated the arrangements to keep a copy of the financial model with a third party.

- **Early Debt Repayment Change**
  The Contractor has repaid the outstanding senior debt 15 months earlier than required.

- **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 £20,000, 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.

- **Reduction in Frequency of Water Quality Monitoring**
  In 2019, the Company and the Contractor have reduced the frequency of Water Quality monitoring within the Contract down to regulatory frequency to align with all monitoring costs of non-PPP WTWs.

- **Temporary Reduction in Water Quality Performance Measures**
  In early 2020, the Company agreed to a request to lessen the water quality performance requirements on a temporary basis to establish if the operating company could reduce its external operating costs, thereby reducing the overall Company costs for water treatment provision at the PPP facilities.

Contractual Performance Failures during AIR20 Period

- **Alpha Performance Deductions: 2019/20**
  - 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] [AIR19 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] *[AIR19 period total deductions* [redacted] *].*

- **Kinnegar Performance Deductions 2019/20**
  The Company had determined no failures in the AIR20 period.

- **Omega Performance Deductions 2019/20**
  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 [April 2019]: [redacted]
  - The Company has determined but the Contractor has not accepted the following failures on Wastewater Services during the period:
    - OR1 Deductions applied at Bullay's Hill WwTW [Jun 2019]: [redacted]
    - OR1 Deduction applied at Bullay's Hill WwTW [Jul 2019]: [redacted]
    - OR1 Deduction applied at Bullay's Hill I WwTW [Aug 2019]: [redacted]
    - OR4 Deductions applied at Ballynacor WwTW [Sep 2019]: [redacted]
    - OR4 Deductions applied at Ballyrickard WwTW [Oct 2019]: [redacted]
    - OR8 Deduction applied at Ballyrickard WwTW [Oct 2019]: [redacted]
    - OR8 Deduction applied at Bullay's Hill I WwTW [Oct 2019]: [redacted]
    - OR1 Deduction applied at Bullay's Hill WwTW [Nov 2019]: [redacted]
    - FM7 Deduction at Richhill WwTW [Dec 2019]: [redacted]
    - OR8 Deduction at Ballyrickard WwTW [Dec 2019]: [redacted]
    - OR4 Deduction at Donaghadee SPS. [Dec 2019]: [redacted]. This was incorrectly applied as a screenings Failure and should have been valued at [redacted] [difference of [redacted]].
    - SOR6 Deduction at Duncrue [Dec 2019]: [redacted]
    - OR8 Deduction at Ballyrickard WwTW [Feb 2020]: [redacted]
    - OR4 Deductions at Donaghadee SPS. [Feb 2020]: [redacted]
    - FM5 Deduction at Millisle SPS. [Feb 2020]: [redacted]
    - OR4 Deductions at Donaghadee SPS. [Mar 2020]: [redacted]
    - OR1 Deduction at Bullay's Hill WwTW. [Mar 2020]: [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] [total deductions are [redacted]] as applied [redacted]: AIR19] has not been included in this line, as credit notes have 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; No performance deductions were applied during the AIR20 period.

- **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**
  There have been changes to the Alpha and Kinnegar Descriptive Reports and a copy of these reports have been made available.

Line 4 & Line 5

No change from AIR19 data.

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 the previous year.

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 increased by 8.1% from the previous year, 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 decreased by 4.8% (£3.652m vs £3.837m in AIR19), DI decreased by 7.3% (258.6 ML/D vs 279.0 ML/D in AIR19).

Omega – variable costs have increased by 10.4% ([redacted] vs [redacted] in AIR19). This is made up of costs in relation to waste water and Sludge Disposal Services (SDS) as follows:

- Waste water - flows increased by 16.1% (35.6 Mm3 vs 30.7 Mm3 in AIR19) resulting in a 17% rise in variable costs (£[redacted] vs [redacted] in AIR19)
- SDS – sludge volumes increased by 0.9% (41.4k TDS vs 41.0k TDS in AIR19) resulting in a 2.9% rise in variable costs ([redacted] vs [redacted] in AIR19)

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 the reporting year were £0.359m, a decrease of £0.041m on the prior year amount of £0.400m.

Omega

No credits for performance deductions have been received in the reporting year.

Kinnegar
No credits for performance deductions at Kinnegar have been received in the reporting year.

Line 10 - Atypical expenditure
Alpha (£0.644m)

	£m
Quality Monitoring Change credit	-0.484
EIB Step-down	-0.097
Refund in respect of reorganisation costs	-0.063
Total	**-0.644**

- 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 £0.484m in the reporting year.
- In 2019/20 a reduction of £0.097m 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 the reporting year were £0.063m.

Kinnegar ( )

	£m
Sydenham Pumping Main	
CSP settlement	
Early Debt Repayment	
Total	

- Relates to potential claim by CCW Ltd for costs incurred in relation to the Sydenham pumping main breach. of potential costs were accrued into the prior year with of these costs not being required and released in the reporting year.
- CSP settlement relates to a payment dispute relating to historic invoices.
- Early debt repayment relates to additional costs incurred by NI Water as a result of the contractor's early settlement of their senior debt. These amounts have been withheld by NI Water and remain in dispute.

Omega ( )

	£m
North Down & Ards Disinfection Change	
Supplemental 4 agreement	
Change in calibration frequency	
Out of spec sludge (OOSS)	
Total	

- The North Down Disinfection Change implemented in Sept 2011 resulted in a efficiency saving in the reporting year. 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 the reporting year.
- 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 the reporting year.
- [redacted] was accrued in relation to the cost of OOSS.

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 (£0.547m)

The reorganisation costs credit (£0.063m), quality monitoring change (£0.484m) all detailed above are efficiency gains arising in the reporting year.

Omega ([redacted])

The North Down Disinfection Change implemented in Sept 2011 resulted in a [redacted] efficiency saving in the reporting year.

Supplemental Agreement 4 executed in 2011/12 reflecting a change in wastewater flow management performance requirements resulted in a [redacted] deduction in the reporting year.

The change in weighbridge calibration frequency implemented in 2013/14 resulted in [redacted] 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	5,401	568	4,833	1,837	897
Castor Bay	4,853	481	4,372	1,662	811
Moyola	2,214	201	2,012	765	373
Ballinrees	2,934	265	2,670	1,015	495
Ballymoney LM	582		582	221	108
Limavady LM	706		706	268	131
CB to FB LM	711		711	270	132
	17,400	1,516	15,885	6,037	2,947

Omega:

Allocation of capital repayment & 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	2019/20
Dunore Point	6,407	10,510	568
Castor Bay	5,429	8,904	481
Moyola	2,272	3,727	201
Ballinrees	2,985	4,897	265
	17,094	28,037	1,516

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/intercompany balances 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	1.655	[redacted]	[redacted]	[redacted]
Disputed Amts	0.030			4
Claims	0.000			
Other	0.000			

Of the [redacted] included for Omega, [redacted] relates to the outstanding monthly unitary charge invoices for February and March unpaid at 31 March 2020. 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.

In relation to Omega disputed amounts, [redacted] was repaid to the contractor during the reporting year and an additional [redacted] of payments withheld. The [redacted] for Kinnegar relates additional costs arising due to the contractors' early debt redemption.

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 AIR19 was 10,680 Ml while the Distribution Input for AIR20 was 10,252 Ml which resulted in 29.26 Mld average to supply during AIR19 and 28.01 Mld average to supply in AIR20. 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 AIR19.

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.

2019 PPP WTW Included in calculations

WTW Code	WTW Name	Turbidity 95 %ile	95 %ile >= 0.5	No of Samples >= 0.5 NTU
W1301P	Moyola PPP	0.316	0	3
W1701P	Ballinrees PPP	0.360	0	1
W2308P	Castor Bay PPP	0.300	0	2
W3301P	Dunore Point PPP	0.230	0	0
W3315P	Forked Bridge PPP	0.250	0	2

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 AIR19.

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 AIR20. 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 reduced slightly from the AIR19 level [DI for AIR19 was 10,680 Ml; DI for AIR20 was 10,252 Ml which equates to 29.26 Mld average to supply during AIR19 and 28.01 Mld in AIR20. The AIR20 period was wetter than AIR19 which would have favoured upland sources usage in preference of pumped abstractions, this would benefit NI Water's energy efficiency. The Ballinrees Output B2 average flow has reduced from 6.52 Ml/d to 5.68 Ml/d [pumped flow to Break Pressure Tank at Moys Service Reservoir – 117m head lift] The reduction in Ballinrees Output B2 flow contributes less to the overall head at site and was of a similar magnitude to the overall reduction from the WTW.

Lines 28 – 29 – Sewerage data

No Change from AIR19 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 AIR17.

Line 38 - Size band of sewage treatment works

Richhill WwTW has now been re-classified as a size band 4 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 sludges. The total Sludge imported from NI Water operated WWTW is recorded as 35.387 TTDS for the AIR20 period (last year the figure was 34.712 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 AIR19. The reporter also requested that an estimate of the re-cycled solids from the Incinerator be produced, this has equated to 2.707 ttds and was returned via Duncrue WwTW for further processing [See Table 15 Line 17 Commentary]. The variations are tabulated below;

PPP Production	AIR20	AIR19	AIR18	AIR17	AIR16	AIR15	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.506	0.486	0.534	0.605	0.535	0.579	0.547	0.535	0.570	0.759	0.840
Richhill WWTW	0.066	0.067	0.068	0.071	0.071	0.063	0.071	0.065	0.066	0.213	0.210
Ballynacor WWTW	2.607	2.307	1.882	1.739	1.564	2.269	2.007	2.069	3.330	2.468	2.290
Ballyrickard WWTW	1.140	1.150	1.246	1.293	1.064	1.337	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.687	1.514	1.629	1.656	1.818	1.633	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.699	0.805	0.331	0.302	0.501	0.668	0.643	0.726	0.823	0.792	0.700
Omega Screenings/Grit	0.141	0.220	0.233	0.206	0.083	0.083	0.088	0.106			
Kinnegar Screenings/Grit	0.030	0.033	0.035	0.058	0.049	0.057	0.047	0.022			
Totals	**6.876**	**6.582**	**5.958**	**5.930**	**5.685**	**6.689**	**6.449**	**6.309**	**7.573**	**7.612**	**7.411**

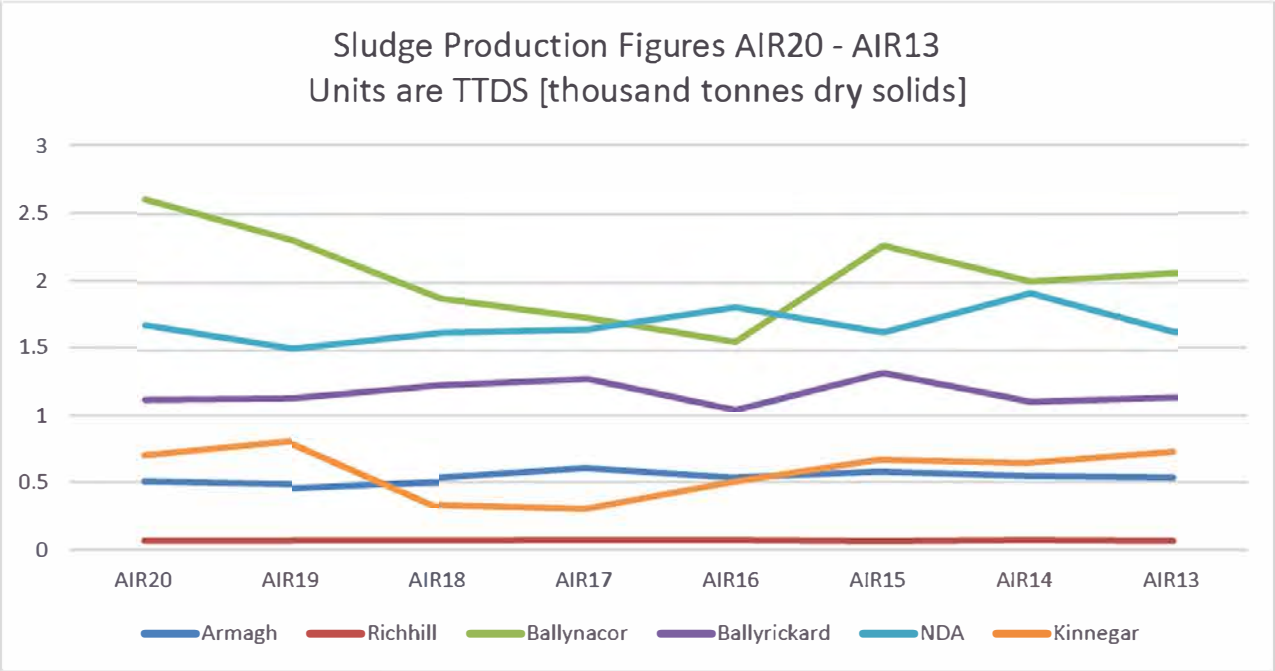
The changes in sludge production [shown overleaf in graphical form] records data for Omega reflect a probable combination of:

(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 displaying an increase from previous years. Given the treatment processes have not changed in the same overall 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 a slight unexpected downward trend as the installed Centrifuge is still processing the Sludge produced by the site and additionally eradicating the retained volume of Sludge due to the protracted Centrifuge provision. The downward trend is seen as a return to a more realistic output from the previous year's production.

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 AIR19

Line 43 - Sludge exported to NI Water
No change from AIR19

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 1.547 TTDS arising from the Contractor's choice of alternative compliant disposal routes. This is at variance from the 0.898 TTDS report in AIR19.

Lines 47 - Sludge disposed of from site to - Incineration
A full year service resulted in 39.388 TTDS being incinerated as the contractor's preferred method of disposal, this being a slightly smaller amount than reported in AIR19 [40.142 TTDS].

Lines 48 - Sludge disposed of from site to - Landfill
A full year service resulted in 0.171 TTDS [0.141 TTDS Omega and 0.030 TTDS Kinnegar] arising from the Contractor's choice of alternative compliant disposal routes. The value represents only both PPP Contractors sludges arising from grit and/or screenings removed directly from the sites to landfill; which is smaller than that 0.253 TTDS reported in AIR19.

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 0.460 TTDS arising from the Contractor’s choice of alternative compliant disposal routes. AIR19 reported a disposal of 0.000 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. AIR19 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 Service	Sewerage Service
2	Service Area			na	WT	WT	WT	WT	WD	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	All	All	All		
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	[redacted]																				
5	Payment by Concessionaire to Operating Company	£m	3																						
C	DIRECT COSTS TO NI WATER																								
6	Power	£m	3		0.722	2.476	2.016	0.448	0.000	0.000	0.000	0.000	0.041	0.117	0.753	1.166	0.231	0.000	0.120	1.194	5.662	0.000	3.622	5.662	3.622
7	Other direct costs	£m	3		0.060	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	0.087	0.000	0.000	0.087	0.000
8	Total direct costs	£m	3	sum 6 + 7	0.782	2.485	2.025	0.457	0.000	0.000	0.000	0.000	0.041	0.117	0.753	1.166	0.231	0.000	0.120	1.194	5.749	0.000	3.622	5.749	3.622
9	General and support expenditure	£m	3		0.014	0.014	0.014	0.014	0.013	0.013	0.013	0.043	0.023	0.024	0.024	0.024	0.024	0.000	0.023	0.024	0.095	0.043	0.166	0.095	0.209
10	Total functional expenditure	£m	3	sum 8 + 9	0.796	2.499	2.039	0.471	0.013	0.013	0.013	0.043	0.064	0.141	0.777	1.190	0.255	0.000	0.143	1.218	5.844	0.043	3.788	5.844	3.831
D	OPERATING EXPENDITURE - NI WATER																								
11	Scientific services	£m	3		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.002	0.002	0.007	0.003	0.004	0.000	0.000	0.069	0.000	0.026	0.087	0.000	0.113
12	Rates	£m	3		0.802	3.180	3.003	0.420	0.000	0.000	0.000	0.157	0.023	0.102	0.330	0.168	0.115	0.000	0.092	0.158	7.405	0.157	0.988	7.405	1.145
13	Estimated terminal pumping costs	£m	3									0.000	0.000	0.000	0.153	0.314	0.000	0.000	0.000	0.000		0.000	0.467		0.467
14	Estimated sludge costs	£m	3									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.235	8.286		0.000	8.521		8.521
E	TOTAL PPP OPERATING EXPENDITURE																								
15	Total PPP operating expenditure	£m	3	Sum 5, 10, 11 and 12	[redacted]																				

Table 43 - PPP Reporting – Operational Costs

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."

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.

Line 4 – Payment to concessionaire

The figures on this line are taken directly from Line 12 of Table 42 and any significant changes from the previous year 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	-0.484
EIB Step-down	-0.097
Refund in respect of reorganisation costs	-0.063
Total	**-0.644**

Kinnegar

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company.

It includes atypical amounts as follows:

	£m
Sydenham Pumping Main	[redacted]
CSP settlement	[redacted]
Early Debt Repayment	[redacted]
Total	[redacted]

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
North Down & Ards Disinfection Change	[redacted]
Supplemental 4 agreement	
Change in calibration frequency	
Out of spec sludge (OOSS)	
Total	

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 decreased during AIR20 [redacted] compared with AIR19 [redacted] and it is considered this partly relates to the decrease in Sludge incinerated while the Sludge processed has remained largely the same [AIR20 – 41.5 TTDS; AIR19 – 41.3 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.

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OVERALL PERFORMANCE ASSESSMEN

	DESCR P ION	UNI S	DP	1 REPOR NG YEAR 2012 13	CG	2 REPOR ING YEAR 2013 14	CG	3 REPOR ING YEAR 2014 15	CG	REPOR ING YEAR 2015 16	CG	5 REPOR ING YEAR 2016 17	CG	6 REPOR ING YEAR 2017 18	CG	7 REPOR ING YEAR 2018 19	CG	8 REPOR ING YEAR 2019 20	CG	9 REPOR ING YEAR 2020 21	CG
A	**WA ER SUPPLY**																				
	DG2 PROPER IES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL																				
1	Total connected properties at year end	nr	0	817,960	A2	82 ,97	B2	828,060	A2	839,710	A2	852,399	A2	862,988	A2	87 ,307	A2	883, 23	A2		
2	Properties below reference level at end of year	nr	0	1, 20	B3	1,257	B3	1,082	B3	900	B3	862	B3	711	B3	719	B3	626	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	0.07	B3		
	DG3 PROPER IES AFFEC ED BY UNPLANNED IN ERRUP IONS																				
	More than 6 hours	nr	0	10, 87	B3	6,7 2	B3	3 767	B3	8,699	A3	5,128	A3	6,097	A3	3,509	A3	6,157	A3		
5	More than 12 hours	nr	0	2,607	B3	1,195	B3	25 693	B3	8 1	A3	9	A3	861	A3	308	A3	751	A3		
6	More than 2 hours	nr	0	1,55	B3	12	B3	13 788	B3	32	A3	0	A3		A3	0	A3	23	A3		
7	Total connected properties at year end	nr	0	817,960	A2	82 ,97	B2	828,060	A2	839,710	A2	852,399	A2	862,988	A2	87 ,307	A2	883, 23	A2		
8	OPA supply interruption value	nr	2	1.98	B3	0.97	B3	11.72	B3	1.1	A3	0.66	A3	0.81	A3	0.	A3	0.79	A3		
	DRINKING WA ER QUALI Y																				
9	% iron compliance at consumers tap	%	2	97.36	A1	98.28	A2	98.90	A2	98. 0	A2	98.66	A2	98.85	A2	98.9	A2	98.89	A2		
10	% manganese compliance at consumers tap	%	2	99.83	A1	99.79	A2	99.82	A2	99.89	A2	99.8	A2	99.90	A2	99.95	A2	99.90	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	99.7	A2	99. 0	A2		
12	% turb dity comp iance at consumers tap	%	2	99.70	A1	99.8	A2	99.85	A2	99.73	A2	99.95	A2	100.00	A2	100.00	A2	99.95	A2		
13	% faecal coliforms compliance at consumers tap	%	2	99.89	A1	99.86	A2	99.99	A2	99.98	A2	100.00	A2	99.9	A2	100.00	A2	99.98	A2		
1	% trihalomethanes compl ance at consumers tap	%	2	97.50	A1	98.50	A2	99.00	A2	99.7	A2	96.9	A2	98. 8	A2	99. 8	A2	99.00	A2		
15	Average overa l compliance figure (Drinking Water Qual ty OPA value)	nr	2	98.98	A1	99.31	A2	99.56	A2	99.50	A2	99.13	A2	99. 9	A2	99.69	A2	99.52	A2		
B	**SEWERAGE SERVICE**																				
	DG5 SEWER FLOODING OVERLOADED																				
16	Flooding incidents in the year (overloaded sewers)	nr	0	189	B2	6	B2	29	B2		B2	3	B2	0	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	0	B2		
18	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630.0	A2	638.1	A2	6 8.6	A2	657.9	A2	668.3	A2	677.1	A2		
19	% of domes ic proper ies f ooded by over oaded sewers (Over oaded sewers OPA value)	%		0.0013	B2	0.0002	B2	0.00 1	B3	0.0005	B3	0.0002	B2	0.0000	B2	-0.0010	B2	0.0000	B2		
	DG5 SEWER FLOODING O HER CAUSES																				
20	Flooding incidents (other causes - equipment fa lures)	nr	0	15	B2	1	B2	2	B2	1	B2	1	B2	0	B2	2	B2		B2		
21	Flooding incidents (other causes - blockages)	nr	0	22	B2	36	B2	38	B2	3	B2	38	B2	26	B2	17	B2	6	B2		
22	Flooding incidents (other causes - co lapses)	nr	0		B2	5	B2	12	B2	3	B2	8	B2	7	B2		B2	1	B2		
23	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630.0	A2	638.1	A2	6 8.6	A2	657.9	A2	668.3	A2	677.1	A2		
2	% of domes ic proper ies f ooded by other causes (Other causes OPA value)	%		0.0066	B2	0.0088	B2	0.0083	B3	0.0060	B3	0.0072	B2	0.0050	B2	0.003	B2	0.0035	B2		
	DG5 PROPER IES ON HE FLOODING REGIS ER																				
25	2 in 10 reg ster at end of year	nr	0	39	B2	62	B2	60	A2	59	B2	61	B2	57	B2	57	B2	55	B2		
26	Problems solved due to ESI, funding	nr	0	20	A1	3	B2	5	A2	3	B2	3	B2	6	B2	1	B2	1	B2		
27	1 in 10 reg ster at end of year	nr	0	10	B2	8	B2	8	A2	7	B2	6	B2		B2	2	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	6 8.6	A2	657.9	A2	668.3	A2	677.1	A2		
29	% of domes ic proper ies considered to be at risk of flooding by sewage (At risk OPA value)	%		0.0088	B2	0.0110	B2	0.0110	A2	0.0103	B2	0.0103	B2	0.0099	B2	0.0093	C2	0.008	B2		
C	**SECURI Y OF SUPPLY**																				
	DG4 HOSEPIPE RES RIC ONS																				
30	Hosepipe rstrictions (OPA value)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1	0	A1	26	B2	0	A1		
	LEAKAGE																				
31	Leakage (Targe)	nr	2	168.00		169.00		165.00		163.00		161.00		159.00		157.00		155.00			
32	Leakage (Actual)	nr	2	161.75	B	167.21	B3	165.99	B3	161.99	B3	163. 3	B3	162. 3	B3	160.1	B3	160.53	B3		
33	% of leakage target not met (Leakage OPA value)	nr	2	0.00	B	0.00	A1	0.00	B3	0.00	B3	0. 9	B3	0.99	B3	1.85	B3	2.50	B3		
	SECURI Y OF SUPPLY ABSOLU E PERFORMANCE																				
3	Secur ty of supply index – company s actual based on p anned evel of service (Absolute performance OPA value)	nr	0	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2		
	SECURI Y OF SUPPLY PERFORMANCE AGAINS ARGE																				
35	Secur ty of supply index - planned (target) levels of serv ce	nr	0	97	A2	97	A2	100	A2	100	A2	100	A2	100	A2	100	A2	100	A2		
36	Secur ty of supply index - company's actual based on p anned evel of serv ce	nr	0	100	A2	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	0.00	A2		
D	**CUS OMER SERVICE**																				
	DG6 RESPONSE O BILLING CON AC S																				
38	Number dealt with within 5 working days	nr	0	77,118	B2	78,398	B2	75 520	B2	75, 62	B2	77,679	B2	71,386	B2	77,010	B2	53,928	B2		
39	Total bil ing contacts	nr	0	77,051	B2	78, 63	B2	75 5 5	B2	75, 90	B2	77,698	B2	71, 09	B2	77,016	B2	53,9 2	B2		
0	% 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	99.97	B2		
	DG7 RESPONSE O WRI EN COMPLAIN S																				
1	Total wr tten complaints	nr	0	3,173	B2	2,505	B2	2,36	B2	2,269	B2	2,375	B2	2,27	B2	2,133	B2	1,958	B2		
2	Number dealt with within 10 working days	nr	0	3,166	B2	2, 98	B2	2 363	B2	2,266	B2	2,375	B2	2,271	B2	2,133	B2	1,957	B2		
3	% 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	99.95	B2		
	DG8 BILLING ME ERED CUS OMERS																				
	Company or customer readings (or both)	nr	0	66,622	A1	66,8 0	A1	66 916	A1	67,366	A1	68,051	A1	68, 20	A1	68,621	A1	68,958	A1		
5	Total metered accounts	nr	0	110,16	A1	115,227	A1	118,732	A1	123,763	A1	127,807	A1	128,705	A1	129,387	A1	130,375	A1		
6	Metered accounts excluded from indicator	nr	0	2,688	A1	7,78	A1	51 21	A1	55,875	A1	59, 28	A1	60,060	A1	60,5 2	A1	61,091	A1		
7	% of metered accoun s 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	99.53	A1		
	DG9 ELEPHONE CON AC																				
8	Total of calls not abandoned	nr	0	216,006	A2	223,256	A2	226,20	A2	209,28	A2	216,015	A2	211,061	A2	213,835	A2	196,289	A2		
9	Total ca ls received on customer contact ines	nr	0	219,399	A2	226,881	A2	230,8 7	A2	210, 87	A2	217,023	A2	212,095	A2	215,011	A2	197,18	A2		
50	% calls not abandoned (0.25 of DG9 OPA value)	%	2	98. 5	A2	98. 0	A2	97.99	A2	99. 3	A2	99.5	A2	99.51	A2	99. 5	A2	99.50	A2		
51	All lines busy	nr	0	0	A2	0	A2	32	A2	159	A2	63	A2	18	A2	29	A2		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	99.98	A2		
53	Call Hand ing Sat sfact on - not used	nr	2	.5	A1	.63	A1	.65	A1	.59	A1										
E	**ENVIRONMEN AL PERFORMANCE**																				
	POLLU ION INCIDEN S																				
5	Number of High & Medium category pollution incidents (Sewage)	nr	0	18	A1	26	A1	25	A1	21	A1	22	A1	20	A1	15	A1	13	A1		
55	Equivalent population served (res dent)	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	2,266. 6	C3		
56	Number of High and Medium sewage incidents per mi lion resident populat on equivalent (pe) served (H&M sewage incidents OPA value)	nr	2	8.5	C5	12.20	C5	11.8	C5	9.91	C5	10. 8	C5	9.52	C3	6.62	C3	5.7	C3		
57	Number of Low category pollution incidents (Sewage)	nr	0	163	A1	188	A1	136	A1	117	A1	11	A1	109	A1	111	A1	85	A1		
58	Number of Low sewage incidents per mi lion resident population equiva ent (pe) served (Low sewage inc dents OPA value)	nr	2	77.33	C5	88.19	C5	6 . 3	C5	55.21	C5	5 .32	C5	51.87	C3	8.99	C3	37.50	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	0	A1		
60	Winter popula ion	000	2	1,8 2.61	C2	1,850.5	C2	1,862.72	C2	1,87 73	C2	1,887.10	C2	1,896. 6	C2	1,902.33	C2	1,91 . 9	C2		
61	Number of High and Medium water incidents per m llion resident popu ation 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	0.00	C3		
	SEWAGE SLUDGE DISPOSAL																				
62	Percentage unsatis actory 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	0.00	A1		
	SEWERAGE SERVICE BREACH OF CONSEN																				
63	WWTW D scharge consent % compliance (WWTW comp iance OPA value)	%	2	1.10	C5	1.89	C5	1.5	C5	1.38	C5	1.08	C5	1.33	C5	0.60	C5	0.50	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	97,704	A2	71,452	A2	169,156	A2
2	Grid electricity purchased - renewable energy	MW.hr	0	112,945	A2	11,762	A2	124,706	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	6,161	A2	3,497	A2	9,658	A2
5	Total electricity consumption	MW.hr	0	216,809	A2	86,711	A2	303,520	A2
6	Non-renewable electricity generated and exported to the gric	MW.hr	0	0	A2	0	A2	0	A2
7	Renewable electricity generated and exported to the gric	MW.hr	0	3,808	A2	0	A2	3,808	A2
8	Total renewable enegry generated	MW.hr	0	9,968	A2	3,497	A2	13,465	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	3,937	B2	3,214	A2	7,151	A2
10	Process and fugitive emissions	$t.CO_2 e$	0	3,310	B3	5,391	A3	8,701	B3
11	Transport: company owned or leased vehicles	$t.CO_2 e$	0	2,611	A2	123	A2	2,733	A2
B.2	**Scope 2 Emissions**								
12	Total grid energy used (including CHP electricity purchased).	$t.CO_2 e$	0	50,384	A2	24,727	A2	75,111	A2
B.3	**Scope 3 Emissions**								
13	Business travel on public transport and private vehicles used for company business	$t.CO_2 e$	0	198	A3	18	A2	216	A2
14	Outsourced activities (if not included in Scope 1 or 2) Energy and other	$t.CO_2 e$	0	0	A2	11,841	A2	11,841	A2
15	Not used								
16	Not used								
17	Gross operational emissions	$t.CO_2 e$	0	60,439	A2	45,314	A2	105,753	A2
C	**Net annual operational emissions**								
18	Exported renewables (generated on-site and exported)	$t.CO_2 e$	0	-661	A2	-267	A2	-927	A2
19	Green tariff electricity purchased	$t.CO_2 e$	0	-28,869	A2	-3,006	A2	-31,875	A2
20	Net operational emissions	$t.CO_2 e$	0	30,910	B3	42,041	A2	72,951	B3
D	**ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES**								
21	Operational GHG per Ml of treated water	$t.CO_2 e/Ml$	3	0 091	B3	0.171	A3	0.118	A3
22	Operational GHG per Ml of sewage treated (flow to full treatment)	$t.CO_2 e/Ml$	3	0 257	B3	0.546	A3	0.386	B3
23	Operational GHG per Ml of sewage treated (based on water distribution input)	$t.CO_2 e/Ml$	3	0.167	B3	0.355	B2	0.251	B3
E	**RENEWABLE INCENTIVES**								
24	Revenue from renewable energy sales and incentives	£000	3	266.985	A2	385.603	A2	652.588	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 AIR20 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 44.30% 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)	2,585,043
Hydro – Oaklands (Non-REGO)	179,735
Hydro – Fofanny (Non-REGO)	212,023
Steam (Non-REGO)	3,497,155
Dunore Solar Farm (REGO)	5,958,982
58 Solar PV Installations (Non-REGO)	1,032,473

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 40% 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	0.091	0.171	0.118	A3
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO_2e/ ML	0.257	0.546	0.386	B3
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO_2e/ ML	0.167	0.355	0.251	B3

Calculations for the tonnes CO_2e/ML intensity ration have been generated from the UK Water Industry Carbon Accounting Workbook 13.0 (March 2020) outputs using data from AIR20 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 2020) for greenhouse gas emissions associated with the provision of water, wastewater, sludge disposal, administrative function and transport in its AIR20 return.

Data sources for the AIR20 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 AIR20 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 AIR20 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 AIR20 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 124,706,199 kWhrs recorded in CAW 13.0 sourced from 100% renewable electricity generation for the period 01.04.19 to 31.03.20. 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 AIR15 to AIR20 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	AIR15	AIR16	AIR17	AIR18	AIR19	AIR20
Gross Operational Emissions	tonnes CO_2e	187,099	175,585	160,447	143,491	120,442	112,130
Green Tariff electricity purchased reduction	tonnes CO_2e	-74,482	-54,112	-41,296	-36,396	-29,651	-31,875
Net Operational Emissions	tonnes CO_2e	111,526	120,327	118,778	106,816	90,364	79,328

Table 4

Description	Unit	AIR15	AIR16	AIR17	AIR18	AIR19	AIR20
Annual operational emissions intensity ratio per Ml of treated water	tonnes CO_2e/ ML	0.185	0.141	0.143	0.176	0.139	0.118
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO_2e/ ML	0.561	0.467	0.574	0.611	0.433	0.386
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO_2e/ ML	0.366	0.490	0.376	0.379	0.287	0.251

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 AIR20 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 2019/20 against the emission factors for 2018/19 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	1,886.30	
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	883.4	
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	27 002.82	
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	2,211	
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	81.9	
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	45,759	
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	751	
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	0.09	
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	1,892	1,984	
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	22	
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	39	
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	1.97	
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	2 257	
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	1.20	
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	120.62	
16	Company's overall serviceability assessment for water infrastructure	Text	N/A								Stable	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	4,427	
18	Number of regu atory 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	6	
19	Number of regu atory 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	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	0.27	
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	388	400	
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	4	
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	27	
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	7.47	6.75	
25	Events at WTW resu ting from treatment d fficulties or ineffective treatment categorised as 'significant' or higher	nr	0				14	27	28	12	28	26	15	23	24	15	12	18	17	
26	Number of regulatory samples taken at Service Reservoirs for col form 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	14,923	
27	Number of regu atory samples taken for co iform bactena at Serv ce Reservo rs exceeding the drinking water standard PCV	nr	0	59	86	68	43	22	24	8	22	27	26	17	20	15	14	8	13	
28	Percentage of regulatory samples taken for coliform bactena at Service Reservoirs exceed n 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	0.09	
29	Unplanned (reactive) maintenance	%	1										3.6	2.6	1.7	1.0	1.5	1.2	1.1	
30	Company's overall serviceability assessment for water non-infrastructure	Text	N/A								Stable	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	16,163.23	
32	Total number of rising main failures	nr	0					25	25	37	26	41	16	11	9	5	12	20	5	
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	1,245	
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	1,250	
35	Sewer co lapses 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	77.3	
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	17,593	
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	1,088.5	
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	7	
39	Number of H, M and L pollut on incidents from sewer network (CSOs, ris ng mains and foul sewers)	nr	0						244	221	199	137	149	126	86	102	96	97	72	
40	Properties flooded in the year (other causes	nr	0				366	23	5	28	23	41	55	52	38	47	33	23	24	
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	4 515	
42	Total number of equipment fa lures 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	6,879	
43	Number of pumping station emergency overflows triggered by equipment fa lure	nr	0									21	18	22	15	8	9	5	6	
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	1,250	
45	Company's overall serviceability assessment for sewerage infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	
D	**SEWERAGE NON INFRASTRUCTURE**																			
46	% WwTW discharges not comp iant 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	5.3	
47	% of total p.e. served by WwTWs not compliant w th numer c consents excluding upper tier fa lures	%	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	0.59	
48	Number of BOD, SS and Ammonia sample results recorded for comp iance reporting at WwTWs w th 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	6,970	
49	Number of BOD, SS and Ammonia compliance sample results which exceeded their numer c consent value	nr	0	652	817	444	297	363	333	361	279	302	370	299	276	283	290	157	164	
50	Percentage of BOD, SS and Ammonia comp iance sample resu ts 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	2.35	
51	Number of WwTWs with one or more compliance samp e result (BOD, SS or Ammon a) exceeding the numeric consent value	nr	0	104	132	115	99	103	98	102	91	76	87	60	55	44	51	42	39	
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	89.29	
53	Unplanned (reactive) maintenance	%	1										5.5	3.6	2.2	2.4	1.8	1.5	2.1	
54	Company's overall serviceability assessment for sewerage non-infrastructure	Text	N/A								Stable	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 81.88 for AIR20

The output figure for this serviceability indicator for AIR20 Line 5, shows that the recent trend has levelled out near and below the median line in the target envelope for the last three years.

The output for this serviceability measure is Stable

In relation to Line 6 “Interruptions to Supply > 3hrs resulting from Equipment failure”, the recent apparent deterioration since AIR14 was due to the transition to the IMS methodology, this required an adjustment to the reference level.
Since this new methodology has been embedded, the trend rate is looking stable.
This assessment is supported by the relevant “Customer Call “annual trend shown below.

This analysis above 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 AIR 16 to AIR 18 has levelled out at the median burst rate in the last two years.

NIW will monitor the trend for this important primary indicator.

The overall Serviceability assessment of the Water Infrastructure Network is “Stable”

Summary Table

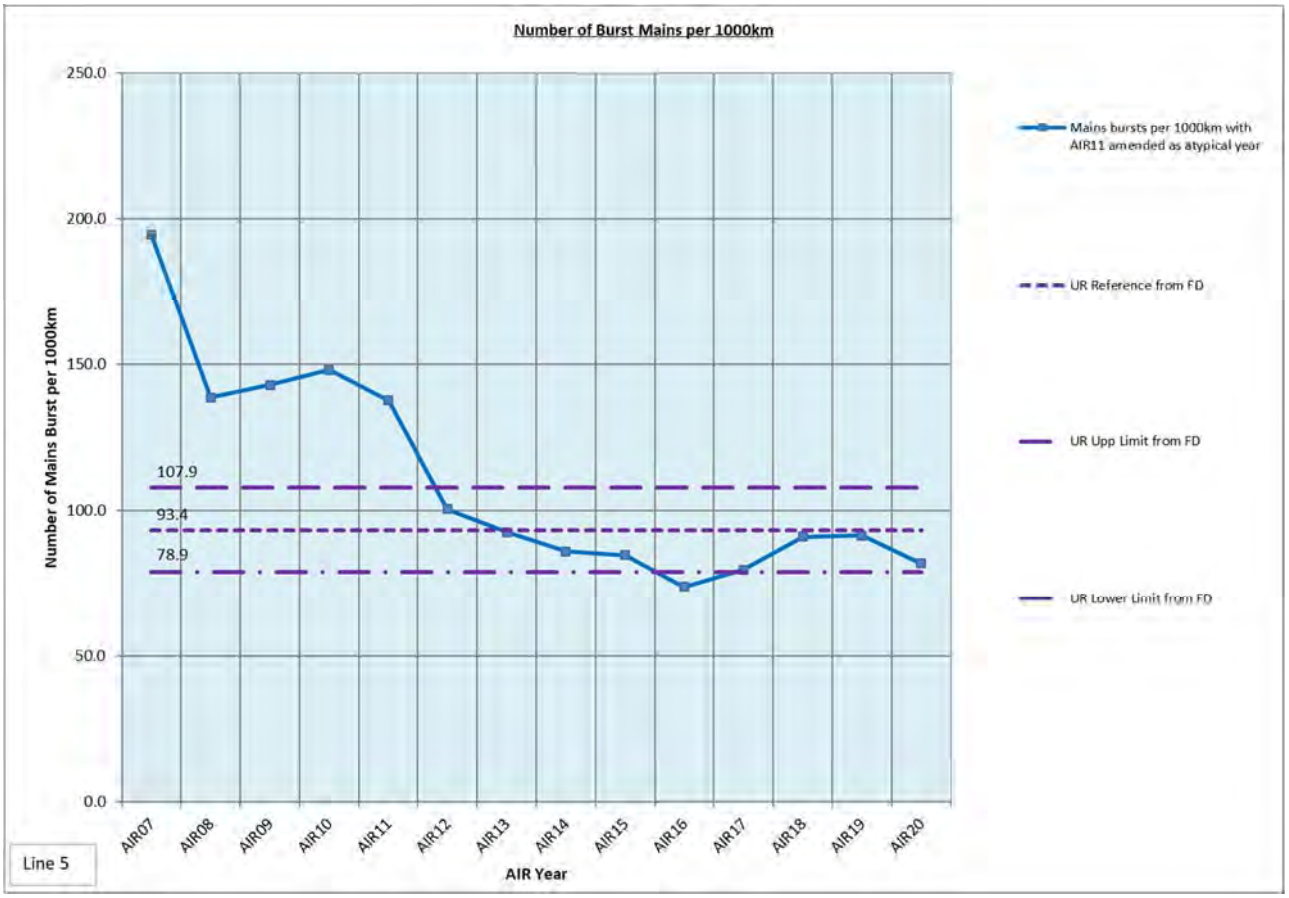
Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
No. of Bursts per 1000km	Line 5	The total annual number of bursts has fallen by approximately 40% in the last 10 years. The burst trend has been fluctuating between the middle and lowest threshold on the graph since AIR 13 This year’s figure is at the lowest threshold level. This trend continues to be monitored and analysed. **This Serviceability Indicator is considered as Stable**	**Stable**

Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
Interruptions to Supply > 3hrs	Line 6	As the 2017/18 outturn did not conform to an improving trend and this trend was based on only five years of data since the better automated data capture systems were introduced (See commentary below) .The conclusion is that NI Water's performance against this measure remains '**Stable**' as the AIR 20 figure is the first year that the figure has reached a point between the upper and lower thresholds on the graph. 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, near or below the lower limit for the last five years and has been between the middle and lower limit since AIR 12 , the perceived improvements 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**

Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
% of iron Samples Exceeding 75% of PCV	Line 12	The AIR20 output shows that the ongoing trend has fluctuated around the lowest control boundary for the last 5 years. These outputs are related to a random sampling regime and would be expected to fluctuate around an average level. This level looks to be between the UR reference level and the UR final determination lower limit The 39 out of 1988 sample failures experienced in this period, is a slightly higher figure than last year but again, the number of samples taken was greater than the previous year. Taking these factors into account, this therefore indicates that this measure indicates a **Stable** trend	**Stable**
Number of Customer Contacts per 1000 population (Discoloured Water)	Line 14	The graph demonstrates fluctuation of the trend between the UR reference level and the upper level control limits since AIR15. The trend has been decreasing on this issue in the past few years within the control boundaries. The AIR 19 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 UR reference level Taking these factors into account, this therefore indicates that this measure indicates a **Stable** trend	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

AIR20

The number of Burst Mains per 1000 km is 81.88 for AIR20.
Total Burst Mains divided by Total length of mains multiplied by 1,000
2237 – 26 (rechargeables) / 27,002.82km = 0.0819 x 1,000 = 81.88
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 lower outputs to AIR 18 and 19, 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

The number of mains repairs due to non-proactive leakage detective methods shows a decrease from AIR 19 and this may be down to a combination of a mild winter, with no significant freeze / thaw periods, and factors within the three points listed above. A substantial reduction, from AIR 19 to AIR 20, in the reported 'Run of Water' complaints by the general public would also confirm this.
The number of mains repairs down to proactive leakage detection methods, while slightly down from AIR 19, is in line with the last five years' average figure from AIR 16 onwards (1017no.) There has been no deviation from the emphasis on proactive leakage detection by 'In House' Crews.

The number of reported defects by Leakage detection teams, relative to mains and service repairs, is consistent with previous years in total but a slightly higher proportion have fallen into the communication pipe repairs category. This is mirrored by the slight increase in communication pipe replacements carried out in the report year (Table11_L10).

There is a significant reduction in the number of repairs attributable to Third Party Damage. The reasons for this are unclear and are difficult for NI Water to manage as the figure is dependent on both contractors admitting liability and front line operatives initiating a rechargeables process when required. NI Water will review procedures and re-emphasis the need for this process to be followed when applicable.

Between AIR19 and AIR20, there was a further 16% reduction in the Table 2 Line 5 outturn number of properties affected by an unplanned interruption of more than 3 hours. When records of 'no water' complaints were used to substantiate the reduction, the outturn was confirmed to be consistent with expectations and not unduly lower. The reduction was also consistent with the burst rate trend reported in Table 11 Line 11 which fell by 10.5% between 2018/19 and 2019/20.

Detailed data for the reporting period April 19 – March 20 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 (for comparison)

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 2237 (including 26no. due to third party damage).

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1051.

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1186.

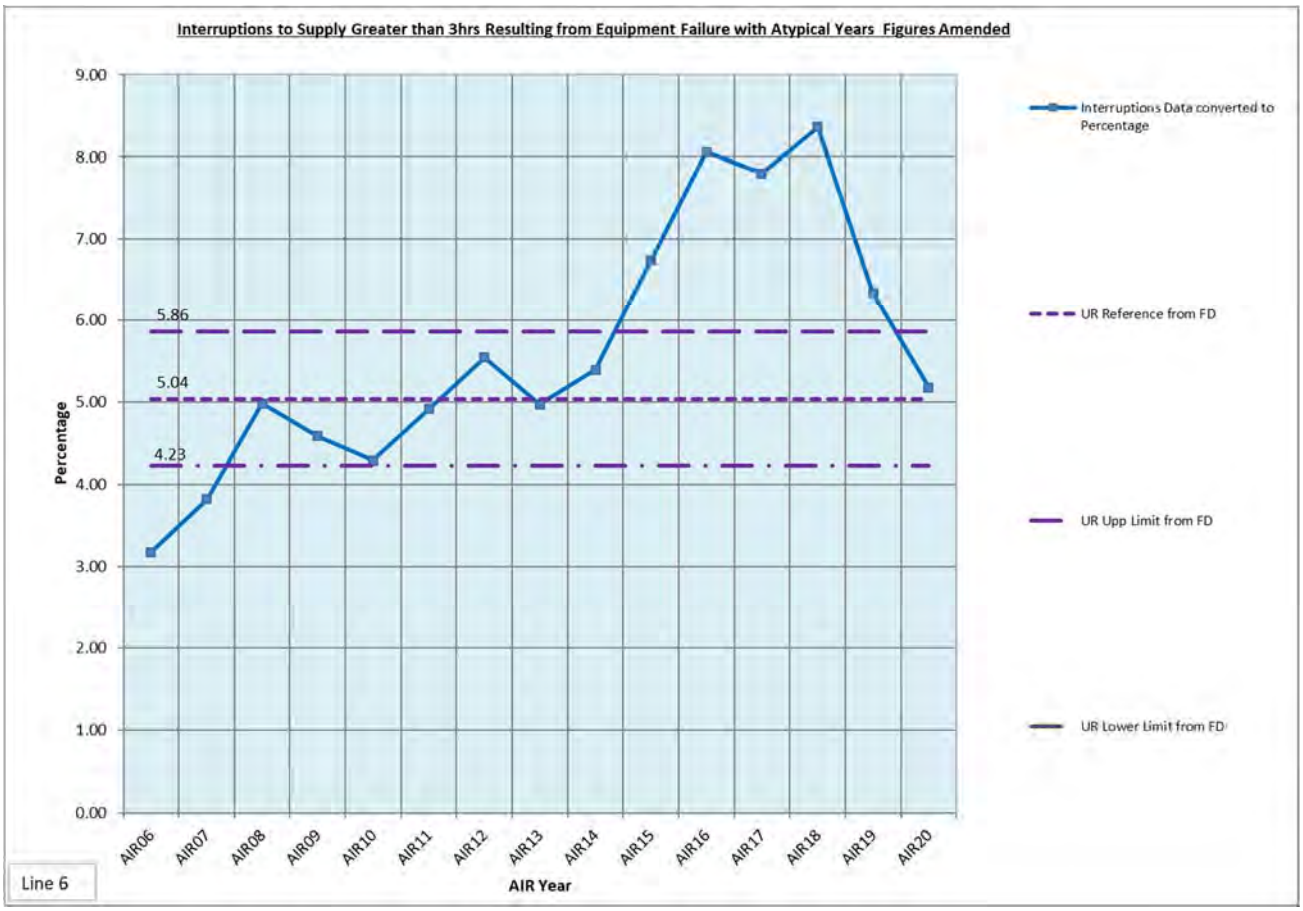
This Serviceability Indicator is considered as Stable

There were two slight increases in the last two years, however the overall trend from AIR 10 onwards shows a positive trend towards reduction in bursts within the UR final determination upper and lower limits on the graph. (See graph above).

Secondary Indicators

Line 6 – Interruptions to Supply > 3hrs resulting from Equipment failure

AIR20 Graph

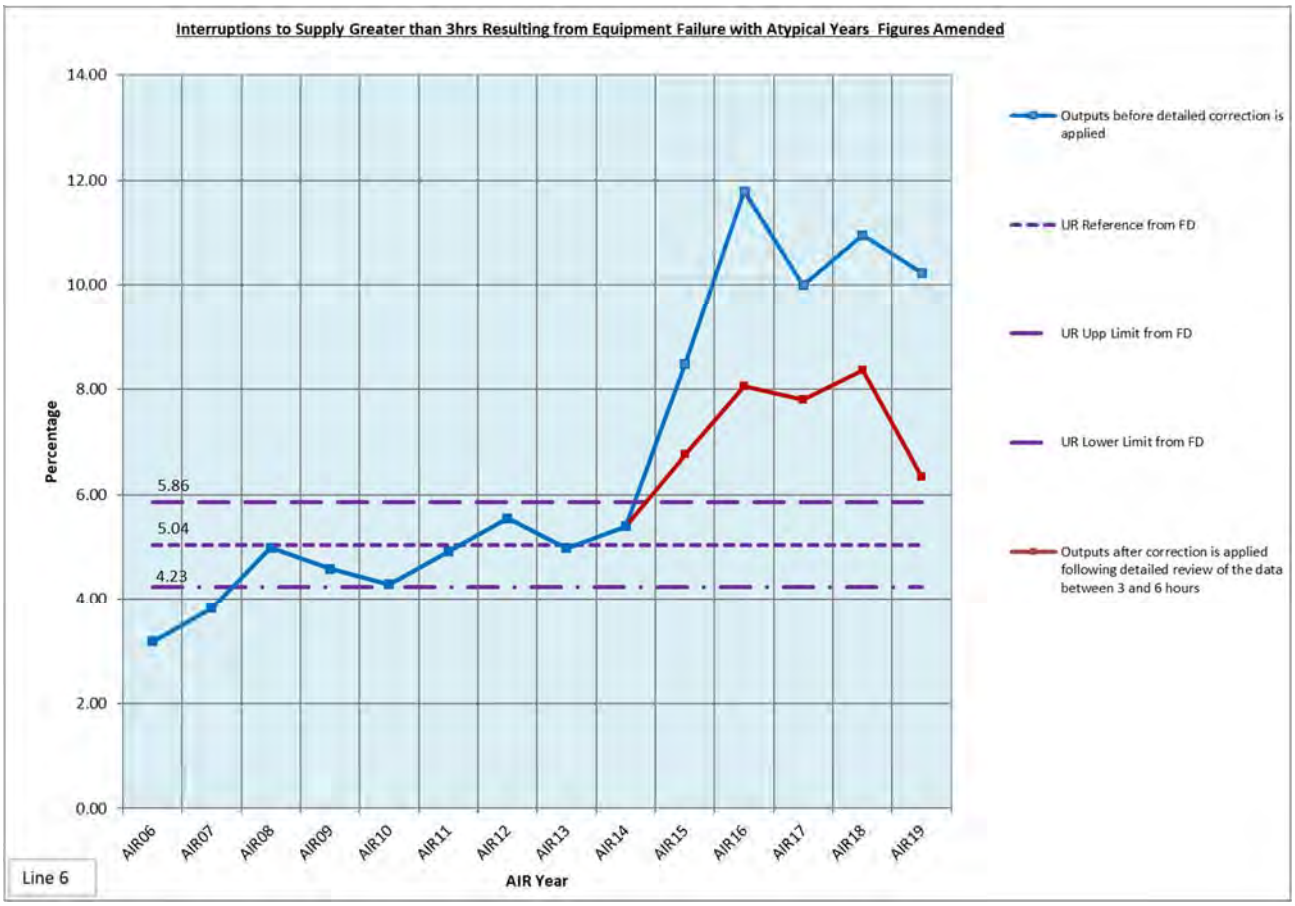


The figures of 8.49, 11.79, 10.00 and 10.96 highlighted in the table below are the AIR15 to AIR18 figures shown on the blue line graph**. (See below for the discussion of these methodologies)**

The figures of 6.34 and 5.18 highlighted below are the AIR19 and AIR20 figures shown on the red line graph. **(This is the more accurate indication-see discussion below)**

	AIR15 (inc. industrial action)	AIR15 (exc. industrial action)	AIR16	AIR17	AIR18 (inc. flooding)	AIR18 (exc. flooding)	AIR19	AIR20
Original Table 46 Line 6 outturns (AIR15 to AIR18), AIR19 outturn (**before** review) and AIR20 outturn	111,081	70,272	98,979	85,239	106,176	94,549	89,466	n/a
Total Connected Properties	828,060	828,060	839,710	852,399	862,988	862,988	874,307	n/a
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**	n/a
Recalculated Table 46 Line 6 outturns (AIR15 to AIR18), AIR19 outturn (**after** review) and AIR20 outturn	91,432	55,931	67,715	66,451	83,777	72,150	55,414	45,759
Total Connected Properties	828,060	828,060	839,710	852,399	862,988	862,988	874,307	883,423
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**	**5.18**
Note: AIR outturns are highlighted yellow and were reported excluding the impact of Dec 14/Jan 15 industrial action and Aug 17 flooding								

Last Year's -AIR 19 Graph for Comparison and Explanation



Original Methodology Employed (Representing the Blue Line)

The blue line of table above, is representative of an outturn based on the same methodology previously used to calculate the outturns for AIR15 to AIR19.

(Utilising this representative outturn, the percentage of connected properties affected in AIR 19 was calculated at 89,466 properties affected, divided by the total number of properties connected to the Network (874,307) = 10.23% as shown on the blue line trend above. An updated figure is not calculated for AIR 20 utilising this methodology)

Adjusted AIR19 Calculation (Representing the Red Line)

The CSD Services – MI & Data Team reviewed the overall methodology for this line during the 18/19 period with a view to making it more accurate ,and concluded that the historical 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 the figures during the 18/19 period, it was considered that NIW was over-reporting the historical figures for this line.

Following detailed scrutiny of the figures for 18/19, a percentage adjustment was considered to be applied to the historical figures for all of the period that the IMS system had been implemented, in order to make the ongoing reporting more accurate.

In an effort to improve the accuracy of its AIR19 outturn, NI Water undertook a detailed review of its unplanned interruption events in 2018/19 with durations of between 3 hours and 6 hours and property counts in excess of 500.

The review process identified that the degree to which interruption events meeting the review criteria were likely to have been over-reported was 61.11% and this in turn enabled NI Water to apply the correction factor in the calculation of a more realistic series of historical outturns. Detailed reviews have continued throughout 2019/20 but on a day-to-day basis as opposed to retrospectively.

AIR19 Utilising the Updated Methodology

Utilising the updated methodology, the revised *(and reported)* percentage of connected properties affected was calculated at 55,414 properties affected, divided by the total number of properties connected to the Network (874,307) = 6.34%.for the AIR 19 period as recorded on the red graph above

AIR 20 Utilising the Updated Methodology

Utilising the updated methodology for AIR 20, the percentage of connected properties affected was calculated at 45,759 properties affected, divided by the total number of properties connected to the Network (883,423) = 5.18% as recorded on AIR20 graph above.

Discussion on the Impact on the Trend Line of the Implementation of the IMS System during 2014 /15

NIW consensus is that the apparent deterioration since AIR14 is due to the introduction of IMS in July 2014, together with the absence of a detailed review process for unplanned interruption events, lasting between 3 hours and 6 hours

Note: This analysis suggests that we may require a reporting adjustment to the reference level in the PC21 period.

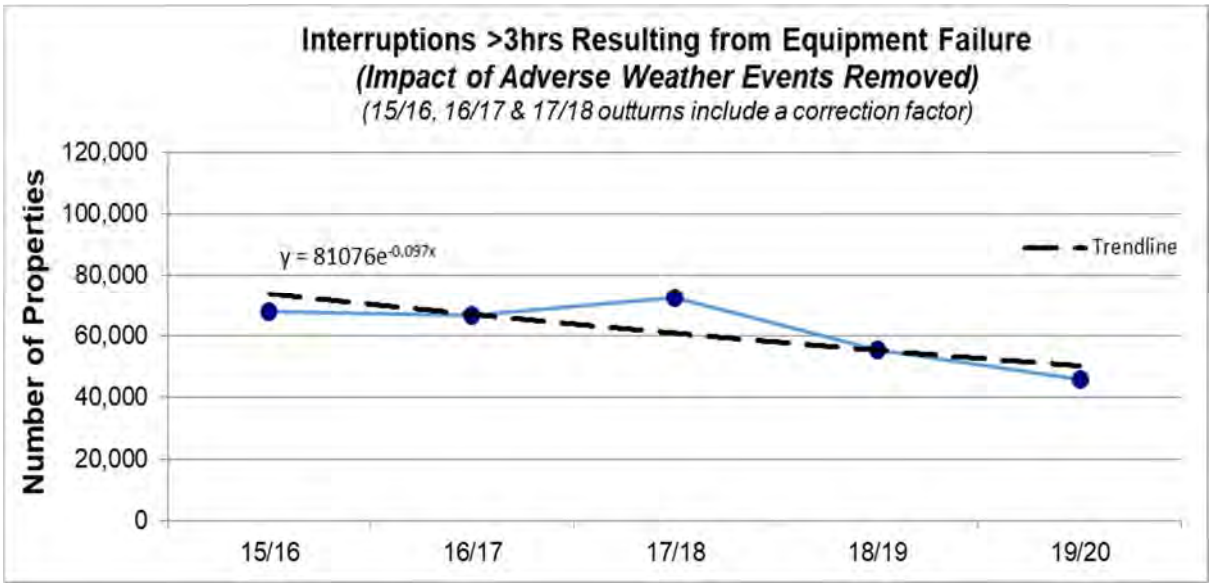
Accuracy Validation

As the 2019/20 outturn of 45,759 was less than the previous year's outturn of 55,414, the Company has examined its records of 'no water' complaints for the same period to see if there was any correlation.

The results in the following table confirm that the number of 'no water' complaints received in 2019/20 as a percentage of the total complaints received in the last two years *(46.3%)* was consistent with the 2019/20 outturn as a percentage of the combined outturns for the last two years *(45.2%)*.

As these two percentages are similar and the data sources are different, this is good evidence that the 2019/20 outturn is consistent with expectations and not unduly lower.

	2018/19	2019/20	2018/19 + 2019/20	2019/20 Percentage
'No Water' Complaints	20,153	17,361	37,514	46.3%
Table 46 Line 6 Outturn	55,414	45,759	101,173	45.2%



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 from 2015/16 to 2019/2020.

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	2019/20
More than 3 hours	781	779	803	654	591
More than 6 hours	119	95	81	75	63
More than 12 hours	17	12	9	4	4

This table further suggests stability in the network for the > 3hours category.

Conclusion

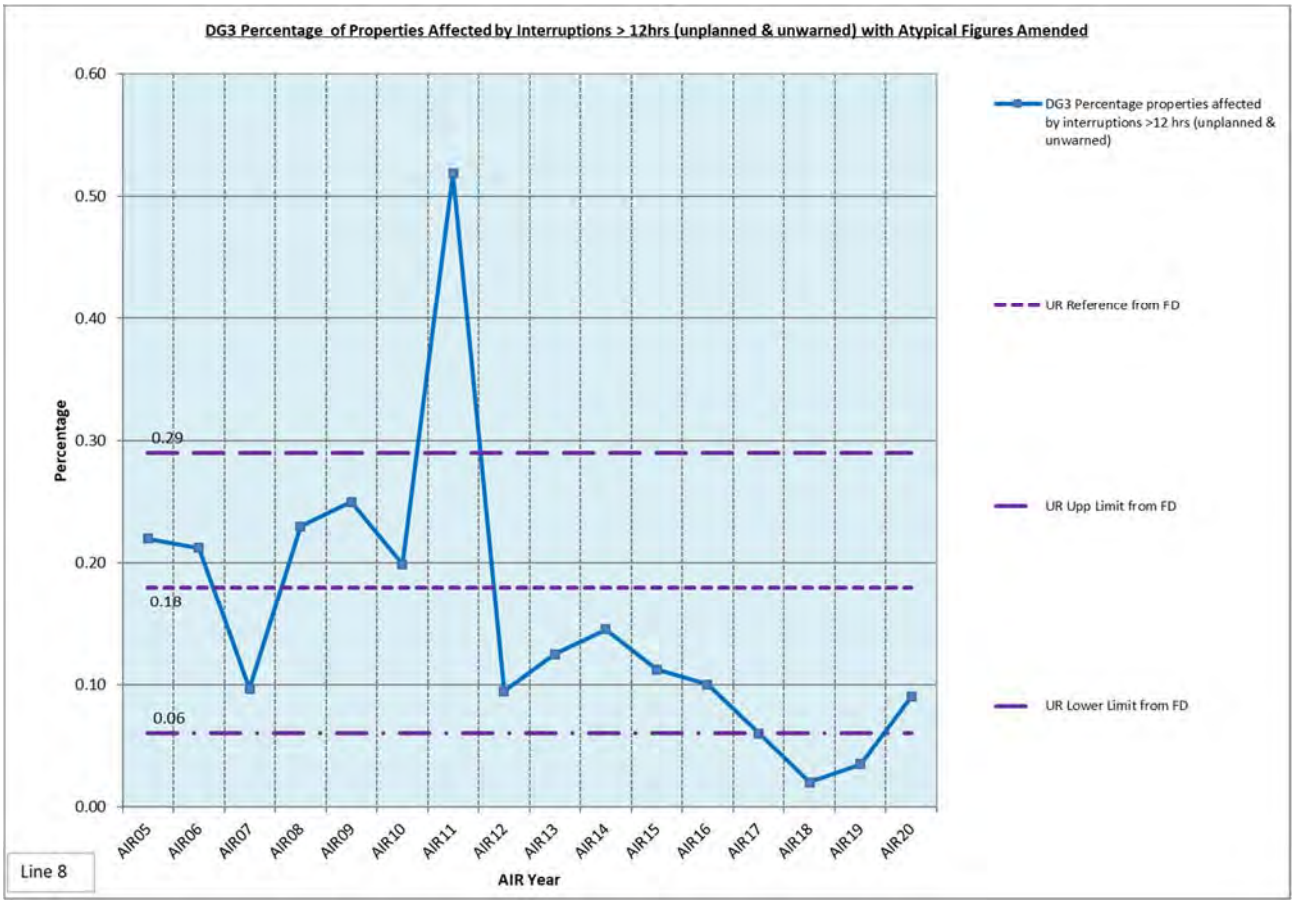
There is no evidence in either the OMIS or IMS datasets *(excluding atypical factors)* to suggest that serviceability has been 'marginal' or 'deteriorating'. An assessment of asset performance based on the OMIS dataset confirms that serviceability was '**stable**' during the 7-year period from 2007/08 to 2013/14. An assessment of asset performance based on the IMS dataset and with a correction factor applied to account for historical instances of over-reporting, confirms that serviceability was 'improving' during the 5-year period from 2015/16 to 2019/20. But this is believed to have been the result of an improved operational focus on work practices.as opposed to an improvement in asset serviceability.

Progress continues to be made as proposals and initiatives identified under the ITS Strategy are implemented across the business. Significant engagement work has been undertaken with the implementation of the new 'Working Differently' process aimed at reducing the Company's lost minutes per property outturn from planned work. Additional equipment has been purchased to assist colleagues and the benefits of such initiatives are already being realised, for example, tanker operations during the Dungonnell to Parkmore incident.

As the 2017/18 outturn did not conform to an improving trend and the trend was based on only five years of 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 trends on a yearly basis and review as necessary.

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%.

For AIR20 the graph shows that, the percentage outturn of properties with outages lasting greater than 12 hours (751) divided by the number of connected props of 883,423 in AIR20 = 0.085%.

The Outturn for AIR 20 is 0.09% rounded to two significant figures.

Table Summary of equipment failures 2007-2020

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	19/20
Outturn	**1,655**	**1,358**	***1,563***	***697***	**663**	***1,017***	**1,105**	***928***	**839**	**344**	***190***	**308**	**751**

The calculation of 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 was 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 perceived improvement of previous years, may be more likely to be attributed to an improved operational focus on work practices than asset performance.

The 2019/20 outturn of **751** is higher than the previous three outturns because of the severity of two of the four interruption events making up the figure, as summarised in the following table.

Event	>6hrs		>12hrs		>24hrs	
	Props	%	Props	%	Props	%
Multiple bursts on trunk main between Tullywhisker and Rakelly SRs	1,824	0.206	233	0.026	23	0.003
Burst main, Craigstown Road, Kells	626	0.071	463	0.052	0	0.000
Burst main, Jacksons Road, Holywood	400	0.045	33	0.004	0	0.000
Burst main, Lettermire North SR, Foreglen Road, Londonderry	49	0.006	22	0.002	0	0.000

Note: The Tullywhisker and Craigstown events each had a greater number of affected properties than the Company's >12hr in-month target of 108.

Tullywhisker Event

During the period 4th to 11th May 2019, a series of bursts occurred on the 300mm diameter spun iron trunk main from Tullywhisker SR to Rakelly SR, Ardstraw, Newtownstewart. The burst mains were effectively over two event periods, initially from the 4th to 6th May *(Incident 1)* and then from the 8th to 11th May *(Incident 2)*.

Incident 1: On Saturday 4th May 2019, a high flow alarm was triggered at 4.45am on the trunk main from Tullywhisker SR to Rakelly SR. A burst occurred on a sluice valve where the main crossed the Derg River at Ardstaw. This repair was a complex operation due to the poor ground conditions, high pressure (approx. 16 bar) and the location of the existing valves. An initial repair was completed on the 4th May 2019.

Incident 2: Then at around 2am on 8th May, a second burst occurred on the trunk main in the same general area as the repairs completed on 4th and 5th May. Initial repairs were completed on the outstanding defects overnight but unfortunately, a further mains failure occurred at approximately 8am the following morning. Rezoning was again carried out and neighbouring service reservoirs balanced to minimise disruption to customers. Tankering operations continued throughout the day.

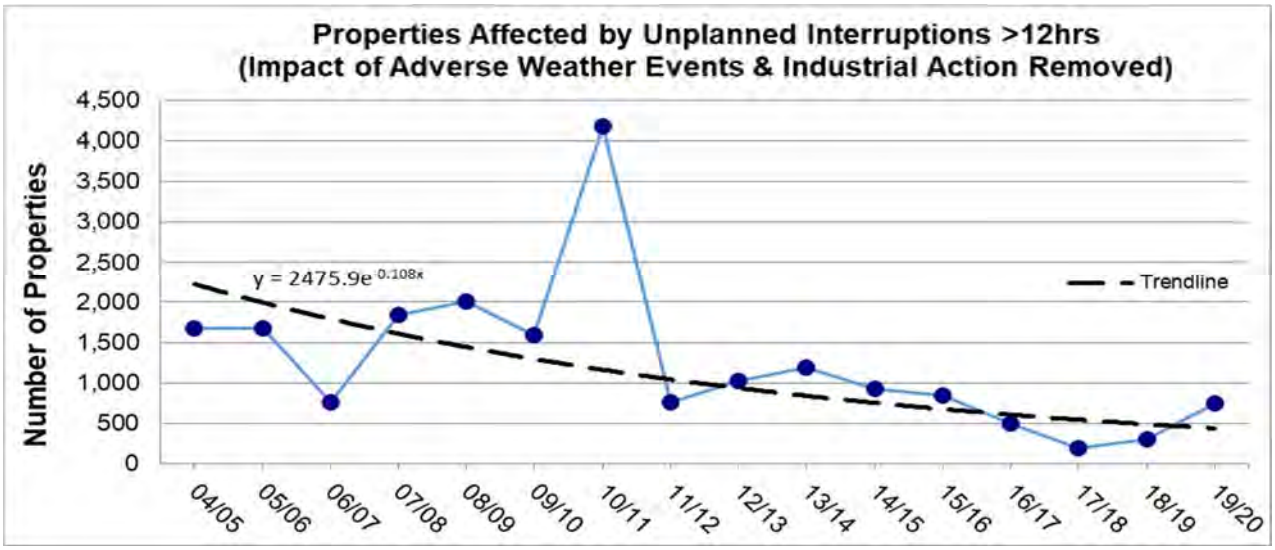
These bursts had a significant impact upon customer supplies in the affected DMAs. A combination of complex operational difficulties were experienced during both incidents i.e. limited options for rezoning and the location of the bursts close to river bank, etc. The trunk main from Tullywhisker to Rathkeely supplies multiple SRs and DMAs, adding further

complexity to incident management. Multiple repairs were carried out during Incidents 1 & 2, which subsequently failed. A number of these failures were due to inadequate anchorage at the burst location.

Craigstown Event

At 18:15 on 15th May 2019, a burst occurred on an 8 inch asbestos cement main at Craigstown Road, Kells affecting properties in Craigstown DMA. Due to the rural location of the burst, rezoning options were limited. A section of main was replaced during the repair but when the new length of main reached normal pressure, it split, resulting in a second unplanned shutdown of the main for the replacement of the failed main. Due to the length of time required to repair the main, twice at the same location, the DMA drained down considerably. The size and amount of small diameter mains within Craigstown DMA increased the time taken for the DMA to return to its normal pressure. An extensive number of airlocks also had to be removed from within the system.

The following graph shows the annual outturn numbers of properties affected by unplanned and unwarned supply interruptions greater than 12 hours for the period 2004/05 to 2019/20, excluding the impact of adverse weather events and industrial action. These figures are reported in Table 46: Line 7.



Despite the impact of events in 2019/20, the overall trend for this serviceability measure continues to be one of stability as the AIR20 figure of 0.09% is close to 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 historical Table 46 Line 6 outturns whose accuracy was previously influenced by an over-reporting issue.

The conclusion is that, although the annual outturn for Table 46: Line 8: DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned) seems to be one of improving performance, this trend is more likely to be attributed to an improved operational focus on work practices than asset performance.

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.

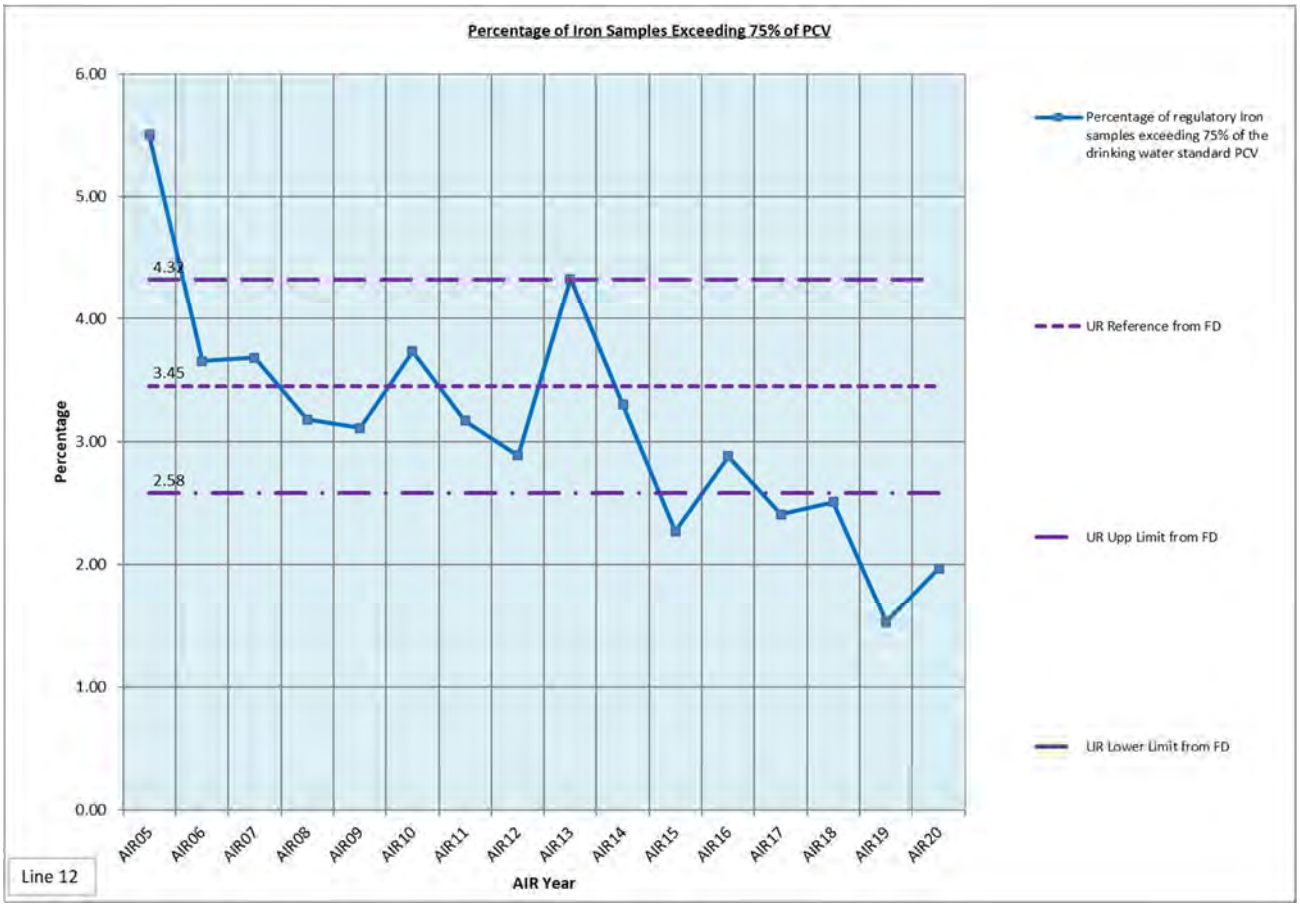
To date, the impact of initiatives targeted towards improving performance has been greatest on the 'more than 12 hour' time band as the main focus has been on those interruptions that last the longest and which therefore have the greatest potential to inconvenience customers.

NIW has commenced a Post Interruption Review (PIR) process, the aim of which is to establish learning points from ITS events, including unplanned interruption events lasting more than 12 hours.

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 near 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
Note: A recent review of the Tullywhisker indicated that the incident was more of a reflection of the location of some key valves in an area of soft ground at the edge of the river i.e. it seemed to have been more of a pipeline design issue rather than a Network condition issue (even though it contributed a lot of outage minutes to the total)

Line 12 – Percentage of Iron Samples Exceeding 75% of PCV



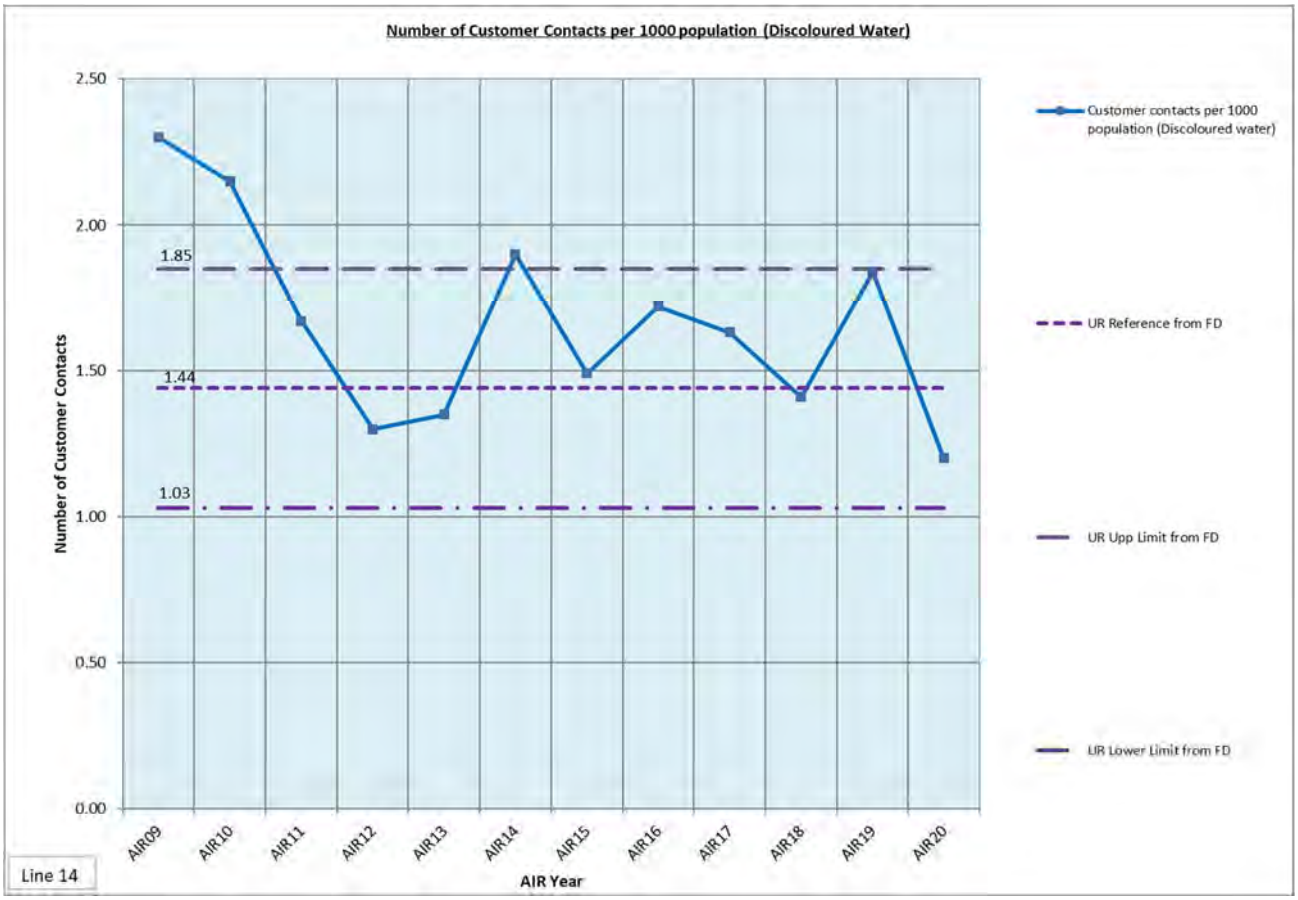
The AIR19 output is 1.96 %, calculated from a total of 39 failures out of 1988 samples.

The current failure rate is relatively low, with the ongoing trend fluctuating below the lower limit (above) for the last 4 years.

This figure is related to a random sampling regime. The 39 failures experienced, is a slightly higher figure than last year but again, the number of samples taken was greater than the previous year.

Taking these factors into account, this therefore indicates that this measure indicates a **Stable** trend as the random sampling regime can skew the trend slightly from one year to the next.

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 the **AIR20** return is 1,886,300 so figure would then be 2257 relevant contacts /1, 886,300 = 1.20%. For comparison, the **AIR19** return the measure for discoloured water Customer Contacts, (calculated from the number of Customer Contacts was 3447 divided by the population figure of 1,869,170 = 0.00184 – multiplied by 1000 for this measure was = 1.84%).

This output suggests that this trend is Stable, as the graph remains within the upper and lower limits of the target envelope

AIR 19 Anomaly

Due to the timeframe for which this data was submitted for the AIR 19 feedback, the severe (yellow warning) weather events in Feb and March 2018 were 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

Summary

The trend has remained between the UR upper and reference level from the Final Determination since AIR15 with a figure in AIR20 which is just below the reference level. Therefore, apart from the anomalies for the AIR 19 period as described above, there has been a stable trend in the last 5 years.

This measure is considered to be **Stable**

Note: A new proactive flushing methodology was commenced in Autumn 2019 with the expectation that for certain pipe cohorts we may be able to address discolouration issues more quickly and effectively.
It is unlikely however that this has yet affected the 2019 Calendar year outputs as it was carried out in such a relatively small area. The relative success of this pilot will lead this methodology to be considered as a possible alternative to Watermains replacement in some limited appropriate scenarios

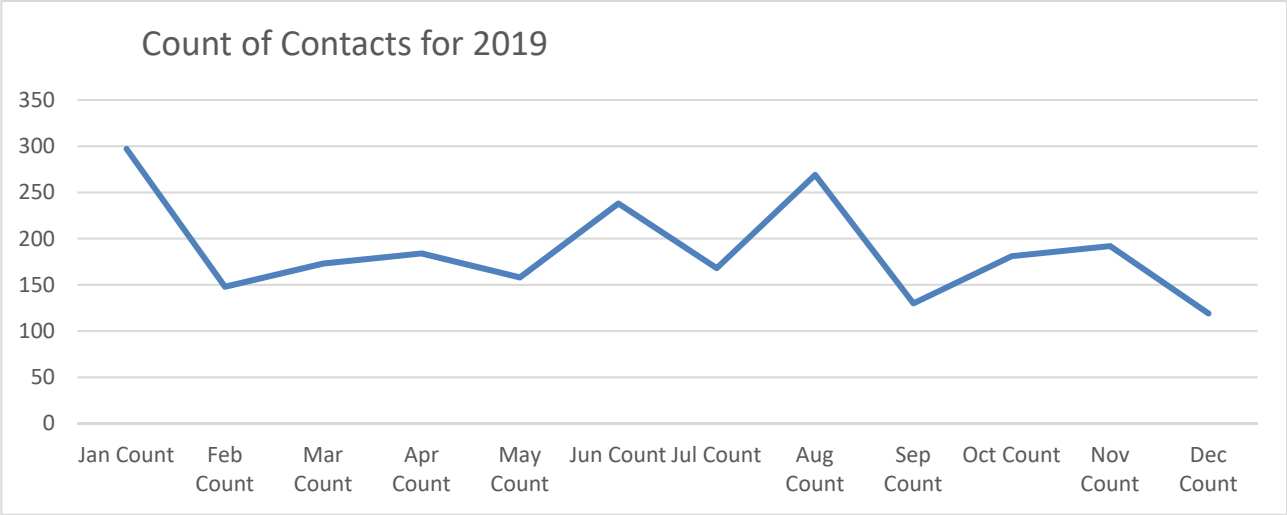
See the actual contact numbers in the table below during this period.

	AIR 17	AIR 18	AIR 19	AIR 20
Average Monthly Number of Calls on This Issue	252	219	287	188
Total Customer Contacts on Water Network for Discolouration Issues	3029	2632	3447	2257

Total Calls Logged Per Calendar Month in 2019 (For AIR 20 Reporting Period)

Discolouration Contacts per month 2019	
Month	**Count of Contact**
Jan Count	**297**
Feb Count	148
Mar Count	173
Apr Count	184
May Count	158
Jun Count	238
Jul Count	168
Aug Count	269
Sep Count	130
Oct Count	181
Nov Count	192
Dec Count	119
Grand Count	2257
Average Monthly number of contacts	188

Total Calls Logged Per Calendar Month in 2019 (For AIR 20 Reporting Period)



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 **AIR20** =120.62 Ml/day

The pattern for the past 4 years has been:
AIR15 = 126.08, AIR16 = 122.08, AIR17 =123.55, AIR18 = 125.44, AIR 19 = 120.23Ml/d

This is calculated by subtracting Lines 16 (DSOU) and 20 (Water Delivered) from Line 26 (Distribution Input),

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 AIR 17 and 18 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).

This Indicator is considered to **Stable**

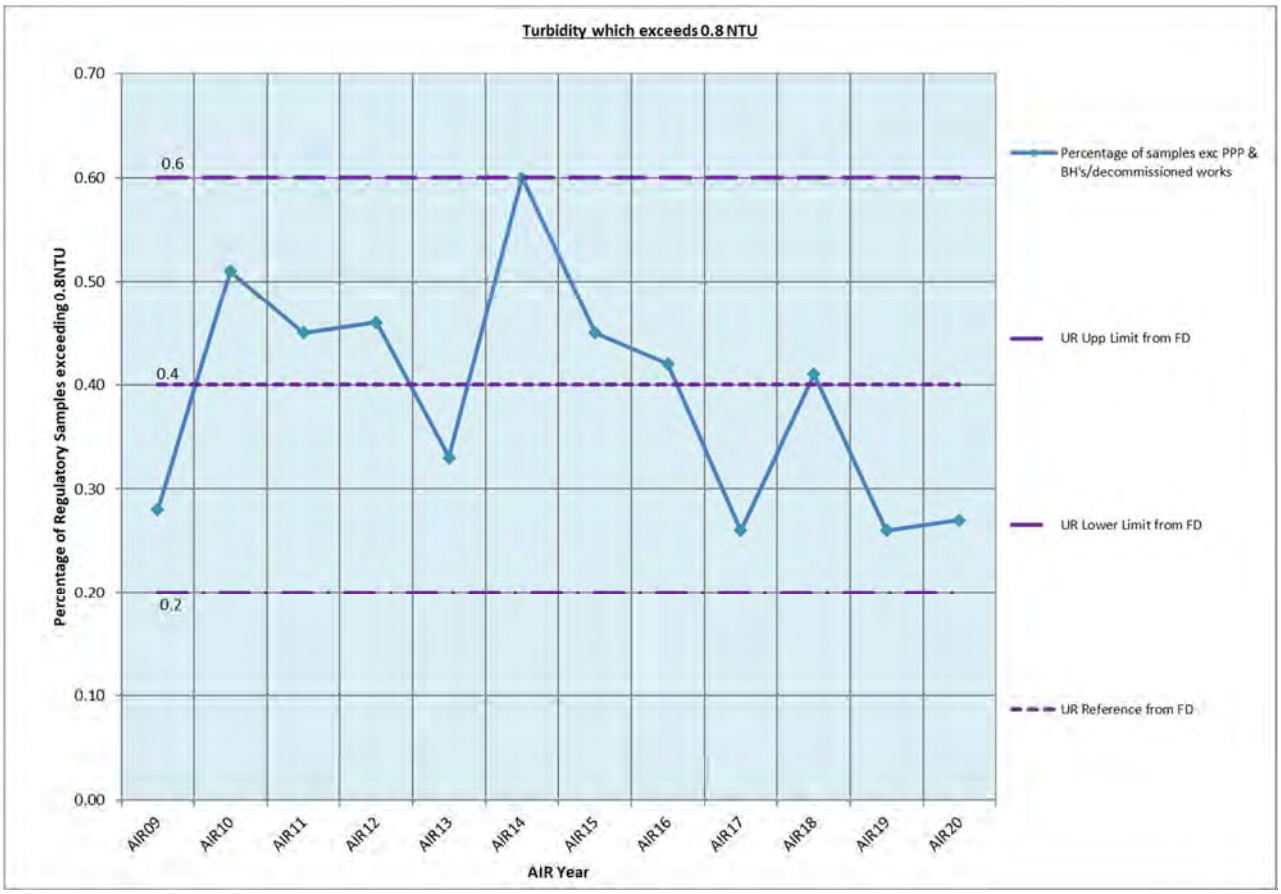
Line 30 – Company's overall serviceability assessment for water non-infrastructure

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 AIR20 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 for AIR 20 is 0.27% which is similar to the previous year.

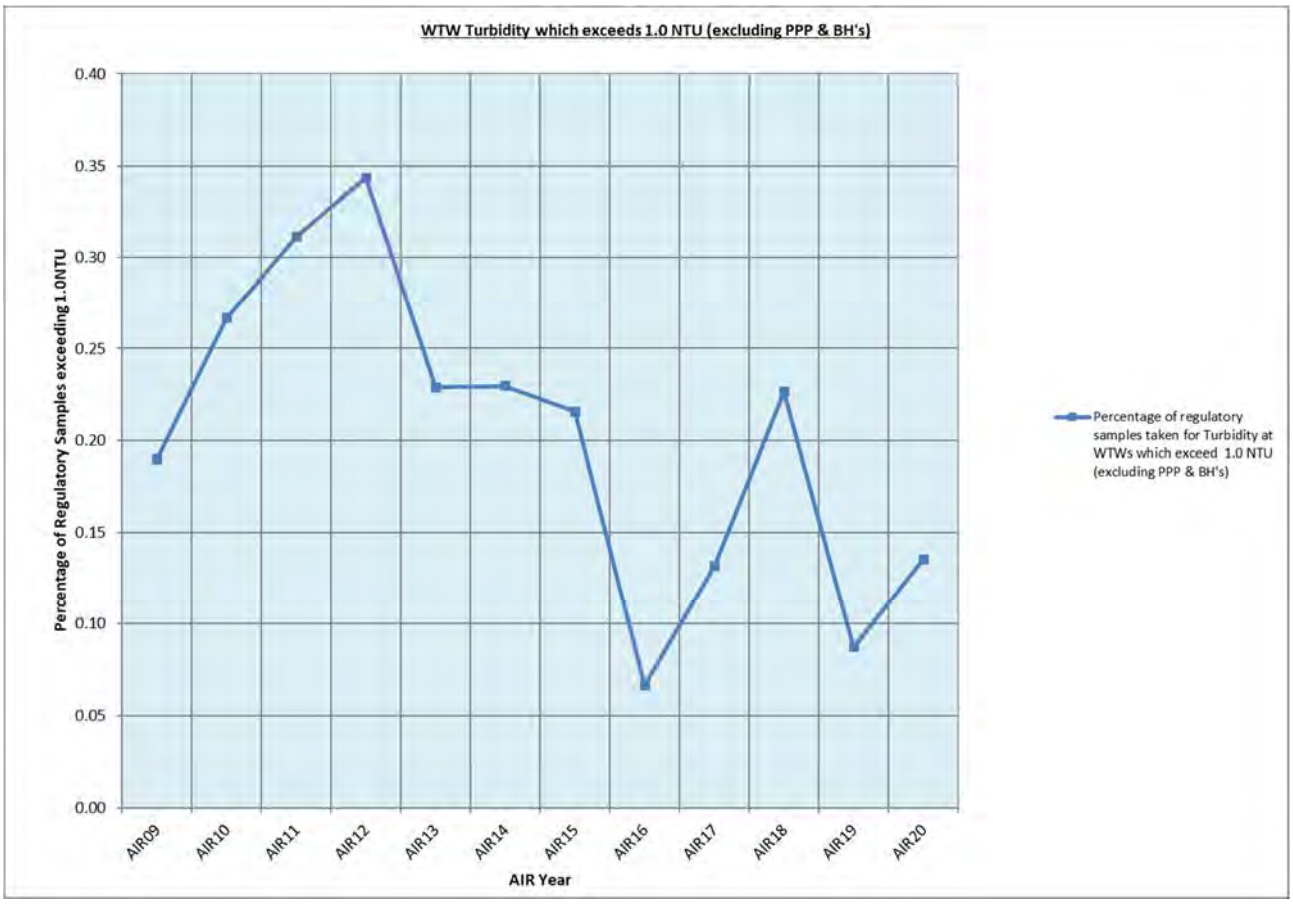
The AIR20 figure is calculated from Line 19 =12 failed regulatory samples divided by Line 17 = 4429 (total samples) and calculated as a percentage.

The AIR20 figure has therefore remained within the agreed Limits, between the UR lower and reference targets from the Final determination, 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. This measure is considered to be **Stable**

Secondary Indicators

Line 18 - WTW Turbidity which exceeds 1.0 NTU

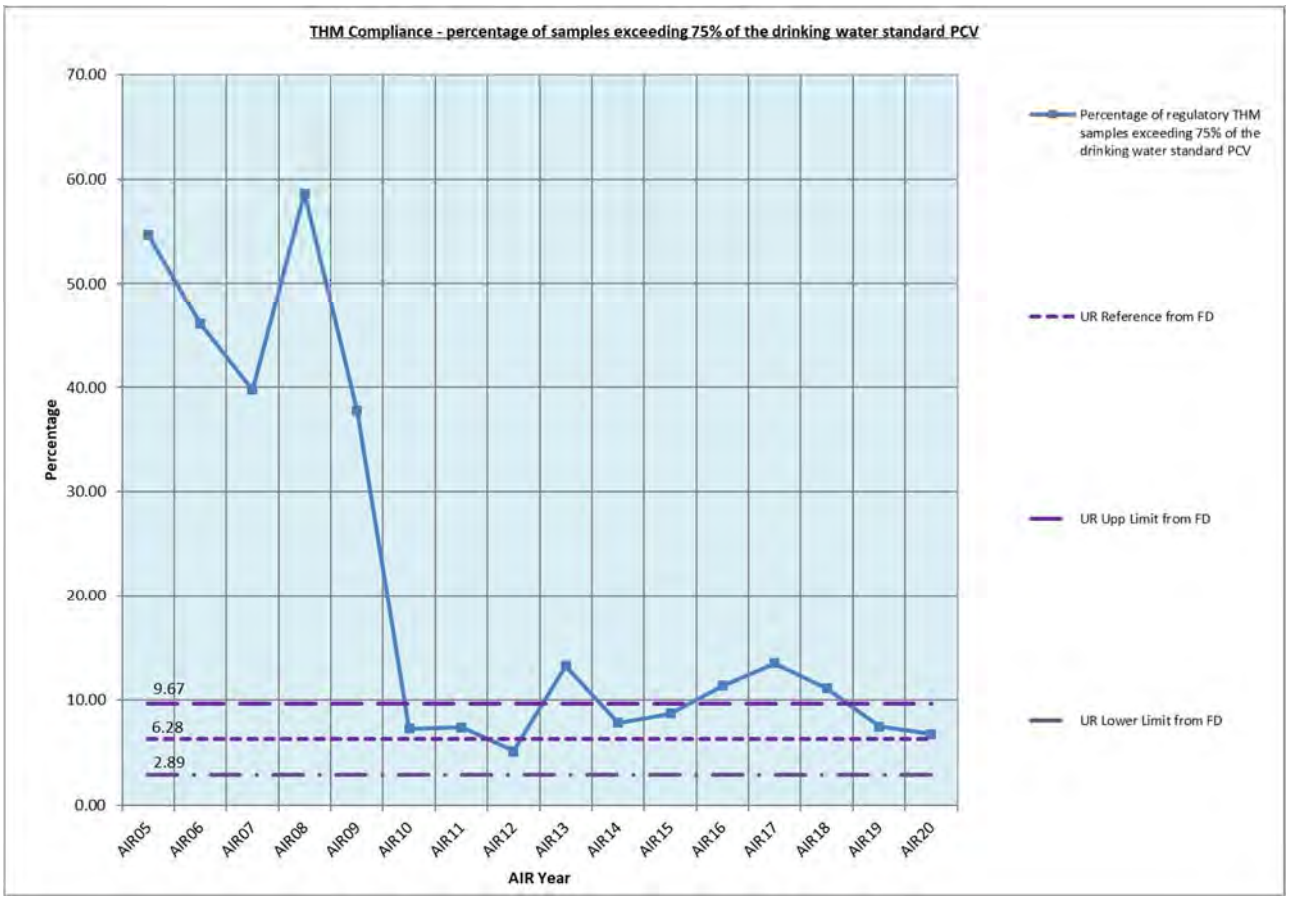


The AIR20 figure is calculated from line 18 =6 failed regulatory samples divided by Line 17, = 4429 samples, expressed as a percentage = 6/4429 = 0.135 -0.14% and is included as an indicator only. The outputs from the last two years has shown a significant improvement on the AIR 18 year's figure of 0.22%.

The "WTW Turbidity which exceeds 1.0 NTU – excluding PPP & BH's/decommissioned works" does not have indicator limits/references set by the Regulator. It has been included for illustrative purposes only.

NIW continue to carry out investigations in relation to quality check issues with sample points and analytical equipment, which can cause a sample to fail but are not reflective of the water quality, or the Serviceability of the WTW.
This measure is considered to be **Stable**

Line 24 - THM Compliance - percentage of samples exceeding 75% of the drinking water standard PCV



This output is calculated by diving Line 23 = 29 samples which failed in this range by Line 21= 389 samples taken , 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

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, 19 and 20 outputs have shown improvement from AIR17, and is therefore now considered to be **Stable.**

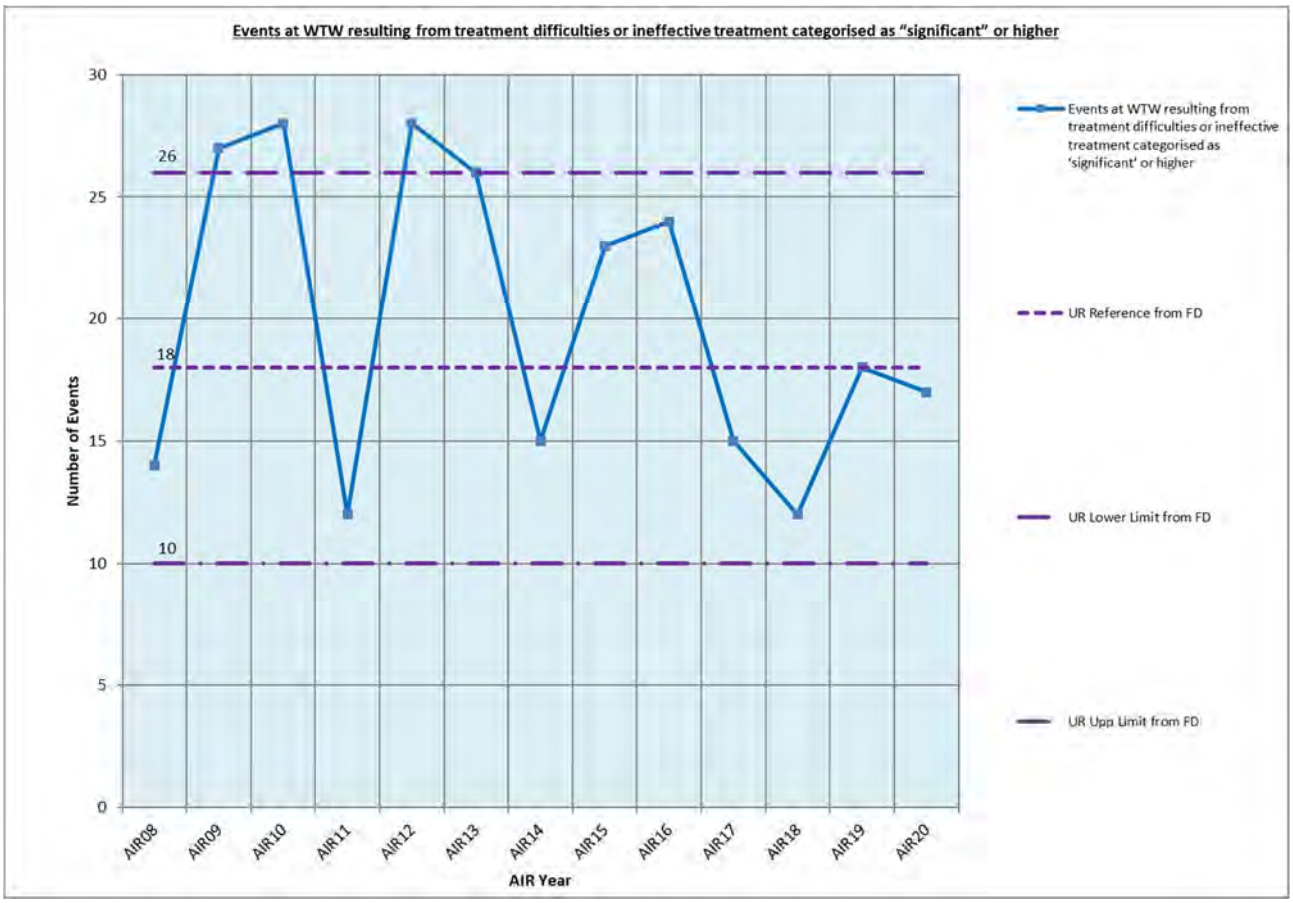
The WTWs have a final water operational monitor for THMs, which acts as a proactive alarm if 50% of the PCV (50µg/l) is measured.

It should be noted that mains water temperature was higher on average 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.

This measure is considered as **Stable**

Line 25 - Events at WTW resulting from treatment difficulties or ineffective treatment categorised as “significant” or higher

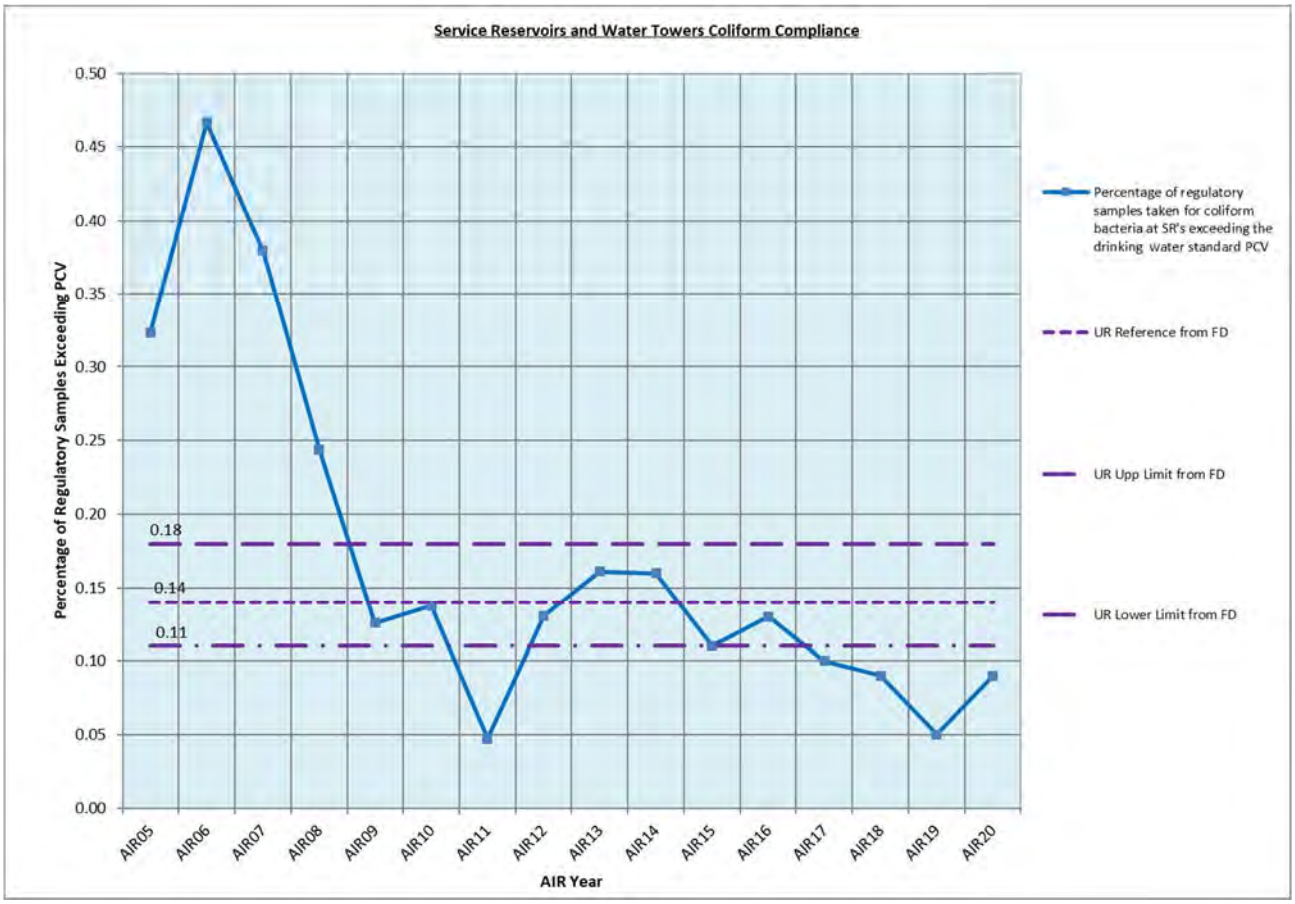


The output for AIR20 is a number of events recorded as 17 nr

The AIR 20 figure fluctuates around the UR reference point line on the graph .The trend here seems to be fluctuating around the median and has been comfortably within the upper and lower envelope target since AIR14.

“Events at WTW resulting from treatment difficulties or ineffective treatment categorised as significant or higher” to DWI has continued, for the seventh year, to perform as **Stable.**

Line 28 - Service Reservoirs and Water Towers Coliform Compliance – Secondary Indicator



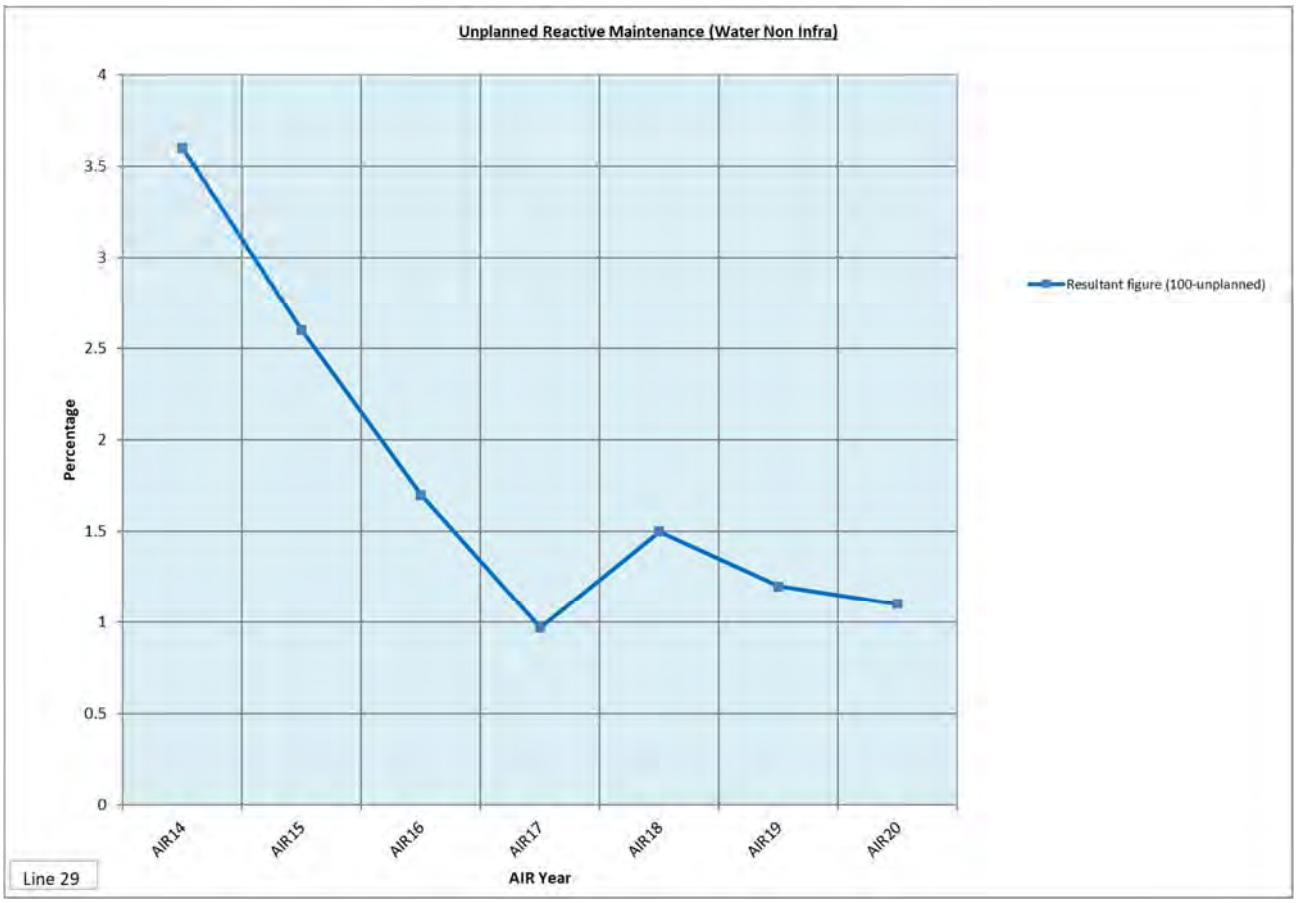
The AIR19 figure is calculated from Line 27 (number of failed samples) = 13 divided by Line 26 = Total number of samples taken 14,923

13/14,923 expressed as a percentage = 0.09%

This figure has dropped over this period to a figure below the lower UR final determination target limit. This is a result of proactive inspections and refurbishments and proactive SR management.

“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



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, the 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. The trend has now levelled off at around 1-1.5% over the last 4 years.

The percentage figure for AIR20 is 1.07% this measure is considered **Stable**

Line 45 – Company's overall serviceability assessment for sewerage infrastructure

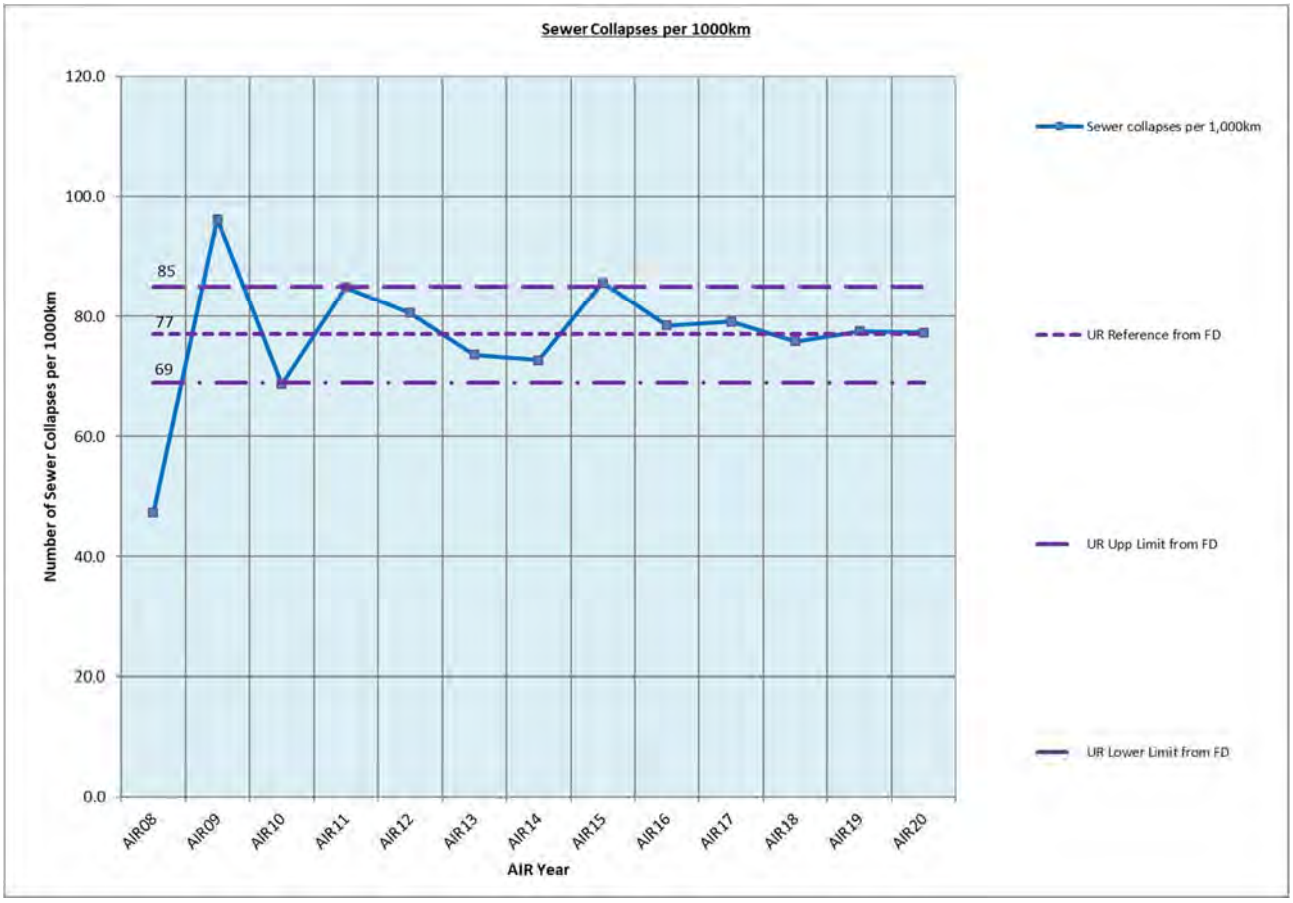
The serviceability assessment has been designated as **Stable** as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for sewerage infrastructure, are all within the control limits or under the lower control limits based on the latest AIR20 information.

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 performance.

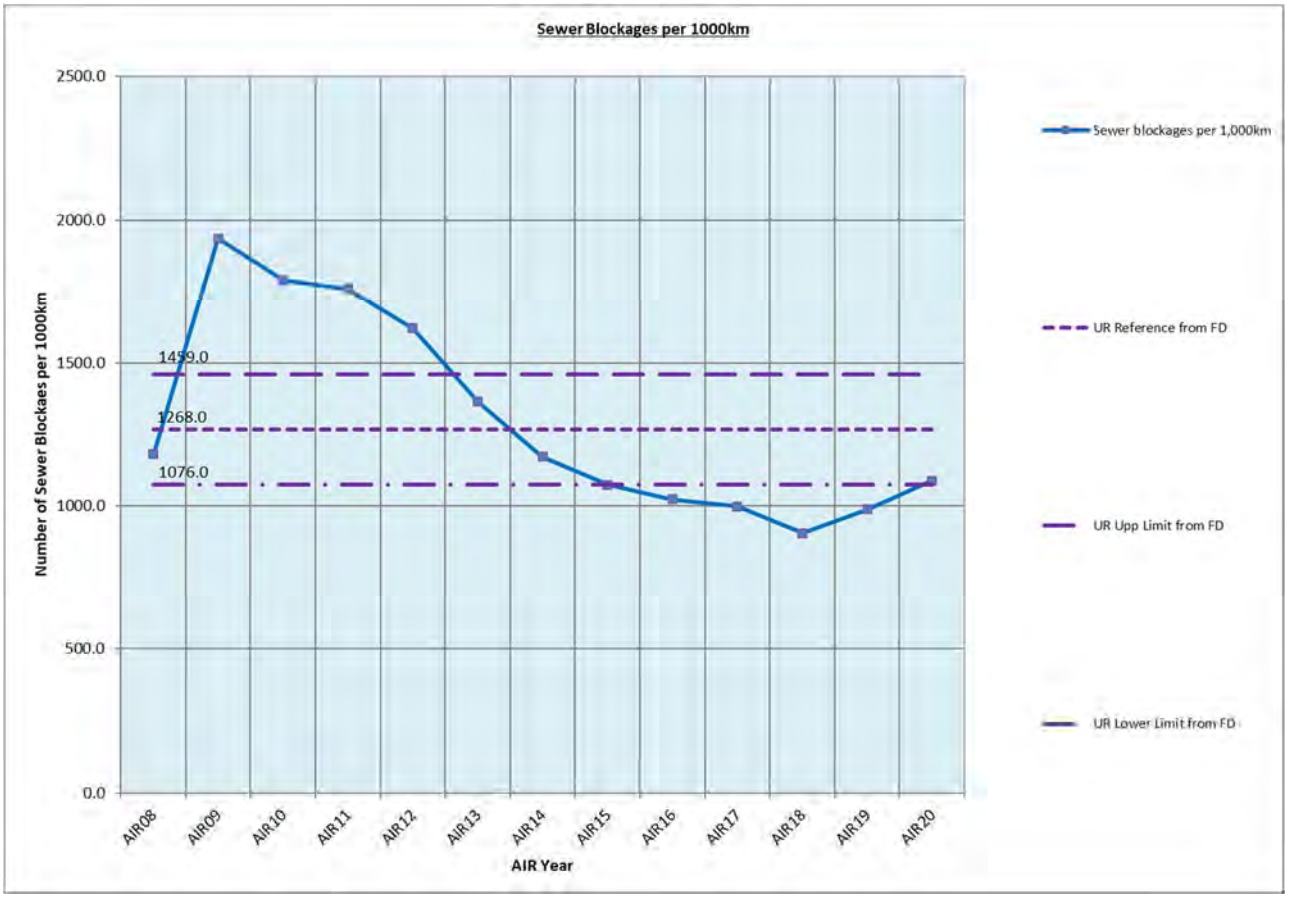


Secondary Indicators

Line 37 – Sewer Blockages per 1,000km

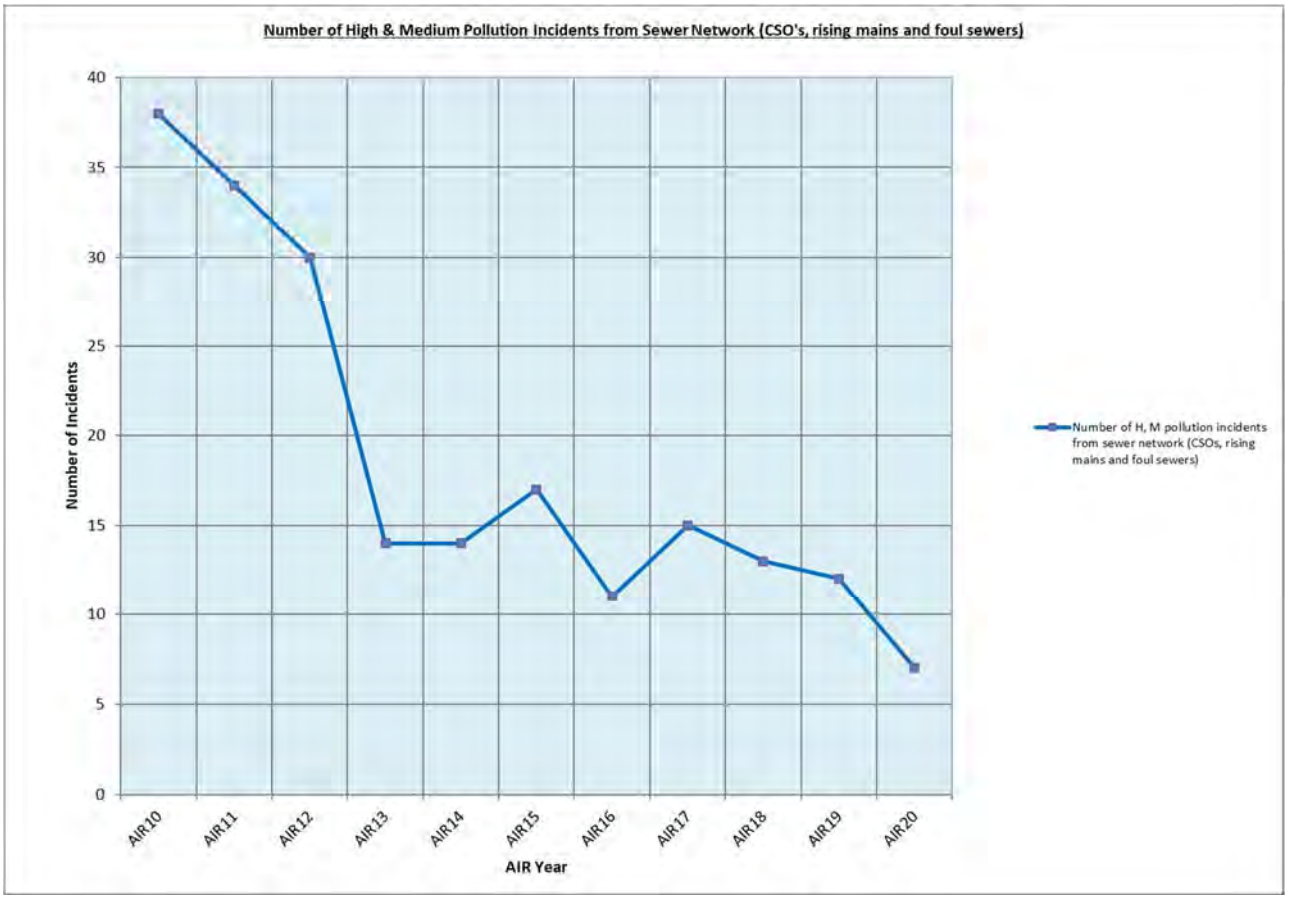
This graph indicates the number of blockages per 1000km over the different AIR return periods, which would indicate a **Stable** performance.

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 catchments and an increased programme of CCTV, the number of blockages has greatly reduced since 2008/09.



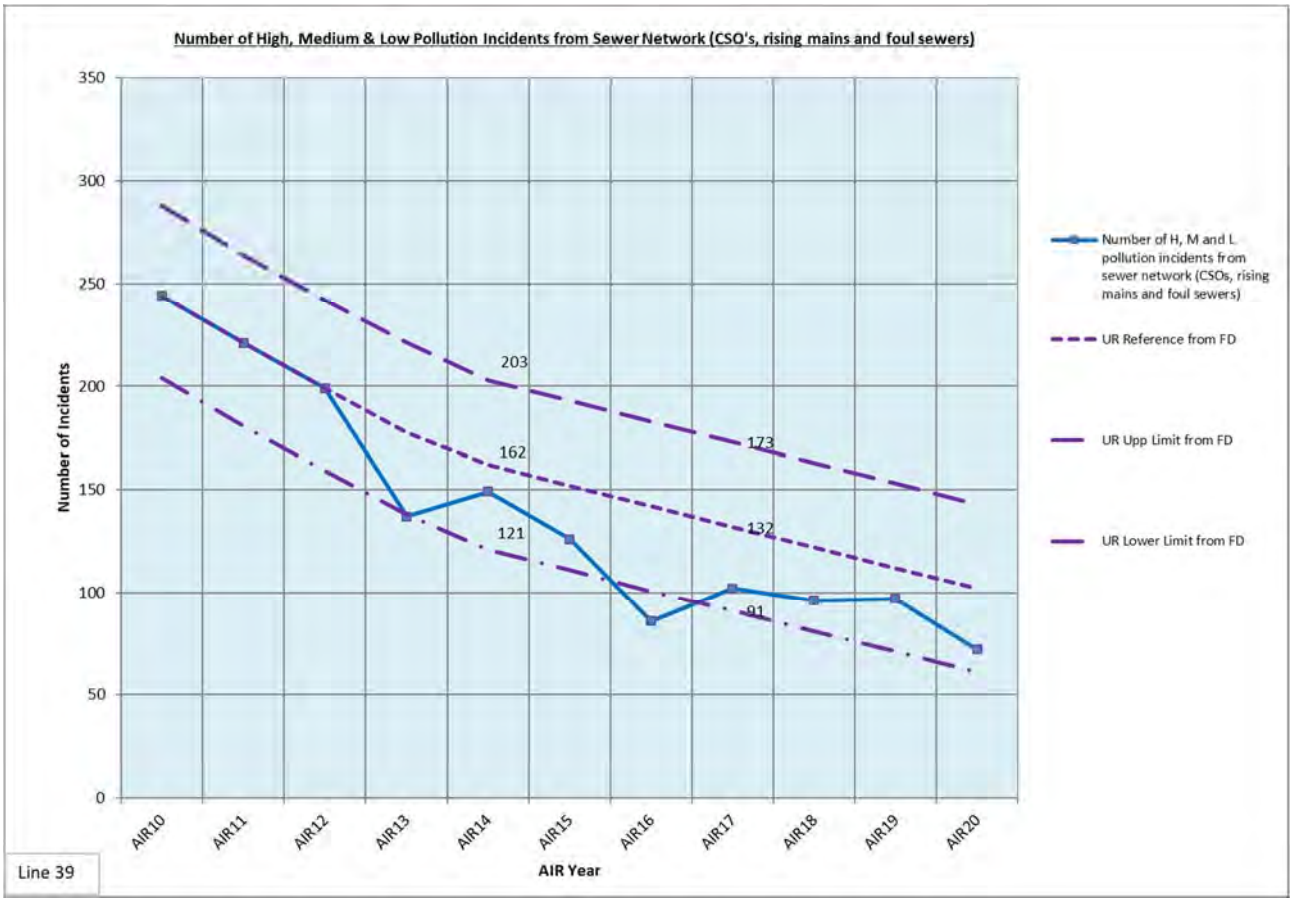
Line 38 – Number of H and M Pollution Incidents from Sewer Network

This graph has been submitted for information purposes only.



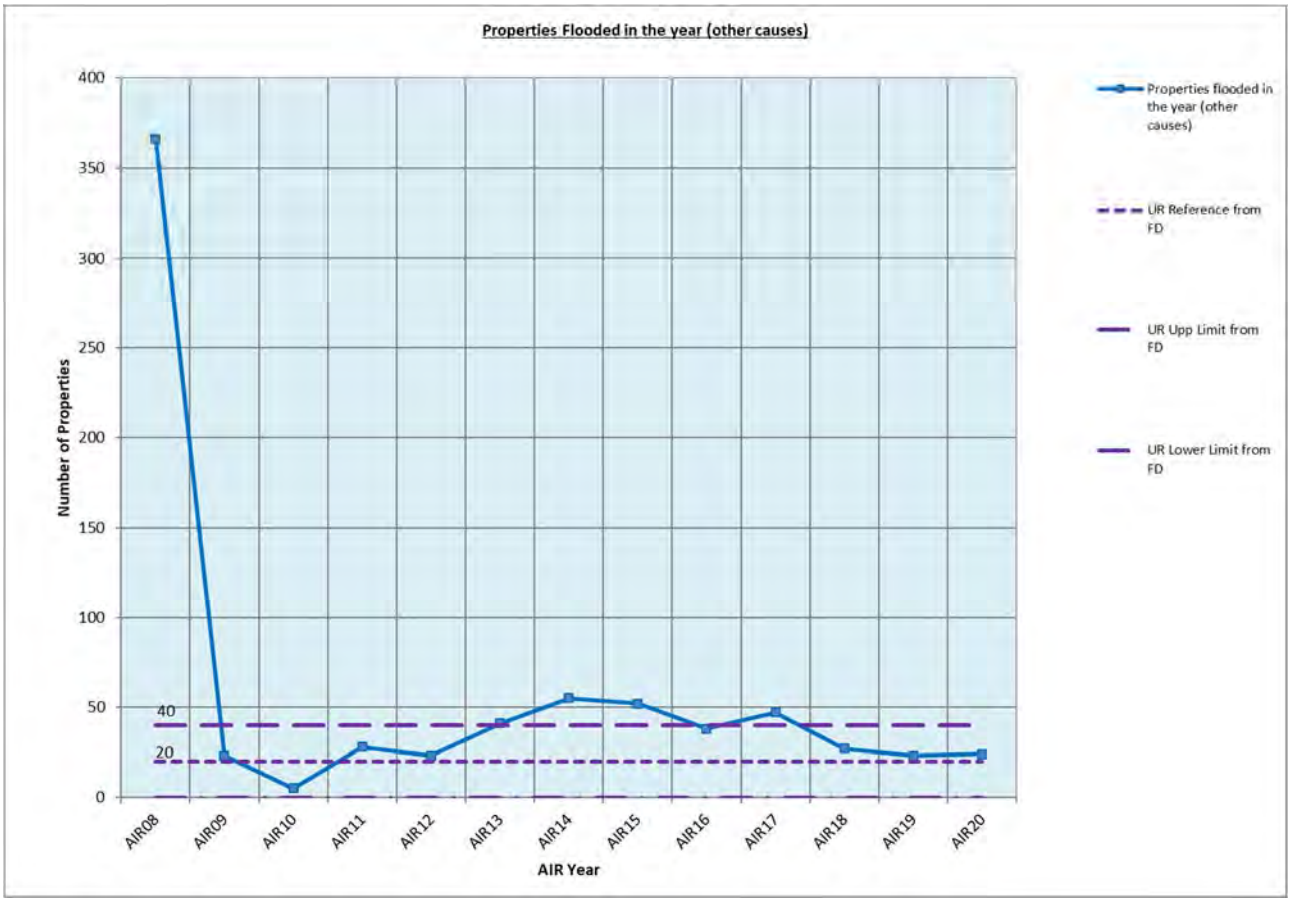
Line 39 - Number of H, M and L Pollution Incidents from Sewer Network

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.



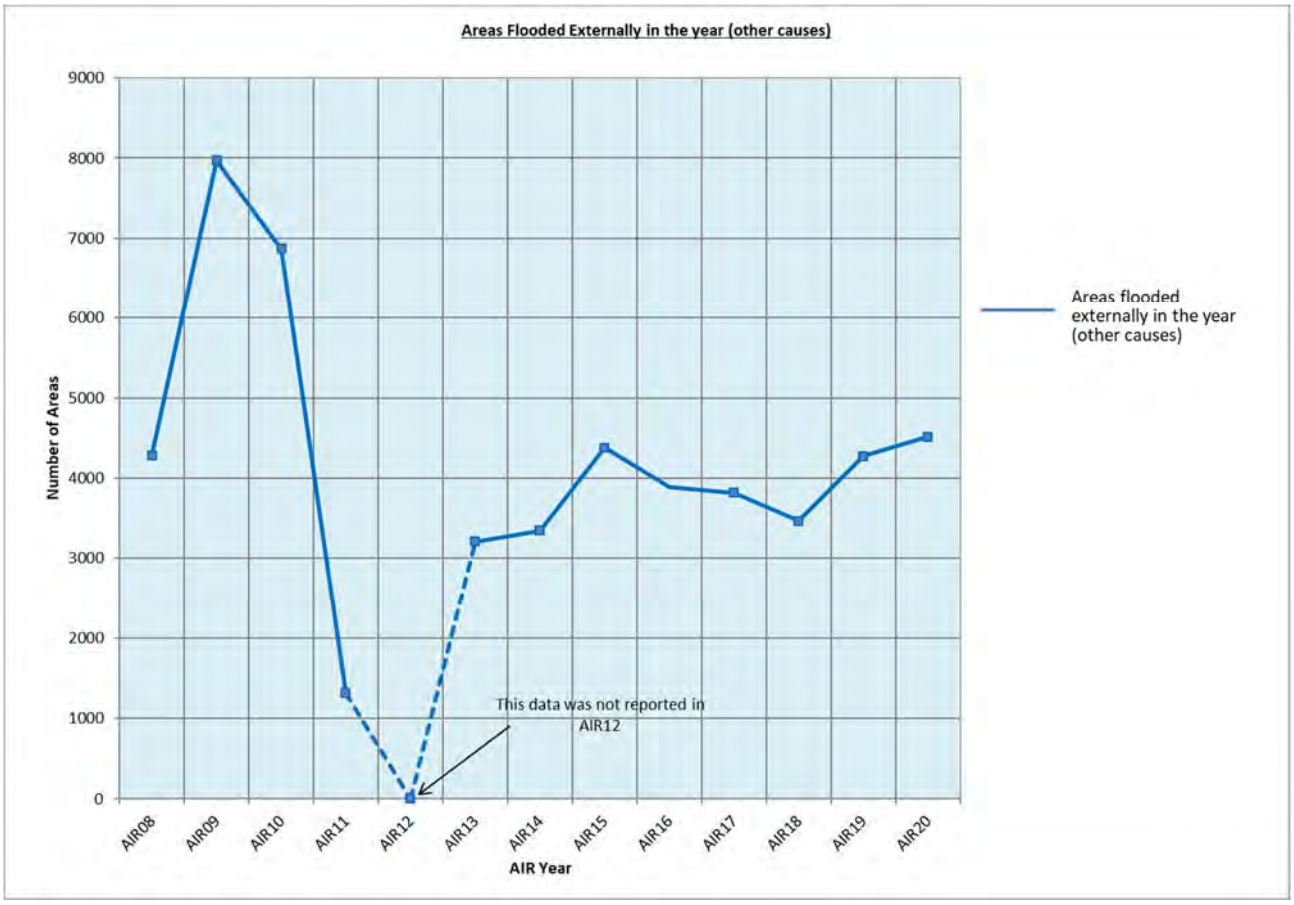
Line 40 – Properties Flooded in the Year

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.**



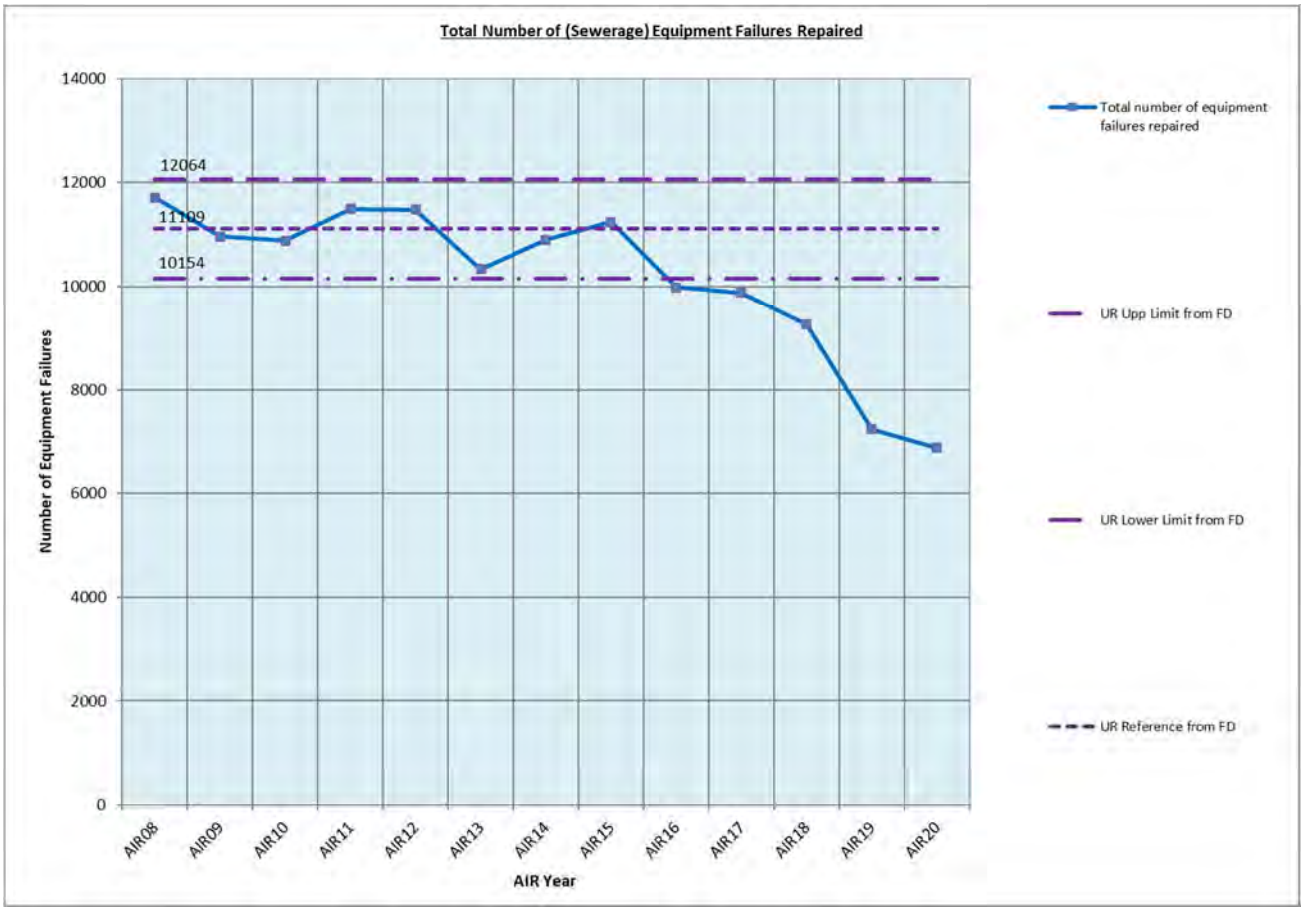
Line 41 – Areas flooded externally in the year

This graph is included for information only.



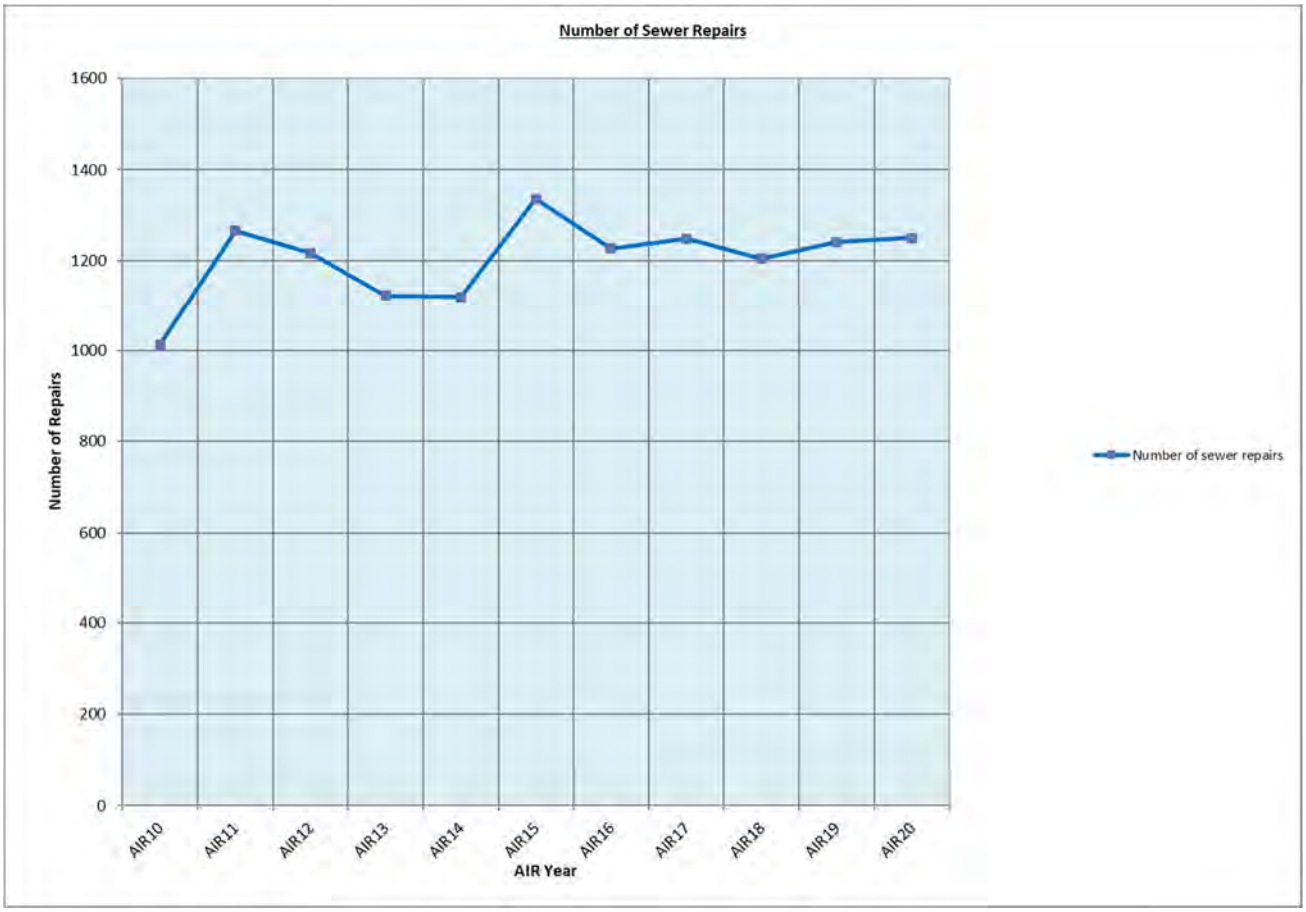
Line 42 – Total Number of (Sewerage) Equipment Failures Repaired

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.



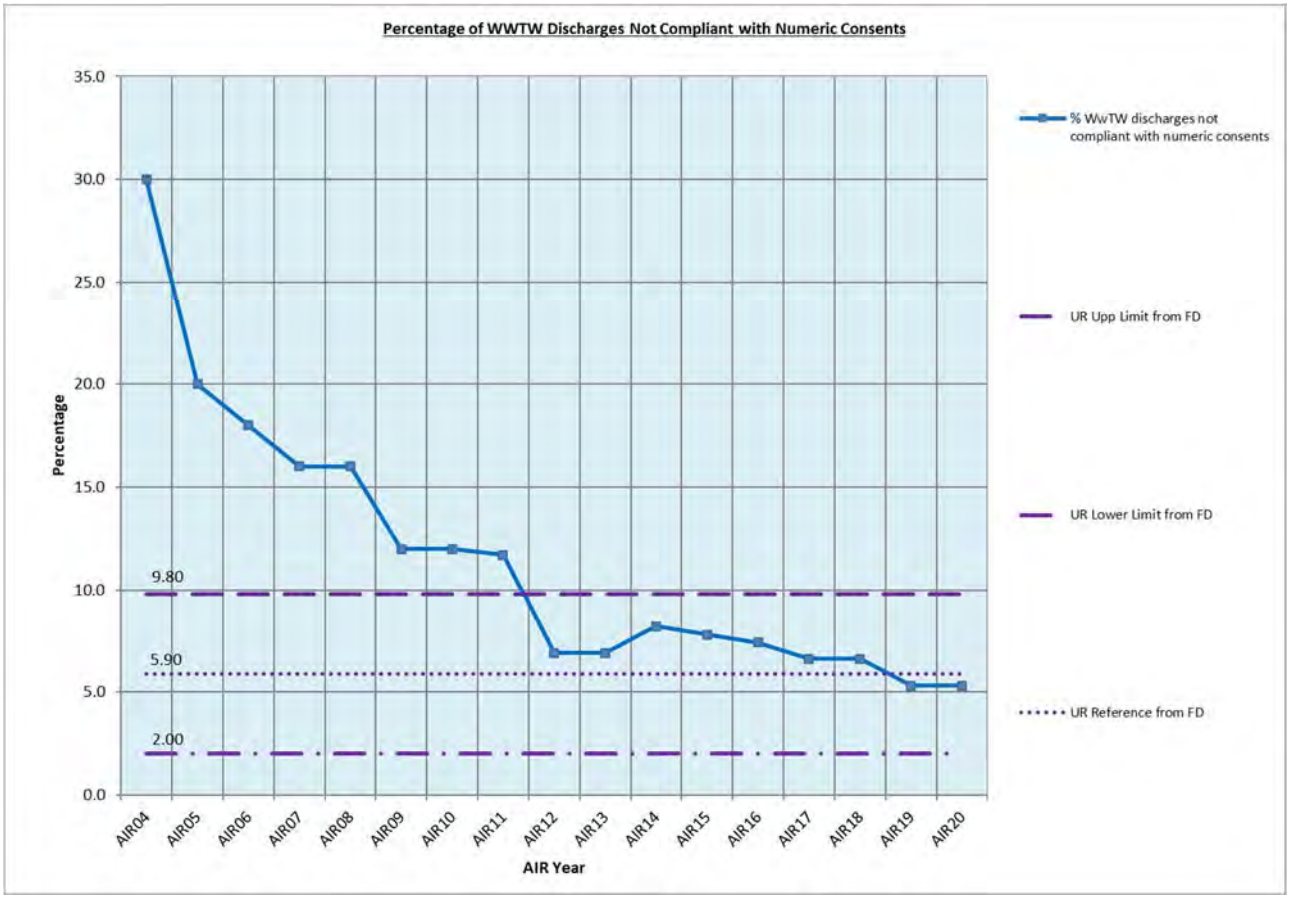
Line 54 – Company's overall serviceability assessment for wastewater non-infrastructure

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

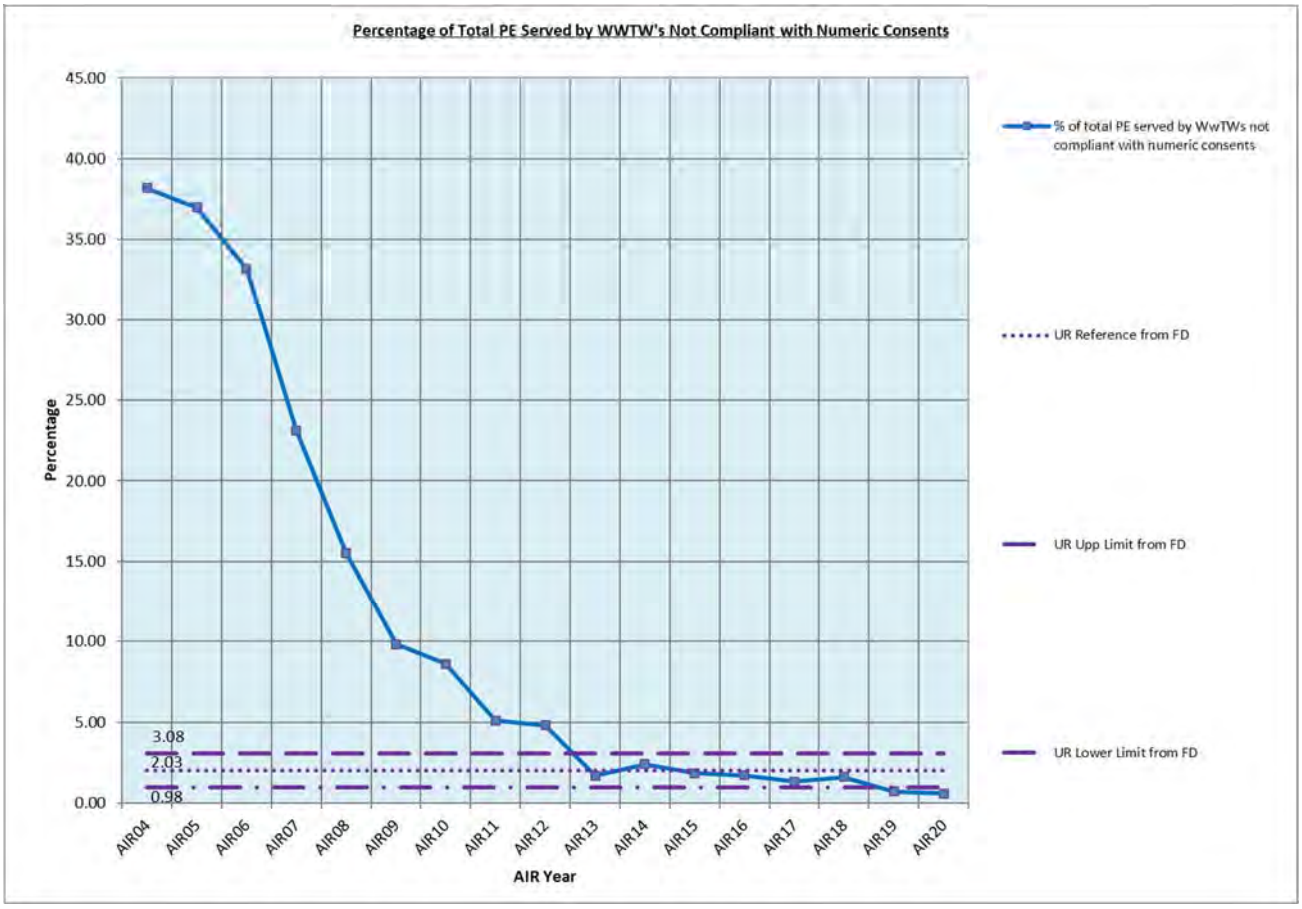
"Percentage of WWTW Discharges Not Compliant with Numeric Consents" has continued to show Stable performance over recent years. The regular investment from Capital Maintenance and Quality driven projects has helped maintain this **Stable** output.



Secondary Indicator

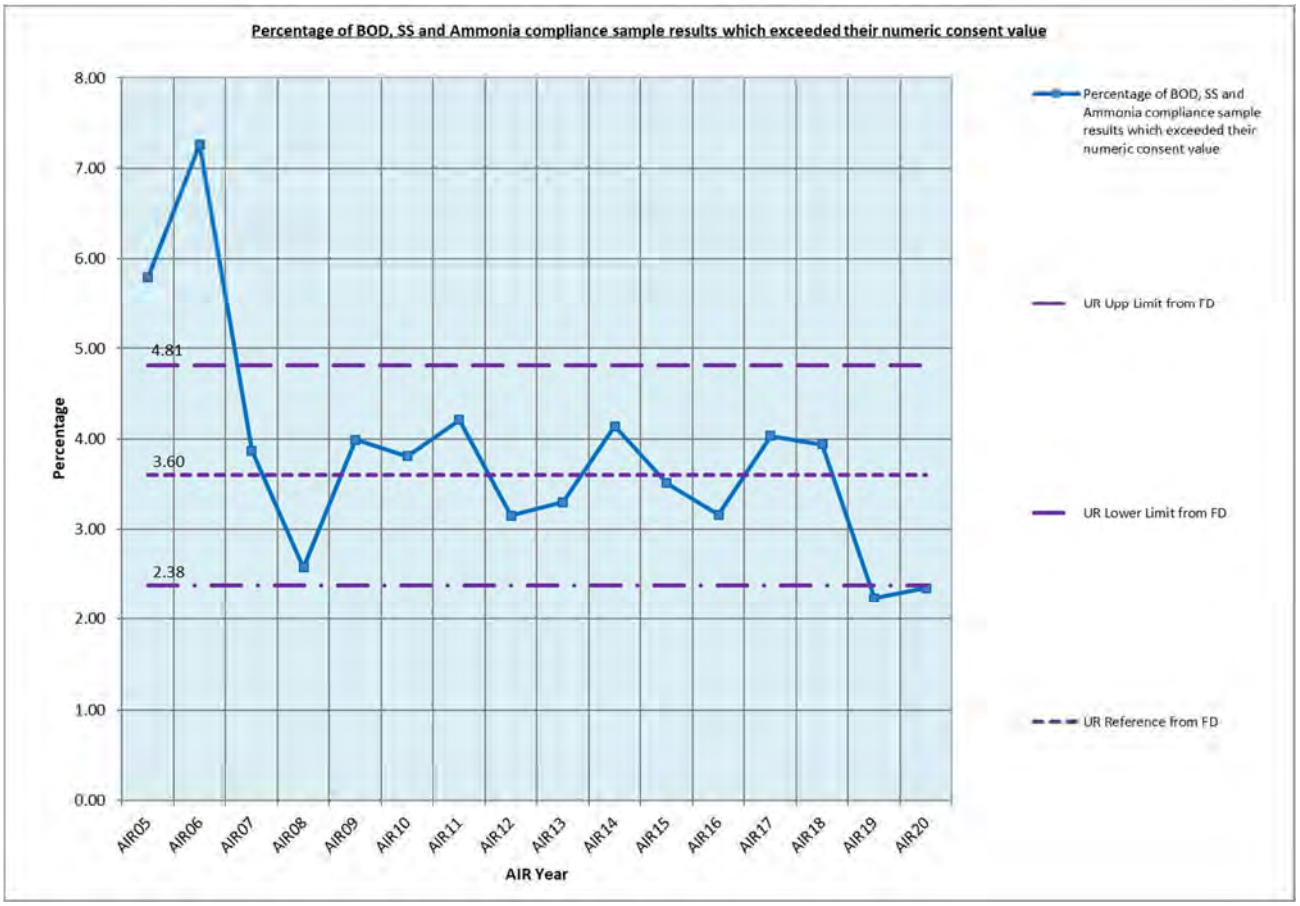
Line 47 – Percentage of Total PE Served by WWTWs Not Compliant with Numeric Consents

"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

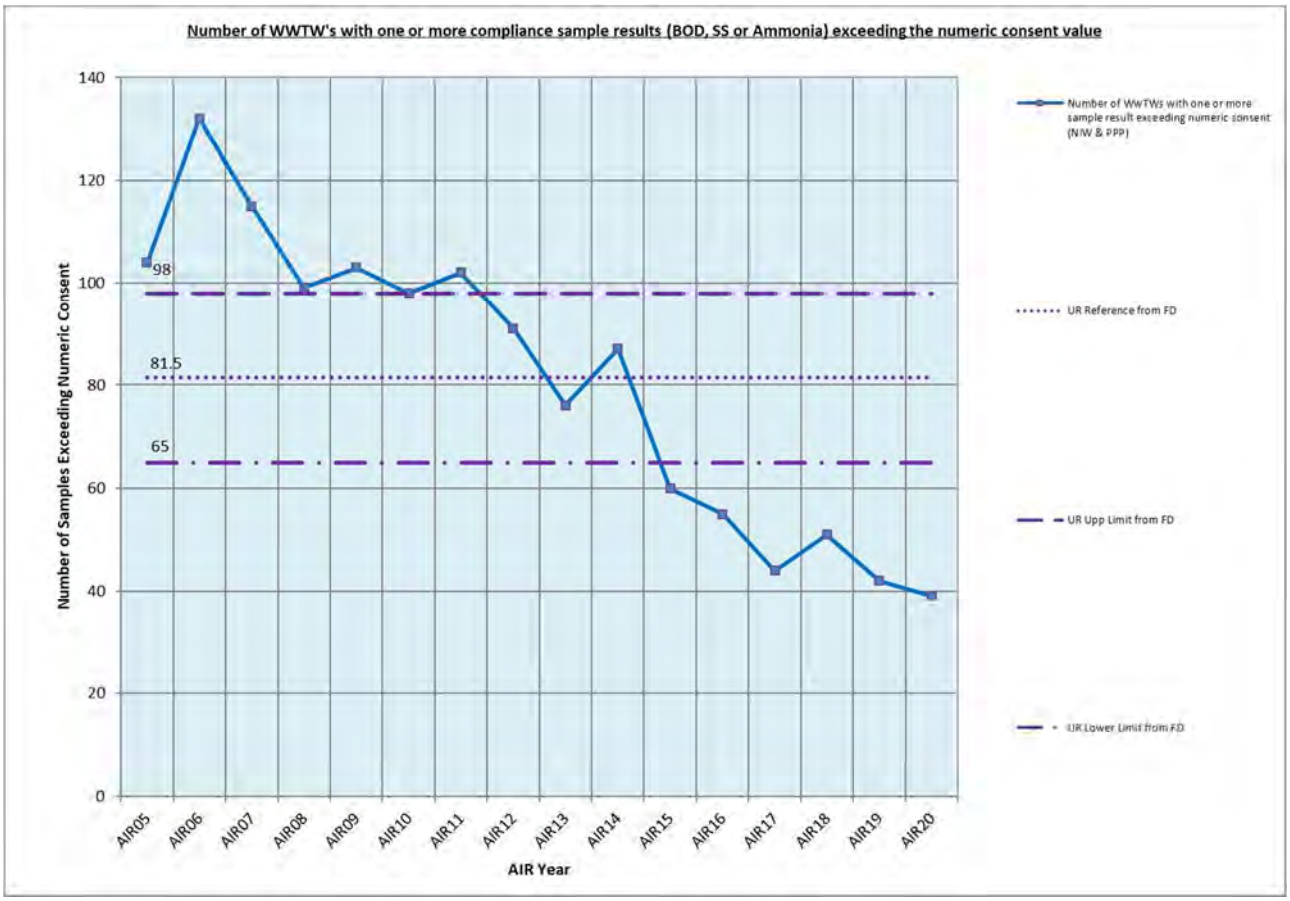
Since the initial outlying figures of AIR05 & AIR06 the "Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value" has continued to perform as **Stable.**



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 below graph depict the non-availability of critical assets for illustrative purposes, and also 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.

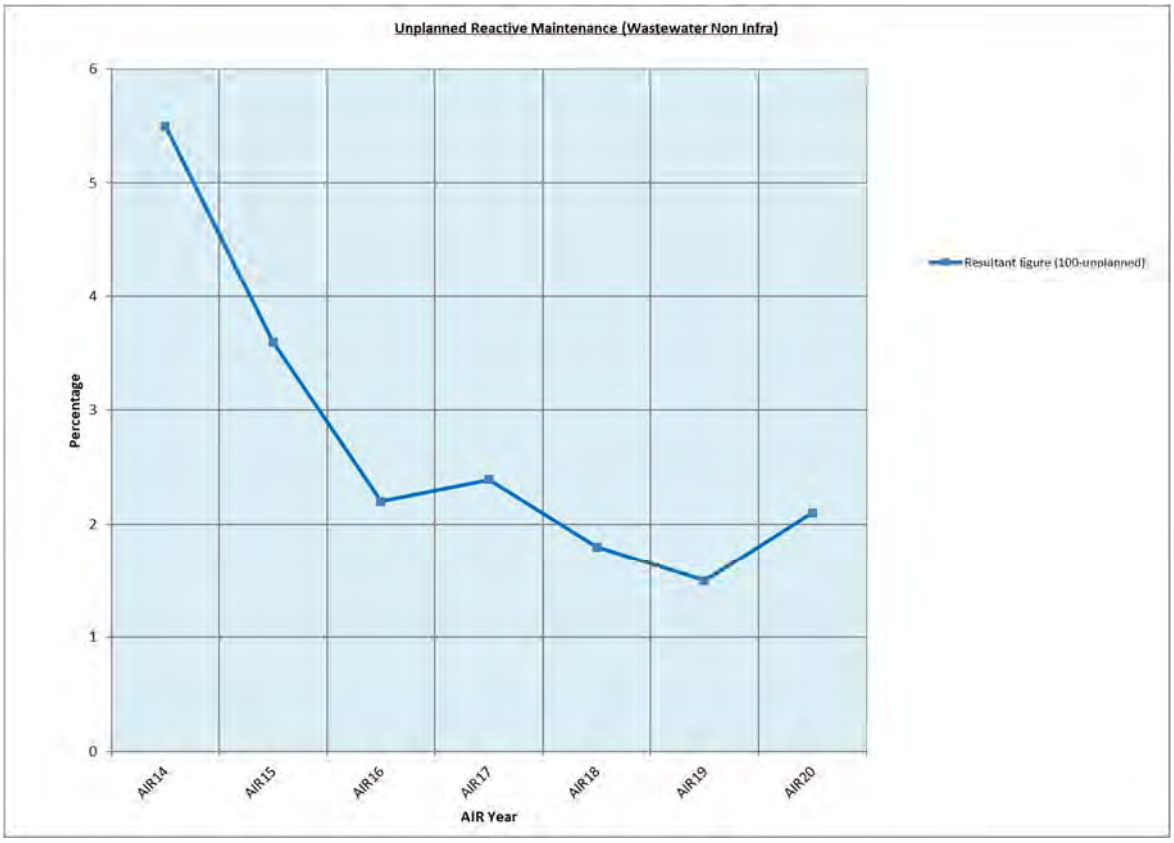


Table 47 – Development Outputs

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 and CM/SAT working groups.
- 4 new metrics were initially agreed by CEOG – 3 Quantitative and 1 Qualitative:
  - total contacts
  - first point of contact resolution (FPOCR)
  - repeat contacts
  - Net Promoter Score (NPS) style measure
- This was then amended to:
  - unwanted contacts
  - first point of contact resolution (FPOCR)
  - Net Promoter Score (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 CM/SAT 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.
- Performance targets for the new measures have been proposed and included 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	Complete

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,
- 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 has subsequently replaced the previous Allto Survey. By using the Voice of the Customer survey this has allowed NI Water to significantly increase the sampling of customer satisfaction from the previous 800 per annum to c8,000 per annum. Voice of the Customer data has been used for AIR 20.

During 2019/20 CEOG engaged Ipsos MORI to carry out customer research which has supported the PC21 submission.

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	Complete
10. PC21 Business Plan – Capital Maintenance Plan	Sep-Dec 2019	Complete

Summary of Progress since AIR19

In previous correspondence, NI Water set out its approach to asset maintenance in accordance with the Final Determination Main Report 2014. In addition, this highlighted the appointment of a service provider to develop Deterioration Models and Service Impact & Reliability Modelling and the work to date on this element. It also highlighted that further development of NI Waters Tactical Investment Planning Tools was being carried out.

Since this time, the Deterioration and Service Impact & Reliability Models were completed, including scenario analysis, and used to inform the PC21 Capital Maintenance Plan submitted in January 2020. The outputs from various tactical investment tools were also used to inform the submission and further details for all model outputs can be seen within the PC21 Capital Maintenance Plan.

In total there were 70 projects across 12 sub-programmes that made up the 'Pure' base maintenance estimates for the PC21 Submission and the details of these including the main asset maintenance technique used to establish the quantum can be seen in the table below.

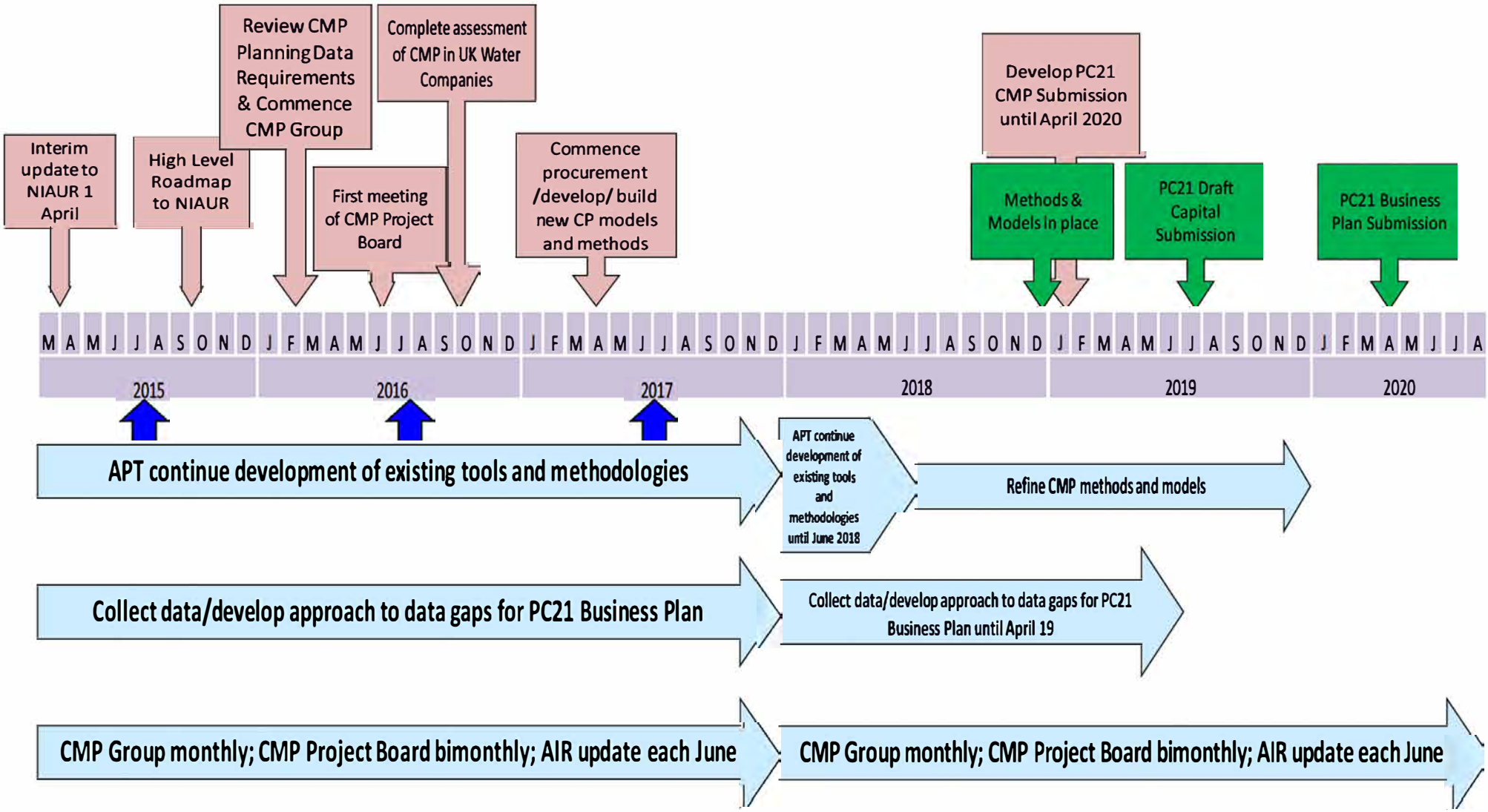
iPAC Reference	Project Name	PC21 Programme	PC 21 Total £m	PC 21 Base £m	Capital Maintenance Planning Technique
2278	WTW Base Maintenance	01a	35.0	31.5	Forward Looking Risk Based Assessment
2280	Raw Water PS Base Maintenance	01b	1.2	1.1	Forward Looking Risk Based Assessment
2281	WPS and WBS Base Maintenance	01b	7.1	6.4	Forward Looking Risk Based Assessment
1426	SR Rehab Programme of Works - Control Panel Replacement	01z	2.4	2.4	Assessment of Asset Condition & Performance
1562	Dorisland Aqueduct replacement	01z	1.4	1.4	Specific Asset Maintenance Plans
2283	Chlorine Station Base Maintenance	01z	2.2	2.2	Specific Asset Maintenance Plans
2284	Chemical and Sludge Tanks - Water	01z	6.6	6.6	Assessment of Asset Condition & Performance
2287	Faughan Weir Gates	01z	1.0	1.0	Assessment of Asset Condition & Performance
2288	PSCEMD Base Maintenance	01z	7.7	3.2	Specific Asset Maintenance Plans
2342	iCAT for IOC - iSR Completion of PC15 Scope	01z	1.0	0.8	Specific Asset Maintenance Plans
2344	iCAT for IOC - Completion of Gravity iSR's (mostly North Antrim) excluded from PC15 programme	01z	0.5	0.4	Specific Asset Maintenance Plans
2346	iCAT for IOC - Installation of iWPS (Intelligent Water Pumping Stations)	01z	5.1	4.1	Specific Asset Maintenance Plans
2289	WWTW Base Maintenance	02a	140.0	126.0	Forward Looking Risk Based Assessment
2292	Lisburn WWTW - Control Panels and Primary Tank Scrappers	02a	2.0	1.8	Assessment of Asset Condition & Performance
2290	WWPS Base Maintenance	02b	30.0	27.0	Forward Looking Risk Based Assessment
2291	Chemical and Sludge Tanks - Wastewater	02b	13.5	13.5	Assessment of Asset Condition & Performance
2293	Health & Safety - Assessment of GRP Flooring	02z	1.0	1.0	Assessment of Asset Condition & Performance
2294	Controlled Reservoir Maintenance - IRs & SRs	03b	7.6	6.5	Specific Asset Maintenance Plans
2295	All Reservoir Panel Engineer Inspections (IRs & SRs)	03b	1.1	0.6	Projection of Historical Expenditure
1472	Mourne Wall Restoration	03z	2.5	2.5	Specific Asset Maintenance Plans
1098	SR Rehab Programme of Works - 0.0<1.0ML (Major Rehab)	07a	2.4	2.4	Projection of Historical Expenditure
1099	SR Rehab Programme of Works - 0.0<1.0ML (Minor Rehab)	07a	1.5	1.5	Projection of Historical Expenditure
1100	SR Rehab Programme of Works - 1.0<2.5ML (Major Rehab)	07a	2.9	2.9	Projection of Historical Expenditure
1101	SR Rehab Programme of Works - 1.0<2.5ML (Minor Rehab)	07a	1.3	1.3	Projection of Historical Expenditure
1102	SR Rehab Programme of Works - 2.5<5.0ML (Major Rehab)	07a	2.2	2.2	Projection of Historical Expenditure
1103	SR Rehab Programme of Works - 2.5<5.0ML (Minor Rehab)	07a	1.1	1.1	Projection of Historical Expenditure
1104	SR Rehab Programme of Works - 5.0<10.0ML (Major Rehab)	07a	2.1	2.1	Projection of Historical Expenditure
1105	SR Rehab Programme of Works - 5.0<10.0ML (Minor Rehab)	07a	1.2	1.2	Projection of Historical Expenditure
1106	SR Rehab Programme of Works - 10.0<20.0ML (Major Rehab)	07a	1.1	1.1	Projection of Historical Expenditure
1107	SR Rehab Programme of Works - 10.0<20.0ML (Minor Rehab)	07a	0.4	0.4	Projection of Historical Expenditure
1108	SR Rehab Programme of Works - >20.0ML (Major Rehab)	07a	0.7	0.7	Projection of Historical Expenditure
1109	SR Rehab Programme of Works - >20.0ML (Minor Rehab)	07a	0.3	0.3	Projection of Historical Expenditure
2296	Watermains Rehabilitation	08z	92.9	47.4	Forward Looking Risk Based Assessment
2297	Leakage	09z	15.9	15.9	Projection of Historical Expenditure
2298	Operational Capital - Water Supply	10z	8.4	8.4	Projection of Historical Expenditure
2299	Operational Capital - Water Networks	10z	7.2	7.2	Projection of Historical Expenditure
2300	Operational Capital - Networks Water - Civil	10z	3.5	3.5	Projection of Historical Expenditure

iPAC Reference	Project Name	PC21 Programme	PC 21 Total £m	PC 21 Base £m	Capital Maintenance Planning Technique
2301	Operational Capital - M&E Water	10z	2.2	2.2	Projection of Historical Expenditure
2302	Sewer Rehabilitation - Gravity	12a	28.0	28.0	Projection of Historical Expenditure
2304	Sewer Rehabilitation - Pitch Fibre	12a	6.0	6.0	Assessment of Asset Condition & Performance
2305	Sea Outfall Maintenance - Development Output	12z	2.0	2.0	Development Output
2307	CSO/Hydrobreak Maintenance - Development Output	12z	1.8	1.8	Development Output
2308	Belfast DA Bruce Street- Tunnel Shaft Maintenance	12z	1.0	1.0	Assessment of Asset Condition & Performance
2309	Operational Capital - Wastewater Non-Infra	18z	7.2	7.2	Projection of Historical Expenditure
2310	Operational Capital - Wastewater Infra	18z	16.8	16.8	Projection of Historical Expenditure
2311	Operational Capital - Wastewater MBR Panels	18z	1.8	1.8	Projection of Historical Expenditure
2312	Operational Capital - M & E Wastewater	18z	21.0	21.0	Projection of Historical Expenditure
2313	Operational Capital - Generators	18z	0.4	0.4	Projection of Historical Expenditure
2314	Operational Capital - HV Switchgear	18z	1.0	1.0	Projection of Historical Expenditure
2315	Operational Capital - LEAPS	18z	4.3	4.3	Projection of Historical Expenditure
2316	Operational Capital - PEIT	18z	4.6	4.6	Projection of Historical Expenditure
2317	Operational Capital - PLC Robustness	18z	0.9	0.9	Projection of Historical Expenditure
1513	Metering - Meter Maintenance	19z	5.7	5.7	Projection of Historical Expenditure
1625	Metering - Proactive Meter Exchange	19z	3.5	3.5	Projection of Historical Expenditure
1630	Metering - General Meter Purchase	19z	0.6	0.6	Projection of Historical Expenditure
2319	Public Realm - Water	23b	4.8	3.4	Projection of Historical Expenditure
2572	Watermains & Sewer Diversions for New Roads	23b	6.0	3.7	Projection of Historical Expenditure
1727	Trunkmain - Whitespots	23c	4.4	3.6	Assessment of Asset Condition & Performance
1775	Trunkmain - Fofanny to Alt	23c	5.4	5.4	Assessment of Asset Condition & Performance
1777	Trunkmain - Castletown Strabane	23c	1.6	1.6	Assessment of Asset Condition & Performance
1779	Trunkmain - Killyhevlin Cavanacross	23c	1.1	1.1	Assessment of Asset Condition & Performance
2285	Raw Water Trunk Main Rehabilitation	23c	1.0	1.0	Development Output
2318	Trunk Main Rehabilitation	23c	2.8	1.7	Assessment of Asset Condition & Performance
2563	Trunkmain - Stiles Way	23c	1.4	1.1	Assessment of Asset Condition & Performance
2565	Trunkmain - Moyola to Mullaghboy	23c	1.5	1.5	Assessment of Asset Condition & Performance
1219	NIW Infrastructure Appraisals - watermains	23e	1.9	1.9	Projection of Historical Expenditure
2322	Public Realm - Wastewater	24b	4.8	3.8	Projection of Historical Expenditure
1220	NIW Infrastructure Appraisals - wastewater gravity sewers	24c	0.9	0.9	Projection of Historical Expenditure
1221	NIW Infrastructure Appraisals - wastewater pump mains	24c	0.3	0.3	Projection of Historical Expenditure
		Total	**560.7**	**479.3**	

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 majority of the initiatives related to the CMP High Level Roadmap have mostly been completed, and where appropriate, are now part of BAU. Details of work ongoing are listed below:

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	Q4 19/20	On-Going	An Overview Report of the DRRM model process has been received which identifies data issues, where gaps exist and indicates what improvements should take place. This will be reviewed and progressed during the remainder of PC15.
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 20/21	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.
10	Water Infra - Raw Water Trunk Mains, Trunk Mains & Strategic mains	Identify Intervention Options and Impacts/Benefits of Approach	PC21	On-Going	Various techniques to assess the condition of Trunk Mains are being investigated to enable enhanced targeting of Trunk Mains for rehabilitation.
11	Water Infra - Sluice Valves	Prioritise critical sluice valves for intervention (based on risk and consequence approach) and identify capital need	PC21	On-Going	NI Water embarked on a Strategic Valve Pilot analysis. The initial Project identified 100 critical valve interventions on the top 100 critical strategic mains. The pilot is almost complete and money has been allocated for further work in PC21.
14	Water Infra - Distribution Mains	Identify Intervention Options and Impacts/Benefits of Approach	PC21	PC21	There has been some refinement in the approach to replacing Distribution Mains due to water quality issues.

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 19	Not Required by DfI
2. External Certifier completes PSCEMD Audit	Feb 20	Complete
3. Submission of Compliance Statement & PSCEMD Report to DfI	1st April 20	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 3rd April 2020 included assessment of work done to date and endorsement of future work programme. The short delay (3rd April 2020) in delivery of audit and statement to DfI was due to Covid-19 working restrictions.

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 harden 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 52 sites requiring security hardening under this programme.

The most recent programme review in December 2018 indicated that:

- 13 Non-CNI Water Treatment Works were due to complete by May 2020 – previously reported as November 2018 - delay due to budgeting alignment and the rescheduling of work programmes on site.
  The final commissioning is now on hold due to COVID-19 working restrictions.
- 52 Enhanced Service Reservoirs will complete by March 2020 - previously reported as August 2019 - delay due to further work required to integrate additional alarm signals from site to a single user interface at our Alarm Receiving Centre.
  This has not been achieved and is on hold due to COVID-19 working restrictions.
- 2 Wastewater Treatment Works, sites confirmed as Omagh Transfer Pumping Station and Newtownstewart WWTW, delivery programme still to be confirmed but were planned to 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 team 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	30/09/20	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	30/12/20	On target
18. PPE1 Report completion for Belfast Work Package	28/02/21	On target

19. PPE2 - Belfast Work Package	28/02/22	On target
20. North West Work Package Finish (ACE Roadmap Milestone)	31/03/20	Complete
21. Ards Work Package Finish (ACE Roadmap Milestone)	31/03/20	Complete
22. Newry Work Package Start	01/04/20	Complete
23. Newry Work Package Finish	31/05/21	On target
24. Enniskillen Work Start	01/04/21	Paused until PC21
25. PPE1 Report completion for Newry Work Package	01/05/21	On target
26. Enniskillen Work Package Finish	01/09/21	Paused until PC21
27. PPE1 Report completion for Enniskillen Work Package	01/12/21	Paused until PC21
28. PPE2 - Newry Work Package	01/05/22	On target
29. PPE2 - Enniskillen Work Package	01/09/22	Paused until PC21

***** See Table Figure 1 for detail of changes to milestones**

DEVELOPMENT OUPUT
5. Water resource management plan and drought plan
Final Determination: *The company shall complete a Water Resource Resilience Plan which combines a Water Resource Management Plan and Drought Plan.* *- A draft plan should be available for consultation by June 2016;* *- A plan should be complete for publication by April 2017.* *When developing its plan, the company should set out and incorporate its water demand management strategy and its policy on water efficiency measures in homes and businesses.*
PROJECT SUMMARY
The WR&SR Plan sets out how NI Water intends to maintain the balance between the supply and demand for water over the long-term, and the operational and management options and activities available to respond to the short-term critical events such as droughts and freeze-thaw issues. Final Determination target dates have been amended with the agreement of the WR&SR steering group: reflected in the milestones below.

KEY MILESTONES	Target	Status
1. Demand Forecast Results	Nov-15	Complete
2. Deployable Output Results	Mar 16	Complete
3. Outage & Headroom Results	May 16	Complete
4. Options Workshops	June 16	Complete
5. Resilience Workshops	Oct 16	Complete
6. Multi-Criteria Assessments of Options & Strategies	Jan 17	Complete
7. Draft Plan for Internal Review	Feb 19	Complete
8. Plan available for consultation	May 19	Complete
9. Plan published	May 20	Complete

Activity completed to date and its outcome

In AIR19 it was reported the draft Water Resource Management Plans & Drought Plan was complete and available for consultation. This consultation subsequently took place for 9 weeks from July 2019 and following a review of consultee responses, the final plan was produced.

This final plan was submitted to DfI in April 2020 for permission to publish which was granted in May 2020 and hence the final plan has now been published.

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	Complete
9. SELL19 – draft SELL outputs for PC21 updating	Jul-19	Complete
10. SELL19 – draft & final executive reporting	Sep-19	Complete

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.
SELL19 annexes and executive reporting was available for PC21 submission review by the Reporter.

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 returned in January 2020 to commence the remaining provisions.

NI Water presently has 46 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. The initial survey has been completed with 40 SRs and CWBs likely to be deemed controlled reservoirs in the future. All Service Reservoir Panel Inspections are now to be completed at these sites to confirm the final listing. These will take placed in the latter end of PC15 and early PC21.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 and the personnel where not a member of a panel of reservoir engineers which is a requirement under the proposed Reservoir Act (NI).

In the absence of the Reservoir Act (NI) a technical advice note (TAN) 'The Practical Application of Strategic Planning Policy for 'Development in Proximity to Reservoirs' was issued which set out how the Department for Infrastructure (DfI) Rivers will apply its responsibilities with regard to the provisions of planning policy contained within the Strategic Planning Policy Statement (SPPS), together with the provisions of Policy FLD 5 of Planning Policy Statement (PPS) 15 (Revised) "Development in Proximity to Reservoirs".

One of the outputs of the TAN was planning was not permitted in the flood inundation zone of any controlled reservoir while there are outstanding 'matters in the interest of safety'. In regards to NI Water this would currently apply to 40 of the 45 Controlled Reservoirs. Following discussions with the application of the TAN a proposal was put forward by DfI Rivers for Responsible Reservoir Manager Status which if granted would automatically satisfy the TAN requirements.

To achieve Responsible Reservoir Manager Status NI Water had to comply with a number of requirements. For all bar one of these NI Water complies as part of its BAU but there was a requirement to:

- Commission a supervising engineer to monitor the reservoir at all times

This Supervising Engineer had to be a member of a panel of reservoir engineers and as such NI Water appointed 3rd party Supervising Engineers to monitor all its controlled reservoirs in November 2019 to satisfy the requirements.
In future as additional SRs are designated controlled reservoirs these will also be under the supervision of the 3rd party Supervising Engineers.

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 was 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 ongoing 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
5. WIIM 3 Analysis and data update implemented to build the WIIM 3 Workpackages	June 2018	BAU

Activity completed to date and its outcome

The company has engaged 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 ON SCORING IMPACT: The chosen cut-off score (based on annual Budget planned for that period, and the geographical bundling required for AD integrated capital delivery) may also skew the makeup of the WQ/Structural Split from Workpackage to Workpackage.

Note: DG2 Workpackages are analysed separately but some DG2 solutions arise out of nearby rehabilitation of the network in the vicinity of some of these properties

More detail on the WIIM procedure and outputs are available on request

The WIIM 3 Workpackage build followed the procedures above, however it was based on a fresh data extract in 2018.

Some 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 that have already been identified 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.

Further Development for PC21

As highlighted above, the WIIM Procedure has been used successfully to identify and prioritise water network rehabilitation investment.

This is reviewed on an ongoing basis to ensure the methodology remains focused on NI Water's customer promises. However the WIIM tool does not enable Forward Looking Risk Based Assessments which has traditionally been a shortcoming across all service areas within NI Water. As part of improvements for PC21 planning Deterioration Models and Service Impact & Reliability Models (DRRM) were developed and this included Water Infrastructure models. These models were used to support the PC21 Capital Maintenance Plan but are also being analysed to potentially be used to identify and prioritise water network rehabilitation investment, similar to WIIM.

Some initial investigations have been carried out to establish if the Water Infra DRRM model could be used to identify specific rehabilitation schemes on the ground and this has identified a number of shortcomings. This includes:

- The DRRM outputs has identified a number of small sections of main for replacement (20% of these interventions were less than 10m long). It was agreed to investigate the possibility of incorporating the Parent Lengths information into the DRRM Clean Water Infra Model.
- The current DRRM outputs PVC only accounts for 0.5% of the selected schemes compared to approximately 30% from WIIM. It was highlighted that some older PVC mains may have a different failure profile and consideration to be given to splitting PVC mains to Pre & Post 1970 within the model.
- The base data with the DRRM model is from November 2017 and this to be refreshed with updated information

Once the actions above have been incorporated within the DRRM model, further investigations will be carried out to establish its suitability to identify specific rehabilitation schemes.

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:**
  The aim was 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 the PC15 period 23 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
  - 2019/20 - Killyhevlin, Belleek WTW's under 'Source To Tap' INTERREG VA Project

  NI Water and DWI have agreed that CMPs for out-of-service catchments are not required. NI Water removed out-of-service catchments from the PC15 target and is focusing resources on delivering the recommendations of the Catchment Management Studies already undertaken for 'live' catchments.
  SCaMP NI's PC21 bid included significant budget to continue delivering these Catchment Management Study measures.

- **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. The 'Rush Solution Without Pollution' weed-wiping trial in Seagahan Catchment has been conducted with great success between 2016 and 2019. An approx. 64% reduction in raw water MCPA concentrations was observed in phase 3 (2019) of the project compared with pre-trial figures. A further weed-wiping project began in summer 2018 in Glenhordial catchment, demonstrating immediate raw water MCPA reductions, with 2019 figures unfortunately increasing slightly due to a number of anomalous results in August 2019.
  - The College of Agriculture, Food and Rural Enterprise (CAFRE), DAERA and NI Water jointly carried out two Rush Control Events in 2019 demonstrating rush control methods and best practices. These events were well attended by local landowners and have helped to encourage behavioural change.
  - 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. Work began in 2019 with The Woodland Trust and NI Water Business Improvement to arrange to plant trees on 4 plots of land owned by NI water within the Mournes area.
- 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 2017. Outputs 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 involved blocking 38,473 metres of drains to raise water levels using peat, stone and wooden dams.
  - All drain blocking was 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	Completed (Mar 2020)
2. Commencement of programme for completion of SCaMP NI interventions as a result of Catchment Management Studies	March 2019	Complete

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 for each of its active water catchments. 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.

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 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

Beginning in 2017, NI Water have been carrying out a weed-wiping trial 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 land managers, benefitting both parties. A Farm Liaison Officer worked with farmers and land managers, delivering education on how herbicides can affect our water quality, coordinating the weed-wiping, promoting best practice on handling, applying and disposing of herbicides. 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 future SCaMP NI projects, ensuring value for money in effectively reducing MCPA levels in watercourses.

The initial 2-year project was managed by NI Water and conducted in conjunction with the WCP. This involves representatives from Ulster Farmers Union, NIEA, DAERA, CAFRE and the Voluntary Initiative. All 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. The project was extended by a further 2 years (2019, 2020) to maximise the benefits demonstrated in Phase1 and 2.

Benefits for NI Water:
Water quality improvements - Ongoing water sampling of the reservoir throughout phase 1 and 2 (2017 and 2018) showed a marked decrease in MCPA found in raw water. Analysis of the results from phase 3 (2019) demonstrated a raw water MCPA residual reduction of approximately 64% in the 2019 period compared with pre-project average figures (2012-2016).

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 – Promotion of the ongoing project was facilitated via UFU and NI Water web pages.

Partnership Working – NI Water worked closely with the WCP to ensure its success during all aspects of the weed-wiping project. The partnership is now close knit and mutually aware of each other's drivers and needs. Close liaison 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 continue using 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% since the project inception. 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 product *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).

Farm Liaison visits/contractor treatments – The Farm Liaison Officer kept in regular contact with the contractor and farmers through phase 3. Feedback from farmers and UFU has been excellent. This role has now finished with work being continued by the Catchment Liaison Officer.

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. These improvements 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 in spring 2019 completed restoration works to promote natural hydrological conditions by blocking drains using peat, stone and timber dams to raise the water table. This has resulted in a raising of 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 dams has reduced the water velocity in the drains and allows more settlement time. This has helped reduce 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.

Benefit 4 - NI water will work toward meeting its environmental obligations in its catchments

Example Project - There is annual work carried out 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 implemented to reduce the risk of wildfires damaging wildlife habitats and adversely affecting raw water quality from the catchment. The group deal with wildfires in the area as and when they occur. 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. Through controlled burning and firebreak construction in spring 2019, no significant wildfires within the area occurred in 2019.

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. 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 has now been completed as far as possible. 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 6 ha site was planted with 9,550 native broadleaf trees along the banks of the river in Dec 2019. 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. This planting brought the total trees planted at Glenedra to 21,245.

The following SCaMP projects are planned for 2020/21:

1. Implementation of 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 2019/20 financial year 23 catchment studies have been completed. 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.
2. Mournes Holistic Management Plan - A need has been identified by NIW and other stakeholders to manage agricultural practices and habitats in the Mournes catchment area (including the NIW-owned East (Silent Valley) and West (Fofanny) Mournes areas) in a more holistic way, involving all key stakeholders, considering multiple land management aspects and considering the requirements of achieving and upholding favourable habitat conditions where the land falls under the special designations.
   Many land management arrangements in the area are currently undertaken by different parties (Sheep grazing, invasive species control, path erosion, recreation and access control, biodiversity improvement, riparian planting etc.).
   One overall management plan encompassing or considering all management work has been deemed to be most efficient and could have the potential to generate greater external funding for said land management and DAERA/other farm subsidy funding for land manager/s, whilst meeting all stakeholders' environmental, regulatory and financial needs and utilising expertise. The SCaMP NI team plan to submit Peace Plus funding application to deliver the plan for which a Business Case is currently being considered.
3. 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. The Eastern Mournes Wildfire work will continue in this manner until the Plan in section 1 is ready to be delivered.
4. 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. This work will continue in this manner until the Plan in section 1 is ready to be delivered.
5. Riparian Planting – The SCaMP NI team are continuing to facilitate The Woodland Trust in 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. Work has been instigated with The Woodland Trust and NI Water Business Improvement to plant trees on 4 plots of land owned by NI water within the Mournes area.

6. Weed-wiping Trials – The innovative weed-wiping that was carried out in Seagahan catchment area in summer 2019-2019 has been largely successful, and a similar trial initiated in Glenhordial has also shown promising results in 2019 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 is continuing into 2020. NI Water's Catchment Liaison Officer will continue to work with the farmers in the areas by coordinating the projects, providing best practice advice and where deemed suitable, provide additional best practice incentives e.g. drip trays to pesticide users. The SCaMP NI team plan to submit Peace Plus funding application to facilitate the future delivery of this incentive and similar pollution prevention projects.
7. Catchment Staff –A full-time Catchment Liaison officer was recruited in April 2019 and has developed all aspects of SCaMP NI and begun to implemented the interventions from the Catchment Management Studies. In addition to the current 6 SCaMP Officers, the SCaMP NI team are recruiting a further 4 SCaMP Champions to deliver the projects planned.
8. Killylane Catchment Project - The Killylane reservoir and WTW's provides potable water for the town of Larne, areas of Ballymena, and to rural districts of South County Antrim. Land use in this water body is a combination of peat bog, natural grassland, pastures, coniferous forest and rotational cutting and burning of heather for red grouse conservation. Diffuse water pollution and insensitive land management has been shown to 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 conditions result in increased costs of water treatment, increase the quantity of effluent and waste produced, and increase the carbon footprint of the water industry.
   The catchment has been identified as a top priority site for the application of the SCaMP approach. Only a small amount of the Killylane catchment is owned by NIW meaning a wider degree of stakeholder engagement will be required in addition to management planning, to ensure the uptake of a sustainable land management approach.
   There are several key stakeholders within the landscape including a large crossover between two government departments; NIW, DAERA, Forest Service and CAFRE.
   The catchment lies within the Antrim Hills Special Protection Area (SPA), designated for the preservation of hen harrier and merlin, and also falls within RSPB NI's Antrim Hills priority landscape, which reflects the areas importance for breeding waders, including curlew in particular. RSPB NI believe that the area should be designated as an ASSI. The project will therefore work to ensure that all sustainable land management practices across the catchment deliver for ASSI features, the features of the SPA, and for improved water quality. The SCaMP NI team plan to submit Peace Plus funding application to facilitate the future delivery of this project.

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

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 analysing and collating information and data obtained from relevant 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 lead exceedance samples and densest clusters
- Desktop exercise to help focus on the areas required for further prioritised sampling verification and review
- If the Network Distribution pipe connected to the Lead Communications pipes ,being analysed ,is considered to be unsuitable structurally or due to WQ issues ,then the

Communications pipe requiring Lead replacement was not progressed in this procedure (To be picked up potentially under the WIIM process)
- On site sampling and inspections were carried out to further verify priority areas
- Value for money in delivery of this work was obtained by clustering priority 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.

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.

See below the initial Workpackages allocated from this process.
A more accurate list of ongoing progress will be available on request following the planned review (below) in July 2020.

Planned next steps for delivery-

The company will continue with its Proactive Communications Lead Pipe Replacement Programme at circa £1 million per year.

Risk to the programme Due to Covid Lockdown

The 5 year target for Lead Communications pipe replacements agreed for PC15, has been achieved, however there is a review planned in July 2020 to review if the 20/21 target is realistically achievable, due to delays caused by the Covid lockdown period.

PC15 Proactive Replacement Programme Proposed by Strategic Asset Performance Team for PC15 -See AIR Table 11 for Progress Measured Against PC15 Target

PC15 YEAR	Contract Code	Prioritised Hotspot Location	Status
YEAR 1	**317**	Marina Park	Complete
	113	Orangefield Crescent	Complete
	113	Gilnahirk ph1	Complete
	112	Ulsterville Gardens	Complete
	112	Ebor Street	Complete
		West Wind Terrace	Further Enabling Information Required
		Victoria Gardens	Further Enabling Information Required
		Ransevyn Park	Further Enabling Information Required
		Derryvolgie Avenue	Further Enabling Information Required
		Ballycraigy Park	Further Enabling Information Required
		Victoria Court Donaghadee	Further Enabling Information Required
YEAR 2	**117**	Roseberry Road (Ph 1)	Complete
	114	Irwin Avenue	Complete
	116	Morven Park (ph1)	Works Info needs to be reviewed.
	118	Gilnahirk ph2	Complete
	115	Grand Parade	Complete
YEAR 3	**211**	York Park	Complete

PC15 YEAR	Contract Code	Prioritised Hotspot Location	Status
	213	Tates Avenue	Complete
	JN547 701	Cregagh Road	Works Info needs to be reviewed. Partial award of package to Meridian to ensure 17/18 KPI was achieved. Est 88# Leads currently being replaced in Somme & Hamel Drive - Mar/Apr 2018
YEAR 4	**212**	Deramore Avenue	Complete
	119	Roseberry Road (Ph 2)	Complete
	316	Willowholme Drive	Complete
	214	Myrtlefield Park	Complete
	215	Cranmore Gardens	Complete
YEAR 5	**216**	Bramcote Street	Complete
		Beechmount Crescent	Works Info needs to be reviewed.
	313	Kirkliston Park	Complete
	312	Ravenscroft Avenue	Complete
	214	Eastleigh Crescent	Complete
	218	Breda Gardens	Complete
YEAR 6	**219**	Ainsworth Street	Complete
	JA313 701	Dunlambert Park	Works Info needs to be reviewed. Partial award of package to BSG to ensure 17/18 KPI was achieved. 65# Leads currently being replaced in Fortwilliam Crescent - Mar/Apr 2018
	218	Haypark Avenue	Complete
	413	Windsor Avenue	Pending DFI Roads 2 year embargo due to road being recently resurfaced
	TBA	Birch Drive	Still to be assigned
	315	Ormiston Crescent	Complete
	217	Wandsworth Parade	Complete
	311	Cherryvalley Park	Complete
	217	Lynnwood Park	Complete
	212	Schomberg Park	Complete
	318	Abbey Ring, Holywood	Complete

PC15 YEAR	Contract Code	Prioritised Hotspot Location	Status
Extra Packages to fill in where access or permissions restrict or delay access elsewhere	**319**	Caseldona Crescent	Complete
	411	Joanmount Park	Complete
	412	Somerton Road, Belfast	Complete
	414	Richhill Park, Belfast	Postponed to PC21
	415	Portallo Street & Abetta Parade, Belfast	Construction
	416	St James Gardens, Belfast	Construction
	417	Eccles Street, Belfast	Construction
	418	Montgomery Road, Belfast	Construction
	419	Ashgrove Road, Newtownabbey	Construction

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.
- Reviewing the PME programme in 19/20 and the impact caused by the increase in public realm schemes across Northern Ireland. Meters installed in area which have undergone a public realm scheme and have been identified as >17 years or have a recorded consumption of >8000m3, will be reviewed on a case by case basis if additional maintenance is required to facilitate the replacement. This is due to the costs being prohibitive on these jobs, and the financial benefits may not support the increased replacement cost.

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	15,401
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		BAU
2. Prepare draft good practice document		Complete
3. Agree and implement good practice document		Complete

Polluted storm water overflows

Activity completed to date and its outcome

Stage 1 of this project has been completed which the investigation of 24 catchments was using CCTV techniques, dye testing and engaging with the public. 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 2020, NI water has addressed 216 miss-connections.
- An agreed procedure between NIEA and NI Water has been set in place, with a master spreadsheet and a reporting programme set out.

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	Dec 2019	Complete

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™,

The SUDS Studio™ 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 & 2019/20 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 & 2019/20 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
24	4A Newforge Lane Belfast	600
24	Ormeau Avenue Belfast Sewerage Scheme	47,986
24	Main Street, Ballykelly Storm Separation	11,000
	Total Impermeable Area Removed, m^2	**267,753**

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). DAP Model Programme PC15.xls

KEY MILESTONES	Target	Status
1. DAS Prioritisation Programme Agreed with NIEA	Nov '16	Complete
2. Modelling and "Needs & Options" work used to inform PC21 asset management plan.	Sep-Dec 2019	Complete
3. Progress "Needs and Options" work to inform and support development of agreed PC21 capital schemes	Dec 2020	Under Review

Strategic drainage study

Activity completed to date and its outcome

Strategic Drainage Area Studies are underway with agreement of NIEA on the catchments to be taken forward. At present NI Water has forty-eight Drainage Area Studies underway (at both MBV and N&Os stages) to meet the required outputs. This figure has changed since the AIR 19 value (n=27) due to more studies being commenced over the past year. Expenditure to date is in the region of £6,000k.

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, which allows identified needs to be addressed on a catchment-wide basis.

In addition, the outputs from the strategic drainage studies (in line with the aims of the Final Determination stated above) can help determine and enable a detailed 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.

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.

Planned next steps for delivery

The next step involves progressing innovative Risk Based Needs and Options studies for the agreed catchments. This will help inform the specific programme of work to be undertaken during PC21, and will facilitate development and refinement of A0 outline capital works to provide strategic catchment-wide solutions.

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. • DG5 properties resulting from the live feasibility projects have been progressed for delivery within the PC15 DG5 delivery programme. • Target for 19/20 has not been able to be achieved due to the size of the scheme and access problems.		
KEY MILESTONES	Target	Status
1. DG5 Removals 2015/16, 2016/17, 2017/18, 2018/19 & 2019/20	40	Behind Target

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 AIR20 summary of register movements is provided in the attached document for the period 1st April 2019 to 31st March 2020.

[redacted]

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.

2019/20 Housing sites adopted, incorporating SUS utilising hydrobrake/ vortex flow control 86 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 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 NI Water 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. NI Water has continued to work closely with NIEA over the past 12 months in the development of feasibility studies, identification of investment.

The Odour work is split into two stages:

- Stage 1 involves undertaking Odour Modelling at required sites to assess whether the site is already compliant and if not, assess the extent of investment requirements to meet Regulations.
- Stage 2 will deliver investment to meet odour compliance outputs.

The sites have been prioritised with NIEA 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,
- by the calculated throughputs.

A project commenced in 2016 to deliver PPC appraisal, odour modelling and assessment and investment to address identified deficiencies. This project will continue to the end of the PC15 period. Civil works commenced in 2017/18, with the main investment from 2018/2019 through to 2020/21.

The table below details the progress with Odour Modelling Implementation Plan (Stage 1).

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	Complete
7. Using 2nd phase modelling develop and deliver a programme of work required to meet PPC odour requirements	31 Mar 21	On Target

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/September 16	Nov-16	Nov-16	2016/17	**Complete**
New Holland (Lisburn)	1	Yes	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	**Complete**
Carrickfergus	1	No	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	**Complete**
Whitehouse	1	No	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	**Complete**
Newcastle	3	No	Mar-17	Mar-17	Aug/September 16	Sep-18	Nov-18	2016/17	**Complete**
Culmore	2	Yes	Jun-17	May-17	Oct-17	Dec-17	Jan-18	2017/18	**Complete**
Ballymena (Tullygarley)	2	Yes	Jan-19	Jan-19	Summer 19	Jul-19	Dec-20	2019/20	**Complete**
Antrim	2	Yes	Jun-17	May-17	Not required	Not required	Not required	2017/18	**Complete**
Dunmurry	2	Yes	Jun-17	May-17	Not required	Not required	Not required	2017/18	**Complete**
Cookstown	2	Yes	Jun-17	Jul-17	Oct-17	Dec-17	Jan-18	2017/18	**Complete**
Glenstall (Ballymoney)	2	Yes	Jun-17	Jul-17	Not required	Not required	Not required	2017/18	**Complete**
Limavady	2	Yes	Oct-17	Nov-17	Not required	Not required	Not required	2017/18	**Complete**
Downpatrick	2	Yes	Dec-17	Jul-17	Not required	Not required	Not required	2017/18	**Complete**
North Coast	3	No	Nov-17	Nov-17	Not required	Not required	Not required	2017/18	**Complete**
Enniskillen	3	No	Apr-18	Apr-18	Sep-18	Oct-18	Dec-18	2018/19	**Complete**
Omagh	3	No	Apr-18	Apr-18	Sep-18	Sep-18	Sep-18	2019/20	**Complete**
Banbridge	3	No	On Hold pending deregulation study					PC21	**Potential Delay**
Larne	3	No	Nov-17	Nov-17	Not required	Not required	Not required	2017/18	**Complete**
Tandragee	3	No	On Hold pending deregulation study			TBC		PC21	**Potential Delay**
Magherafelt	3	No	Oct-17	Nov-17	Sep-18	Nov-18	Nov-18	2020/21	**Complete**
Waringstown	3	No	On Hold pending deregulation study			TBC		PC21	**Potential Delay**
Greenisland	3	No	Apr-18	May-18	Not required	not required		2020/21	**Complete**
Ballyclare WwTW	3	No	Apr-18	May-18	Sep-18	Nov-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	On Hold pending deregulation study	N/A	N/A	N/A	N/A	PC21	**Potential Delay**
Lisnaskea	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	**Complete**

Stage 2 - Plans for Delivery of the PPC investment requirements for Odour Management, as identified from odour model reports and NIEA site inspections

NI Water has continued to deliver investment to address deficiencies identified by the odour model reports and/or through NIEA site inspection reports. The following table summarises the investment delivered to date and planned for 2020/21.

WwTW	Target Year For PPC Compliance	Completion Date	Compliance Status
Newry	No Capital Investment Required	01/04/2015	Compliant
Newtownbreda	No Capital Investment Required	01/04/2015	Compliant
Lisnaskea	No Capital Investment Required	01/04/2015	Compliant
Ballymoney	No Capital Investment Required	31/07/2017	Compliant
Downpatrick	No Capital Investment Required	31/07/2017	Compliant
Limavady	No Capital Investment Required	31/07/2017	Compliant
North Coast	No Capital Investment Required	31/07/2017	Compliant
Greenisland	No Capital Investment Required	30/05/2018	Compliant
Whitehouse	2017/2018	31/01/2018	Compliant
Ballyclare	2018/2019	30/05/2018	Compliant
Lisburn	2018/2019	31/03/2019	Compliant
Carrickfergus	2018/2019	31/03/2019	Compliant
Culmore	2018/2019	31/03/2019	Compliant
Cookstown	2018/2019	31/03/2019	Compliant
Antrim	2019/2020	31/10/2019	Compliant
Larne	2019/2020	31/10/2019	Compliant
Newcastle	2019/2020	31/03/2020	Compliant
Dunmurry	2019/2020	31/03/2020	Compliant
Enniskillen	2019/2020	31/03/2020	Compliant
Omagh	2019/2020	31/03/2020	Compliant
Banbridge	2019/2020		Decision to be made following deregulation study
Magherafelt	2020/2021		Non-Compliant
Strabane	2020/2021		Non-Compliant
Dungannon	PC21		Non-Compliant
Ballymena	PC21		Non-Compliant
Tandragee	PC21		Decision to be made following deregulation study
Waringstown	PC21		Decision to be made following deregulation study
Dromore	PC21		Decision to be made following deregulation study

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

Drinking Water Quality		
Priority	**Drinking Water Directive**	**Update on Delivery (June 2020)**
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 2019 reporting year NI Water achieved its drinking water quality targets and is on profile to achieve its targets in 2020. Water infrastructure investment (water mains rehab) is prioritised using our WIIM model which includes for a range of issues including water quality. Any enforcement notices relating to water mains infra should they arise will be accommodated as must do investments within the water mains 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. This work at Derg is complete. 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. Work at Rathlin WTW has been completed. Pilot study work at Derg and Ballinrees to determine the best long term solution has been delayed due to COVID 19. NI Water is liaising with DWI to determine the best way forward within the regulatory framework.
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. DWI 2020 DWSPs Annual Return made on 31/03/2020.
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. NI Water worked with NIEA during this process.
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 20/21.

Priority	Managing Raw Water Quality Risks	
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 Studies - Completed for all 23 drinking water catchments in NI to identify issues and recommend actions for each catchment to enhance environment and to improve raw water quality at abstraction points. • Mournes Holistic Land Management plan - A management plan prepared to address grazing, erosion control, riparian planting, invasive species control, recreation/access, wildfire requirements and other land management improvements. • Grazing in Mournes - Grazing contracts for east and west Mournes awarded. • Mournes Path/erosion control works – Remedial erosion control works ongoing. • Mournes Wildfire Group - Intervention work ongoing to progress Eastern Mournes Wildfire Plan, reducing wildfire risks. • Invasive Species control - Ongoing annually in Silent Valley catchment. Review completed to assess effectiveness and progress of NI Water's measures. • Seagahan, Glenhordial & Ballinrees Pesticide reduction projects – Successful weed-wiping projects ongoing, showing positive water quality results. Passive sampling project also ongoing to monitor results. • Water Catchment Partnership - Agricultural shows, farmer engagement, press engagement, etc. Ongoing engagement with partners in message and spring/summer press releases on weed control and water quality protection. • Rush Control Events - Farm events carried out in high risk priority areas. CAFRE/NIW video on best practice rush control planned for 2020, with corresponding engagement work with grassland BDGs planned to supplement the message on weed control. • DAERA/NI Water liaison on the future of agricultural policy and possible movement away from area-based subsidies. • Glenedra Riparian Planting project – A further 7ha towards Glenhedra source were planted with 9,000 trees in Nov-Mar 2020 bringing the total planted there to 21,245. This will stabilise river banks and prevent livestock encroachment, thus improving water quality for treatment at Caugh Hill WTW. • Faughan valley/Burntollet riparian tree planting project (Carmoney WTW) - 3 yr project including tree planting, recreation access, conservation measures and educational initiatives in a 45ha area. • Tree planting - Work ongoing to facilitate Forest Service FES funding to plant 4 large areas of NIW catchment land in Mournes to improve biodiversity, create firebreaks, reduce our carbon footprint and stabilise water quality. • Lough Neagh Partnership - Liaison ongoing to establish projects that will have water quality benefits, deliver shoreline management solutions reducing pesticides, colour and turbidity. • Lough Erne Landscape Partnership - Liaison ongoing to establish projects that will have water quality benefits. • 'CABB' INTEREGG VA Project - Work on Garron Plateau Bog Restoration project completed, bog demonstrating ongoing recovery. Water quality and biodiversity benefits being monitored. • 'Source To Tap' INTERREG VA Project - A major €4.9M cross-border project, to improve water quality in rivers and lakes in the Erne and Derg catchment areas.
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. Mournes Wildfire Group - The MWG was established with the aim of forwarding the recommendations from the Eastern Mourne Wildfire Plan and to mitigate against wildfire. The group includes Mourne Heritage Trust, NI Water, NIEA and NIFRS.
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. A) Drinking water quality targets are in place for iron and other significant parameters, designed to protect public health. Drinking water quality target for iron remains to be monitored. On track as of 31/03/20. B) Drinking Water Quality targets and / or Regulatory limits are in place. In particular targets for iron, and Regulatory limits for colour and taste & odour, relate to drinking water quality complaints and help to inform investment decisions, including prioritisation of water main rehabilitation.
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 water mains 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). The PC15 approach will continue into PC21.
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 Dfl for comment on the 25th April 2018.

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.	The Water Resource & Supply Resilience Plan has been developed following DfI's Technical guidance including stakeholder engagement throughout the process. An initial draft of the plan was signed off by NI Water board in November 2017, however, it was agreed to reassess the draft plan against the summer 2018 high demand incident. This was completed and the Draft Plan was issued for consultation in July 2019 and following a review of consultee responses the final plan has been produced and is due to be published in June 2020, 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.	The leakage targets for the PC15 period are proving to be very challenging. It should be noted that the leakage target is cumulative which is unlike a number of other targets and KPIs. NI Water has undertaken the following: • NI Water has very much focussed its effort on seeking to reduce leakage through a variety of different means through better data management, leakage specific capital investment and find & fix. • Increased the number of specialist leakage detection resources. • In 19/20 we increased our external detection resources by 17% to 113. • Our contract detection expenditure increased from £2.4m in 18/19 to £3.5m in 19/20. • We have retained our complement of in-house NIW staff and increased overtime working for NIW specialist leakage detection staff. • Invested in CALM network training for all NIW and contract staff. • Investing in our in-house detection teams with a leakage development programme. • Increased the number of defects being found and repaired on the public side. • Our repair costs increased from £2.0m in 18/19 to £2.3m in 19/20. • Found additional numbers of defects on the private side and issued approximately 2,500 leakage notices in 19/20. • Continued with the PC15 leakage capital investment programme. • The natural rate of rise (NRR) has increased which is influenced by the pipe material, condition, age and climate. To counter this NIW has a targeted mains replacement programme which is related to adequate funding. • Not only have we continued with recognised leakage detection methods but we are also undertaking a number of innovative projects associated with satellite imagery, noise logging and drones.
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 c4 weeks 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	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 furt her 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, YouTube, Print-Press and Radio/TV interviews. As part of the consultation on the Water Resource & Supply Resilience Plan NI Water have been engaging with Waterwise, an independent not-for-profit, non-governmental organisation promoting water efficiency, with regards to establishing pilot schemes. As a consequence as part of the PC21 submission £150k has been identified to trial and pilot a number of demand management activities in PC21. This is likely to focus on the benefits of household audits to inform the next Water Resource and Supply Resilience Plan. This is in addition to the recommendations from the current Water Resource and Supply Resilience Plan which will be actioned in PC21. • Targeted non-household water audits (key accounts)

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. PC15 is not being fully funded reducing NI Water's ability to deliver investment at WWTW's and as a result a number of new housing development planning permissions are receiving negative consultation responses from NI Water as the receiving WWTW and/or Wastewater network 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),	
WW2b	- flow monitoring requirements (in support of the introduction of flow compliance from 2015); and	
WW2c	- any outstanding spill monitoring requirements needed for compliance with the UWWTD, SWD & BWD.	
WW2d	And deliver the highest priority schemes during PC15 within the funding constraints.	
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. NI Water has set in place a process for removing storm water from the sewer network on a prioritised bases taking into account large flows at WWTW or WWPS during rainfall events. This will give more capacity within these networks for growth and also reduce risk of flooding. NI Water has agreed to develop and enhanced DAP for Belfast to inform the LWWP. An enhanced DAP includes for the modelling of NI Water storm sewers which historically have not been modelled as part of the DAP process.
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 SWELL coastal, river and drainage area model builds for the Carlingford Lough and Lough Foyle drainage catchments are now substantially complete and currently undergoing review prior to calibration and integration into the ecosystem models. Associated field and sampling studies have ceased due to Covid-19 but is being reviewed on an ongoing basis. This could have an impact on delivery the final models and result in potential delays.
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 has set in place a process for removing infiltration from the sewer network on a prioritised basis taking into account large flows at WWTW or WWPS during dry weather and tidal infiltration. This will give more capacity within these networks for growth and also reduce risk of flooding. 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. During 19/20 financial year a significant project was completed in Ballykelly to remove storm water from the combined network.
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.
WW10a	- development pressures (& address overloaded works) and	
WW10b	- reduce pollution incidents;	
WW10c	- comply with existing/revised Water Order Consents; and	
WW10d	- meet the PPC requirements.	
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.
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. In addition two other PC15 projects contained funding for backsyphonage issues:- KI514 – WwTWs - Water Regulation Compliance & Energy Efficiency Programme' for which £558k was allocated for backflow prevention at 15 large WWTWs & JI032 Water Treatment Sites - Water Regulation Compliance & Energy Efficiency Programme for which £1.12m was allocated for backflow prevention at WTWs.
WW14	Continue a prioritised long-term programme of Drainage Area Plan work to:	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.
WW14a	- maintain the serviceability of the sewerage system;	
WW14b	- meet development pressures (& address capacity issues);	
WW14c	- reduce sewer related flooding; and	
WW14d	- 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 DfI Rivers when required. Within the new Risk Base approach to Needs and Options and MBVs specification part of this new specification is meetings with DfI Rivers regarding flooding and solution to address this flooding with a joint approach where possible. NI Water are members of the Technical Flood Risk Steering Group contributing to the development of the next FRMP.
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. NI Water have appointed external supervising engineers in order to obtain responsible reservoir management status to ensure compliance with planning policy from the absence of full commencement of the Reservoirs Act NI.
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).	An Integrated Environmental Modelling Steering Group is now established for the development of environmental models alongside drainage area models to inform optimal sustainable options for both wastewater networks and treatment works and to facilitate the delivery of overall water quality objectives.
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 under final internal review by Developer Services before final issue to WRc for publication. There has been additional internal challenge on the draft document. Expected completion Summer 2020.
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. Design for Exceedance will be included within Sewers for Adoption 2nd Edition. Expected completion Summer 2020.
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. DG5 removal funded in PC15/21 for internal flooding only. External flooding of property is not currently funded and policy is required for the longer term.
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. NI Water are continuing to remove storm water from are combined system when this can be achieved. NI Water take all opportunities to remove storm water as part of projects or network upgrade or new development. To date 296,313 m^2 of combined sewers have been separated into foul and storm water sewers as a result of brownfield development.

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 2019/20, and the final Audit Report submitted to the Department for Infrastructure's Water & Drainage Policy Division. NI Water continues to be represented on the DfI 'Emergency Planning Steering Group' which includes three main drainage agencies; DfI Rivers, DfI Roads and NI Water. NI Water continues to participate in the multi-agency 'Flood Strategy Steering Group' (led by DfI 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 continues 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 2019/20, NI Water has continued to contribute to the development of the EPGs contingency planning and is represented on the Northern, Southern and Belfast Flooding and Severe Weather Planning Groups. 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.

Service Delivery, Improvement and Affordability

Priority	Customer Priorities for Customer Service, Information & Communication	
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 NI Water's corporate systems relating to various customer accounts. 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 with an out-turn success rate of >99.2%. We are starting deployment of automatic meter reading equipment and utilising mobile telephone technology to remotely read key meters whilst investigating the potential for SMART metering. 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 2019/20, new technology was installed at 8 service reservoir (potable water storage) sites. The PC15 total of ICAT SRs to date is 125 (Project began September 2016). During 19/20 the first prototype iCAT WPS was completed at Ballyhome (Portrush) in advance of The Open.
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	
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	
CS5biii	- 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 2019 reporting year NI Water achieved its drinking water quality targets and is on profile to achieve its targets in 2020. For the development of the PC21 Plan Deterioration and Risk & Reliability Models (DRRM) were developed. The deterioration models are used to predict when asset failures are expected to occur in the future and therefore form the basis for assessing the level of repair and replacement activity required throughout the planning period and beyond. The service impact models inform the probability of the asset failure leading to a service failure and also the type and scale of any consequences of asset failure. This enables the development of a more customer focused rather than asset focused approach to CMP. These include measures on drinking water quality and associated customer complaints.
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).	1) 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. 2) The Water Resource & Supply Resilience Plan includes a number of resilience project proposals. 3) NI Water has developed an Interruptions to Supply (ITS) Strategy that sets out what NI Water needs to focus upon to improve our supply interruption performance and achieve better service for our customers.
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 water mains 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	A register of properties at risk of low pressure (DG2) continues to be maintained as BAU, with regular meetings held with internal stakeholders under chair of Leakage DMU to monitor progress. The target reduction for 2019/20 was achieved with 115 removed this year. When adding in the carried forward excess total from the previous year of 46 gives us a removal total of 161 against a target of 160 removed. The PC21 business plan confirms that the DG2 register requires a refresh as the current register is incomplete. The register will be refreshed during PC21.
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.	Since PC10, NI Water has maintained a register of properties at risk of internal (DG5) and external flooding. The register has developed in confidence in the intervening time with an established system of additions, investigation of root cause and removal by company action or other means now in place and informing the PC15 investment. Other corporate tools are being introduced to complement this work including sewer risk model and capacity mapping. PC15 targets for years 1,2,3 & 4 achieved.
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 activities, which currently involve; Project Alpha: A 12 month reduction in the contract level water treatment standards, to establish if savings can be generated from within NI Water Alpha chemical operating costs, which would then reflect in lower NI Water Group operating costs for the alpha facilities Project Omega: The ongoing Facilitation process, 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, is anticipated to be complete by August 2020. Kinnegar: The parties are looking at options around handback conditions in 2024 which might be for mutual benefit.
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. Within our Wastewater sites we will have rolled out Real Time Control (RTC) technology to 13 No sites by end April 2020 and Process Improvement work at a further 7 No. Wastewater sites. This has been possible as a result of the input of the Wastewater Team in conjunction with the Energy Programme Delivery Team - financial savings as a result of this work are positive which will help the company meet its demanding PC15 OPEX target of £4.1m. We have also rolled out Best Efficiency Point (BEP) pumping control at 10 No WwPS with a further 10 No sites to be complete by the end of June 2020 - this has improved the pumping performance of our large pumping assets which will deliver energy savings for the company. Our next key area of focus within the Wastewater Production Line (PL) is on Odour Control and reducing the energy utilised with this activity. A PoC trial is progressing at the North Coast in relation to this and the outcome of this trial will inform future rollout at further WW sites (end June 2020). Within the Water PL a key area of Energy Efficiency focus this year has been on Source Optimisation (utilising upland sources and reducing pumping costs (and hence energy) at our WTW's and large WPS. This area of work has progressed well in 19/20 FY with significant energy savings been realised. The next area of focus is working with our Data Analytics colleagues to identify inefficient WPS and introduce a programme of work to optimise performance at these sites.

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	NI Waters Project Appraisal Process takes into account 'whole-life' energy and carbon costs for all projects assessed including drinking water investment decisions. As part of the appraisal process Net Present Cost Analysis with Whole life Carbon assessments are carried out to ensure the correct options are selected to go forward for implementation.
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 at 58 sites across the NI Water estate including the recently completed Solar Farm at Dunore point. 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. Further pilot projects are planned with a variety of sustainable solutions to gain confidence in long performance and value for money. There are 4Nr sustainable solutions at WwTWs >250PE (Stoneyford, Castle Archdale, Clabby Pragmafitre and Ballykelly) included within NI Water's PC15 target.
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. NI Water have introduced an OPs Risk Affordability Assessment to ensure the correct solutions are being taken forward to business case development.
Priority	**Research Development and Innovation**	
SSR6	Maintain and implement a Research Development and Innovation (RDI) strategy.	NI Water continuing to develop, maintain and implement a Research, Development and Innovation (RDI) strategy with the aim that this will assist improved performance and the delivery of further efficiencies. Where possible full use should be made of opportunities for sharing RDI costs with other organisations. Highlighted as a target area within PC21.
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 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 opportunities including pump efficiency, real time control and odour control as BAU. Opportunities are being progressed to increase solar generating capacity and energy storage.
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. NI Water are investigating the potential of incorporating oxygen generated from renewable energy within the waste water process.
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. The percentage of NI Water's power usage derived from renewable sources was 36.9% in 2017/18, 39.4 % in 2018/19 and 44.6% in 2019/20.
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.	NI Water continues to expand its exploration of sustainable wastewater treatment. Trials planned or underway to date include; Integrated Constructed Wetlands, Phragmafiltre (aerated reed bed), Nereda, 5000PE ICW and Aerofac (naturally aerated lagoon). Castle Archdale Integrated Constructed Wetland has come into operation and along with Stoneyford ICW. Further sustainable treatment pilot is complete at Clabby WwTW, Co Fermanagh using a Phragmifilter Reed Bed System. Within the 19/20 financial year the first Nereda plant in Northern Ireland was commissioned at Dungannon WwTW as phase 1 of the overall plant upgrade.

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	NI Water continues to expand its exploration of sustainable wastewater treatment. Trials planned or underway to date include; Integrated Constructed Wetlands, Phragmafiltre (aerated reed bed), Nereda, 5000PE ICW and Aerofac (naturally aerated lagoon). Castle Archdale Integrated Constructed Wetland has come into operation and along with Stoneyford ICW. Further sustainable treatment pilot is complete at Clabby WwTW, Co Fermanagh using a Phragmifilter Reed Bed System. Within the 19/20 financial year the first Nereda plant in Northern Ireland was commissioned at Dungannon WwTW as phase 1 of the overall plant upgrade.
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. We continue to communicate our key Bag it & Bin it messages, Freeze/Thaw protection and FOG (Fat, Oil and Grease) via TV/Radio/Print/Social Media. NI Water engaged with all 11 council areas, meeting either the Mayor or Chairperson for a promotional photograph and a quote. Tailored releases with area specific information on blockages were then issued to all media outlets. Each Council also shared this PR through their own channels including social media. This engagement generated PR in 16 print publications, 12 online and 4 radio pieces. From 2 Dec 2019 – 12 Jan 2020, an advertising campaign ran on TV, Outdoor posters and social media, with a focus on the fats oils and grease message. From 2 Mar 2020 – 15 Mar 2020, a campaign is currently running on TV, radio and outdoor posters, which will focus on our 3 Ps message – "only pee, poo and toilet paper should be flushed down the toilet". Our Education Team continue to visit schools across the country to deliver our bag it and bin it messages. 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).	The Catchment Team have formed or are involved in a wide range of partnerships to protect or improve water quality: • **The Water Catchment Partnership** - The WCP was established to help tackle the problem of pesticides in the water environment, particularly in Drinking Water areas in Northern Ireland. This involves representatives from UFU, NI Water, NIEA, CAFRE, DAERA and the Voluntary Initiative. Our aim is to proactively work together to promote and raise awareness of best practice when using pesticides in the garden or on the farm, through a voluntary approach to improve water quality in the catchment. • **Source To Tap** - A major €4.9M cross-border project, to improve water quality in rivers and lakes in the Erne and Derg catchment areas. NI Water is the lead Partner working in collaboration with Irish Water, AFBI, East Border Region, Ulster University and The Rivers Trust, to explore measures to improve local water quality. • **Cooperation across Borders for Biodiversity** - CABB is a €4.9m five-year partnership involving RSPB, Birdwatch Ireland, Butterfly Conservation, Moors for the Future and NI Water. The Garron Plateau bog restoration project benefitted from this partnership after obtaining funding where 493 hectares of globally rare blanket bog was restored. • **Mournes Wildfire Group** - The MWG was established with the aim of forwarding the recommendations from the Eastern Mourne Wildfire Plan and to mitigate against wildfire. The group includes Mourne Heritage Trust, NI Water, NIEA and NIFRS. • Lough Neagh Partnership - A partnership with a wide range of stakeholders with the aim of improving water quality and wildlife habitats in Lough Neagh area. • Lough Erne Landscape Partnership - A partnership with a wide range of stakeholders with the aim of improving water quality and wildlife habitats in Lough Erne area. • Wild Strangford Group - is a partnership with a wide range of stakeholders with the aim of improving water quality and wildlife habitats in Strangford Lough area. • SCAMP Steering Group - This group is chaired by NI Water and involves environmental NGO's, govt agencies and academics. The aim is to oversee the direction of SCAMP projects.
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 DfI: - 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. These are complete and passed to DfI.
SSR17	Ensure:	
SSR17a	• All CNI sites continue to meet latest security advice; and	
SSR17b	• Implementation of a prioritised plan for securing other identified sites to required standards.	
SSR18	impounding	

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 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).
SSR19a	1) Water supply	
SSR19b	2) Prevention of internal flooding (e.g. due to a sewer pumping station being flooded)	
SSR19c	3) Prevention of pollution (e.g. due to WWTWs or SPS being flooded)	

Tourism, Recreation & Biodiversity

Priority	Estate Management	
TRB1	Contribute to the development and implementation of the NI Biodiversity Plan.	NI Water 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. Cooperation across Borders for Biodiversity - CABB is a €4.9m five-year partnership involving RSPB, Birdwatch Ireland, Butterfly Conservation, Moors for the Future and NI Water. The Garron Plateau bog restoration project benefitted from this partnership after obtaining funding where 493 hectares of globally rare blanket bog was restored.
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. Project was completed April 2019.
TRB3	Continue to develop partnerships (e.g. SCAMP NI) with other public, community & voluntary sector organisations to deliver sustainable catchment initiatives.	SCAMP and Source to Tap projects progressing as planned. Reduction in raw water MCPA levels evidenced with the SCAMP weed wiping trials. Data gathering still ongoing for the Source to Tap project with the first weed wiping season to be carried out in 2020. Catchment Management Plans are in place and ongoing for all drinking water catchments. Plans are in place to engage with two more official SCAMPNI partners in 2020.
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 in PC21.
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	Monitoring programme for CSOs/EOs, which have been prioritised initially on designated bathing and shellfish waters, is being taken forward within PC15. To date 149 have been completed. The second phase of this is being taken forward within the PC21 Business Plan.
Priority	**Reservoirs**	
TRB9	Progress the assessment of 'unused' reservoirs to determine the approach to disposal.	NI Water has recently changed its strategy with regards Out of Service Impounding Reservoirs as summarised below:- • NI Water has determined that they do not sell category 'A' reservoirs. • For other reservoirs if the sale falls within 3 years of the end of the period for the next schedule Section 10 inspection, NI Water will instruct an inspection and advise the purchaser of the necessary work to be carried out. • When assessing the options for Disposal of a reservoir, NI Water will consider the environmental sensitives of the site, statutory requirements and the stakeholders involved such as those who may benefit from flood protection provided by the reservoir. • When selling a reservoir, NI Water will conduct due diligence assessment of the capability of the new owner to maintain safely the reservoir and comply with the statutory requirements of the reservoir act. A full certificate of information transfer will be provided and information concerning the safe running of the reservoir, including the existing emergency response plan. As a consequence of the change only 8 of the 20 Out Of Service Impounding Reservoirs are now available for sale. There are five sites that may be suitable for abandonment subject to planning permission.

Annual Information Return 2020

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 AIR20 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

Supply interruptions are defined as when properties are without a continuous supply of water, whether planned or unplanned, warned or unwarned. A property shall be considered as without a supply when water is lost from the first cold water tap – taken as being **operationally equivalent to ≤3m pressure at the main (adjusted for any difference in ground or property level)**. This can be inferred from local logging, network modelling or a customer contact indicating a loss of supply which was caused by the company operation and has not been demonstrably restored. Multiple-storey buildings shall be considered on a case-by-case and floor by floor basis, with properties on a particular floor being considered as receiving the same pressure.

Supplies may be affected by other factors, for example, lower pressure through the flushing of mains, or restrictions on use. These are covered under the DG2 and DG4 procedures.

3.2 Duration

Duration is defined as the length of time for which properties are without a continuous supply of water.

3.3 Start Time Determination

Start time is when water is lost from the first cold water tap at a property – taken as being **operationally equivalent to ≤3m pressure at the main (adjusted for any difference in ground or property level)**.

In the event of applicable telemetry data or logging being unavailable, the time should be determined from the earliest of:

- As advised by “no water” contact from customer (where not due to a customer side issue);
- Indications from flow or pressure monitoring to infer a change in supply; or
- Verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data).

The company shall gain confirmation by consulting complainants (if any) and/or customers at high points on the system.

3.4 End Time Determination

End time is when water is restored to the first cold water tap at a property – taken as being **operational equivalent to >3m head of pressure at the main**.

In the event of pressure logging being unavailable, the time should be determined from the latest of:

- As advised by notification from customer;
- Indications from flow or pressure monitoring to indicate return to normal supply conditions; or
- Verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data).

It is the responsibility of the company to demonstrate that supply conditions have been restored and available to all previously affected customers from the time determined from the above. In the absence of physical evidence, the company shall gain confirmation by consulting complainants (if any) and/or customers at high points on the system.

The company shall apply the precautionary principle, using the start and finish times and the properties affected that will give the highest supply interruption value in the event of uncorroborated or conflicting data.

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.

3.5 Event

Event is the term used by NI Water to describe its involvement in an abnormal occurrence in its services to customers.

3.6 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.

- 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).

3.7 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'.

3.8 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.

3.9 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.

3.10 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.

3.11 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 o Export to Excel o 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.	Ongoing throughout the week/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; o ***Unplanned >6hr Summary*** o ***AIR & KPI Reporting***	By 1st working day of the new month.

DG3 Reporting and Audit Process		
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; o Individual FM folders with DG3 ID Events checks. o Comparison Checks Summary. ▪ Red/Amber/Green against start/finish/No. prop o Properties not recorded on IMS. ▪ Used to check No. of prop queries.	1st working day + 8 days
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

and 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 have been captured in accordance to the regulatory guidance. For further information on the development of the DG3 Register, please refer to the DG3 LoS Methodology.

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]

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.

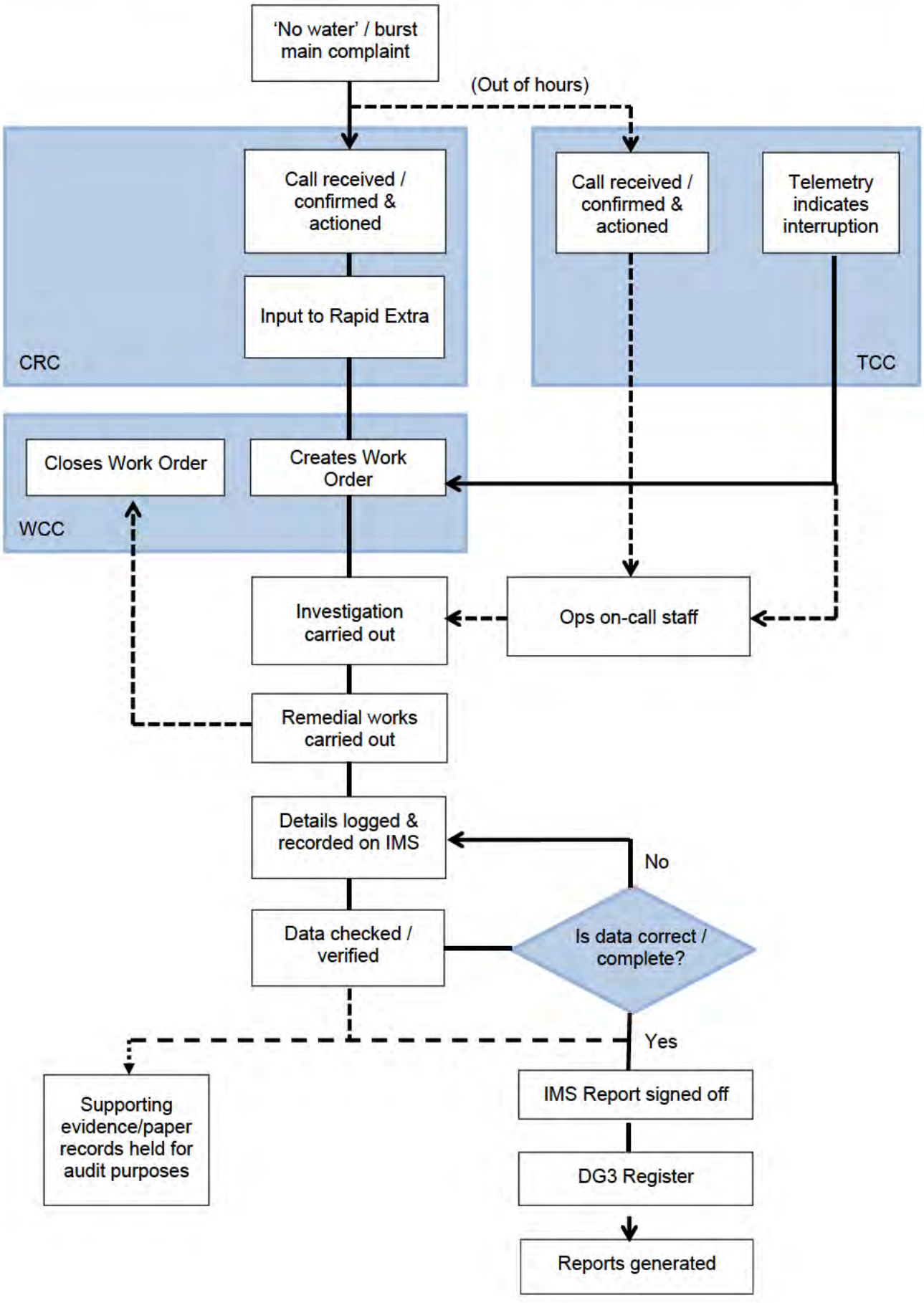
Bronze Team – MIP Only

- 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.

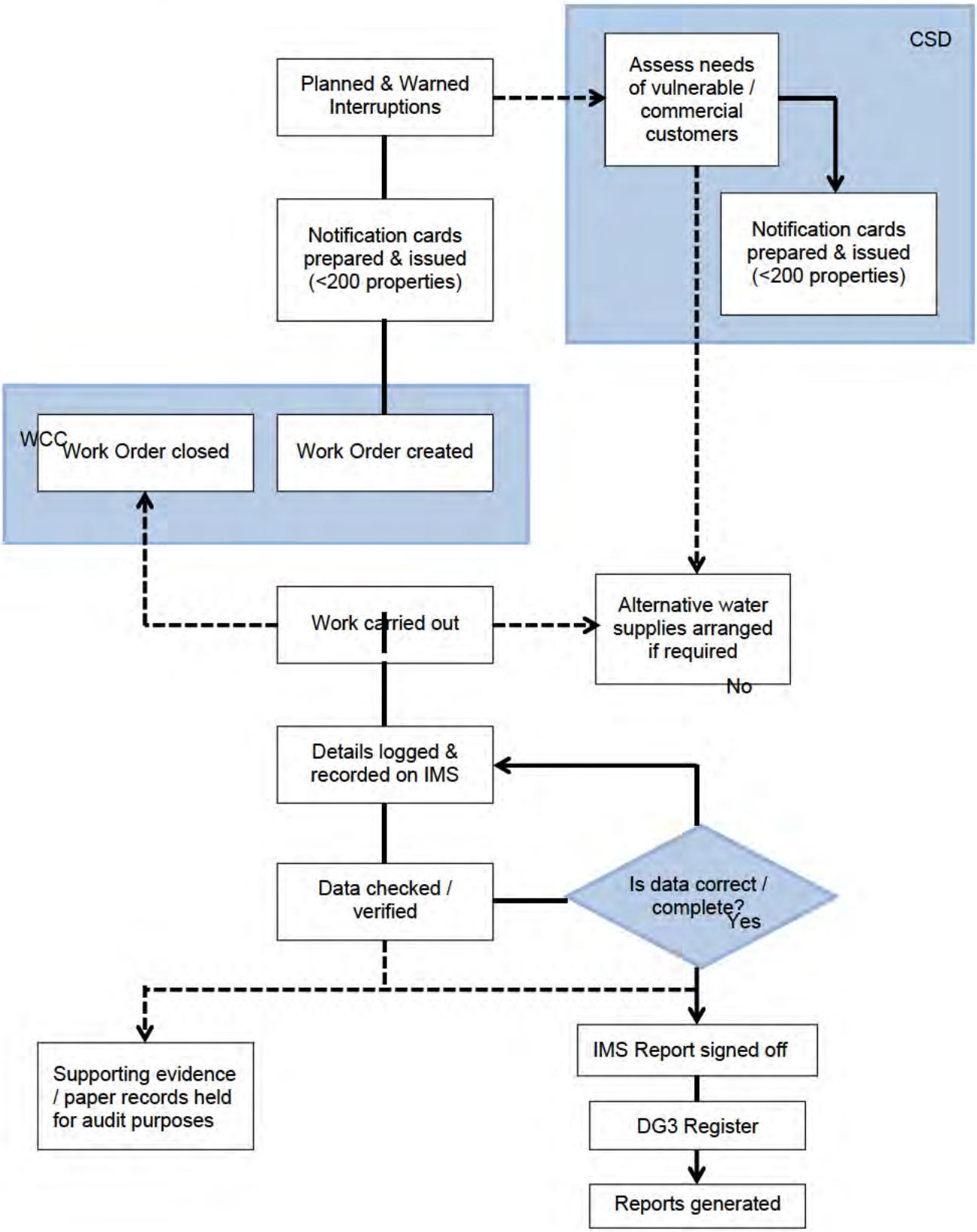
Silver Team

- Interrogate reports to provide status updates as incidents develop.

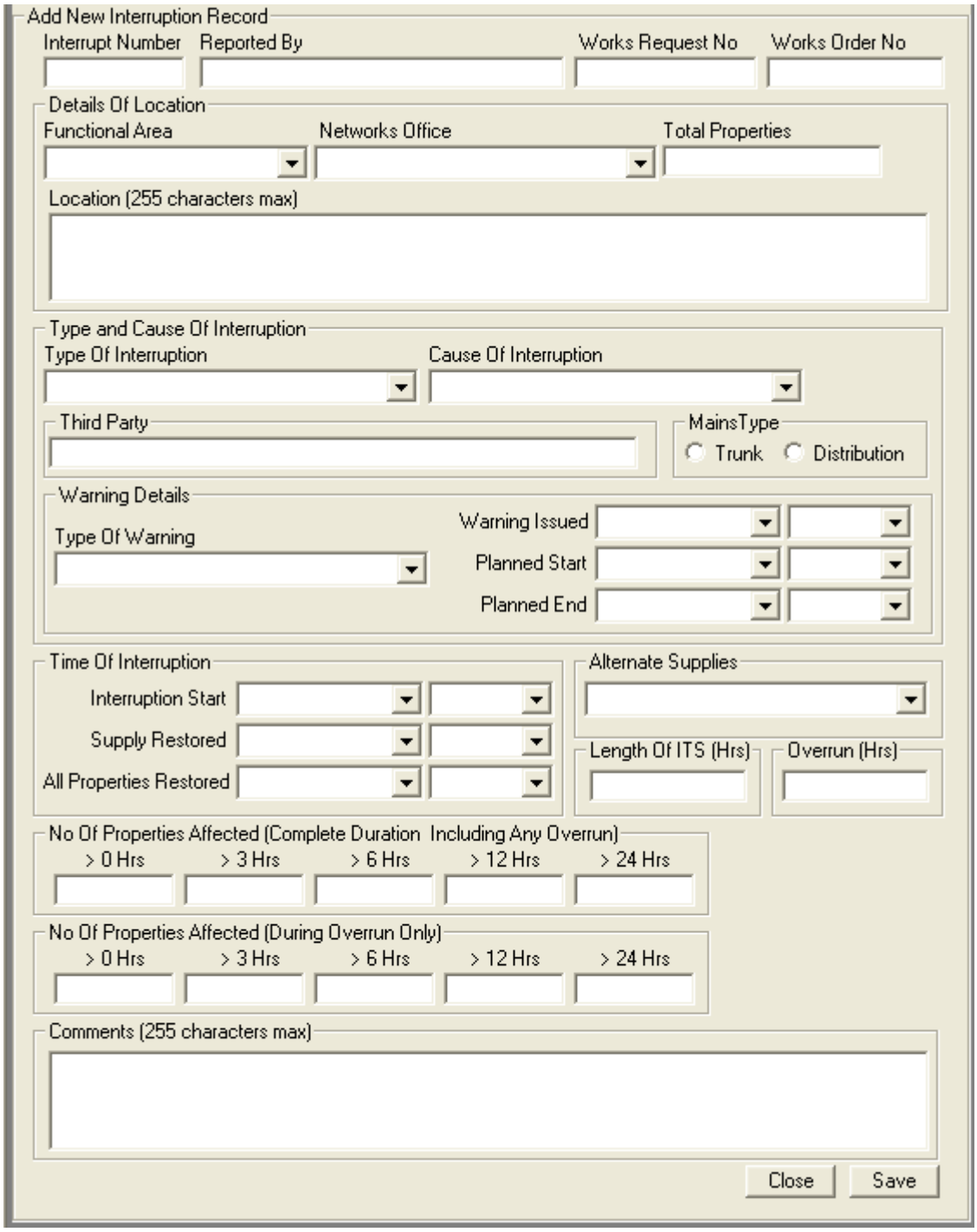
Appendix B – DG3 Process Flow Diagram – Unplanned or Unwarned Interruptions



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:

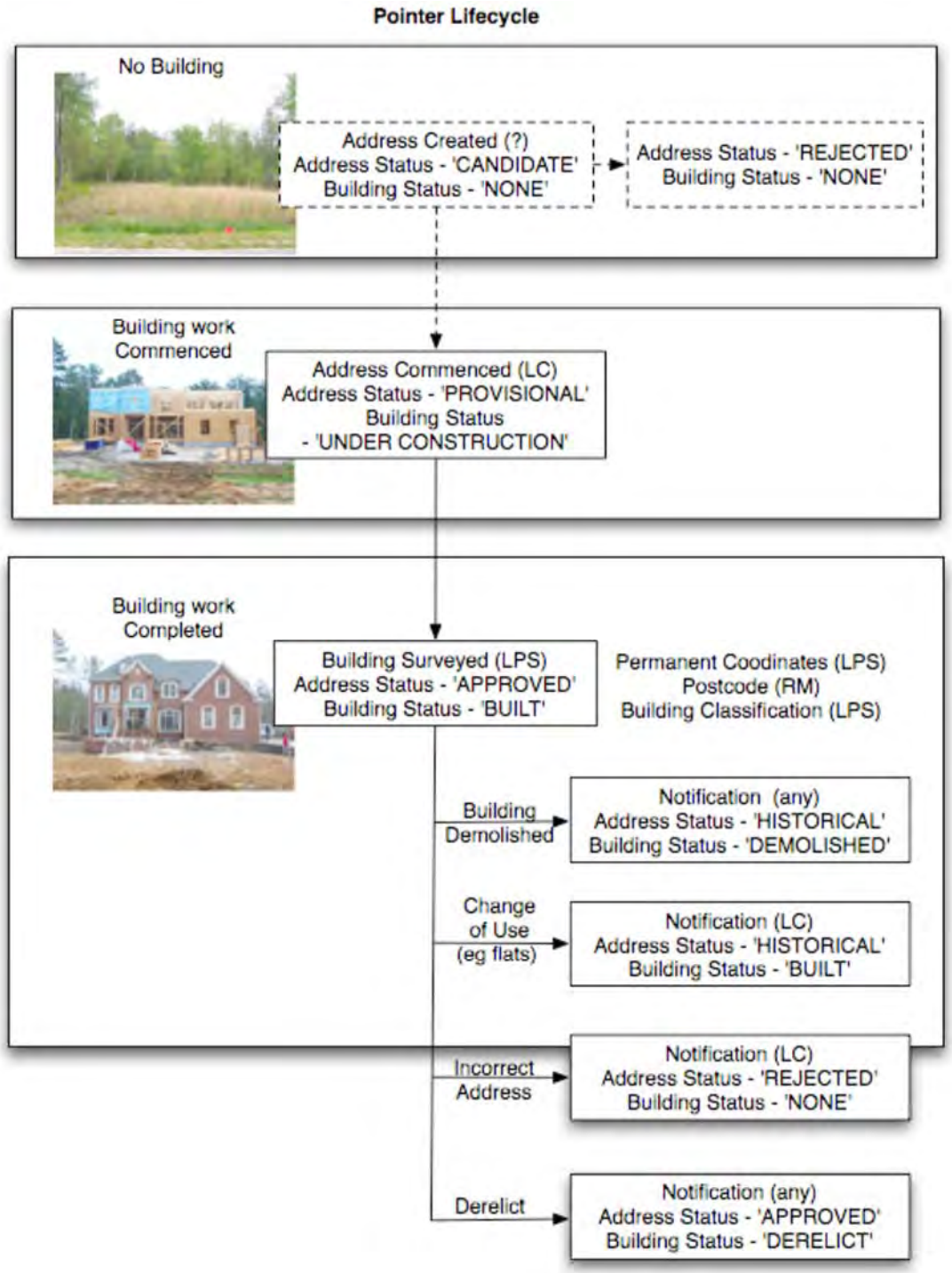
None, Under Construction, Built, Derelict and Demolished

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.

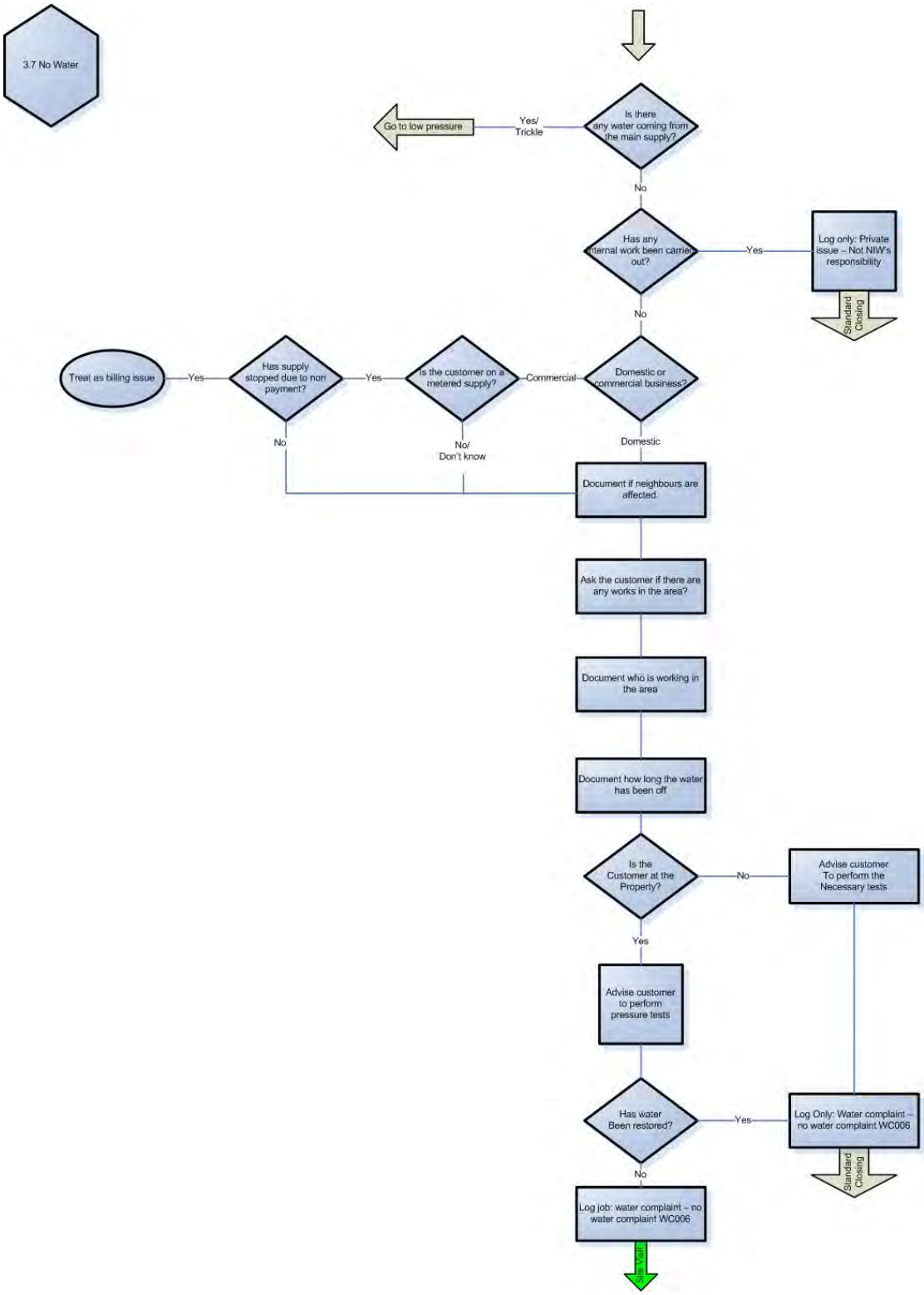
Constraints

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.

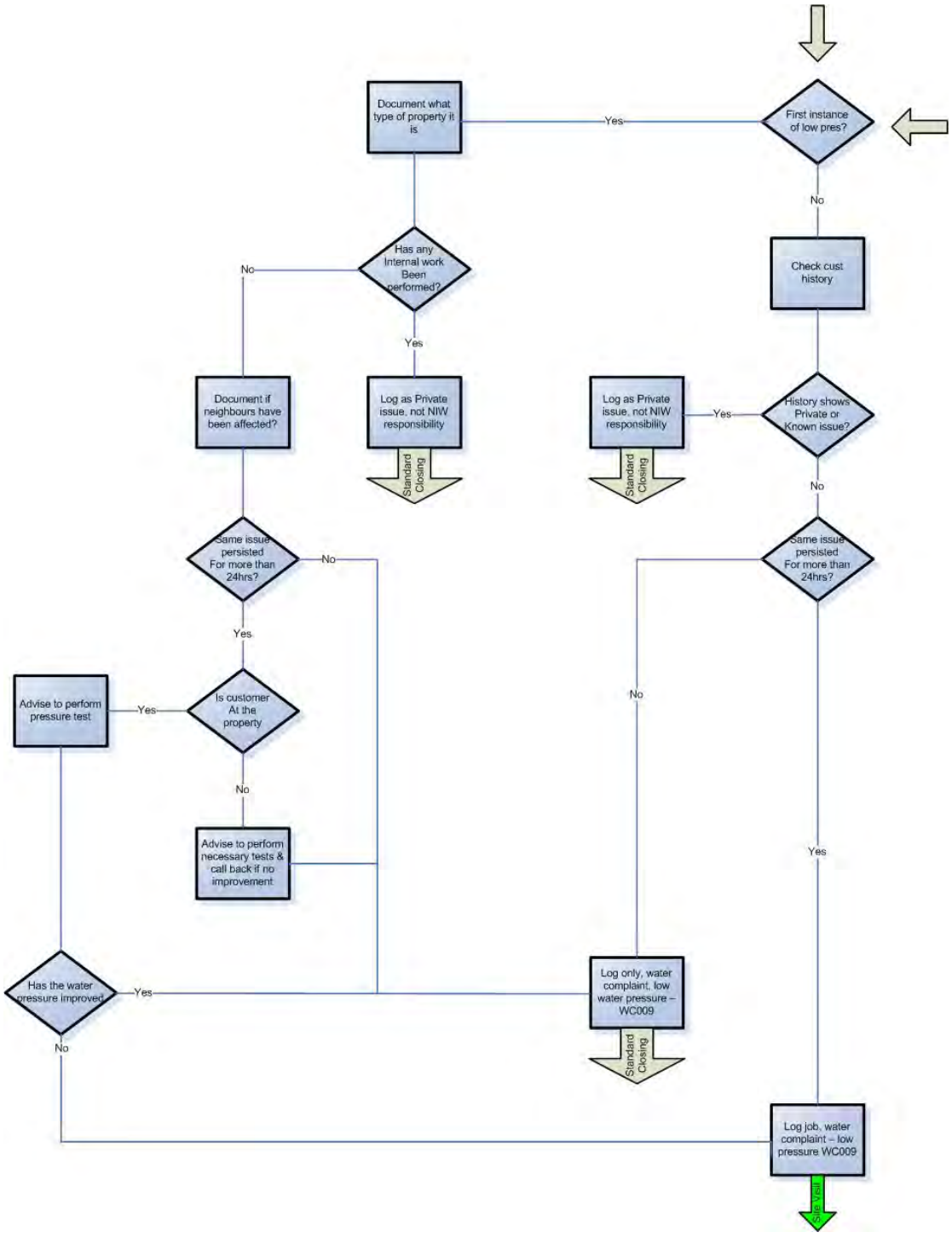
Details

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
14/05/2020 10:58

Unplanned, Unwarned Interruptions

More than 3 hrs No of Properties 3,575

Event Id	Interruption Id Use	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties by Duration Hours	Properties by Duration Minutes	Properties by Duration Seconds	Location	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description
262474	1965833	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			06/03/2020 08:53	06/03/2020 12:00	30	30	30	0	0	0	3	7	0	(UPRN 187304533)	FALSE			Bu st Ma n/Ma n Repa
262758	1967581	Reg ste ed	Netwo ks Wate	NWA4E			Unplanned Interruption		N/A			31/03/2020 11:06	31/03/2020 14:15	2	2	2	0	0	0	3	9	0	(UPRN 185793703	FALSE			Bu st Ma n/Ma n Repa
262480	1965900	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			07/03/2020 08:47	07/03/2020 12:15	56	33	33	0	0	0	3	28	0	(UPRN 185460053)	FALSE			Bu st Ma n/Ma n Repa
262667	1966952	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			21/03/2020 11:24	21/03/2020 15:00	88	88	88	0	0	0	3	36	0	(UPRN 185404360	FALSE			Bu st Ma n/Ma n Repa
262752	1967526	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			30/03/2020 18:33	30/03/2020 22:15	51	51	51	0	0	0	3	42	0	(UPRN 185494313)	FALSE			Bu st Ma n/Ma n Repa
262665	1966947	Reg ste ed	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			21/03/2020 07:57	21/03/2020 11:40	8	8	8	0	0	0	3	43	0	(UPRN 185607889)	FALSE			Bu st Ma n/Ma n Repa
262577	1966545	Suben tied to Custome Field Manage	Netwo ks Wate	NWA1A			Unplanned Interruption		N/A			14/03/2020 08:03	14/03/2020 11:45	57	54	54	0	0	0	3	43	0	(UPRN 185564572)	FALSE			Other
262567	1966396	Reg ste ed	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			13/03/2020 10:45	13/03/2020 14:30	16	16	16	0	0	0	3	45	0	(UPRN 185461227)	FALSE			Bu st Ma n/Ma n Repa
262519	1966022	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			10/03/2020 08:10	10/03/2020 12:00	6	6	6	0	0	0	3	50	0	(UPRN 185650146)	FALSE			Bu st Ma n/Ma n Repa
262489	1965901	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			07/03/2020 12:05	07/03/2020 15:55	58	17	17	0	0	0	3	50	0	(UPRN 185460053)	FALSE			Bu st Ma n/Ma n Repa
262757	1967581	Reg ste ed	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			31/03/2020 10:06	31/03/2020 13:55	24	24	24	0	0	0	3	55	0	(UPRN 187328650				Other
263401	1969391	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			07/03/2020 13:59	07/03/2020 17:55	46	46	46	0	0	0	3	56	0	(UPRN 185439484)				Bu st Ma n/Ma n Repa
263513	1969596	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			09/03/2020 20:04	10/03/2020 00:00	10	10	10	0	0	0	3	56	0	(UPRN 185803048				Bu st Ma n/Ma n Repa
263395	1965344	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			02/03/2020 09:00	02/03/2020 13:00	12	12	12	0	0	0	4	0	0	(UPRN 185473978				Bu st Ma n/Ma n Repa
263637	1966796	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			19/03/2020 08:00	19/03/2020 12:00	11	8	8	0	0	0	4	0	0	(UPRN 185769083				Bu st Ma n/Ma n Repa
263573	1966641	Reg ste ed	Netwo ks Wate	NWA4E			Unplanned Interruption		N/A			13/03/2020 12:05	13/03/2020 16:15	10	10	10	0	0	0	4	10	0	(UPRN 187327719				Bu st Ma n/Ma n Repa
263593	1966556	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			14/03/2020 10:06	14/03/2020 14:15	11	11	11	0	0	0	4	15	0	(UPRN 185473955				Bu st Ma n/Ma n Repa
263612	1966961	Reg ste ed	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			17/03/2020 07:30	17/03/2020 11:45	161	161	161	0	0	0	4	15	0	(UPRN 185992011				Bu st Ma n/Ma n Repa
263512	1965977	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			09/03/2020 16:44	09/03/2020 21:00	236	34	34	0	0	0	4	16	0	(UPRN 186004294				Bu st Ma n/Ma n Repa
263605	1966935	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			16/03/2020 17:37	16/03/2020 22:00	56	36	36	0	0	0	4	23	0	(UPRN 185487305				Bu st Ma n/Ma n Repa
263650	1966985	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			20/03/2020 08:50	20/03/2020 13:20	8	8	8	0	0	0	4	30	0	(UPRN 185473983				Bu st Ma n/Ma n Repa
263679	1967006	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			22/03/2020 10:06	22/03/2020 14:30	19	19	19	0	0	0	4	30	0	(UPRN 185473426				Bu st Ma n/Ma n Repa
263705	1967122	Reg ste ed	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			25/03/2020 10:30	25/03/2020 15:00	11	11	11	0	0	0	4	30	0	(UPRN 185494568				Other
263738	1967446	Reg ste ed	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			28/03/2020 12:20	29/03/2020 16:50	118	115	115	0	0	0	4	30	0	(UPRN 185328018				Bu st Ma n/Ma n Repa
263738	1967206	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			26/03/2020 14:43	26/03/2020 19:17	91	91	91	0	0	0	4	34	0	(UPRN 185461694				Fleet ctiy Supply fie lu e
263733	1967411	Reg ste ed	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			27/03/2020 16:34	27/03/2020 21:10	21	21	21	0	0	0	4	36	0	(UPRN 187664729				Other
263579	1966547	Reg ste ed	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			14/03/2020 13:27	14/03/2020 18:10	44	44	44	0	0	0	4	43	0	(UPRN 187662709				Bu st Ma n/Ma n Repa
263669	1966986	Reg ste ed	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			21/03/2020 16:46	21/03/2020 21:30	9	9	9	0	0	0	4	44	0	(UPRN 185697889				Bu st Ma n/Ma n Repa
263393	1965208	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			01/03/2020 00:45	01/03/2020 05:30	45	45	45	0	0	0	4	45	0	(UPRN 185214682				Bu st Ma n/Ma n Repa
263412	1965468	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			03/03/2020 09:20	03/03/2020 14:05	11	11	11	0	0	0	4	45	0	(UPRN 185465802				Bu st Ma n/Ma n Repa
263526	1969804	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			10/03/2020 10:06	10/03/2020 14:50	34	34	34	0	0	0	4	50	0	(UPRN 187651450				Bu st Ma n/Ma n Repa
263576	1966644	Suben tied to Custome Field Manage	Netwo ks Wate	NWA1A			Unplanned Interruption		N/A			13/03/2020 20:03	14/03/2020 01:00	18	18	18	0	0	0	4	57	0	(UPRN 185821331				Replacement F tt ng (e.g. SV, fit)
263432	1965652	Suben tied to Custome Field Manage	Netwo ks Wate	NWA1B			Unplanned Interruption		N/A			04/03/2020 06:59	04/03/2020 12:00	268	268	268	0	0	0	5	1	0	(UPRN 185443134				Other
263548	1966228	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			12/03/2020 09:54	12/03/2020 15:00	46	46	46	0	0	0	5	6	0	(UPRN 185244342				Bu st Ma n/Ma n Repa
263530	1966811	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			11/03/2020 07:02	11/03/2020 12:15	247	247	247	0	0	0	5	13	0	(DMA - C0484 - Ca	existey			Other
263711	1967205	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			26/03/2020 09:42	26/03/2020 14:55	9	1	1	0	0	0	5	13	0	(UPRN 187239209				Bu st Ma n/Ma n Repa
263728	1967345	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			27/03/2020 05:00	27/03/2020 10:27	52	52	52	0	0	0	5	18	0	(UPRN 187670917				Bu st Ma n/Ma n Repa
263711	1967205	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			26/03/2020 09:42	26/03/2020 15:08	9	1	1	0	0	0	5	26	0	(UPRN 187239209				Bu st Ma n/Ma n Repa
263763	1967577	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			12/03/2020 11:21	12/03/2020 16:48	350	350	350	0	0	0	5	27	0	(UPRN 185286863				Bu st Ma n/Ma n Repa
263589	1966557	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			16/03/2020 09:33	16/03/2020 15:03	47	47	47	0	0	0	5	30	0	(UPRN 185213519				Bu st Ma n/Ma n Repa
263497	1965933	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			08/03/2020 07:43	08/03/2020 13:15	84	84	84	0	0	0	5	32	0	(UPRN 185017324				Bu st Ma n/Ma n Repa
263194	1965532	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			01/03/2020 07:06	01/03/2020 12:40	583	329	329	0	0	0	5	34	0	(UPRN 185666238				Other
263533	1966132	Suben tied to Custome Field Manage	Netwo ks Wate	NWA3B			Unplanned Interruption		N/A			11/03/2020 08:04	11/03/2020 13:40	17	17	17	0	0	0	5	36	0	(UPRN 185990093				Bu st Ma n/Ma n Repa
263484	1965988	Reg ste ed	Netwo ks Wate	NWA3A			Unplanned Interruption		N/A			06/03/2020 21:06	07/03/2020 02:40	12	12	12	0	0	0	5	40	0	(UPRN 185495834				Bu st Ma n/Ma n Repa
263455	1965760	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			05/03/2020 08:34	05/03/2020 14:15	47	4	4	0	0	0	5	41	0	(UPRN 185752277				Bu st Ma n/Ma n Repa
263577	1966451	Suben tied to Custome Field Manage	Netwo ks Wate	NWA1A			Unplanned Interruption		N/A			14/03/2020 08:02	14/03/2020 13:45	57	3	3	0	0	0	5	43	0	(UPRN 185564572				Other
263729	1967401	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			27/03/2020 10:47	27/03/2020 16:30	49	49	49	0	0	0	5	43	0	(UPRN 185912571				Bu st Ma n/Ma n Repa
263728	1967206	Reg ste ed	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			26/03/2020 16:45	26/03/2020 22:30	52	52	52	0	0	0	5	45	0	(UPRN 185675833				Bu st Ma n/Ma n Repa
263574	1966942	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4A			Unplanned Interruption		N/A			13/03/2020 11:06	13/03/2020 16:50	38	38	38	0	0	0	5	50	0	(UPRN 185642904				Bu st Ma n/Ma n Repa
263457	1965747	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			05/03/2020 08:49	05/03/2020 14:47	36	36	36	0	0	0	5	58	0	(UPRN 185679925				Bu st Ma n/Ma n Repa
263587	1966502	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			15/03/2020 09:02	15/03/2020 15:00	5	5	5	0	0	0	5	58	0	(UPRN 185215805				Bu st Ma n/Ma n Repa
263455	1965760	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			05/03/2020 08:34	05/03/2020 14:45	47	43	43	43	0	0	6	15	0	(UPRN 185752277				Bu st Ma n/Ma n Repa
263619	1966664	Reg ste ed	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			17/03/2020 23:35	18/03/2020 06:30	8	8	8	0	0	0	6	55	0	(UPRN 185872457	Bove nment T a n ng Cent e Ba lyn an Lane, Ca ow eagh, Dundonald, Down, BT16 1UH			Bu st Ma n/Ma n Repa
263528	1966454	Suben tied to A ea Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			11/03/2020 08:30	11/03/2020 13:30	76	76	76	0	0	0	7	0	0	(UPRN 185215329	Newcastle Road, Newcastle, Po telle y, Down, BT22 1QQ			Bu st Ma n/Ma n Repa
263642	1966812	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			19/03/2020 11:51	19/03/2020 19:00	22	10	10	10	0	0	7	9	0	(UPRN 185679075	Dunte ge Road, Tully, Omagh, Ty one, BT78 5PB			Bu st Ma n/Ma n Repa
263670	1967013	Suben tied to Custome Field Manage	Netwo ks Wate	NWA1A			Unplanned Interruption		N/A			21/03/2020 18:07	22/03/2020 01:45	38	38	38	0	0	0	7	38	0	(UPRN 185489963	Ca mcrney Road, Lowe Go tagher ty, Londonde y, BT47 3JL			Bu st Ma n/Ma n Repa
263433	1965556	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			04/03/2020 07:04	04/03/2020 17:25	240	240	240	240	0	0	10	21	0	(UPRN 185878813	Malone Road, Malone Uppe , Belfast, Ant rn, BT9 5LP			Other
263607	1966663	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			17/03/2020 08:55	17/03/2020 19:20	437	437	437	437	0	0	10	25	0	(UPRN 185163813	Glengoland Avenue, Ballycullo Tom Of The Tae-End, Dunmu y, Ant rn, BT17 0HY			Bu st Ma n/Ma n Repa

Unplanned, Unwarned Interrupt ons

More than 6 hrs No of Properties 852

Event Id	Interruption Id Use	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties by Duration Hours	Properties by Duration Minutes	Properties by Duration Seconds	Location	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description
263455	1965760	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			05/03/2020 08:30	05/03/2020 14:45	47	43	43	43	0	0	6	15	0	(UPRN 185752277				Bu st Ma n/Ma n Repa
263619	1966664	Reg ste ed	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			17/03/2020 23:35	18/03/2020 06:30	8	8	8	0	0	0	6	55	0	(UPRN 185872457	Bove nment T a n ng Cent e Ba lyn an Lane, Ca ow eagh, Dundonald, Down, BT16 1UH			Other
263528	1966454	Suben tied to A ea Manage	Netwo ks Wate	NWA2B			Unplanned Interruption		N/A			11/03/2020 08:30	11/03/2020 13:30	76	76	76	0	0	0	7	0	0	(UPRN 185215329	Newcastle Road, Newcastle, Po telle y, Down, BT22 1QQ			Bu st Ma n/Ma n Repa
263642	1966812	Suben tied to Custome Field Manage	Netwo ks Wate	NWA4B			Unplanned Interruption		N/A			19/03/2020 11:51	19/03/2020 19:00	22	10	10	10	0	0	7	9	0	(UPRN 185679075	Dunte ge Road, Tully, Omagh, Ty one, BT78 5PB			Bu st Ma n/Ma n Repa
263670	1967013	Suben tied to Custome Field Manage	Netwo ks Wate	NWA1A			Unplanned Interruption		N/A			21/03/2020 18:07	22/03/2020 01:45	38	38	38	0	0	0	7	38	0	(UPRN 185489963	Ca mcrney Road, Lowe Go tagher ty, Londonde y, BT47 3JL			Bu st Ma n/Ma n Repa
263433	1965556	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			04/03/2020 07:04	04/03/2020 17:25	240	240	240	240	0	0	10	21	0	(UPRN 185878813	Malone Road, Malone Uppe , Belfast, Ant rn, BT9 5LP			Other
263607	1966663	Suben tied to Custome Field Manage	Netwo ks Wate	NWA2A			Unplanned Interruption		N/A			17/03/2020 08:55	17/03/2020 19:20	437	437	437	437	0	0	10	25	0	(UPRN 185163813	Glengoland Avenue, Ballycullo Tom Of The Tae-End, Dunmu y, Ant rn, BT17 0HY			Bu st Ma n/Ma n Repa

Unplanned, Unwarned Interrupt ons

More than 12 hrs No of Properties 0

Event Id	Interruption Id Use	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties by Duration Hours	Properties by Duration Minutes	Properties by Duration Seconds	Location	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Unplanned, Unwarned Interrupt ons

More than 24 hrs No of Properties 0

Event Id	Interruption Id Use	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties by Duration Hours	Properties by Duration Minutes	Properties by Duration Seconds	Location	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Appendix G – DG3 Register Extract *(Planned & Warned, Third Party & Overrun Events – IMS Report RPT1184)*

Planned and Warned Interruptions

More than 3 hrs No of Properties **1,329**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location		Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description
2615548	1960621	Reg ster ed	Network s Wate	NWAAA	[redacted]	[redacted]	Planned Inte rupt on	10/03/2020 08:00	Ca d d op	12/03/2020 09:00	12/03/2020 16:00	12/03/2020 08:45	12/03/2020 12:15	28	28	28	0	0	0	03 H s 30 M nu 0 Secs	3	30	0	LUPRN 185485124	[redacted] Kes y Pa k, Maghe arnaston, Maghe arnaston, Ty one, BT67 2TD	FALSE			Replacement F tt ng (e.g. SV, FH)
2616128	1960677	ulen tted to Custome F eld Manage	Network s Wate	NWAA8	[redacted]	[redacted]	Planned Inte rupt on	11/03/2020 12:00	Ca d d op	14/03/2020 09:00	14/03/2020 18:00	13/03/2020 22:50	14/03/2020 13:00	56	56	56	0	0	0	03 H s 10 M nu 0 Secs	3	10	0	LUPRN 187270474	[redacted] Tullyb yan Road, Tullyb yan, Ballygowley, Ty one, BT70 2LY	FALSE			Install New F tt ng (e.g. SV, FH)
2617353	1961754	Reg ster ed	Network s Wate	NWA2B	[redacted]	[redacted]	Planned Inte rupt on	25/03/2020 16:00	Ca d d op	31/03/2020 09:00	31/03/2020 16:00	31/03/2020 09:00	31/03/2020 12:15	8	8	8	0	0	0	03 H s 15 M nu 0 Secs	3	15	0	LUPRN 185312305	[redacted] B ng St eet, Ba ngBridge, Newcastle, Down, BT33 0HB	FALSE			Re st Ma n/Ma n Repa
2617367	1961766	eg ster ed	Network s Wate	NWA2B	[redacted]	[redacted]	Planned Inte rupt on	27/04/2020 16:00	Ca d d op	01/05/2020 18:00	01/05/2020 20:00	01/05/2020 18:30	01/05/2020 21:45	18	18	18	0	0	0	03 H s 15 M nu 0 Secs	3	15	0	LUPRN 185246880	[redacted] C oesg Road, Ballagh, Ba lynah ish, Down, BT24 8XT	FALSE			Re st Ma n/Ma n Repa
2615552	1960668	Reg ster ed	Network s Wate	NWA3A	[redacted]	[redacted]	Planned Inte rupt on	12/03/2020 11:30	Ca d d op	18/03/2020 08:00	18/03/2020 16:00	18/03/2020 09:15	18/03/2020 12:30	56	56	56	0	0	0	03 H s 15 M nu 0 Secs	3	15	0	LUPRN 185504080	[redacted] [redacted] mo e, Loughan t A magh, BT61 8LW	FALSE			Install New F tt ng (e.g. SV, FH)
2615546	1960650	Reg ster ed	Network s Wate	NWA2B	[redacted]	[redacted]	Planned Inte rupt on	13/03/2020 10:00	Ca d d op	16/03/2020 09:00	16/03/2020 05:00	16/03/2020 06:00	16/03/2020 09:30	181	181	181	0	0	0	03 H s 30 M nu 0 Secs	3	30	0	LUPRN 185190725	[redacted] Bloomf eld Road South, Co po at on, Bango , Down, BT19	FALSE			Re st Ma n/Ma n Repa
2617310	1960740	ulen tted to Custome F eld Manage	Network s Wate	NWA1A	[redacted]	[redacted]	Planned Inte rupt on	14/03/2020 10:00	Ca d d op	24/03/2020 21:00	27/03/2020 04:00	26/03/2020 23:40	27/03/2020 01:20	547	82	82	0	0	0	04 H s 40 M nu 0 Secs	4	40	0	LUPRN 185842230	[redacted] Pennybu n Indust al Estate, Pennybu n, Londonde y, Londonde y, BT48 0LU	FALSE			Re st Ma n/Ma n Repa
2615782	1960636	ulen tted to Custome F eld Manage	Network s Wate	NWA4B	[redacted]	[redacted]	Planned Inte rupt on	12/03/2020 12:00	Ca d d op	12/03/2020 16:00	12/03/2020 16:00	12/03/2020 14:30	12/03/2020 14:45	65	65	65	0	0	0	04 H s 45 M nu 0 Secs	4	45	0	LUPRN 185800448	[redacted] Fedden Road, Mullyknock Cl Topped Mounta n, Tempo, Fe rmanagh, BT74 4RE	FALSE			Replacement F tt ng (e.g. SV, FH)
2615545	1960624	Reg ster ed	Network s Wate	NWAAA	[redacted]	[redacted]	Planned Inte rupt on	10/03/2020 08:00	Ca d d op	12/03/2020 09:00	12/03/2020 16:00	12/03/2020 09:30	12/03/2020 13:25	8	8	8	0	0	0	03 H s 55 M nu 0 Secs	3	55	0	LUPRN 185696422	[redacted] D um Road, D um, Coolstown, Ty one, BT80 9DS	FALSE			Install New F tt ng (e.g. SV, FH)
2616401	1960395	ulen tted to Custome F eld Manage	Network s Wate	NWA3A	[redacted]	[redacted]	Planned Inte rupt on	24/02/2020 09:00	Ca d d op	02/03/2020 08:00	02/03/2020 16:00	02/03/2020 11:00	02/03/2020 15:00	22	22	22	0	0	0	04 H s 00 M nu 0 Secs	4	0	0	LUPRN 185813070	[redacted] B shop St eet Commun ty Cent e B shop St eet, Londonde y, Londonde y, Londonde	FALSE			New Ma ns Y e ts
2615531	1960516	Reg ster ed	Network s Wate	NWA3A	[redacted]	[redacted]	Planned Inte rupt on	03/03/2020 09:00	Ca d d op	11/03/2020 09:00	11/03/2020 18:00	11/03/2020 09:00	11/03/2020 13:15	45	45	45	0	0	0	04 H s 15 M nu 0 Secs	4	15	0	LUPRN 185074873	[redacted] Kosana een Cou t, Ba lymoney, Belfast, Ant m, BT53 8PU	FALSE			Install New F tt ng (e.g. SV, FH)
2615444	1960570	eg ster ed	Network s Wate	NWA4B	[redacted]	[redacted]	Planned Inte rupt on	03/03/2020 12:00	Ca d d op	05/03/2020 09:00	05/03/2020 16:00	05/03/2020 09:00	05/03/2020 13:30	44	44	44	0	0	0	04 H s 30 M nu 0 Secs	4	30	0	LUPRN 185617351	[redacted] Ba ywoy Road, Mullaghbane, Ballygawley, Ty one, BT70 2LQ	FALSE			Install New F tt ng (e.g. SV, FH)
2617090	1961747	Suben tted to Custome F eld Manage	Network s Wate	NWA2A	[redacted]	[redacted]	Planned Inte rupt on	25/03/2020 13:00	Ca d d op	30/03/2020 09:00	30/03/2020 15:00	30/03/2020 10:15	30/03/2020 15:00	58	42	42	0	0	0	04 H s 45 M nu 0 Secs	4	45	0	LUPRN 185148048	[redacted] Glando e Avenue, Skegone i, Be fast, Ant m, BT15 3FB	FALSE			Re st Ma n/Ma n Repa
2615488	1960555	ulen tted to Custome F eld Manage	Network s Wate	NWA4A	[redacted]	[redacted]	Planned Inte rupt on	12/03/2020 12:00	Ca d d op	16/03/2020 09:00	16/03/2020 16:00	16/03/2020 09:30	16/03/2020 15:00	28	28	28	0	0	0	04 H s 55 M nu 0 Secs	4	55	0	LUPRN 185474227	[redacted] Th cheste Avenue, Shanem ullagh, Castledawson, Londonde y, BT45 8AU	FALSE			Replacement F tt ng (e.g. SV, FH)
2634169	1960664	Reg ster ed	Network s Wate	NWA1A	[redacted]	[redacted]	Planned Inte rupt on	27/02/2020 09:00	Ca d d op	04/03/2020 09:00	04/03/2020 17:00	04/03/2020 09:00	04/03/2020 15:00	74	74	74	0	0	0	06 H s 0 M nu 0 Secs	6	0	0	LUPRN 185485499	[redacted] H ghmoo Road, Go t n e d, Londonde y, Londonde y, BT47 3AY	FALSE			Replacement F tt ng (e.g. SV, FH)
2615504	1960595	Reg ster ed	Network s Wate	NWA1A	[redacted]	[redacted]	Planned Inte rupt on	04/03/2020 09:00	Ca d d op	09/03/2020 09:00	09/03/2020 17:00	09/03/2020 10:15	09/03/2020 15:45	8	8	8	0	0	0	03 H s 30 M nu 0 Secs	3	30	0	LUPRN 185512708	[redacted] Lisn on Road, Walwo th, Ballykelly, Londonde y, BT49 9HU	FALSE			Re st Ma n/Ma n Repa
2615504	1960828	Reg ster ed	Network s Wate	NWA3A	[redacted]	[redacted]	Planned Inte rupt on	14/03/2020 09:00	Ca d d op	19/03/2020 22:00	20/03/2020 07:00	19/03/2020 22:00	20/03/2020 04:30	586	586	586	0	0	0	08 H s 30 M nu 0 Secs	8	30	0	LUPRN 185484779	[redacted] Mullaghmo e Road, L snahull, Dungannon, Ty one, BT70 1QT	FALSE			Ma ns Rehab l tat on
2615578	1960651	Reg ster ed	Network s Wate	NWA1A	[redacted]	[redacted]	Planned Inte rupt on	10/03/2020 10:00	Ca d d op	15/03/2020 08:00	15/03/2020 16:00	15/03/2020 08:30	15/03/2020 15:30	87	87	87	87	0	0	07 H s 0 M nu 0 Secs	7	0	0	LUPRN 185510134	[redacted] B shop St eet, Londonde y, Londonde y, Londonde y, BT48 6EJ	FALSE			Ma ns Rehab l tat on

Planned and Warned interrupt ons

More than 6 hrs No of Properties **632**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location		Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description
2615548	1960621	Reg ster ed	Network s Wate	NWAAA	[redacted]	[redacted]	Planned Inte rupt on	10/03/2020 08:00	Ca d d op	12/03/2020 09:00	12/03/2020 16:00	12/03/2020 08:45	12/03/2020 12:15	28	28	28	0	0	0	03 H s 30 M nu 0 Secs	3	30	0	LUPRN 185485124	[redacted] Kes y Pa k, Maghe arnaston, Maghe arnaston, Ty one, BT67 2TD	FALSE			Replacement F tt ng (e.g. SV, FH)
2615546	1960650	Reg ster ed	Network s Wate	NWA2B	[redacted]	[redacted]	Planned Inte rupt on	13/03/2020 10:00	Ca d d op	16/03/2020 09:00	16/03/2020 05:00	16/03/2020 06:00	16/03/2020 09:30	181	181	181	0	0	0	03 H s 30 M nu 0 Secs	3	30	0	LUPRN 185190725	[redacted] Bloomf eld Road South, Co po at on, Bango , Down, BT19	FALSE			Re st Ma n/Ma n Repa
2615578	1960651	Reg ster ed	Network s Wate	NWA1A	[redacted]	[redacted]	Planned Inte rupt on	10/03/2020 10:00	Ca d d op	15/03/2020 08:00	15/03/2020 16:00	15/03/2020 08:30	15/03/2020 15:30	87	87	87	87	0	0	07 H s 0 M nu 0 Secs	7	0	0	LUPRN 185510134	[redacted] B shop St eet, Londonde y, Londonde y, Londonde y, BT48 6EJ	FALSE			Ma ns Rehab l tat on

Planned and Warned Interruptions

More than 12 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Planned and Warned interrupt ons

More than 24 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Interruptions caused by third parties

More than 3 hrs No of Properties **370**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description
2616601	1960658	Suben tted to Custome F eld Manage	Network s Wate	NWAM8	[redacted]	[redacted]	Unplanned Inte rupt on		N/A			16/03/2020 15:20	16/03/2020 18:45	121	47	47	0	0	0	03 H s 25 M nu 0 Secs	3	25	0	LUPRN 185665852	[redacted] College Pa k Lane, Moneyroe Glebe O Chance h 1, Enn sk llen, Fe rnmagh, BT74 6GP	TRUE	Gas Cont actо	[redacted]	Re st Ma n/Ma n Repa
2616660	1960691	ulen tted to Custome F eld Manage	Network s Wate	NWA8A	[redacted]	[redacted]	Unplanned Inte rupt on		N/A			21/03/2020 09:32	21/03/2020 13:10	184	184	184	0	0	0	03 H s 37 M nu 0 Secs	3	37	0	LUPRN 185625168	[redacted] R chdale, Ballymacaste , Lu gan, Down, BT66 7TR	TRUE	Gas Cont actо	[redacted]	Re st Ma n/Ma n Repa
2634133	1960549	eg ster ed	Network s Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte rupt on		N/A			08/03/2020 10:07	08/03/2020 14:00	33	33	33	0	0	0	04 H s 53 M nu 0 Secs	4	53	0	LUPRN 185118553	[redacted] Rank Road, Ballybaen, Dundonald, Down, BT16 2DG	TRUE	Gas Cont actо	[redacted]	Re st Ma n/Ma n Repa
2634126	1960548	ulen tted to Custome F eld Manage	Network s Wate	NWA1B	[redacted]	[redacted]	Unplanned Inte rupt on		N/A			03/03/2020 12:48	03/03/2020 17:15	83	83	83	0	0	0	04 H s 21 M nu 0 Secs	4	21	0	LUPRN 185835986	[redacted] Mull Road, Sp ngFie rm, Ant m, BT41 2TR	TRUE	Othe	[redacted]	Re st Ma n/Ma n Repa
2615506	1960668	Reg ster ed	Network s Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte rupt on		N/A			08/03/2020 12:15	08/03/2020 17:00	28	28	28	0	0	0	04 H s 45 M nu 0 Secs	4	45	0	LUPRN 187661920	[redacted] Lagpogee Road, Lagpogee, D onno e, Down, BT25 1BD	TRUE	Roads Se v ce	[redacted]	Re st Ma n/Ma n Repa

Interruptions caused by third part es

More than 6 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Interruptions caused by third part es

More than 12 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Interruptions caused by third part es

More than 24 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Unplanned Interruptions (Overruns of Planned Interruptions)

More than 3 hrs No of Properties **17**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description
2617090	1961747	Suben tted to Custome F eld Manage	Network s Wate	NWA2A	[redacted]	[redacted]	Planned Inte rupt on	25/03/2020 13:00	Ca d d op	30/03/2020 09:00	30/03/2020 15:00	30/03/2020 10:15	30/03/2020 15:00	58	17	17	0	0	0	04 H s 48 M nu 0 Secs	4	48	0	LUPRN 185148048	[redacted] Glando e Avenue, Skegone i, Be fast, Ant m, BT15 3FB	FALSE			Re st Ma n/Ma n Repa

Unplanned interrupt ons (Overruns of Planned interrupt ons)

More than 6 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Unplanned Interrupt ons (Overruns of Planned Interrupt ons)

More than 12 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Unplanned Interrupt ons (Overruns of Planned Interrupt ons)

More than 24 hrs No of Properties **0**

Event Id	Interruption Id Use Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Category	DG3 Category	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	Properties Duration Hours	Properties Duration Minutes	Properties Duration Seconds	Location on	Th d Pa ty Caused Interruption	Th d Pa ty	Other Th d Pa ty Details	Interruption Cause Description

Appendix G – DG3 Register Extract *(Unplanned Interruption Property Records – IMS Report RPT1183)*

LastRun
13/05/2020 13 56

Event Id	Inte upt on Id Use F endly	Inte upt on Status	Manag ng Funct on	F eld Manage A ea	Event C eato	DG3 C eato	Inte upt on Name	Planned Wa n ng Type	Planned Wa n ng Date T me	Du at on Hou s	Du at on M nutes	Du at on Seconds	Planned Sta t Date T me	Planned Resto at on Date T me	Actual Sta t Date T me	Unplanned Est mated Resto at on Date	Unplanned Repa Commenced Sta Date T me	Actual Supply esto ed Date me	Wate Sample ontacted Date me	Unplanned Est mated A l P ope t es	UPRN	PRIMARY THORFARE	BUILDING NUMBER	BUILDING NAME	SUB BUILDING NAME	SECONDARY THORFARE	OWN	POSTCODE	DTM HEIGHT M	Affected A ea P ope ty	Affected A ea P ope ty	Affected A ea P ope ty	Total Affected P ope t e	Locat on	P ope ty DMA	Th d Pa ty Caused Inte upt on	Th d Pa ty	Desc pt on
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	49.1	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	60.43	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	54.7	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	57.04	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	58.05	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	54.78	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	51.43	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	66.07	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	55.8	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BP	51.51	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BQ	59.61	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BR	56.5	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Beltu bet Road	[redacted]				De yl n	BT92 9BR	48.14	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BY	47.99	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BY	52.37	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BY	55.31	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BY	48.43	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BY	52.39	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BY	52.12	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9AU	68.32	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BZ	63.86	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BZ	68.76	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BZ	61.87	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9BZ	50.04	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9DA	62.69	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9DA	56.77	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	Cack n sh Road	[redacted]				De yl n	BT92 9DB	53.92	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	De yhooly Road	[redacted]				De yl n	BT92 9ET	51.87	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	De yhooly Road	[redacted]				De yl n	BT92 9ET	57.9	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	De yhooly Road	[redacted]				De yl n	BT92 9ET	63.66	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	De yhooly Road	[redacted]				De yl n	BT92 9EU	58.47	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	66.56	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	65.09	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	61.89	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	55.74	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	57.41	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	52.26	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	51.78	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FP	51.81	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9AU	51.48	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 7FG	69.39	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umde g Road	[redacted]				De yl n	BT92 9FG	68.58	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FR	60.56	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FR	60.25	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FR	63.67	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FR	65.32	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FR	69.37	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FR	60.56	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FS	64.46	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	#########	D umettagh Road	[redacted]				De yl n	BT92 9FS	66.08	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185917974	D umettagh Road	[redacted]				De yl n	BT92 9FS	66.79	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187422645	D umettagh Road	[redacted]				De yl n	BT92 9FT	52.28	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187526562	D umettagh Road	[redacted]				De yl n		65.28	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185917965	D umettagh Road	[redacted]				De yl n	BT92 9FT	53.27	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187526564	D umettagh Road	[redacted]				De yl n		65.92	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185917968	D umettagh Road	[redacted]				De yl n	BT92 9FS	59.51	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185917993	K lyn ck Road	[redacted]				De yl n	BT92 9HJ	59	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185917989	K lyn ck Road	[redacted]				De yl n	BT92 9HJ	56.81	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185792789	K lyn ck Road	[redacted]				De yl n	BT92 9HJ	59.57	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187683268	K lyn ck Road	[redacted]				De yl n	BT92 9HJ	56.97	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187527193	K lyn ck Road	[redacted]				De yl n	BT92 9HJ	57.6	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187527195	K lyn ck Road	[redacted]				De yl n	BT92 9HJ	49.01	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185792791	K lyn ck Road	[redacted]				De yl n	BT92 9HN	49.18	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185792792	K lyn ck Road	[redacted]				De yl n	BT92 9HP	46.17	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185792790	K lyn ck Road	[redacted]				De yl n	BT92 9HN	51.86	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185792793	K lyn ck Road	[redacted]				De yl n	BT92 9HQ	46.88	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185792787	K lyn ck Road	[redacted]				De yl n	BT92 9GD	51.08	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185716038	Teemo e Road	[redacted]				De yl n	BT92 9QF	49.7	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185914868	Teemo e Road	[redacted]				De yl n	BT92 9QF	49.99	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185995452	Teemo e Road	[redacted]				De yl n	BT92 9QF	49.39	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187550513	Teemo e Road	[redacted]				De yl n	BT92 9QF	50.02	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185914856	Teemo e Road	[redacted]	[redacted]			De yl n	BT92 9QF	49.51	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185914858	Teemo e Road	[redacted]	[redacted]			De yl n	BT92 9QF	49.64	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185914863	Teemo e Road	[redacted]				De yl n	BT92 9QF	49.88	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187529286	Teemo e Road	[redacted]				De yl n	BT92 9QF	50.52	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187528153	Teemo e Road	[redacted]				De yl n		49.3	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185793169	Teemo e Road	[redacted]				De yl n	BT92 9QF	50.49	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185793172	Teemo e Road	[redacted]				De yl n	BT92 9QG	49.28	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187412494	Teemo e Road	[redacted]				De yl n	BT92 9QF	49.65	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185914910	Teemo e Road	[redacted]				De yl n	BT92 9QG	49.26	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185914893	Teemo e Road	[redacted]				De yl n	BT92 9QF	49.52	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187530163	Teemo e Road	[redacted]				De yl n	BT92 9QG	48.93	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	187394503	Teemo e Road	[redacted]				De yl n	BT92 9QG	48.86	31	1	6	38	(UPRN 185917924) [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261497	196593	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA4B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		5	32	0			08/03/2020 07 43	08/03/2020 14 30	08/03/2020 12 20	08/03/2020 13 15	08/03/2020 14 25	08/03/2020 14 25	185793174	Teemo e Road	[redacted]	[redacted]			De yl n	BT92 9QG	48.87	31	1	6	38	(UPRN 185917924 [redacted] De yhooly Road, De yhooly, De yl n, Fe managh, BT92 9ET	C0670	FALSE		Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248315	Howe Road	[redacted]				D omo e	BT25 1ET	135.35	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248316	Howe Road	[redacted]				D omo e	BT25 1ET	107.98	22	0	1	23	(UPRN 18766192 [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248317	Howe Road	[redacted]				D omo e	BT25 1ET	107.34	22	0	1	23	(UPRN 187661920 [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248318	Howe Road	[redacted]				D omo e	BT25 1ET	111.09	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	187599486	Howe Road	[redacted]				D omo e	BT25 1ET	98.54	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248319	Howe Road	[redacted]				D omo e	BT25 1ET	102.35	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248320	Howe Road	[redacted]				D omo e	BT25 1ET	100.97	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	187539184	Howe Road	[redacted]				D omo e	BT25 1ET	98.2	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248321	Howe Road	[redacted]				D omo e	BT25 1ET	134.67	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248329	Howe Road	[redacted]				D oma a	BT25 1ET	103.58	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248322	Howe Road	[redacted]				D omo e	BT25 1ET	105.92	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185899121	Howe Road	[redacted]				D oma a	BT25 1ET	98.41	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185899120	Howe Road	[redacted]				D oma a	BT25 1ET	98.72	22	0	1	23	(UPRN 187661920 [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	187531253	Howe Road	[redacted]				D omo e	BT25 2NJ	112.22	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	187546752	Howe Road	[redacted]				D oma a	BT25 2NJ	99.13	22	0	1	23	(UPRN 187661920 [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	187556418	Howe Road	[redacted]				D omo e	BT25 2NJ	109.75	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185252152	Howe Road	[redacted]				D omo e	BT25 2NJ	107.11	22	0	1	23	(UPRN 187661920 [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185252149	Howe Road	[redacted]				D omo e	BT25 2NJ	111.76	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	187558040	Howe Road	[redacted]				D omo e	BT25 2NJ	108.92	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185252151	Howe Road	[redacted]				D omo e	BT25 2NJ	106.56	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248328	Howe Road	[redacted]				D omo e	BT25 1ET	133.55	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185248327	Howe Road	[redacted]				D omo e	BT25 1ET	133.55	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa
261509	196596	Subm tted to Custome F eld Manage	Netwo ks Wate	NWA2B	[redacted]	[redacted]	Unplanned Inte upt on	N/A		4	45	0			09/03/2020 12 15	09/03/2020 18 00	09/03/2020 16 00	09/03/2020 17 00	09/03/2020 17 45	09/03/2020 17 30	185252150	Howe Road	[redacted]				D omo e	BT25 1ET	123.53	22	0	1	23	(UPRN 187661920) [redacted] Leapoges Road, Lappoges, D omo e, Down, BT25 1EQ	C1473	TRUE	Roads Se v ce	Bu st Ma n/Ma n Repa

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 Properties	Location		Property DMA	Third Party Caused Interruption	Third Party	Description
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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	[redacted]				ENNISKILLEN	BT74 7LH	72.39	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664034	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	76.32	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664035	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	71.42	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664036	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	76.38	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664037	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	69.13	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664038	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	75.62	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664040	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	67.58	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664041	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	74.38	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664042	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	66.8	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664043	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	72.71	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664044	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	64.57	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664045	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	71.4	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664046	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	63.81	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664047	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	70.29	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664048	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	67.81	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664049	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	67.88	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664051	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	69.18	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664052	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	67.19	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664062	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	71.35	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664053	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	65.88	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664054	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	68.05	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257237	183939	Submitted to Area Manager	Networks Water	NW53A	[redacted]	[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		185664055	OLD ROSSORRY PARK	[redacted]				ENNISKILLEN	BT74 7LH	70.9	22	0	0	22	(UPRN: 185664032)	[redacted] Old Rossorry Park, Rossorry, Enniskillen, Fermanagh, BT74 7LH	C0875	FALSE		Burst Main/Main Repair
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	4.72	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	8.58	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	12.3	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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]				CARRICKFERGUS	BT38 8TZ	11.99	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	13.07	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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]				CARRICKFERGUS	BT38 8TZ	9.4	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	6.04	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	8.05	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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]				CARRICKFERGUS	BT38 8TZ	13.52	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	12.58	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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		187708965	SHORE ROAD	[redacted]				CARRICKFERGUS	BT38 8TZ	8.61	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	11.17	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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]				CARRICKFERGUS	BT38 8TZ	11.72	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	11.57	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	11.5	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257342	184009	Submitted to Customer Field Manager	Networks Water	NW01B	[redacted]	[redacted]	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	[redacted]				CARRICKFERGUS	BT38 8TZ	11.38	15	0	1	16	(UPRN: 185391377)	[redacted] Unit 6a&8 Fortfield Farm Shore Road, West Division, Antrim, BT3	C0019	FALSE		New Mains Tie In
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.18	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.4	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.08	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.24	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.95	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.19	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.84	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.03	18	0	0	18	(UPRN: 185311727)	[redacted] Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.72	18	0	0	18	(UPRN: 18531172[redacted]	Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF	C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.97	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.37	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.88	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.95	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.87	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	4.4	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.65	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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	[redacted]				NEWCASTLE	BT33 0EF	3.87	18	0	0	18	(UPRN: 185311727) - 13 Shimna Vale, Ballaghbeg, Newcastle, Down, BT33 0EF		C0443	FALSE		Service Pipe Repair
257350	184014	Registered	Networks Water	NW02B	[redacted]	[redacted]	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) - 13 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 20:

- 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 AIR20.

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 2019 to March 2020 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 AIR20, 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	

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0.8	26 Feb 11	Revise to include improved approach	[redacted]	[redacted]	
1.0	31 Mar 12	Finalised ahead of sign-off by DG5 Panel	[redacted]	[redacted]	[redacted]
1.1	08 Jun 15	Minor revisions and new FIR form inserted	[redacted]	[redacted]	[redacted]

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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

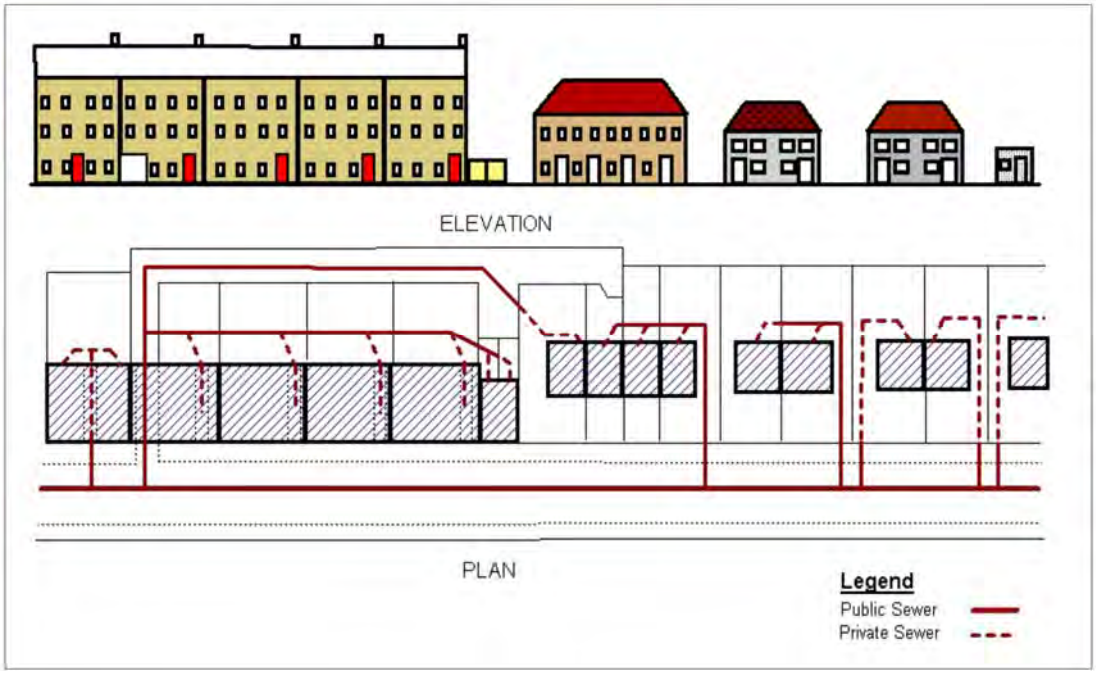
The following definitions are to be applied when recording and reporting properties and incidents held on NI Water's DG5 Internal Flooding Register.

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.

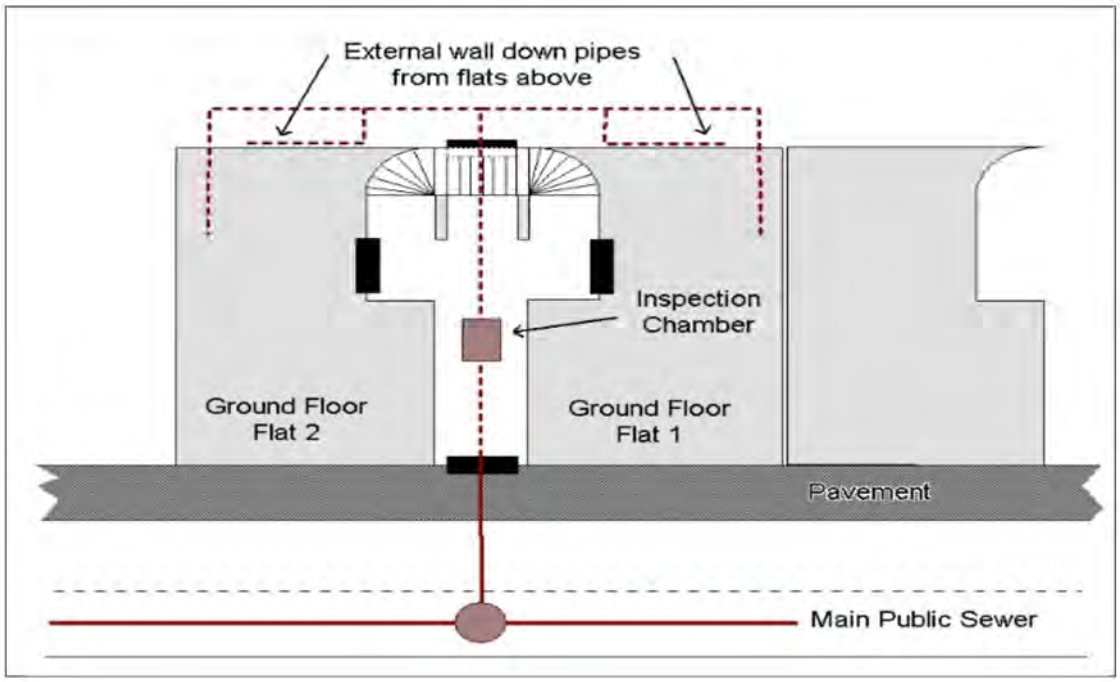
11.1.4 Basement Flooding

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.

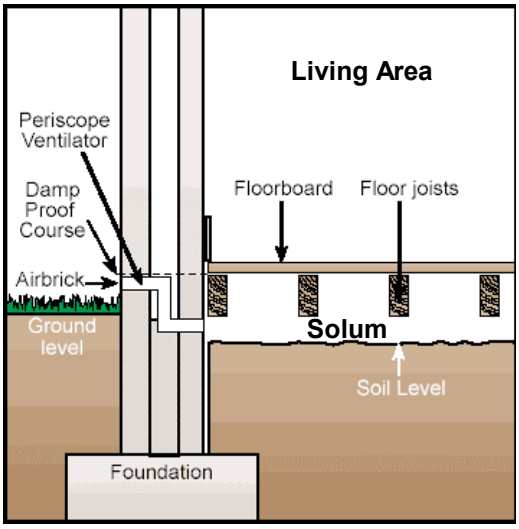
A permanent solution is defined as one that permanently addresses the cause of the hydraulic overload. Permanent works would enable a property to be removed from the DG5 Internal Flooding Register.

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.

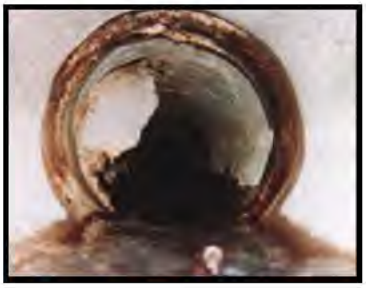
11.3.4 Blockages

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, Asset Delivery (AD) 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 ☐

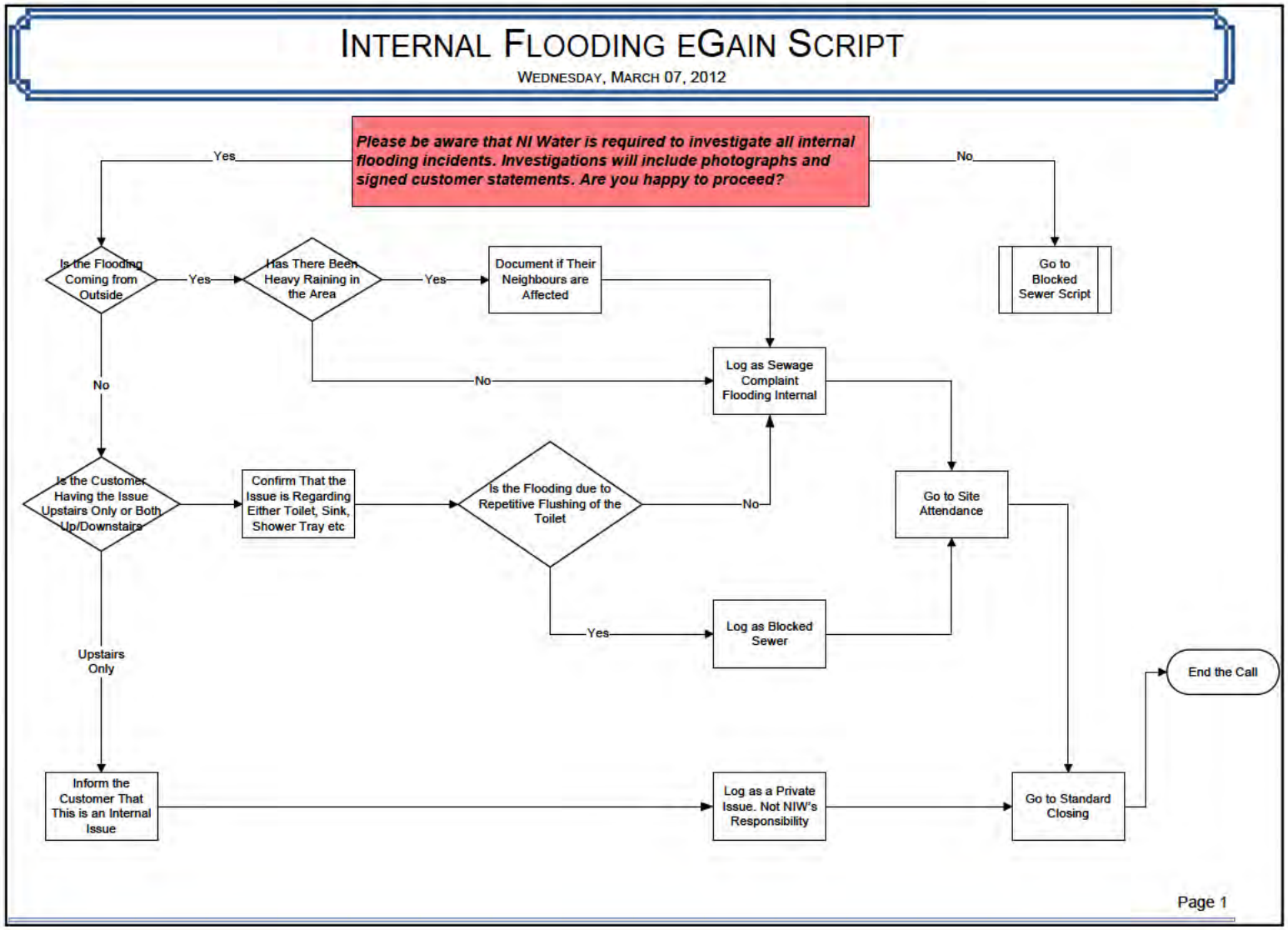
6) Weather Conditions:

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
Log as Sewage Complaint Flooding Internal
No
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	[redacted] Upgrade (Interceptor Sewer)					Major Scheme regarding building a tunnel in East Belfast and also side works. Feasibility on going.		PC21
		DG5P0002528	[redacted]	[redacted]	1 in 20			
		DG5P0002529			2 in 10			
		DG5P0003700			2 in 10			
		DG5P0003683			2 in 10			
		DG5P0003684			2 in 10			
		DG5P0003685			2 in 10			
		DG5P0002667			2 in 10			
		DG5P0003784			2 in 10			
		DG5P0003781			2 in 10			
		DG5P0003782			2 in 10			
		DG5P0003701			2 in 10			
		DG5P0003702			2 in 10			
		DG5P0003559			2 in 10			
		DG5P0003014			2 in 10			
		DG5P0003699			2 in 10			
		DG5P0003709			2 in 10			
		DG5P0003686			2 in 10			
		DG5P0003687			2 in 10			
		DG5P0000045			1 in 20			
		DG5P0003668			2 in 10			
KR444	Stand Alone Scheme.	DG5P0000131			1 in 20			
		DG5P0000191			1 in 20			
KR442	[redacted] Belfast					Feasibility Study being carried out.	29/08/2014	PC21
		DG5P0000629	[redacted]	[redacted]	1 in 20			
		DG5P0000630			1 in 20			
		DG5P0003763			2 in 10			
		DG5P0002659			2 in 10			
KR500	[redacted] Belfast					Feasibility Study being carried out.	30/05/2014	PC15
		DG5P0000004	[redacted]	[redacted]	2 in 10			
		DG5P0000634			2 in 10			
		DG5P0000635			1 in 20			
		DG5P0003762			1 in 20			
		DG5P0000640			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 29 of the 140 open DG6 contacts were checked to see if they had a holding letter issued on or before working day 5 and 100% of the 29 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 2019/20

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. Customer Support Agents within the Complaints & Executive Mail Team scan, log & index documentation whilst Customer Service Officers within the team case-manage and respond to the written 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 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 OEBPM (upgraded version of the BPM solution);
- cases allocated to Customer Service Officers;
- Customer Service Officers assess, investigate and case-manage the 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 RapidXtra 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 recommendations arising from the audit resulted in the development of:

- a matrix outlining sign-off delegations for the different types of written complaint e.g. those addressed to the CEO and those escalated to second stage review;
- enhanced reporting to support additional categorisation checks; and
- revised end-to-end process documentation for written complaints.

Each complaint also undergoes a series of quality assurance checks. The first is carried out by the Customer Service Officer who has been allocated the case.

They check that the case has been:

- correctly categorised as DG7;
- coded using an appropriate CMS code; and
- logged to the correct account(s).

The Customer Service Officer verifies that the information received from within the business is suitable to use in response to the complaint before the reply 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 description; 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, therefore ensuring security and minimising administration.

Each complaint received is scanned using the Fujitsu FI 6670 scanner. At the end of each "batch" of correspondence scanned, a batch number is allocated. The images can then be viewed by Customer Support on their PC and indexing can begin. During indexing the following details are input:

- Property and/or Customer reference;
- Date of receipt;
- CMS group;
- CMS description; and
- Document type.

The Operator ID is automatically populated based on which member of Customer Support log the correspondence. At the indexing stage the scanned items are categorised, allowing the CMS description to be applied.

Changes in system during the reporting year

In January 2020, a number of system changes were implemented:

- migration of the CBC applications from Windows 2008 to Windows 2016 servers;
- migration from Savvion to OEBPM (the BPM solution which supports case-management); and
- an upgrade to v19.03 of RapidXtra.

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 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 (RapidXtra).

NIW replies to 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 their complaint will be taken if it cannot be done immediately e.g. capital works programme scheduled for completion 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 on RapidXtra 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 is defined as a response to a written complaint which advises the customer that NIW needs to undertake additional investigation 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 update the customer.

Holding responses can be issued in writing or provided 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 19/20.

System-based report data was used to derive the number of holding responses issued between 01/04/19 and 31/03/20.

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 169 DG7 contacts received in 19/20. Therefore, it can be concluded that one or more holding response was issued in relation to 8.63% of the DG7 contacts received during 19/20.

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. HVCA is now called HVCH (High Volume Call Handling) system. 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 Handling (HVCH) System

The HVCH 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 HVCH 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 HVCH 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 HVCH 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 HVCH 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.

IVR Cirrus

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.

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.

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 HVCH 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 HVCH 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 HVCH 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 HVCH 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 HVCH system in situations where calls exceed the volume of agents available in the CRC.

As noted above, the CIRRUS Voice IVR Platform is now being utilitsed to automate and simplify interactions with incoming customer calls. The 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.

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 (HVCH), 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.

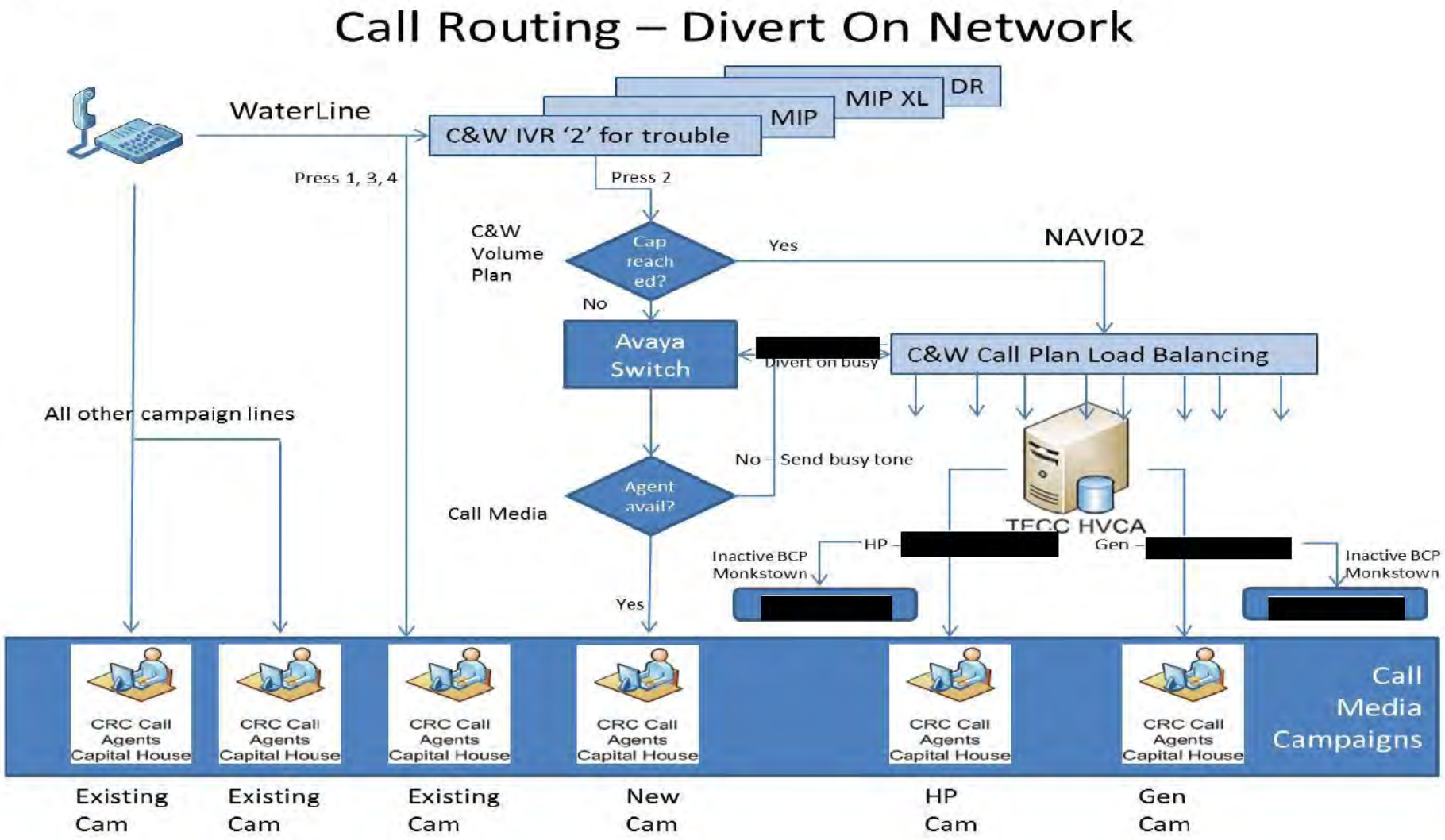
Text Relay Service is a third-party service whereby the customer rings a Text Relay operator, who in turn contacts the Customer Relations Centre via the normal customer line (Waterline/Leakline/Billing, etc.) on behalf of the customer. This is recorded as a call received on the appropriate line.

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
C&W IVR '2' for trouble
MIP
MIP XL
DR
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
TECC HVCA
HP
Gen
Inactive BCP Monkstown
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 2020

Section 4

Customer Research Appendix

Annual Information Return 2020

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.
- 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 Centre (CSC) has been working extensively on providing an improved customer experience. Under the auspices of the Customer Engagement Oversight Group (CEOG) and the Customer Measures/Satisfaction (CM/SAT), CSC 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.

For regulatory reporting purposes in 2019/20, only the satisfaction scores from the Customer Advocacy Measure 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

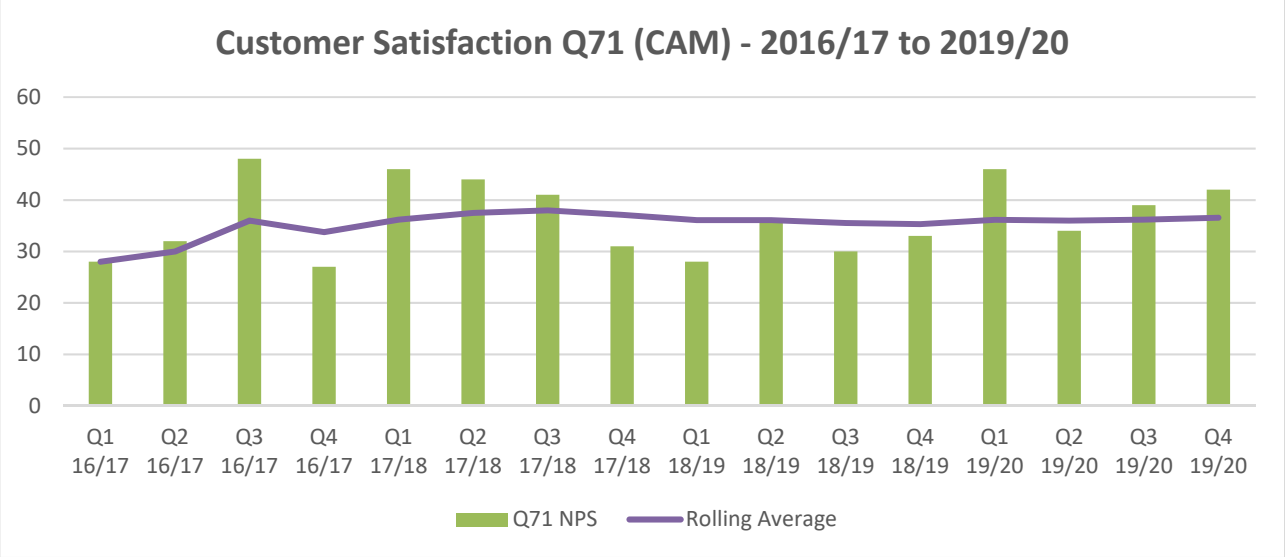
In 2018/19 NI Water introduced Voice of the Customer (VoC) in which surveys are conducted by Watermelon, an independent Customer Experience and Insight specialist.

Previously this score was provided by Allto, an external market research company who carried out quarterly surveys of customers. The switch to VoC came about as it is a continually operating service, day-by-day, with each customer being asked to complete a survey after interacting with NI Water. This provides a much greater sample size over the course of an entire year (approximately 700 surveys per month compared to 200 per quarter), giving a more true reflection of NI Water's satisfaction score as opposed to the Allto method which only focused on a single week within a 3 month time-span, 4 times per year.

The objective of the surveys is to capture the views of those customers who have had dealings with the company, not only through the main contact centre but other parts of the business. On top of surveying customers who have telephoned our main contact centre, an automated report has been set up to look at any Operational work completed the day before via Ellipse. Once the Work Order is closed within Ellipse the data is linked to the initial contact(s) logged in Rapid to obtain the details of the customer ringing with the issue. This data is then passed to Watermelon every morning who then survey that customer.
Customers are asked "*Based on your recent experience with us, how likely are you to recommend NI Water? Please respond 0 for very unlikely up to 10 for very likely".*

The score is calculated using Net Promoter Score methodology based on results from the previous question.

NI Water achieved an overall score of 42 for the reporting year 19/20.



The survey is based on resolved contacts only in relation to all areas of the business.

As previously mentioned the daily report only captures completed Work Orders from the day before in Ellipse linking it with the customer contact details from Rapid. A separate report is generated for log-only contacts, within Rapid when a contact is logged a flag is ticked to categories the contact as Telephone, capturing all contacts received.

An extract of this Rapid data is sent every morning to Watermelon and in turn they provide the latest completed surveys via SFTP into NI Water's data warehouse where the master set of surveys are stored. The score is based on an annual sample of c8,000 completed surveys.

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 – known as the Silent Majority. Our records show that on average 80% of our customers do not contact/need to contact us. Yet it is important to seek and understand their views regarding the level of service they are receiving from NI Water, to determine if there is any correlation between their views and those customers that do contact us.

Ipsos MORI conducted quantitative research on behalf of NI Water, between 24th January and 3rd February 2020, 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 age, gender, social class and geographical location.
- 500+ business customers were surveyed by means of Computer Assisted Telephone Interviewing (CATI), conducted by telephone from the Ipsos MORI Telephone Research Centre in Belfast. Quota controlled by location, industry sector and size. For consistency with previous research, non-domestic customers were categorised as services or manufacturing.

A summary of the key findings is as follows:

- Findings from the research suggest strong levels of endorsement of water services in Northern Ireland, with
    - 70% of domestic customers and 75% non-domestic customers indicating that they are satisfied with the services they receive from NI Water.
    - Of the domestic customers, significantly more of those aged 65+ (81%) agree with the statement. “I am happy with the service I receive from NI Water.”
    - It should be noted that significantly more students indicated that they don’t know (25%), indicating that their lower satisfaction may be to do with a lack knowledge rather than negative experiences.
    - Of the non-domestic/business customers, where three quarters (75%) agree with the statement, there are no significant differences in terms of sector or business size;
- Overall, the average level of satisfaction, weighted over both customer bases, is 71.66, as follows:

	Sample Size	Score	Total
Domestic	1009	70	70630
Non-domestic	500	75	37500
Total	1509		108130
Average			**71.66**

- In terms of Advocacy:
    - 63% of domestic customers rated NI Water with a score of 7 or more out on 10 in terms of likelihood to recommend. The average score across the sample was 7.65. Over 55’s are more likely to recommend NI Water.
    - 66% of non-domestic customers rated NI Water with a score of 7 or more out on 10 in terms of likelihood to recommend. The average score across the sample was 7.58, which is broadly in line with domestic advocacy.

Service Incentive Mechanism (SIM)

We previously measured the SIM score via the Consumer Experience Survey (CES-SIM), which was based on a sample of 800 consumers annually that have had direct contact with the company to request a service or make a complaint. The sample was split into a minimum of 200 consumers per Quarter and carried out four times a year. Question 60 of this survey asked the customer to rate their ‘Level of satisfaction taking everything into account.’

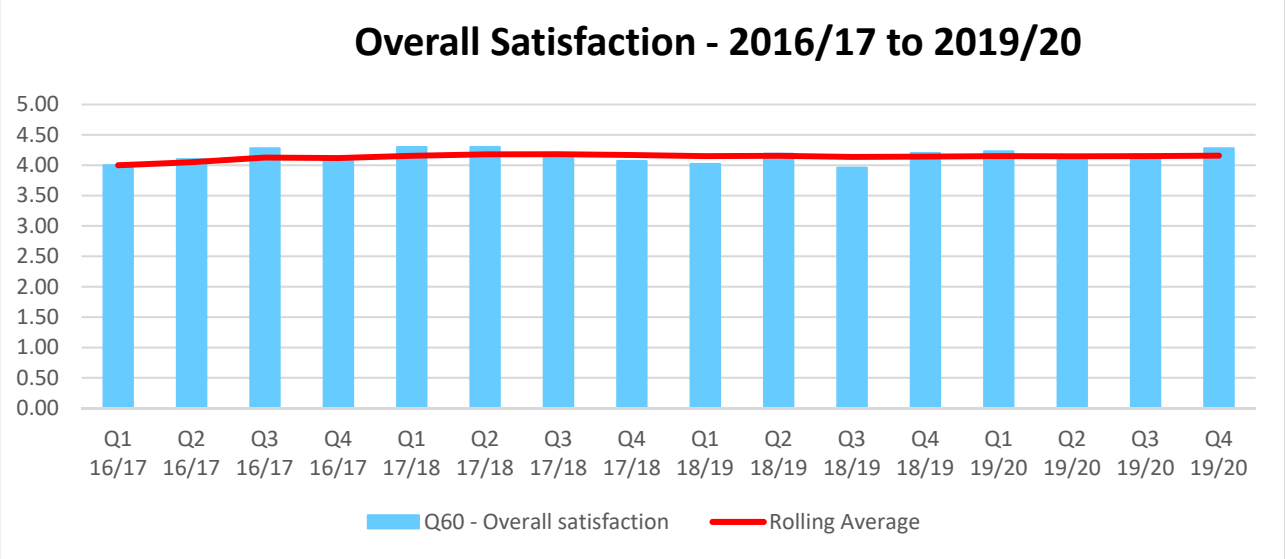
From FY19/20 onwards, the decision was made to switch to the Voice of the Customer service provided by the third party, Watermelon. This was initially set up in 2018/19. All customers which have interacted with NI Water in any capacity would be asked to complete a survey which provided a much greater sample size of close to 700 surveys per month. This larger, ongoing sample allowed for a more reliable reflection of NI Water’s customer metrics, while also allowing NI Water to monitor ongoing trends.

As part of the survey, customers are asked “*taking everything into account, how satisfied were you with the way NI Water handled this matter? Remember, that 0 is very dissatisfied through to 10 for very satisfied*”

NI Water supplies contact details (telephone number, date of initial contact, CMS code detailing the type of contact) to Watermelon each day via Secure File Transfer Protocol, with

Watermelon returning any completed surveys the same way the following morning. This information is then stored in NI Water's encrypted data warehouse.

The scores given in the aforementioned question are normalised to a 5 point scale and are used to drive the qualitative, overall satisfaction component of the SIM Score.



Development of new measures

As mentioned in the introduction, Customer Services Centre 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; 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 appointed IPSOS MORI as it 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.

IPSOS MORI completed the PC21 Customer Research under the guidance and monitoring of CEOG – Consumer Engagement Oversight Group – incorporating representatives from CCNI, DfI, NI Water and NIAUR.

The final PC21 Customer Research was completed in Winter 2019/20 and findings included in the PC21 Business Plan.