

Social and Environmental Guidance for Water & Sewerage Services (2021-27)



Department for
Infrastructure

An Roinn
Bonneagair

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Ministerial Foreword

The supply of clean, healthy drinking water and the effective treatment of our wastewater are basic needs, essential for public health and wellbeing, the environment and the economy and completely aligned with achieving many of the outcomes within the Programme for Government. These services must meet the varied needs of all consumers, including households, agriculture, business and industry, without impacting adversely on the environment. They must also respond to the challenges presented by Climate Change.



I am, therefore, delighted to publish new Social and Environmental Guidance for Water and Sewerage Services. This Guidance will set the direction for how water and sewerage services are provided in Northern Ireland during the period from 2021 - 2027. The Guidance focuses on making sure NI Water meets its environmental obligations (including drinking water quality, wastewater quality and reducing pollution), continues to make improvements in service delivery and works to operate sustainably, taking account of climate change.

Unfortunately, the publication of this Guidance has been delayed by the impact of COVID-19. The impact of the restrictions has also affected the timetable for publication of the Utility Regulator's Draft and Final Determinations, which are key deliverables in the Price Control process. Despite these challenges, I know that all key water stakeholders are working extremely hard to complete the Price Control process as soon as possible. The current situation has underlined more than ever the importance of water and waste water services to the health and wellbeing of our citizens.

Improving the water and sewerage infrastructure is a key priority within the Guidance, to facilitate economic growth and support the housing sector, especially to aid the provision of affordable and social homes, and to protect our environment. In

addition to addressing the historic underfunding in this area, we need to deal with our stormwater in a more sustainable way by encouraging the use of sustainable drainage systems. These help to minimise flood risk and also take rain water out of the wastewater network, leaving more capacity for wastewater treatment and therefore helping to facilitate housing and economic development.

The Guidance also focuses on the key priorities of sustainability and climate change. NI Water has a key role to play to mitigate and adapt to climate change in its investment planning and decision making and to reduce its energy consumption, as well as improving resilience in the face of more extreme weather.

As Minister for Infrastructure, I am committed to working with NI Water and the Utility Regulator, to deliver the priorities in this Guidance, as we work to improve lives, create opportunities for communities and tackle the climate emergency.

A handwritten signature in black ink, appearing to read 'N. Mallon', written in a cursive style.

Nichola Mallon MLA
Minister for Infrastructure

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1. Introduction

Summary

1.1 The purpose of this document is to provide the Northern Ireland Authority for Utility Regulation ('the Regulator') with Guidance on the key environmental and social policies and legislation that the Minister for Infrastructure expects it to have regard to when carrying out its role of regulating Northern Ireland Water (NI Water) during the years 2021-27 inclusive. This is known as Price Control 21 (PC21).

1.2 This Guidance has been developed to reflect current policies and legislative commitments. Its aim is to, at minimum, maintain the current high levels of drinking water quality, to improve wastewater compliance levels, to deliver affordable service improvements in key customer areas and to promote a sustainable industry. NI Water's strategic investment priorities for PC21 are as follows:

Environmental
Improvement &
Compliance

- Maintain and, where possible, improve its water and sewerage infrastructure.
- Meet its legal obligations in relation to drinking water quality, wastewater quality, and pollution prevention and control.
- Work in partnership with other agencies to provide the relevant input to joint flood risk management plans and solutions and work towards separating storm water from the sewerage system.
Maintain and, where necessary, improve the safety of its network of controlled reservoirs (both impounded and service).

- Service Delivery, Improvement and Affordability
 - Provide an efficient and cost effective service to customers.
 - Improve its performance against customer service standards by targeting key areas such as sewer flooding and interruptions to water supply.
 - Promote tourism, recreation & biodiversity at its water and sewerage assets.

- Sustainability and Climate Change
 - Apply a catchment based approach to investment to reduce leakage, pollution incidents and energy consumption, whilst facilitating future development and growth.
 - Mitigate and adapt to climate change in all aspects of investment planning and decision making.
 - Deliver increasingly energy efficient water & wastewater services.

Sustainable Water

1.3 Sustainable Water - A Long-Term Water Strategy for Northern Ireland (2015-2040) encourages a sustainable and integrated approach to managing all our different water needs in a way which promotes regional development, without compromising the environment or increasing flood risk. It includes many of the legal obligations in the legislation governing water management in Northern Ireland, and focuses on the strategic investment priorities highlighted above. To help deliver these investment priorities, the Strategy focuses on four key areas:-

- (i) Drinking Water Supply and Demand;
- (ii) Flood Risk Management and Drainage;
- (iii) Environmental Protection and Improvement; and
- (iv) Water and Sewerage Services.

The Strategy contains a range of actions aimed at delivering the investment priorities and these actions form the basis of the priorities in this Guidance.

Programme for Government

1.4 The priorities set out in this Guidance will help to fulfil commitments in the draft Programme for Government (PfG) by contributing to the following PfG outcomes, as a minimum:-

- (a) outcome 1 - we prosper through a strong, competitive, regionally balanced economy. The provision of a robust water and sewerage network will facilitate economic development and the expansion of businesses;
- (b) outcome 2 - we live and work sustainably - protecting the environment; Delivering the objectives of the Water Framework Directive will help to improve river and marine water quality;
- (c) outcome 4 - we enjoy, long, healthy, active lives; The provision of high quality drinking water will help to deliver this outcome.
- (d) outcome 11 - we connect people and opportunities through our infrastructure. By investing in water and wastewater services, high levels of drinking water quality will be maintained and the risk of pollution incidents / out of sewer flooding will be reduced.

Equality Impact

1.5 The impact of the proposed Guidance was assessed on equality of opportunity and the need for an Equality Impact Assessment (EQIA) was screened out. A copy of the screening form can be viewed on the Equality Section of the Department's website at <https://www.infrastructure-ni.gov.uk/publications/social-and-environmental-guidance-water-and-sewerage-services-screening-form>

Other Regulatory Impacts

1.6 The need to conduct detailed regulatory and/or strategic environmental assessments¹ was ruled out for the investment priorities within this Guidance because:

- it sets out investment priorities for NI Water with no direct impact on any other businesses;
- investment has been prioritised on environmental need in both rural and urban areas; and
- investment will have beneficial effects on the environment and on public health.

1.7 It should also be noted that some of the future investment priorities set out in this Guidance are provided for by legislation, and are, therefore, mandatory. Failure by NI Water to comply with these legislative requirements, may result in legal challenge and the possibility of substantial financial penalties, the consequence of which would be reduced investment in the services provided by NI Water. In the event that the risk of a challenge materialises, as a consequence of the company's inability to fulfil its legal obligation as a result of a shortfall in funding, NI Water should escalate such risks to the Department and Regulatory stakeholders, to facilitate decisions on operational priority and outputs, to provide adequate mitigation and help minimise any potential disruption to the delivery of water and sewerage services..

1.8 It should also be noted that the specification of certain activities should not automatically equate to separate elements of funding as they may be accounted for in the usual benchmarked costs.

¹ The Guidance informs NI Water's financial business plan and does not require assessment under the Strategic Environmental Assessment Directive (Directive 2001/42/EC).

The Price Control 21 (PC21)

- 1.9 This Guidance sets out the strategic priorities for water and sewerage services delivered by NI Water for PC21 which covers the 6 year period 2021-27 inclusive. The Guidance is issued by the Department to the Regulator under Article 7 of the Water and Sewerage Services (Northern Ireland) Order 2006². The Regulator must have regard to this Guidance when discharging its functions. Through the PC21 process, the Regulator will determine the performance targets for NI Water (including setting appropriate targets for the priorities in this Guidance) and the revenue that NI Water can raise through charges during PC21. In the absence of domestic charging for water and sewerage services, the revenue that would otherwise be forthcoming from domestic consumers, is subsidised and administered by the Department. As the majority of funding is provided by government, final decisions on funding will be part of the budgetary process. As was the case in PC15, the Department will strive to secure adequate funding for NI Water to meet its legal obligations and deliver the outcomes required by the Regulator for PC21. However, as with PC15, government is operating within a constrained budgetary environment, and funding the requirements in PC21 will be an even greater challenge.
- 1.10 It is recognised that longer investment plans will have a degree of uncertainty. Therefore, the Regulator should carry out a mid-term review of NI Water's PC21 Business Plan to consider any recalibration of targets required over the PC21 period and to facilitate any necessary changes to the second half of the Plan. This review will be limited to those areas where it is strictly necessary and will not be treated as a full price control process. It will instead be a review of proposals for the second three years of the investment programme, taking account of any new or emerging priorities and any pilot studies or research carried out. Therefore, NI Water's investment plan for the first three years should include details of the studies, trial work and pilot projects which will be carried out during the first three years of PC21 and which will be used to inform the second three years, particularly on sustainable solutions.

² <http://www.legislation.gov.uk/nisi/2006/3336/article/7>

- 1.11 Noting the Better Regulation Framework and the responsibilities already imposed on NI Water by current governance arrangements, consideration should be given by the Regulator to ensuring that the administrative burdens on NI Water are appropriate and every effort is made to ensure that these are not increased.
- 1.12 In accordance with the MoU³ and the Planning Assumptions Paper⁴, it is important that the Regulator sets appropriate targets and, throughout PC21, monitors and regularly reports on NI Water's performance to deliver its key performance indicators and priorities set out in the Social and Environmental Guidance.

Governance and Funding Arrangements

- 1.13 The Water and Sewerage Services Act (Northern Ireland) 2016⁵ and, subsequently, the Grants to Water and Sewerage Undertakers Order (Northern Ireland) 2017⁶, extended the period during which NI Water will continue to receive funding from government subsidy, in lieu of domestic charging to 31 March 2022.
- 1.14 To help reduce the levels of public expenditure funding required by NI Water, and to benefit its paying customers, it must continue to improve business performance and deliver efficiencies.
- 1.15 The Department and NI Water will continue to work together to consider alternative funding streams post EU Exit, especially given the uncertainty of continued funding after the United Kingdom leaves the European Union. During the PC21 period, the Department will, in partnership with NI Water, seek opportunities to identify alternative funding opportunities to develop and progress potential project proposals. Any successful bids should be progressed through the stakeholders' agreed change protocol process.

³ The MOU refers to the memorandum of understanding between DfI and the Utility Regulator.

⁴ The Planning Assumptions Paper is prepared by DfI and sets out the key assumptions for PC21.

⁵ [Water and Sewerage Services Act \(Northern Ireland\) 2006](#)

⁶ [The Grants to Water and Sewerage Undertakers Order \(Northern Ireland\) 2017](#)

The Living with Water Programme (LWWP)

1.16 In July 2014, the Northern Ireland Executive agreed to set up an interdepartmental group to develop a 'Strategic Drainage Infrastructure Plan' (SDIP) for Belfast to **protect** against flood risk, **enhance** the environment and support economic **growth**. To facilitate the development of the SDIP for Belfast, the Department is taking forward the 'Living with Water Programme' (LWWP), the Board of which includes senior representatives from: the Department's Rivers and Roads, Water and Drainage Policy Division (WDPD) and Finance Division; the Regulator; Northern Ireland Environment Agency (NIEA); Belfast City Council (BCC) and NI Water. The Board is supported by an inter-departmental working group which includes representatives from Department for Communities (DfC), Department of Agriculture, Environment and Rural Affairs (DAERA), Strategic Investment Board (SIB) and the Department of Finance (DoF). The high level aim for the LWWP is to develop a strategic infrastructure plan that will manage the flooding risk in Belfast, address the risk of infraction proceedings under the Water Framework and Urban Waste Water Treatment Directives in respect of Belfast Lough, and support economic growth.

1.17 LWWP will require investment of approximately £1billion (excluding inflation) in NI Water's wastewater networks and treatment facilities during PC21 and PC27. The LWWP is currently working on a catchment basis to find alternative solutions that may reduce the cost of dealing with Belfast's drainage problems. However, further work will be required over the coming months to:

- refine the scale of the works required and the associated cost estimations; and
- determine which elements of the LWWP should reasonably be expected to be delivered and funded by NI Water through the tariff and which require additional funding from Government.

Capital Investment Scenarios for PC21

1.18 The indicative budget identified in the PC15 Social and Environmental Guidance was used for investment planning purposes and formed the basis of both NI Water's Business Plan submission and the Regulator's PC15 determination. However, it was significantly less than the investment need identified by NI Water and placed constraints on delivery. The budget allocation to date in PC15 for capital investment has been below the indicative budget identified in the PC15 Social and Environmental Guidance.

However, benign inflationary conditions leading to lower construction costs have enabled NI Water to do more with its funding and largely achieve on PC15 outputs to date.

It is expected that a similar constrained budget environment will persist throughout PC21. The actual Budget set for NI Water will take into account the Regulator's final determination and but also needs to be affordable within the Northern Ireland budget expenditure process.

However, it is recognised that NI Water has estimated in its Outline Capital Submission that significantly more funding is needed than that provided in PC15. The Department acknowledges that a budget set at PC15 levels, index-linked, will have a significant detrimental impact on the economy, the environment and the wellbeing of citizens. It will result in an ever-increasing number of areas where there are development constraints, more environmental breaches by NI Water leading to poorer river and marine water quality and more fines levied against the company and an increased flood risk from a drainage system working at over-capacity.

Whilst NI Water's current performance is good, it is also evident that due to the difficult fiscal environment in which it has been operating, the company has been unable to invest adequately for the future sustainability of water and sewerage services in Northern Ireland. Continued underinvestment would fail to meet the needs of citizens, the economy and society as a whole.

Therefore, NI Water should prepare a Business Plan which sets out what is essential for the company to meet its obligations and the requirements of this Guidance, along with the associated costs. It should formulate a deliverable investment plan which meets established needs and is affordable from a tariff perspective. The NI Water elements of the Living with Water Programme should be included within this Business Plan. Given that the tariff is unlikely to be able to fully fund the assessed capital requirements, the tariff assumptions in the Business Plan should be made clear, as well as setting out the increase that would be required in the tariff if all capital requirements were to be financed that way.

NI Water should also clearly articulate the implications of a constrained budget set at PC15, index linked, outlining what could be delivered within this funding envelope and the implications of not funding the assessed capital requirements, based on the work already completed in the Outline Capital Submission.

The Regulator's determination for PC21 should have regard to the requirements identified in this Guidance and take into account required environmental standards, development priorities and customer affordability. The Regulator should also consider company proposals for how elements of the LWWP could be prioritised within the PC21 funding envelope, should no or only limited, additional funding be forthcoming.

Recognising that the actual budget allocation may still be constrained by affordability within the Northern Ireland public expenditure allocation process, the Regulator should maintain and develop appropriate mechanisms for managing change as part of its determination.

Resource DEL

1.19 NI Water has successfully reduced its resource costs over the PC15 period, and consideration should be given to driving through further efficiencies by continuing its ambitious business improvement programme, “Achieving Customer Excellence” (ACE) during the PC21 period. This should focus particularly on further efficiencies presented through use of business innovation, technology and energy efficiency/renewables. The Regulator should build on the work undertaken in previous Price Control periods to establish an efficient level of operational expenditure and resource DEL for PC21. For initial planning purposes, NI Water should prepare a Business Plan to set out its assessment of resource requirements and this will inform the Regulator’s final determination. The Regulator’s final determination along with the affordability within the Northern Ireland budget expenditure process will determine the actual budget. If the efficient level of operational expenditure or Resource DEL exceeds the expected budget, NI Water and the Regulator, in conjunction with other stakeholders should consider the consequences of any budget constraints in time for the PC21 final determination.

Metering

1.20 No move to universal metering is currently envisaged in the domestic sector. Metering should continue to be used as the method of billing the non-domestic sector, where possible. Smart meters are presently being piloted on Rathlin Island. The roll-out of smart meters to other parts of Northern Ireland for non-domestic customers should be considered following the evaluation of this pilot.

Sustainable Water Management

1.21 This Guidance has been informed by the NI Executive’s Long-Term Water Strategy entitled ‘Sustainable Water’ which sets out a vision for a sustainable water sector. Sustainable water management is a key theme throughout this

Guidance and is about managing and investing in assets and infrastructure to improve services and protect the environment while securing future service provision. It is recognised that NI Water cannot achieve this alone. Amongst other things, the introduction of reservoir safety legislation, and changes to planning legislation and building control conditions may also be needed to facilitate sustainable residential, commercial and industrial development.

- 1.22 NI Water's role will be to deliver efficient, affordable, 'greener' services by improving existing operations and investing in sustainable solutions. This means gradually moving away from traditional high energy water, wastewater and drainage solutions and adopting natural approaches where issues are addressed at source. This will involve consideration by NIEA, when developing discharge standards to ensure that the overall benefit to the environment is optimised in terms of both water quality and carbon emissions.

Digital Modernisation

- 1.23 Digital services are transforming customer contact channels, with a shift from traditional contact centre communication to self-service digital based interaction. The implementation of digital services presents the opportunity to provide an enhanced customer service, at a time when the customer requires it, and at a lower operational cost. NI Water has commenced this process with the development of new systems to provide a modern digital offering and to enable customers with the choice to access company information through digital communications. NI Water should continue to develop its digital offering, to keep pace with customer demands and expectations and to seek to lower the operational cost of customer service delivery.

Research Development and Innovation

- 1.24 NI Water should 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 through the timely

provision of focused applied research and development support to all areas of business need. Where possible, this should be through collaborative projects, such as through UK Water Industry Research, to make full use of opportunities for sharing RDI costs with other organisations,

Sustainable Water – A Long-Term Water Strategy for Northern Ireland (2015-2040)

1.25 While the guidance often summarises the more detailed aims of Sustainable Water, it is acknowledged that there are shared roles and responsibilities by other stakeholders in delivering the Strategy and that it includes items where NI Water is in a supporting role rather, than a lead role. The Regulator should refer back to Sustainable Water for further detailed clarification, as necessary.

It should be ensured that NI Water fully plays its part in progressing the relevant actions in the Strategy, working in collaboration with other stakeholders as appropriate.

Approach

1.26 The following sections detail the Department's social and environmental objectives for the PC21 period. These have been informed by the long-term aims and objectives identified in Sustainable Water – A Long-Term Water Strategy for Northern Ireland (2015-2040). The Regulator should have regard to the delivery of these objectives when assessing NI Water's proposals for PC21, including the needs identified by the company as part of an affordable and deliverable plan.

Public Consultation

1.27 The draft Social and Environmental Guidance was published for an 8-week public consultation in October 2019. Copies of the Guidance were issued to a

range of organisations, groups and individuals. The document was also made available on the DfI Website.

- 1.28 A total of nine responses were received from a variety of stakeholders including environmental groups, the Regulator, NI Water and the Consumer Council. The majority of respondents signalled their support for the Draft Guidance and its focus on providing sustainable water and sewerage services.
- 1.29 A consultation report has been produced summarising the main responses to the consultation.

2. Drinking Water Supply and Demand

Introduction

2.1 The current high levels of drinking water quality and reduced levels of leakage and burst pipes have been achieved through a policy of significant investment in water treatment facilities and mains rehabilitation. These improvements should be maintained and investment targeted through a risk management approach to target specific quality and supply issues. Ensuring the delivery of a wholesome water supply will help to deliver Programme for Government Outcome 4 – we live long, healthy, active lives. The drinking water investment priorities for PC21 are detailed in the aims and actions set out below.

DW Aim 1 - Manage drinking water quality risk in a sustainable manner from source to tap

DW Policy 1A: Maintain and review Drinking Water Safety Plans (DWSP) for all drinking water catchments

2.2 Drinking Water Safety Plans are the most effective way of ensuring that a water supply meets the health-based standards and other regulatory requirements throughout the water supply chain. The primary objectives of DWSPs are the identification and mitigation of risks through the minimisation of contamination of source waters, the reduction or removal of contamination through appropriate treatment processes and the prevention of contamination in the distribution network and the domestic distribution system.

SEG DW 1A NI Water should continue to maintain and review drinking water safety plans for all drinking water catchments and also continue to implement a prioritised investment programme to manage drinking water quality risks informed by DWSPs.

DW Aim 1B - Put effective protection measures in place for drinking water sources

2.3 All drinking water sources should be designated as Drinking Water Protection Areas (DWPAs) to provide appropriate regulatory protection and help prevent future deterioration of drinking water sources in line with the Water Framework Directive principles.

SEG DW 1B To help deliver this policy, NI Water should review the designation of all existing (and future) drinking water sources as Drinking Water Protected Areas (DWPAs) and ensure appropriate monitoring and regulatory protection measures are put in place.

DW Aim 1C - Introduce sustainable catchment management at all drinking water sources

2.4 NI Water continues to develop Sustainable Catchment Management Programmes (SCAMP), taking on best practice from Great Britain and Ireland. NI Water has completed Catchment Management Plans for all in-service catchment areas.

Through the Water Catchment Group: a joint partnership between NI Water and the NIEA, a number of catchment initiatives are in place, including engagement with the farming communities in Seagahan, Glenhordial and Ballinrees catchments to implement weed wiping trials, which aim to replace the use of the herbicide, MCPA, which can leach directly into watercourses or via land drains.

NI Water is the lead partner in the Source to Tap Interreg Project, which aims to pilot catchment management initiatives in the cross-border Derg and Erne catchment. The project team includes Irish Water, the Agri-Food and Biosciences Institute (AFBI) and the Rivers Trust.

Learning and awareness regarding sustainable catchment management is raised in the community by NI Water's Education team and NI Water's

Communications team through the use of social media, TV and radio interviews.

SEG DW 1C NI Water should continue to introduce sustainable land management practices at all drinking water sources through collaborative partnership working, where possible, and also help to educate those with private water supplies about the importance of protecting groundwater. Specifically, NI Water should develop a programme to implement appropriate recommendations developed through the SCAMP programme in PC15.

DW Aim 1D - Manage water quality risks from the water distribution system

2.5 NI Water's water distribution system is an extensive network. It consists of 370 service reservoirs and approximately 27,000 kilometres of mains pipe. As water travels through the distribution system, the quality of the water may deteriorate, depending on the condition and structural integrity of the distribution system, the nature of the water and materials it comes into contact with.

To help minimise these risks, NI Water has implemented a 'Risk-Based Service Reservoir Condition Assessment Programme' (expenditure circa £250k per annum). This methodology is reviewed annually to ensure industry best practice is maintained. In addition, NI Water uses the Water Infrastructure Investment Methodology (WIIM) methodology for prioritising replacement pipelines in the distribution network, which includes water quality sample results as drivers for pipeline replacement. It is acknowledged that NI Water wishes to embrace technology which could result in rehabilitation solutions being avoided/deferred by extensive network cleaning. Pilots are underway during PC15 which will inform PC21.

NI Water also has drinking water quality targets in place for iron and other significant parameters, designed to protect public health.

SEG DW 1D NI Water should continue to effectively manage and operate the distribution system to maintain standards of drinking water quality, in line with current standards, and to prevent deterioration in drinking water quality including addressing iron exceedances and delivering the water mains rehabilitation programme to address water quality issues and consumer complaints.

DW Aim 1E – Remove lead pipes and fittings from drinking water supply systems

2.6 For many years, lead pipes were the preferred means of transporting drinking water. Following scientific evidence, using lead pipes to transport drinking water has been deemed to have a detrimental effect on human health especially on young children and unborn babies. Lead pipe work is still present within the distribution system as well as within the boundary of many older properties where it is privately owned.

Since 25 December 2013, the regulations require compliance with the final lead standard of 10 µg/l. However, NI Water should be encouraged to keep abreast of changes in industry standards. This measurement is taken at customers' taps. Meeting this lead standard is a complex matter because, although some lead pipes are owned by NI Water, most belong to consumers. This is why orthophosphate treatment is required to reduce the amount of lead dissolved in the water from these pipes. NI Water has a targeted strategic lead replacement programme which aims to replace lead communication pipes throughout the distribution system, to help achieve compliance with the 10 µg/l lead standard at the customer tap. It also carries out opportunistic lead replacement when lead pipes are identified while undertaking water mains rehabilitation and reactive replacement as a consequence of sample failures and/or customer requests.

SEG DW 1E NI Water should continue implementing its strategic lead policy and lead pipe replacement programme focusing on the aim of removing all lead pipes from the public supply system and improving compliance with current lead standards. In addition, NI Water should work with stakeholders to develop and implement a strategic risk-based approach for addressing lead

compliance issues associated with private supply pipes and domestic distribution systems.

DW Aim 1F – Manage water quality risks from defective water fittings systems

2.7 The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009⁷ set out minimum performance standards for water-using apparatus (e.g. toilets, dishwashers, washing machines, etc.). The Regulations aim to reduce the risk of contamination and reduce wastage of water supplied by NI Water through the use of specified water fittings and methods of installation. The Regulations apply to all plumbing systems, water fittings and appliances connected to the public water supply. They help to ensure that any plumbing system in your home or business is installed and maintained correctly. Complying with these Regulations can help to prevent any potential contamination of the public water supply or to other parts of your home or business. NI Water is responsible for enforcing the Regulations in all properties that have a public water supply.

NI Water proactively inspects customers premises on a risk-based approach as detailed in an annual return provided to the Department.

NI Water, along with all the GB water suppliers and the Water Regulations Advisory Scheme (WRAS), has set up a Point of Sale (POS) working group, to help change the behaviours of manufacturers & retailers, many of whom are manufacturing, stocking and selling non-compliant water fittings. The desired outcome is to reduce the significant numbers of non-compliant water fittings on the UK market thus reducing waste and preventing water quality failures/events and maintaining drinking water safety.

NI Water also proactively inspects customer's premises in response to water quality issues identified by sample failures.

SEG DW 1F NI Water should continue to effectively monitor and regulate compliance with

⁷ [Water Supply \(Water Fittings\) Regulations \(Northern Ireland\) 2009](#)

the Water Supply (Water Fittings) Regulations (Northern Ireland) 2009 and reduce the risk of contamination or waste of public water supplies through defective water fittings. It should continue its work with the WRAS Point of Sale working group, to help change the behaviours of manufacturers & retailers. In addition to this, NI Water should also continue to educate and improve public awareness of the importance of compliant water fittings and using licensed plumbers (Watersafe). NI Water should be encouraged to keep abreast of changes in industry standards and developments and should maintain systems and processes necessary to ensure effective regulation of water fittings.

DW Aim 1H – Manage water quality risks from domestic distribution systems

2.8 Where there is a public water supply to buildings, such as hospitals and schools, the building owners must ensure that there is no deterioration in the drinking water quality as a result of the distribution of the water throughout the site. This onward distribution of water through the building's domestic distribution system is regulated to ensure that it does not present a risk to members of the public. The Drinking Water Inspectorate has responsibility to ensure that appropriate remedial measures are taken by the building owner (where there are water quality failures identified under domestic distribution system regulations and which are related to the onward distribution of water within these buildings).

SEG DW 1H NI Water should continue to work with stakeholders to ensure adequate resource and guidance is in place to ensure the effective monitoring and regulation of domestic distribution systems is maintained.

DW Aim 2 – Meet the water demand needs of society, the economy and the environment

DW Aim 2A – Provide access to efficient, safe, secure drinking water supplies

2.9 Approximately 99% of the population are currently connected to the public

drinking water supply network. The long-term aim is to connect as many properties as possible to the public supply system, where this is requested by the customer and assessed to be economically viable. NI Water provides a contribution towards the initial cost of providing a connection. In addition, the Northern Ireland Executive provides a further financial contribution to ensure that the cost of new water connections remains affordable to householders and businesses.

To help manage future water supply costs, it is important that any planned development can be efficiently served by the public drinking water supply system. This is recognised in the Regional Development Strategy which recommends that land-use planning should be informed by current water and sewerage infrastructure and future investment programmes. This will involve close cooperation between Local Councils and NI Water in the preparation of Local Development Plans (LDPs) and water investment programmes.

NI Water provides assessments on water capacity and the associated network with respect to Local Councils' LDPs. This information is then incorporated into Preferred Options Papers and individual Plan Policies. The Department is also provided with this information. However, outcomes are subject to adequate funding of the current and future NI Water Business Plans.

SEG DW 2A NI Water should continue to provide financial assistance towards the initial cost of providing a water connection to encourage connections to the public supply system (reasonable cost allowance (RCA)) and also to put in place and implement improved mechanisms to ensure integration between water investment and local development plans, to help ensure that customers' water needs are efficiently met in the future. It should also take account of any future requirements to increase access to drinking water in public places.

DW Aim 2B – Water resource management and drought planning to inform long term investment needs

2.10 In 2014, the Department issued technical guidance to NI Water, to help inform the development of its Water Resource and Supply Resilience Plan (WR&SRP). The draft WR&SRP sets out NI Water's strategy for maintaining drinking water supplies up to 2042 and takes into account forecast changes in population, housing and water usage and incorporates any predicted changes to our climate. The average volume of water needed in the supply system has reduced from around 735 megalitres per day (Ml/day) in 2001/02 to around 570 (Ml/day) in 2017/18. However, water demand needs to be reduced further if we are to protect our water sources, facilitate future development and reduce the carbon and financial costs of drinking water provision in the future. Following the high demand event at the end of June, early July 2018, the draft WR&SRP has been re-visited to ensure that it is still appropriate.

SEG DW 2B NI Water must deliver the WR&SRP and review it, in accordance with the legislation, energy considerations and any associated guidance, to inform subsequent price control periods.

DW Aim 2C – Put effective systems and processes in place to avoid over abstraction

2.11 The Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006 provide controls on water abstractions and impoundments in Northern Ireland. All significant operators, like NI Water, who have a licence to abstract from surface water or groundwater under the regulations are required to have monitoring systems in place or, in respect of hydro operations, to produce a monitoring plan three months prior to commencement of the operation. The NIEA needs accurate information on abstractions to carry out its duties and meet the Water Framework Directive's (WFD) objectives on promoting sustainable water use and preventing deterioration of, and protecting/enhancing the water environment.

Every day, NI Water currently draws around 570 MI/day from the environment and supplies around 560 MI/day of drinking water with the additional water used in the treatment processes. NI Water has active licenses to abstract up to 1,045 MI/day and this ensures that NI Water has access to additional raw water reserves. There is the potential to develop groundwater to be utilised during major supply incidents and it could also have a role to play in ensuring supplies in emergencies.

SEG DW 2C NI Water should continue to develop, agree and implement water abstraction monitoring and management plans with NIEA.

DW Aim 2D – Encourage households and businesses to be water efficient

2.12 The long-term target is to reduce average water consumption from 146 l/h/day to 130 l/h/day by 2040. The WFD promotes the sustainable use of water resources through water pricing. Water pricing arrangements for the agriculture and industrial sectors have been in place for many years. The majority of these customers are metered and charged according to usage. This is in line with the WFD's requirement for users to use water resources efficiently and promotes the polluter pays principle.

NI Water offers all schools an education talk on key water efficiency messages and also attends Events/Exhibitions-such as Balmoral Show, and local community events/talks to promote water efficiency.

SEG DW 2D NI Water should continue to invest in education and public awareness campaigns to promote water efficiency and to highlight the link between water efficiency and lower energy bills. NI Water should continue to invest in its education team resources, including the waterbus and targeted Corporate Social Responsibility activity such as its monthly Cares Challenge. It should also be mindful of any new initiatives in GB regarding water efficiency.

DW Aim 2E – Deliver water efficient residential and commercial development

2.13 The long-term target is to reduce average water consumption from 146 l/h/day to 130 l/h/day by 2040. Only around 4% of water supplied to an average household is used for drinking. Toilets account for around 30% of drinking water usage. Properties can be built or modified to be more water efficient in high consumption areas. For example, new properties could include recycling systems where grey water from washing machines is used for toilets.

SEG DW 2E NI Water should implement measures to reduce average water consumption through sustainable development and work with the Department and other stakeholders to develop and implement policies in respect of retro-fitting water efficiency/recycling measures in homes and businesses.

DW Aim 3 Resource efficient drinking water treatment and supply chains

DW Aim 3A – Achieve a Sustainable Economic Level of Leakage (SELL) in all supply systems

2.14 NI Water should continue to deliver improvements in leakage during the PC21 period. The current focus of achieving and maintaining the Sustainable Economic Level of Leakage (SELL) within its distribution system should continue.

SEG DW 3A NI Water should continue to focus on achieving and exceeding the Sustainable Economic Level of Leakage (SELL) and strive towards to SELL targets set out in the WR&SRP. NI Water should also review and update the SELL at regular intervals consistent with practice in the industry. NI Water should also work with stakeholders to develop and implement proposals to reduce private supply leakage.

DW Aim 3B - Improve the energy efficiency of the public drinking water supply system

2.15 NI Water has an energy efficiency programme in place and further developments in water treatment and supply technology can contribute to improving the energy efficiency of the water supply system. NI Water has now established an energy efficiency team to explore and evaluate new energy efficient technology.

SEG DW 3B NI Water should review existing water treatment and supply systems to identify how potential energy efficiency savings might be achieved and also develop and implement a programme of energy efficiency improvements across the water and sewerage infrastructure and asset base. In addition, NI Water should develop short and long-term energy efficiency targets specifically for PC21 and beyond into PC27.

DW Aim 3C - Increase the use of renewable energy in the public drinking water supply system

2.16 Northern Ireland's local demographics and rural landscape mean large amounts of energy will continue to be needed to treat and pump drinking water long distances, no matter how efficient the supply systems are. To minimise carbon emissions, it is important that NI Water secures as much of this energy as possible from renewable sources such as wind, solar, hydro and anaerobic digestion and implements appropriate measures to ensure that no indirect detriment is caused to the environment e.g. ammonia from by-products of anaerobic digestion.

NI Water has invested in solar panels at 58 sites throughout Northern Ireland and also operates three hydro-power schemes.

SEG DW 3C NI Water should consider further opportunities to invest in renewable energy generation (e.g. solar panels & wind turbines) to reduce running costs at drinking water facilities. NI Water should also consider generating renewable electricity through innovative management of drinking supply systems (e.g. generating

hydro-power from excess water mains pressure). NI Water should consider the business merits of investing to save in other innovative areas of sustainability which can be employed in its business and to strive to increase the use of renewable energy in the public water system by also exploring the purchase of renewable energy.

DW Aim 3D - Reduce the amount of chemicals used in the drinking water treatment and supply systems

2.17 The drinking water treatment process requires a range of chemicals to remove impurities and to disinfect the water to make it safe. For example, chlorine is used for disinfection and orthophosphoric acid is added to ensure tap water has not dissolved additional lead from pipes along the way. The use of these chemicals in the treatment process is carefully monitored by NI Water and approved by the Drinking Water Inspectorate (DWI) to ensure that drinking water at the tap achieves stringent quality standards. Although the use of these chemicals is essential to ensure safe drinking water, they can have a negative impact on the environment if their use is not effectively managed and controlled.

Catchment Management Plans have been developed by NI Water for all drinking water catchments and these plans will examine reducing the use of chemicals used in the drinking water treatment and supply systems.

SEG DW 3D NI Water should minimise the amount of chemicals used in the drinking water treatment and supply systems by improving raw water quality through natural means such as SCAMP and also by improving the water supply system to minimise the amount of chemicals needed e.g. orthophosphate. Initiatives, such as weed-wiping, should be further investigated and promoted in the agricultural industry to improve raw water quality.

3. Flood Risk Management and Drainage

Introduction

3.1 Instances of surface water flooding in recent years have highlighted the need for a more holistic and integrated approach to surface water drainage provision and flood risk management. Extreme weather, resulting in flooding of properties and infrastructure, is predominant among the potential long term risks associated with climate change for Northern Ireland⁸. If it is accepted that Northern Ireland is likely to experience more regular flooding events in the future, action should be taken now to manage that risk. It is not affordable to keep putting bigger pipes in the ground or building taller flood defences in all cases, so we need to think differently and sustainably manage flood risk. Such an approach will help make investment go further and reduce the future costs of maintaining and operating the drainage and flood resilience infrastructure. This is in line with the aims of the Floods Directive on the assessment and management of flood risks. This approach will help to deliver Programme for Government Outcome 2- we live and work sustainably – protecting the environment.

Floods Directive

3.2 The Floods Directive is transposed in Northern Ireland through the Water Environment (Floods Directive) Regulations (Northern Ireland) 2009⁹. The Regulations require areas at significant risk to be identified and for objectives to be set and measures identified for the management of flood risks in those areas. The Department is the Competent Authority for the implementation of the provisions of the Regulations and is progressing a three stage strategy to ensure that an updated Flood Risk Management Plan (FRMP) will be produced for the continued management of flood risk across the country from December 2021:

⁸ [UK Climate Change Risk Assessment 2017 Evidence Report - Summary for Northern Ireland](#)

⁹ [Water Environment \(Floods Directive\) Regulations \(Northern Ireland\) 2009](#)

- **Review of the 2011 preliminary flood risk assessment** to produce the Northern Ireland Flood Risk Assessment (NIFRA) 2018 and identify Areas of Potential Significant Flood Risk (APSFR) (published in December 2018);
- **Review of flood hazard & risk maps** for the APSFR (by December 2019); and
- **Produce the Northern Ireland Flood Risk Management Plan (FRMP)** containing objectives and measures to manage flood risk in APSFR (by December 2021).

The process of assessment, mapping and planning will continue to be reviewed in 6-year cycles, coordinated and synchronised with the Water Framework Directive. More information on the Floods Directive implementation can be found on the Department's website at <https://www.infrastructure-ni.gov.uk/news/consultation-open-draft-timetable-and-work-programme-preparation-northern-ireland-flood-risk>

3.3 The NI Flood Risk Assessment (NIFRA) 2018 (published on 22nd December 2018) identifies 12 Areas of Potential Significant Flood Risk (APSFR) where pluvial (or surface water) flooding is a significant risk. With no single organisation responsible for surface water drainage in urban areas, it is imperative that there is coordination between all the drainage agencies. Although the Department is responsible for developing and overseeing the implementation of FRMPs, as the owner of key drainage infrastructure and with statutory duties to exercise its 'relevant functions in a manner which secures compliance with the requirements of' the Water Environment (Floods Directive) Regulations (NI) 2009,^{10[8]} NI Water is one of the key organisations that have a major role to play in providing information and support to DfI for the management of pluvial flood risk in urban areas.

3.4 Given the pluvial flooding risk in the 12 identified APSFR it is expected that there would be a much more significant role for NI Water in the development

¹⁰ Regulation 4 of the Water Environment (Floods Directive) Regulations (NI) 2009 (S.R. 2009 No. 376 (as amended by S.I. 2019 No. 32))

and implementation of the 2021-27 FRMPs. The development of FRMPs would be progressed over the next 18 months by the Floods Directive Technical Stakeholder Group (FDTSG) which includes NI Water representation. Although it will ultimately be for NI Water to consider the appropriate objectives and measures that will be developed to address flood risk within the 12 identified APSFR, it is expected that the Drainage Area Plans (DAPs) or some of them, depending on what objectives / measures are considered appropriate for the 12 APSFR identified, will be prioritised during PC21.

The following paragraphs outline the individual investment priorities for flood risk management & drainage.

FRMD Aim 1: Deliver Sustainable Flood Resilient Development

FRMD Policy 1A: To ensure land-use planning decisions are informed to help minimise flood risk

3.5 It is important that the planning system takes full and proper account of flood risk. This means preventing most forms of development in high flood risk areas and ensuring that surface water from new developments is properly managed and does not overwhelm existing sewers and/or watercourses, increasing the risk of flooding elsewhere in a catchment. The Water and Sewerage Services Act (Northern Ireland) 2016¹¹ (the “2016 Act”), provides NI Water with the power to refuse surface water connections to the public combined sewer where there are alternative options for dealing with surface water, such as SuDS.

SEG FRMD 1A NI Water should put appropriate resources in place to effectively fulfil its legal obligations. Separate storm sewers should not be connected to the combined sewer system, where there are viable alternative options for managing surface water. NI Water should also ensure it has an appropriate system in

¹¹ [Water and Sewerage Services Act \(Northern Ireland\) 2016](#)

place to effectively implement its powers in respect of consideration and suitability of SuDS when considering wastewater connections.

FRMD Policy 1C: Sustainable Drainage Systems (SuDS)

3.6 If drainage is considered at the design stage of a development, surface areas and landscaping can be designed to minimise surface water run-off. The 2016 Act encourages the use of SuDS and aims to ensure that certain types of SuDS are constructed to the appropriate standard and are subsequently adopted by NI Water. NI Water is currently updating Sewers for Adoption (NI), to reflect the latest effects of climate change, household requirements and storm water attenuation and control.

NI Water should put appropriate resources in place to ensure that:

SEG FRMD 1C (i) Sewers for Adoption (NI) remains relevant and reflects new and emerging policies; and

SEG FRMD 1C (ii) it continues its work with the Department and other stakeholders, including councils, to promote the use of SuDS and to establish clear working procedures for implementation.

FRMD Policy 1D: Design for drainage exceedance to be incorporated into all new drainage infrastructure

3.7 When drainage systems are overwhelmed during extreme rainfall, excess rainwater can cause flooding and damage to property. 'Design for Exceedance' is about understanding what happens to the excess water when drainage systems are overwhelmed and designing measures to safely manage the water to prevent damage. The aim is for 'Design for Exceedance' to be incorporated into all new infrastructure.

NI Water has updated Sewers for Adoption (NI) to specify the need for new development proposals to demonstrate overland flow paths for exceedance conditions including storm events and system failure.

SEG FRMD 1D NI Water should put appropriate procedures and resources in place to ensure 'design for exceedance' requirements in Sewers for Adoption (NI) are effectively implemented in new developments.

FRMD Aim 2: Manage the Catchment to Reduce Flood Risk

FRMD Policy 2A: Effective regulation of reservoir construction and maintenance

3.8 NI Water, as a water undertaker, is the Reservoir Manager of a number of impounding and service controlled reservoirs. Therefore, it must comply with the provisions of the Reservoirs Act (Northern Ireland) 2015¹² as and when sections are commenced, in respect of all of its controlled reservoirs (both impounding and service). In the meantime, NI Water should voluntarily manage its impounding and service reservoirs that are capable of holding 10,000m³ of water above the natural level of the surrounding land, in accordance with the reservoir safety policy provided for by the Reservoirs Act 1975¹³. In particular, NI Water should voluntarily comply with the supervision and inspection regimes as set on in the legislation:

- Commission a reservoirs supervising engineer(s) to supervise its impounding and service reservoirs at all times and comply with any recommendations or directions given by the engineer(s);
- Commission a reservoirs inspecting engineer(s) to inspect its impounding and service reservoirs and comply with any recommendations or directions given to it by the engineer(s); and
- Commission a reservoirs construction engineer(s) to supervise any works to construct or alter any of its impounding or service controlled reservoirs and comply with any directions given by the engineer(s).

SEG FRMD 2A NI Water should comply with the provisions of the Reservoirs Act 1975 on a voluntary basis, in respect of its impounding and service reservoirs, until such time as the Reservoirs Act (Northern Ireland) 2015 is fully commenced.

¹² [Reservoirs Act \(Northern Ireland\) 2015](#)

¹³ [Reservoirs Act 1975](#)

FRMD Aim 3: Provide Sustainable Integrated Drainage in Rural and Urban Areas

FRMD Policy 3B: Reduce the amount of rainwater in combined sewers

3.9 Since the 1970s, new developments have had to provide separate drainage systems for sewage and surface water. However, due to the lack of a suitable river or drain into which to discharge the surface water, these systems are often merged at the boundary and connected to an existing combined sewer. This means that in urban areas, sewage and rainwater are often still collected together in combined sewers. This rainwater can overload the sewers causing flooding and pollution and costing £millions every year to collect, pump and treat.

To help deliver this policy in PC15, NI Water identified initial locations for potential storm separation and also included storm separation in all current/future drainage area plan work. In addition, NI Water has included an assessment of infiltration within a catchment in its revised 'Risk-Based Drainage Area Plan' Methodology.

To help deliver this policy, NI Water has completed the development of a SuDS scheme in the form of a rainwater garden in Clandeboye Primary School. Potential soft SuDs solutions and also combined hard and soft SuDS solutions are being considered by developers in the Belfast and Londonderry areas.

To help deliver this policy NI Water will:-

SEG FRMD 3B (i) work with the Department and NIEA (amongst other stakeholders) and utilise evidence from its Integrated Environmental Modelling (IEM), DAPS and SWM tools and to identify and implement stormwater separation and infiltration reduction schemes to address unsatisfactory intermittent discharge (UIDs), pollution incidents, out-of-sewer flooding, surface water flooding and providing capacity for development ; and

SEG FRMD 3B (ii) contribute to any future development and implementation of sewerage recommendations and policies arising from the Stormwater Management Group in relation to future sustainable drainage systems.

FRMD Policy 3C: Manage 'private' drainage systems to reduce the risk of flooding

3.10 A significant amount of drainage infrastructure (sewers, storm drains, culverts and culverted watercourses etc.) throughout Northern Ireland is either designated or adopted and therefore subject to maintenance by DfI Rivers, NI Water or DfI Roads. However, work carried out in 2015 estimates that there is around 177km of Private Drainage Infrastructure (PDI) for which the landowner whose property it passes through is responsible for maintenance (this figure excludes private open watercourses). Some of this PDI conveys significant discharges from surface areas, designated watercourses, road drains, surface water sewers and combined sewer overflows. PDI is therefore often integral to the drainage system working effectively.

Over time, the condition of drainage infrastructure deteriorates and without maintenance will eventually fail which may lead to flooding and other types of disruption. The majority of PDI has been in existence for many decades and is more likely to be in poor condition, given that it is not surveyed and maintained by any of the existing drainage providers (DfI Rivers, DfI Roads and/or NI Water). Through the Flood Investment Planning Group (FIPG) previous flooding investigations have identified locations where the PDI has been a contributing factor to flooding and effectual drainage.

To help mitigate the impacts of PDI, NI Water will be expected to:

SEG FRMD 3C (i) continue to work with the other drainage organisations (DfI Rivers or DfI Roads) through FIPG, and other fora, to identify PDI to ensure a complete and up to date dataset is maintained ;

SEG FRMD 3C (ii) include funding and resources for LWWP, DAPs, IEM and FIPG purposes to address impacts to the network arising from PDI ; and

SEG FRMD 3C (iii) contribute to any future development of policy in this area.

FRMD Aim 4: Improve Flood Resistance and Resilience in High Flood Risk Areas

FRMD Policy 4A: Develop and maintain accurate information on flood risk

3.11 It is essential that accurate information is provided on the location and levels of flooding risk across Northern Ireland. This information is compiled in Flood Risk Management Plans, which are a requirement of the EU Floods Directive. These plans identify significant risks from flooding and set objectives and measures for managing these risks.

SEG FRMD 4A NI Water must make progress towards the delivery of measures set out in the Executive's FRMPs (2021-27) and also contribute to the development of the next cycle of flood risk management planning for the 2027- 2033 period.

FMRD Policy 4C: Reduce the number of properties at risk of sewer flooding

3.12 Preventing out-of-sewer flooding inside properties has been identified as a priority by consumers in research carried out by the Consumer Council to inform NI Water's current business plan.

NI Water maintains a register of properties at risk of internal (DG5) and external flooding. Each year, NI Water carries out remediation work on a number of these properties to remove them from the register. NI Water also prioritises public sewer investment and maintenance programmes to help reduce the number of properties at risk of out-of-sewer flooding. In addition, it carries out extensive education campaigns, for example, 'Bag it and Bin it', to inform the public of the damage caused by placing inappropriate items in the toilet.

SEG FRMD 4C NI Water should continue to reduce the number of properties at risk of internal and external out-of-sewer flooding to meet the associated annual target set by the Regulator and continue to invest in its various education campaigns, including messages being delivered through online, web and social media, to

ensure that the public is aware of the impact its actions have on the sewerage system.

FRMD Policy 4D: Deliver a programme of integrated surface water drainage schemes to alleviate flooding

3.13 NI Water shall provide input to the development of DfI's LWWP 'NI Integrated Drainage and Wastewater Investment Planning Guide', which will be the NI version of the Water UK 'Drainage and Wastewater Management Plan - the overarching document for how NI Water will be required to progress this type of appraisal across Northern Ireland from April 2021. NI Water's DAPs should be 'integrated' and incorporate integrated drainage, surface water management and, where appropriate, design for exceedance¹⁴ where this is determined necessary through the IDIP screening process. It is expected that this work will involve NI Water working closely in partnership with the Department (WDPD, DfI Rivers and Roads) and other stakeholders (including the Councils) to develop and deliver joint drainage schemes to manage surface water flood risk in urban areas. For example, the Department may need to upgrade a watercourse to facilitate a storm separation scheme by NI Water. In some instances, this may mean accelerating lower priority sewerage projects to accommodate delivery of integrated schemes.

During PC21, appropriate funding and resources should be prioritised towards progressing 'integrated' DAPs in line with the preliminary NI IDIP Guide and associated surface water management measures identified through the FRMP.

During PC21, NI Water will be expected to continue working with the Department and other key stakeholders to provide an integrated approach to managing flood risk across Northern Ireland. This includes implementing any sewerage-related measures set out in the Executive's FRMP (2021-27).

¹⁴ Design for Exceedance is about putting measures in place to manage excess flows when drainage systems are overloaded.

SEG FRMD 4D (i) NI Water must broaden the scope of drainage area plans to be integrated by incorporating surface water management and integrated drainage design for exceedance in line with current UK best practice for Drainage and Wastewater Management Planning, the preliminary NI Integrated Drainage Investment Planning (IDIP) Guide and any future guidance issued by relevant bodies. Surface water management measures should be quantified and coordinated appropriately with the Integrated Environmental Modelling framework to assess the environmental impact of such measures in a drive to achieve Northern Ireland's Long-Term Water Strategy sustainability goals.

To help deliver these policies NI Water must:-

SEG FRMD 4D (ii) work with the Department, Councils and other stakeholders to develop and implement the sewerage aspects of integrated drainage schemes to manage surface water flooding in urban areas (incorporating storm drains, SuDS, sewers and watercourses);

SEG FRMD 4D (iii) develop and implement a prioritised programme of Integrated Environmental Models (IEMs) / Drainage Area Plans (DAPs), targeting the 12 Areas of Potential Significant Flood Risk (APSFR), as appropriate, including assisting in the development of integrated drainage modelling in specific locations on a case by case basis, where this has been identified as necessary through the preliminary NI IDIP Guide;

SEG FRMD 4D (iv) progress integrated Drainage Area Plans and associated surface water management measures identified through the FRMPs; and

SEG FRMD 4D (v) prioritise any work identified through the Flood Investment and Planning Group (FIPG).

3.14 Within Northern Ireland, no single organisation is currently responsible for all surface water flooding. To help address localised flooding, a Flood Investment Planning Group (FIPG) was established to provide a

coordinated approach to the identification of localised flooding issues to be addressed on a multi-agency basis.

NI Water is a key member of FIPG and helps to deliver the group's key functions which include, identifying issues to be addressed, carrying out investigations, gaining organisational support for schemes and agreeing funding proposals. The flexibility provided by FIPG is designed to help simplify processes, reduce overall cost to the department and help facilitate joined up working.

Through the Flood Investment and Planning Group (FIPG), NI Water should:-

SEG FRMD 4D (vi) continue to contribute to the key functions of the FIPG;

SEG FRMD 4D (vii) help to deliver a programme of integrated surface water drainage schemes to alleviate flooding;

SEG FRMD 4D (viii) continue to assist in the development of integrated flood modelling in specific locations on a case by case basis, where stakeholders agree that this is necessary; and

SEG FRMD 4D (ix) consider if the budget for 'integrated' DAPs could also potentially be used to fund any NI Water works identified through the FIPG.

FRMD Aim 5: Be prepared for extreme weather events

FRMD Policy 5C: Effective flood emergency planning and delivery structures

3.15 To improve the response to major flooding incidents, it is important that effective arrangements are in place to co-ordinate the work of all organisations involved.

SEG FRMD 5C NI Water is a key member of the Floods Strategy Steering Group (FSSG) and Civil Contingencies Group Northern Ireland (CCGNI) and should continue to contribute to delivering the group's key functions including a coordinated response from Government during flooding incidents and effective emergency planning,

4. Environmental Protection and Improvement

Introduction

4.1 Protecting and improving the long-term quality of the water environment is fundamental to securing high quality, safe drinking water supplies for households, business, industry and agriculture. A healthy water environment is critical. It is not just needed for drinking water but also supports recreational activities, biodiversity and the character of our countryside. This approach will help to deliver Programme for Government Outcome 2 - we live and work sustainably - protecting the environment.

The following paragraphs outline the individual investment priorities for environmental protection and improvement.

EP Aim 1: Sustainable Environmental Policy and Regulation

EP Policy 1A: Sustainable environmental policy

4.2 Sustainable environmental policy is about developing and implementing policies which are socially, economically and environmentally viable. To help achieve this, policy makers need to work closely with key stakeholders to develop affordable environmental policies which can be programmed into long term investment plans.

To help deliver this policy, NI Water in conjunction with NIEA, has developed shared catchment models, to help inform the scope of catchment-based solutions. NI Water is also factoring climate change into its WR&SRP plan to help inform improvements to its network to provide greater resilience for specific critical periods.

SEG EP 1A NI Water should continue to place greater emphasis on longer-term planning, to allow more time to develop and implement sustainable shared solutions and factor in climate change predictions on the future quality and quantity of

raw water. This approach will help to deliver the objectives of the Northern Ireland Climate Change Adaption Programme (2019-2024). A primary platform for this is the Integrated Environmental Modelling framework, which assesses the impact of NI Water's assets on the receiving water quality.

EP Aim 2: Sustainably Manage the Catchment to Improve Water Quality

EP Policy 2B: Sustainable catchment management to reduce pollution

4.3 This policy is about managing all other (non-agricultural) land within the catchment to reduce surface water run-off and nutrients/contaminants being washed or leached into rivers, lakes and underlying programme.

To help comply with discharge consents and sustain levels of wastewater compliance, NI Water in conjunction with NIEA, has agreed delivery of nominated outputs for wastewater treatment works to help minimise potential pollution and also meet annual wastewater compliance targets.

SEG EP 2B NI Water should continue to improve compliance with discharge consents regulated by NIEA and through its Integrated Environmental Modelling Programme has initiated stakeholder partnerships addressing other sources of pollution and priority pollutants, with a view to catchment-based connecting of NI Water assets that are impact and evidence based.

EP Aim 3: Effective and Efficient Wastewater Collection and Treatment

EP Policy 3A: Educating consumers to prevent inappropriate items entering the sewerage network

4.4 This policy is about encouraging responsible sewerage consumer behaviour to prevent inappropriate items/substances entering the public sewerage system.

NI Water offers all primary and secondary schools an education talk on its key 'Bag It & Bin It' messages. It also provides education programmes and public awareness campaigns on the importance of correct disposal of fats, oils

and greases (FOG) and has established partnerships with environmental stakeholders, such as Environmental Health (in all the Local Councils), to work collaboratively to raise awareness of appropriate FOG disposal.

NI Water also carries out research to identify more sustainable alternatives to orthophosphate treatment and how best to reduce the amount of nutrients entering the wastewater system.

SEG EP 3A NI Water should continue its education programmes/campaigns and partnership working with environmental stakeholders to raise awareness of important issues. NI Water should also develop and implement new public awareness campaigns such as plastic pollution and seek to incorporate its Corporate Social Responsibility (CSR) activity when forging relationships with environmental stakeholders. In addition, NI Water should also carry out research to identify more sustainable alternatives to orthophosphate treatment and how best to reduce the amount of nutrients entering the wastewater system and alternatives to orthophosphate should be used, if they become available. Integrated Environmental Modelling may assist as part of the emerging approach.

EP Policy 3B: Efficient, effective and compliant wastewater treatment

4.5 NIEA regulates the quality of wastewater discharges and monitors and enforces NI Water's compliance with environmental requirements. During PC15, NI Water is developing a holistic catchment-based approach to wastewater treatment by widening the scope of drainage area (sewer) studies and, where necessary, include recommendations for treatment facilities. NI Water also continues to expand its exploration of sustainable wastewater treatment and has also engaged with the environmental regulator to recommend a large PE sustainable solution at Ballykelly. NI Water's appraisal process now includes whole life costs which ensures that optimum long-term solutions are identified.

NI Water also regularly liaises with Local Councils to provide them with information on headroom capacity and growth scenarios at wastewater treatment works and the wastewater system as a whole.

SEG EP 3B NI Water should continue with its catchment-based approach to wastewater treatment and conveyance, utilising its various modelling tools to inform project appraisals to deliver optimum long-term benefits. This will be done in conjunction with local councils to identify where wastewater treatment works need to be upgraded, to minimise areas where economic growth has to be restricted. NI Water should continue to explore sustainable wastewater treatment solutions to reduce treatment costs and improve compliance. NI Water should also continue planning for a new sludge disposal strategy and work closely with NIEA to develop and implement a WwTW flow metering plan.

EP Policy 3C: Reduce unsatisfactory discharges from the public sewerage system

4.6 Most of the public sewerage infrastructure is combined and collects and carries both foul water (sewage and wastewater) and surface water (rainwater). When combined sewers are overloaded during intense rainfall, combined sewer overflows (CSOs) enable sewage to be discharged directly into waterways to prevent sewers backing up.

To help achieve this objective, NI Water implemented a long-term investment programme, to address UIDs, to help achieve good ecological status in inland and coastal waters. In addition, NI Water will only implement conventional sewer storage solutions where storm separation and/or infiltration reduction are not viable, or provide an incomplete solution. During PC15, NI Water also commenced a programme of flow monitoring at combined sewer overflows and emergency overflows. This was prioritised initially on designated bathing and shellfish waters, to identify problematic overflows.

SEG EP 3C NI Water should continue to implement a long-term investment programme to address unsatisfactory intermittent discharge (which should initially be

identified through Integrated Environmental Management and drainage studies) and a programme of flow monitoring at combined sewer overflows and emergency overflows, to identify problematic overflows, on the basis of prioritising the environmental needs of the receiving water. NI Water's focus should also be on deploying sustainable treatment solutions, like SuDS, within Drainage Area Planning, wherever possible, to reduce pressures on sewerage systems before discharge into the environment.

EP Policy 3D: Sustainable and compliant private sewers and treatment systems

4.7 The impact of septic tank discharges or on-site wastewater treatment systems on the aquatic environment in Northern Ireland has been an issue for many years. There are also many private sewerage systems on residential and large commercial sites which are not managed or maintained by NI Water and it is important that these are effectively regulated. In addition, sewerage systems can include misconnections, which are drains that are wrongly connected e.g. foul sewer connected to the storm water drain.

NI Water investigates and undertakes remedial action on misconnections within the public sewer network, although this is dependent on future funding. A 'Drainage Misconnections' leaflet has been produced to inform and raise awareness regarding the environmental impact of misconnections to the sewerage system. This leaflet is distributed at stakeholder engagement events and in targeted areas.

SEG EP 3D NI Water should continue to collaborate with NIEA to address environmental pressures related to private sewerage infrastructure, septic tanks and misconnections between the sewerage system and stormwater drains. NI Water should also continue to work with the Department on preliminary work to identify further policy needs in this area of misconnections.

EP Aim 4: Maintain sustainable levels of water in the environment

EP Policy 4A: Protect water resources through effective regulation and enforcement

4.8 The Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) Order 2006¹⁵ provide controls on water abstractions and impoundments in Northern Ireland. All significant operators who have a licence to abstract from surface water or groundwater under the Regulations are required to have monitoring systems in place.

SEG EP 4A NI Water should work with NIEA to help it to review the effectiveness of drinking water abstraction processes and complete a review of NI Water abstraction licences.

¹⁵ [The Water Abstraction and Impoundment \(Licensing\) Regulations \(Northern Ireland\) Order 2006](#)

5. Water and Sewerage Services

Introduction

5.1 The supply of clean, healthy drinking water and the effective treatment of our wastewater are essential for public health, the economy and the environment. These services must meet the varied needs of all customers including agriculture, business, industry and households without impacting adversely on the environment. This approach will help to deliver Programme for Government Outcome 1 - we prosper through a strong, competitive, reasonably balanced economy and Outcome 11 - we connect people and opportunities through our infrastructure.

The following paragraphs outline the individual investment priorities for water and sewerage services.

WSS Aim 1: Provide efficient and affordable water and sewerage services

WSS Policy 1B: Manage future costs through innovative management of assets and infrastructure

5.2 NI Water's investment policy, to prioritise maintenance needs over enhancement, should still apply, although NI Water recognises the increasing pressure from growth and its potential to negatively impact on treatment and drainage performance. To help deliver this policy, NI Water revised its Capital Appraisal Guidance, to ensure that solutions that provide the greatest value for money in terms of whole life costs versus whole life benefits are progressed. NI Water also has a Capital Maintenance Planning project underway to improve Capital Maintenance Planning during the PC15 period, and also continues to identify advantageous technologies and systems by trialling technology through pilot innovation projects.

In addition, NI Water has revised its Research, Development and Innovation Strategy to assist the continued focus on improving performance and the delivery of further efficiencies.

SEG WSS 1B NI Water should continue to prioritise maintenance needs over enhancement; keep the Capital Appraisal Guidance under review to ensure the right sustainable solutions are delivered; improve systems and processes associated with gathering asset information to inform investment needs; continue to deliver the company's Research, Development and Innovation Strategy; and invest in new technology and systems that improve operational efficiency and performance, as well as reducing future operational or maintenance costs. Integrated Environmental Modelling should assist in this regard.

WSS Policy 1C: Transform water and sewerage assets and infrastructure through sustainable solutions

5.3 To manage future maintenance and power costs, future investment must be sustainable. This means moving away from traditional high energy water, wastewater and drainage solutions and adopting innovative, natural approaches, where issues are addressed at source. The aim is to achieve Sustainable Service Delivery' by delivering 5 key policies:

- Sustainable Catchment Management Planning (SCAMP NI);
- Sustainable Stormwater Management;
- Sustainable Wastewater Treatment solutions;
- Water Demand Management;
- Energy Efficiency and Reduced Greenhouse Gas Emissions.

Through its Research, Development and Innovation Strategy, NI Water has identified sustainable solutions, trialled new equipment and processes, and delivered sustainable treatment solutions at Stoneyford and Castle Archdale.

NI Water has also invested in solar panels at 58 sites including the completion of a Solar Farm at Dunore point and currently has three hydro schemes.

SEG WSS 1C NI Water should continue to deliver its long-term strategy to transform its asset base to be less energy intensive, explore opportunities to invest in and generate renewable energy, such as hydro-power and solar panels, to reduce running costs, carefully plan and manage project risks by considering trialling projects and also identify, and secure, sufficient land early in a project phase, to give the option for larger footprint solutions with lower operating costs, if appropriate. Integrated Environmental Modelling should assist in this regard.

WSS Aim 2: Provide high quality services to water and sewerage customers

WSS Policy 2A: Provide high levels of service to all water and sewerage customers

5.4 Drinking water quality is by far consumers' top service level priority. Northern Ireland's high levels of drinking water quality have been achieved through sustained levels of investment in water treatment facilities and water mains rehabilitation. Wastewater treatment compliance also remains very high as a result of sustained investment in wastewater treatment facilities. Investment has also helped to reduce the number of water supply interruptions, reduce the number of properties affected by internal and external sewer flooding, reduce leakage and improve water pressure.

For PC15, NI Water developed an Infrastructure Investment Methodology (WIIM) to help prioritise water investment. In addition, NI Water utilises a Strategic Mains Risk and Consequence Model to prioritise capital maintenance interventions in the strategic mains network. NI Water also continues to educate the public about its 'Bag It & Bin It' and 'Fats, Oils and Greases' campaigns to help reduce costly blockages and damage to the environment.

NI Water should continue to:-

- SEG WSS 2A (i) adopt a risk-based approach to sustain current levels of drinking water quality compliance;
- SEG WSS 2A (ii) reduce the number of properties that experience unplanned supply interruptions;
- SEG WSS 2A (iii) resolve issues quickly and provide good communication to those customers that will be affected by both planned and unplanned supply restrictions;
- SEG WSS 2A (iv) maintain a register of properties at risk of internal and external flooding and invest to remove all properties from this register in accordance with agreed levels of funding;
- SEG WSS 2A (v) educate customers with important messages;
- SEG WSS 2A (vi) achieve and maintain the sustainable economic level of leakage;
- SEG WSS 2A (vii) maintain a register of properties at risk of receiving low pressure and invest to remove them from the register in accordance with agreed levels of funding;
- SEG WSS 2A (viii) contribute to the development and delivery of an integrated drainage and wastewater infrastructure plan; and
- SEG WSS 2A (ix) contribute to the development and delivery of Integrated Environmental Modelling (EMI).

WSS Policy 2B: Maintain accurate information on water and sewerage assets, infrastructure and consumers' views

5.5 Customers are the most important part of any business and, therefore, it is essential that accurate and reliable information is collected on customer complaints. In addition, robust and reliable information on water and sewerage infrastructure and assets is needed to inform future investment plans and target improvements where they are most needed.

In PC15, a major exercise of consumer engagement was carried out by NI Water to understand consumer priorities. This was supported by stakeholders working together in the Consumer Engagement Oversight Group to advise

and be informed about the development and application of consumer engagement.¹⁶

The PC21 price control provides an opportunity to build on the consumer engagement work carried out in PC15, the actionable data arising from the development of more meaningful consumer measures and good asset management data linking service to asset performance. Considerable customer engagement is already underway to inform customer priorities as part of the PC 21 process. This should enable the Regulator to set targets for improvement in these new consumer measures and consider what more can be done to both improve service, subject to engagement with consumers over what their expectations are for improving customer service from NI Water.

The majority of NI Water's customer contacts are received via their contact centre and are recorded and logged and an escalation process is operated to inform specific business areas of repeat contacts/issues raised. Customers can also contact NI Water via Social Media through Facebook, Twitter and Instagram and view live online operational information through the post-code search facility on niwater.com. It is expected that the use of social media, web and other digital applications for contacting NI Water may need to be expanded.

Resourcing and technological solutions for dealing with customer contacts will be particularly important in the event of a major incident when NI Water can receive a large number of contacts simultaneously.

NI Water is also progressing projects to improve data accuracy and data validation. NI Water also carries out customer surveys throughout the price control period to help inform future investment plans.

SEG WSS 2B NI Water should continue to collect accurate and reliable information on customer complaints, to provide actionable data and to take account of

¹⁶ [Connecting with Consumers - A report on consumers' priorities for water and sewerage services](#)

customers' views, which will inform future investment and to continue its research to inform investment plans and improve the accuracy, reliability security and consistency of information.

WSS Policy 2C: Effective customer education and public awareness

5.6 NI Water should continue to manage its assets efficiently to reduce both wastewater and pollution incidents. To help do this, NI Water delivers key messages to customers and schools covering water efficiency and what can be disposed of in the sewer. NI Water has developed new partnerships with different stakeholders to help educate a larger audience and raise awareness about key messages.

SEG WSS 2C (i) NI Water should continue to assess the outputs of previous education and public awareness campaigns to enhance future proposals and develop effective partnerships with other organisations, where there are shared benefits of the campaign.

SEG WSS 2C (ii) NI Water should adopt a lead role in consumer engagement to promote the value of water. This should include working with stakeholders to set out a programme of work to improve consumer education and engagement, including pilots or trials to test the effectiveness of different approaches.

WSS Aim 3: Provide high quality customer service and customer information

WSS Policy 3A: Consistent, accessible and timely customer information

5.7 It is important that NI Water provides its customers with consistent, accessible and timely customer information.

NI Water provides a range of options to facilitate customer contact and also utilises social media to enable customers to get in contact. NI Water has launched a self-service website and this will continue to be developed as part of the future services improvement requirement under the customer billing

and contacts contract. First Point of Contact Resolution functional targets have also been set and these are monitored at NI Water's monthly customer meetings.

SEG WSS 3A NI Water should continue to keep customers informed with up to date information using a range of communication channels. NI Water should also investigate the benefits of new web and social media channels as an additional means of communicating with customers and should endeavour to enhance its customer self-service facility and seek to develop it to meet customers' needs and expectations and to improve their experience.

WSS Policy 3B: Improving and measuring the customer experience

5.8 Improving and measuring customers' experience is essential for NI Water to help assess the level of service provided and achieve greater levels of customer satisfaction.

NI Water keeps customers informed of interruption to their service via proactive text messaging and the NI Water website, which also provides live updates on planned and unplanned supply interruptions. NI Water has also launched a new "help" service for customers on its website, where customers can type in questions or queries about their water or wastewater and get immediate answers.

SEG WSS 3B NI Water should continue to seek to reduce the number of complaints received year on year, increase the number of contacts resolved at first point of contact by defining, measuring and using root cause analysis to improve customer experience and continue to work with stakeholders through the Consumer Measures and Satisfaction Working Group to implement agreed customer experience measures and continue to develop these measures through PC21 and consider benchmarking itself against other service providers.

WSS Policy 3C: Helping vulnerable customers in the community

- 5.9 It is important that NI Water provides free additional services for customers who require extra support, e.g. those with a disability, older customers or those with a serious medical condition.

NI Water maintains a Customer Care Register, which customers need to join to get the extra free services available to vulnerable customers. NI Water should continue to actively promote the Customer Care Register to those who are vulnerable and raise awareness through communication activities and targeted engagement with representative organisations.

SEG WSS 3C NI Water should encourage equal access to its services by promoting and reviewing its Customer Care Register to support consumers in vulnerable and changing circumstances. The content and requirements of the Customer Care Register should be reviewed and updated in light of best practice emerging from the Regulator's Consumer Protection Programme and also from other utilities and service providers. NI Water should aim to achieve and sustain an appropriate number of consumer registrations on its Customer Care Register and the Regulator should set targets to increase customer awareness of NI Water's Customer Care Register and to measure the level of satisfaction of support provided to consumers in vulnerable circumstances.

WSS Policy 3D: Efficient and effective processing of customers' bills

- 5.10 The efficient and effective processing of customers' bills is a key aspect of customer service and has the potential to reduce the customer contacts and the number of complaints received.

NI Water has an extensive data quality project ongoing through the Achieving Customer Excellence programme, to improve the overall accuracy of the information held on its corporate systems relating to various customer accounts. NI Water has also deployed a modern meter data management system to collect and record meter reads on site, and return them to the

corporate billing system, in real-time with an out-turn success rate of >99.2%. NI Water has also deployed automatic meter reading equipment and utilises mobile telephone technology to remotely read key meters whilst investigating the potential for SMART metering.

SEG WSS 3D NI Water should consider how it may best avail of new technologies to seek to improve the efficiency and accuracy of the 'meter to bill' process.

WSS Aim 4: Provide resilient and secure water and sewerage services

WSS Policy 4A: Improve the resilience of water and sewerage assets, infrastructure and systems

5.11 It is important that water treatment and distribution systems are resilient to extreme weather events. These include regular flooding after intense rainfall in the summer months, prolonged periods of dry weather causing water scarcity/supply issues and freeze/thaw events following sustained periods of sub-zero temperatures causing bursts and major supply interruptions.

NI Water has undertaken a number of projects across the asset base to assess resilience in relation to freeze/thaw, drought and flooding events. During PC15, water and wastewater treatment works are being upgraded to insulate key components against extreme cold. The draft WR&SRP includes critical period plans for both freeze/thaw & drought events which identifies a programme of investment for mitigation.

NI Water will also be expected to make progress towards the delivery of the Urban Wastewater Treatment Directive and the Pollution Prevention and Control Regulations in relation to odour management

SEG WSS 4A (i) NI Water should continue to assess the resilience of water and sewerage services, assets and systems to extreme weather events and other risks to

inform future investment requirements. NI Water should review and continue the work already undertaken following the Regulator's Freeze Thaw and Industrial Action Reports.

NI Water should also commence a programme of investment to improve and maintain the resilience of the wider water and sewerage asset base and system, prioritised as follows:

SEG WSS 4A (ii) water supply;

SEG WSS 4A (iii) prevention of internal flooding;

SEG WSS 4A (iv) prevention of pollution and odour management; and

SEG WSS 4A (v) manage surface water to protect people and property.

WSS Policy 4B: Effective incident planning and preservation of services

5.12 Investing in resilience will help improve infrastructure/asset performance during climatic extremes although service delivery may still be affected during extreme weather events and, therefore, it is important that NI Water can effectively handle major incidents in order to preserve service delivery. In addition, the Department provides guidance to NI Water on the procedures and measures it expects to be put in place in respect of security of water assets and supply.

NI Water must meet legislative requirements associated with the preservation of services and civil emergency measures and it does this by undertaking an independent annual audit to confirm that all requirements have been met. NI Water also completes an annual winter advertising campaign and regularly attends community winter events and delivers community talks, continuing with its objective to educate and increase public awareness about this important message.

SEG WSS 4B NI Water should maintain and review the effectiveness of emergency plans, systems and processes to preserve service delivery during a major incident, continue to educate and increase public awareness about the importance of insulating supply pipes to prevent bursts and leakage during freezing

conditions and ensure water and sewerage assets and infrastructure are safe. It must comply with any guidance issued by the Department.

WSS Aim 5: Utilise NI Water assets to provide wider benefits for the Environment and the Community

WSS Policy 5A: Manage the NI Water estate to promote recreation, biodiversity and cultural heritage

5.13 It is important that NI Water recognises the wider public value of its land for recreation, biodiversity and cultural heritage. NI Water is currently working with the Northern Ireland Environment Agency, Newry, Mourne and Down District Council, Mourne Heritage Trust and Tourism NI to promote recreation, biodiversity and cultural heritage. NI Water also has a recreational and access policy in place that permits the public access to its land. SCAMP studies are also being rolled out across all drinking water catchments. In addition, a list of heritage sites, within NI Water's estate, has been established under the Protocol for the Care of the Government Historic Estate and condition assessments are taking place to identify any remedial action required.

To help deliver this policy NI Water should:-

SEG WSS 5A (i) develop and implement a long-term estate management strategy;

SEG WSS 5A (ii) permit access to its land/assets to facilitate recreational activities, where it is safe to do so and financial resources permit;

SEG WSS 5A (iii) look for opportunities to enhance or restore biodiversity within its estate;

SEGWSS 5A (iv) continue to develop partnerships to deliver sustainable catchment initiatives;

SEG WSS 5A (v) continue to implement its Biodiversity Action Plan;

SEG WSS 5A (vi) adopt and implement the Protocol for the Care of the Government Historic Estate; and

SEG WSS 5A (viii) develop a long-term plan to bring its assets, covered by this, up to a suitable standard and maintain them going forward.

WSS Policy 5B: Using surplus water and sewerage assets to provide recreational benefits for the community

5.14 As a result of operational improvements, including putting new assets and infrastructure in place, NI Water can be left with various redundant assets, including surplus land and reservoirs. Although these assets may no longer be needed for the provision of water and sewerage services, they may have wider recreational and amenity value to the community.

NI Water has commissioned an Abandonment/Discontinuance Scoping Report to be carried out at a number of reservoirs and this report will be available in PC15. NI Water's current land disposal policy is to offer all surplus land through Land and Property Services, to other public bodies, in the first instance.

SEG WSS 5B NI Water should progress the assessment of 'unused' reservoirs to determine the approach to disposal, develop a policy to ensure surplus water and sewerage assets with recreational value are transferred within the public sector, where appropriate, and ensure that future NI Water Estate Management Plans align to Executive policy on disposal of assets, including Community Asset Transfer.

Information and Security

5.15 NI Water should ensure it addresses emerging information and security requirements.

SEG IS (i) NI Water must comply with the requirements of the Networks and Information System (NIS) Directive on cyber security and the requirements of the General Data Protection Regulation (GDPR), which both came into force in May 2018;

SEG IS (ii) NI Water must have in place arrangements to protect its business critical assets and information. The fast pace of the risks from, and understanding of, cyber threats means that NI Water must constantly review and revise its

practices against increased cyber security threats in line with advice from Defra, as the lead government department for the water sector, together with the Centre for the Protection of National Infrastructure (CPNI), the National Cyber Security Centre (NCSC) and Competent Authority while ensuring its infrastructure and assets are safe and secure;

SEG IS (iii) Security measures on assets must be upgraded and maintained to meet required standards as laid out in the Preservation of Services and Civil Emergency Measures Direction and associated guidance; and

SEG IS (iv) Agreed security and emergency standards for physical security, personnel security and cyber security must be followed. NI Water must ensure that all Critical National Infrastructure (CNI) sites continue to meet the latest security advice, and security issues identified at other sites, to bring them up to the required standard. During the PC21 period, it should continue with training staff to respond to major incidents in line with emergency guidance and protocols.

Glossary

Better Regulation	Delivering policies and laws that bring the greatest possible benefits to people and businesses in the most effective way.
Consumer Council	The Consumer Council for Northern Ireland. CCNI represents the interests of water and sewerage customers to NI Water and Government.
Combined Sewer Overflow (CSO)	Combined Sewer Overflows are overflows used in combined sewerage system to discharge storm waste water directly into surface waters to relieve hydraulic pressure in the system under storm conditions.
Combined Sewer	A sewerage system that collects both waste water and rain water.
DAERA	The Department of Agriculture, Environment and Rural Affairs
DEFRA	Department for Environment Food and Rural Affairs. National Government Department, based in London.
Dfi	Department for Infrastructure
Discharge Consent	All discharges to the water environment are regulated and controlled by NIEA through Discharge Consents.
Discharge Standard	A standard issued by NIEA to allow the discharge of sewage/waste water into a water body, such as a river. The standard will include conditions, to minimise the effects on the receiving water.
Drainage Area Plan (DAP)	A list of necessary sewerage improvements within a catchment area determined by a Drainage Area Study. The DAP normally takes the form of a prioritised list of unsatisfactory intermittent discharges.
Drainage Area Study (DAS)	A comprehensive study of an entire drainage catchment which uses a vast amount of asset and performance data on the condition, performance and future capabilities of the sewers in a given area.

Drinking Water Inspectorate	The Drinking Water Inspectorate (DWI) for Northern Ireland regulates public and private water drinking water supplies, to ensure the ongoing provision of safe, clean drinking water.
Economic Level of Leakage (ELL)	The level at which it would cost more to reduce water leaking from pipes than pump more water into them.
EQIA	Equality Impact Assessment. A detailed assessment of a Government policy on equality grounds.
Flood Risk Management Plan (FRMP)	Under the EU Floods Directive, Flood Risk Management Plans must be prepared at a river basin district level or a set of Plans co-ordinated at river basin district. The plans must include policies for managing flood risk in the long term taking account of the possible effects of climate change. DfI is the designated authority for the implementation of the Directive.
NIEA	The Northern Ireland Environment Agency
NI Water	Northern Ireland Water
PC21	Price Control 2021-2027. PC21 is the process by which the Regular determines what NI Water should deliver during the period by agreeing the Business Plan for the Company. This will be based on the priorities set out in this Guidance.
Protected Areas	This includes: Areas of Special Scientific Interest (ASSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Nature Reserves, Marine Nature Reserves (MNRs), Ramsar Sites, Natura 2000 Sites, Areas of Outstanding Natural Beauty (AONBs) & World Heritage Sites.
Raw Water	Water abstracted for drinking water purpose before treatment.
River Basin Management Plan (RBMP)	A River Basin Management Plan contains a range of measures aimed at protecting, improving and sustaining the use of the water environment, from source to sea.
Regulator	The Northern Ireland Authority for Utility Regulation

DfI Rivers	DfI Rivers is a business area within the Department for Infrastructure and is responsible for managing the risk of flooding from rivers and the sea.
Section 75	Section 75 of the Northern Ireland Act 1998. This law requires the Government to have due regard to the need to promote equality of opportunity. Government policies must be reviewed, in a process known as 'screening'. If this screening identifies a potential equality issue then an EQIA (see above) must also be completed.
Sewerage system/ infrastructure	A system of pipes and ducting which collects and transports sewage.
Sustainable Drainage System (SuDS)	A drainage system that controls the quantity and/or quality of run-off waters by providing storage. This delays or prevents discharge to streams, rivers or NI Water's sewerage infrastructure until there is capacity to accommodate it.
Water Resource and Supply Resilience Plan	A water resource and supply resilience plan shows how a water company intends to maintain the balance between supply and demand for water over the next 25 years. It also incorporates a drought plan which shows how a water company will manage drought situations
Waste Water Treatment Works (WWTWs)	The treatment plant or site where sewage/waste water is received, treated and discharged.
Water Safety Plan	A Water Safety Plan (WSP) is the most effective way of ensuring that a water supply is safe for human consumption and meets both health based and wholesomeness standards. It is based on a comprehensive risk assessment and risk management approach to all the steps in a water supply chain from catchment to consumer.
Water Treatment Works (WTWs)	The treatment plant or site where raw water is treated to provide safe and wholesome drinking water for public supply.

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