

Water and Drainage Policy Division



LTWS Stakeholders

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Your reference:
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November 2021

Dear Stakeholder

SUSTAINABLE WATER – A LONG-TERM WATER STRATEGY FOR NORTHERN IRELAND (2015-2040) – FIFTH ANNUAL STRATEGY PROGRESS REPORT

The Minister has approved the fifth Annual Progress Report on Sustainable Water – A Long-term Water Strategy and copied the report to Executive colleagues. I attach an electronic copy for your information. The report is also available on the DfI website at the link below:

<https://www.infrastructure-ni.gov.uk/publications/fifth-annual-report-sustainable-water-long-term-water-strategy-northern-ireland-202021>

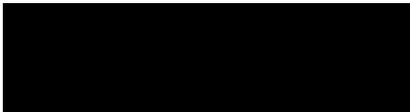
The fifth Annual Progress Report highlights the success of our various organisations in progressing the programmes and plans that have been put in place to tackle and improve the areas of drinking water, flood risk, environmental requirements and water and sewerage services.

I would like to thank you all for your contributions towards the continued delivery of the key elements of the Strategy, which will be important in helping to achieve a number of commitments in the Executive's Draft Outcomes Framework. We will need to continue and increase our integrated working and collaboration between all stakeholders and reinforce the need for appropriate levels of funding.

Looking forward, if there are any areas, or specific actions, in which you could assist or would like to become involved, I would encourage you to contact the lead organisation for those actions to discuss. If you are unsure who to contact within the lead organisation, please contact Julian Smyth (028) 9034 6220.

Thank you for your continued support.

Yours sincerely



JULIE ANN DUTTON

Water and Drainage Policy Division



Department for

Infrastructure

An Roinn

Bonneagair

www.infrastructure-ni.gov.uk

**ANNUAL REPORT
ON
SUSTAINABLE WATER -
A LONG-TERM WATER STRATEGY
FOR NORTHERN IRELAND (2015-2040)**

Fifth Annual Report - October 2021

Executive Summary

1. The Executive's Sustainable Water – A Long-Term Water Strategy sets out a common vision for a sustainable water sector. To ensure full compliance with the Strategy, an Implementation Action Plan was agreed by all the relevant stakeholders. The Department for Infrastructure (DfI) is responsible for managing the implementation of the Strategy and has undertaken to co-ordinate an Annual Report on its progress and furnish the NI Executive with a copy. This is the fifth Annual Report on the implementation of the Strategy.
2. The Implementation Action Plan contains 231 actions which have been drawn directly from the Strategy. The actions have been prioritised as short, medium and long-term actions. It should be noted that a large number of actions are considered 'business as usual' and as such will always be ongoing rather than having a specific end date.
3. Key achievements this period include:
 - (i) NI Water is undertaking an innovative Oxygen and Hydrogen Demonstrator Project that will deploy a state-of-the-art one megawatt electrolyser at wastewater treatment works. The purpose of this project is to demonstrate how: elevated levels of oxygen can increase wastewater processing capacity; green-hydrogen can be adopted to decarbonise transport; improvements in the utilisation of renewable grid supplied electricity are possible; and leading hydrogen technology can assist in addressing the climate emergency by cutting harmful carbon emissions;
 - (ii) NI Water intends to plant over 1 million trees over the next 10 years. This commenced in February 2021, with planting at Fofanny Dam in the Mourne. As the second biggest landowner in Northern Ireland, after the Forest Service, NI Water is delivering a large-scale planting programme across 11,300 hectares of land;

- (iii) NI Water recently completed a £1million investment in a major water improvement project at Rathlin Island. The project involved the construction of a new pumping main, bore well and an improved water treatment facility using a new technology for Northern Ireland. The new modern automated system will improve services for customers in the area, providing greater security of supply and enhanced water quality to the island;
 - (iv) through the Water Quality Improvement Strand of the Environmental Challenge Fund, the Department of Agriculture, Environment and Rural Affairs (DAERA) approved and funded eight water quality improvement grant projects. Applications were accepted from not-for-profit organisations and councils, to deliver on water quality priorities across Northern Ireland. DAERA provided funding of almost £123,000 which was matched by the applicants, with over £55,000 contributed;
 - (v) Newry and Mourne District Council delivered a Water Resource Management Programme for the rivers in the Ring of Gullion Area of Outstanding Natural Beauty in Carlingford and Newry. The Council worked to re-engage the community and farmers with their local water resources and encourage a better understanding of the importance of water in the local environment; and
 - (vi) DAERA, DfI and the Department of Health (DoH), in partnership with NI Water and Queens University Belfast, are delivering an interdepartmental approach to monitoring COVID-19 in wastewater. Wastewater surveillance is one of the tools being used to help in the response to the current COVID pandemic aimed at informing public health decisions.
4. Strategy actions will assist in the delivery of a number of the outcomes in the Executive's Draft Outcomes Framework, and will help to protect the environment and grow a carbon-neutral economy.

KEY CHALLENGES

Funding

5. Full implementation of the Strategy will require significant financial investment over the 25-year period of the Strategy. The issue of costs and funding is of increasing concern in the current economic climate. It is recognised that reductions in funding will have an impact on key stakeholders' (government departments and NI Water) ability to deliver the objectives of the Strategy and the level of investment will depend on the Executive's budget priorities. In addition, the implications of the UK withdrawal from the EU, which are still evolving, will need to be carefully managed to minimise any potential impact on the delivery of the Strategy. The longer-term impacts of COVID-19 will also need to be more fully understood. The management of the pandemic has made it very clear that water plays a key role in protecting the health and wellbeing of our citizens, and this has underscored the need to manage this natural resource in a more sustainable way.

Increased Water Consumption

6. During 2021 to end of July, water demand has not returned to pre COVID-19 levels, with further high demand continuing, especially in July 2021, as a result of the prolonged period of hot dry weather. In July 2021, NI Water pumped extremely high volumes of water on a daily basis, peaking at 735 million litres, an increase of about 30% on an average day. In addition, NI Water also had to deal with localised water challenges, including tankering water within the NI Water infrastructure, to ensure customer supplies were maintained.

Climate Change

7. The latest climate projections indicate that Northern Ireland will be subject to higher average temperatures, increasing winter precipitation and more extremes of weather. The Strategy and its delivery partners will need to

consider these latest climate projections in the management of flood risk, development planning and the delivery of Strategy actions.

Water Quality

8. Significant challenges remain to improve the quality of water bodies, in line with the standards set out in the Water Framework Directive. Water catchments continue to be impacted by a wide range of pressures including urban development, industry, agriculture, abstraction, forestry and chemicals.

Future Agricultural Policy

9. Future agricultural policy will be developed outside the constructs of the Common Agricultural Policy. Looking ahead, this means that there will be greater flexibility to decide the shape and nature of future agricultural support and agri-environment schemes. In making decisions around this, there will need to be consideration of the details of any measures to support the strategy, alongside how the agriculture industry needs to be supported through any wider challenges and opportunities post EU exit.

INTRODUCTION

10. This is the fifth Annual Report on the Executive's Sustainable Water – A Long-Term Water Strategy. The Strategy sets out a common vision for a sustainable water sector and focuses on Economic Development & Growth, Affordability, Environmental Improvement & Compliance, Flood Risk Management and Sustainable Service Delivery.
11. The Strategy will support the delivery of specific commitments in the Northern Ireland Executive's Draft Outcomes Framework and has informed PC21 Social and Environmental Guidance for water and sewerage services, which sets out key investment priorities for the water sector.
12. The Strategy focuses on four high-level aims to cover the key water needs within a catchment:
 - (i) to provide high quality sustainable supplies of drinking water to households, industry and agriculture;
 - (ii) to manage flood risk and drainage in a sustainable manner;
 - (iii) to achieve the environmental requirements of the Water Framework Directive in a sustainable manner; and
 - (iv) to provide sustainable water and sewerage services that meet customers' needs.

Drinking Water Supply and Demand

13. In order to "*Manage Drinking Water Quality Risks in a Sustainable Manner from Source to Tap (DW Aim 1)*"; NI Water has, in consultation with key stakeholders, put a number of plans and programmes in place:
 - (i) NI Water is progressing its Sustainable Catchment Management Planning programme (SCAMP) and Source to Tap Project across the Derg and Erne drinking water catchments. The Source to Tap project has continued to roll out the pilot Land Incentive scheme to farmers in the Derg catchment, which has involved NI Water making over 100 farm

visits promoting sustainable, catchment-scale solutions for the protection of rivers and lakes in the Erne and Derg cross border catchments;

- (ii) NI Water is also involved in the Cooperation across Borders for Biodiversity (CABB) project which is a €4.9m five-year partnership involving the Royal Society for the Protection of Birds, Birdwatch Ireland, Butterfly Conservation and Moors for the Future. The Garron Plateau bog restoration project benefitted from this partnership after obtaining funding to restore 493 hectares of globally rare blanket bog;
 - (iii) the Drinking Water Inspectorate (DWI) continues to work with NI Water to ensure that it reviews the mitigations identified within all the risk assessments of the Drinking Water Safety Plans; and
 - (iv) DAERA published a groundwater protection leaflet in December 2020 and also ran a promotion campaign in January/February 2021, through its social media channels. In addition, an annual engagement letter and short guide was sent to all groundwater monitoring network site owners (57 in number), in March/April 2021. In 2021/22, NIEA staff also used digital platforms and digital devices to undertake surveys of all groundwater monitoring sites. This enabled NIEA to gain a better spatial understanding of monitoring sites.
14. Over the PC15 period (2015/21), NI Water achieved its target of the replacement of 11,064 lead communication pipes (which are outside the curtilage of the property) at consumers' properties, in addition to opportunistic lead pipe replacement under water main rehabilitation. NI Water has also carried out lead pipe replacements in response to customer requests and/or following an exceedance of the lead standard for samples taken as part of its routine sampling programme.
15. NI Water also issues a leaflet, highlighting the risks posed by lead, alongside customer notification to affected areas, where improvement work is taking place by its Watermains Rehabilitation team. A social media campaign was rolled out in May 2021 to a targeted geographical audience.

16. The Drinking Water Inspectorate (DWI) is the drinking water quality regulator covering both public and private drinking water supplies. Within the Strategy, it leads on the monitoring and risk assessment of drinking water quality from private water supplies, through administering the private water supply regulations. In 2020, due to COVID-19 restrictions, the private water supply monitoring programme had to be suspended for approximately two months. Although a number of businesses closed, others such as food manufacturers increased production, thereby putting pressure on water supplies. DWI worked closely with council staff and private water supply owners to ensure that there were effective risk management processes in place, in the absence of sampling. In advance of businesses opening, the DWI published [Guidance on maintaining drinking water quality when reinstating water supplies following temporary closure](#). Sampling at private water supplies recommenced in June 2020 as businesses started to reopen and the overall monitoring targets were met for the year.
17. DWI undertakes an annual monitoring programme of private water supplies, and in 2020, there were over 14,900 tests carried out, with 99.24% of these tests compliant with drinking water standards at these supplies. The Service Level Agreement continues to operate between councils and the Drinking Water Working Group. Representatives from each council and DWI met in September 2020 and more recently in June 2021. In addition, five training sessions focusing on sample collection competency were delivered to council staff in October and November 2020 and June 2021. A total of 86 council staff attended this training, either for the first time or for refresher training. Risk assessment training was delivered to 16 council staff in December 2020.
18. DWI also leads on a series of targets, within the Strategy, related to managing water quality risks within domestic distribution systems. These include promoting the use of the Water Safety Plan approach within buildings, where water is made available to the public, by providing appropriate advice and guidance. DWI has continued, during 2020/21, to work with key stakeholders,

and intends, within the short to medium term, to develop and promote such an approach.

19. The Strategy aims to ensure that we “*Meet the Water Demand Needs of Society, the Economy and the Environment (DW Aim 2)*”; and a key means of achieving this is by effective forward planning. In June 2020, NI Water published its first Water Resource and Supply Resilience Plan. This Plan states that there has been a substantial improvement in the resilience of the water network since the previous Water Resource Management Plan in 2012, through the implementation of a number of capital projects. However, the Plan does recommend a small number of schemes which NI Water considers important to further improve the resilience of the network and three projects that are essential to ensure that sufficient water is available for customers over the next 25 years. In addition, NI Water continues to provide assessments on water and wastewater capacity to local councils, in respect of the preparation of Local Development Plans.
20. During 2020/21, NI Water’s education team delivered 272 live and pre-recorded virtual education talks on key water efficiency messages to primary schools and created online video lessons for primary schools on the topic of saving water. To complement the virtual lessons, NI Water offered 53 water butts to primary and secondary schools.
21. To ensure that it can “*Resource Efficient Drinking Water Treatment and Supply Chains (DW Aim 3)*”; in 2021, NI Water implemented a number of energy efficiency projects across its water assets, including improvements in its pumps and control systems. This will help to unlock significant energy and carbon savings, reducing operating costs and providing a better value service for customers.
22. NI Water has been examining energy efficiency of source optimisation (utilising upland sources and reducing pumping and energy costs) at water treatment works. Within the PC15 period, NI Water’s Energy Benefits target was £4.1m.

At the end of the PC15 period, NI Water realised £5m of sustainable benefits and an additional £670k of 'one-off' benefits.

23. During 2020, the first pilot plant at Derg wastewater treatment works was used to confirm the processes that are required at this site. A construction project is now underway to upgrade this plant.
24. A new ion exchange treatment process, which is new technology for NI Water, has also been installed at Rathlin Island wastewater treatment works, to enhance the water treatment system on the island. This was installed following the service of a notice on NI Water by DWI, to take measures to improve compliance for the trihalomethanes parameter.
25. Land Incentive Scheme (LIS) Water, is a non-profit centre of excellence focused on public policies, regulation and management of water services and related water resources. It offers grants to farmers to help deliver water initiatives and is funded by the European Union's INTERREG VA Programme.

The LIS officially closed for applications in December 2020 and 119 applications for farm grants were received, with a waiting list created for which no further funds were available. A total of 236 farm visits were carried out, with Water Environment Management Plans produced for these farmers, outlining recommendations to improve both the farm business and water quality. Further farm visits are still being requested and fulfilled by the Project Officers. At 30 September 2021, over €1,018,000 has been approved for payment to farmers participating in the LIS, for measures implemented. These include measures to reduce sediment and pesticide run-off, for example, weed wiping by contractors, pesticide storage, installation of riparian fencing and alternative drinking sources, clean and dirty water separation in the farmyard and improvement to farm tracks to reduce run-off. Monitoring is also underway in the Derg and the Finn catchments to ascertain if there is a reduction in MCPA herbicide from the measures installed.

Flood Risk Management and Drainage

26. Given the number of flood events in Northern Ireland in recent years, and the widespread impact that these events have caused, one of the key aims of the Strategy is to manage flood risk and drainage in a sustainable manner.
27. The Department for Infrastructure is the competent authority for implementing the Floods Directive in Northern Ireland, in partnership with a number of other statutory bodies and departments, including NI Water, local councils and DAERA. Three separate first cycle Flood Risk Management Plans were published in 2015, and covered the period 2015-2021. Preparation of the second cycle Flood Risk Management Plan, for the period 2021-27, is reaching its final stage. A single Plan covering all three River Basin Districts will take over from the first cycle Plans. A six month public consultation, during which the draft Plan was circulated widely, ended in June 2021 and the responses received will shape the final Plan which must be completed and published by 22 December 2021. COVID has prevented public meetings about the Plan being held but the public consultation was circulated to over 260 consultees seeking their views on its contents. This work continues to be overseen by the Floods Directive Technical Stakeholder Group (FDTSG), led by DfI's Water and Drainage Policy Division.
28. There are a number of stages in the development of a Flood Risk Management Plan and work on the second cycle, which runs concurrently with the implementation of first cycle Plans, is being progressed as follows:
- (i) The Northern Ireland Flood Risk Assessment (NIFRA) 2018, published in December 2018, is a high level analysis of the potential economic, social and environmental impacts which could result from flooding in Northern Ireland. This assessment has identified 12 Areas of Potential Significant Flood Risk (APSFR);
 - (ii) For each of the 12 APSFR identified, the Directive required that flood hazard and flood risk maps were reviewed and, if necessary, updated and made available to the public by 22 December 2019. This exercise

was completed within the statutory timeframe and the updated flood maps can be viewed at Flood Maps (NI); and

- (iii) The third stage of the process is the publication of the final second cycle Flood Risk Management Plan and associated Strategic Environmental Assessment (SEA) and Habitat Regulations Assessment (HRA) (which are in the latter stages of completion) by 22 December 2021. The focus of the Flood Risk Management Plan is to mitigate flood risk within APSFR through appropriate objectives and measures, helping DfI and other stakeholders to work with communities to reduce the impacts from flooding. However, measures in the Plan do extend beyond APSFR recognising that flooding can happen outside areas which have the greatest risk.
29. Amendments have been made to the regulations which transposed the Floods Directive into Northern Ireland law to ensure that they are still operative post EU-Exit.
 30. Land-use planning is key to managing flood risk and drainage issues and to “*Delivering Sustainable Flood Resilient Development (FRMD Aim 1)*”; DfI is responsible for planning policy and drainage matters and it is working closely with council planning departments to enable them to make informed decisions in relation to flood risk policies that should be included in their new Local Development Plans (LDPs) and Development Management issues.
 31. The Stormwater Management Group (SMG) is a multi-agency group jointly chaired by DfI’s Water and Drainage Policy Division (WDPD) and NIEA. Its focus is to encourage the use of sustainable drainage systems (SuDS) as the preferred means of dealing with surface water. Work to date has been successful in increasing the implementation of hard engineered underground SuDS systems. The group is exploring various options for approval and adoption/maintenance of soft SuDS assets to encourage their uptake among developers. Consideration is being given as to whether any such policy may require legislative change and what, if any, financial impacts it might have on

one or more stakeholders. The widespread use of SuDS will further reduce flood risk in the future and provide sustainable development by retaining stormwater local to the development during flood events. LDPs from local councils have been scrutinised and comments returned to encourage inclusion of SuDS within Plans, particularly referencing the additional benefits of soft SuDS. The SMG is continuing to engage with stakeholders to identify potential pilot soft SuDS projects. A sub-set of the SMG has been working with two private developers where soft SuDS feature in the development and the group has identified possible risks and issues, for each of the development sites. In the absence of a power, or responsibility, for approving soft SuDS, the group has worked with the developers to find solutions and mitigation measures which can be implemented to enable the SuDS proposal to proceed. Learning from these developments will help inform future SuDS policy and guidance.

32. In *“Managing the Catchment to Reduce Flood Risk (FRMD Aim 2)”*; it is important to consider man-made structures as well as those that occur naturally. DfI Roads and Rivers and NI Water continue to carry out routine proactive and reactive maintenance, as resources permit, to ensure that publicly-managed drainage systems are performing their function, particularly during periods of intense or prolonged rainfall. Specifically, DfI Rivers has a rolling programme of annual watercourse and drainage asset inspection.
33. Reservoirs are significant man-made structures. It is, therefore, important that these structures are routinely monitored by the owner or manager to ensure that each structure is fit for purpose and that any identified weaknesses are addressed to mitigate against the risk of flooding caused by reservoir failure.
34. Following the Department’s (Transfer of Functions) Order (Northern Ireland) 2021 being affirmed in the Assembly on 1 June 2021, statutory responsibility for the Reservoirs Act (Northern Ireland) 2015 transferred to the Department for Infrastructure with effect from 2 June 2021. The Minister is now in a position to be able to consider the way forward in terms of the commencement and implementation of the reservoir safety policy envisaged in the Act.

35. In the absence of the commencement of the full regulatory framework provided for by the Reservoirs Act (NI) 2015, DfI Rivers has produced a Technical Guidance Note, to provide a structured approach to the provision of advice to local council planning departments on flood risk from reservoirs.
36. The Living With Water Programme (LWWP) is developing a Strategic Drainage Infrastructure Plan (SDIP) for Belfast to protect against flooding, enhance the environment and enable economic growth. This is being led by DfI, with significant input from NI Water, DAERA, Belfast City Council and the Utility Regulator. The Plan will examine a range of sustainable drainage options e.g. SuDS, etc. along with traditional engineering solutions. Provisional estimates indicate that over £1.4 billion will be needed to deliver the SDIP over the next 12 years. This presents a significant challenge in the current financial climate. The draft plan, entitled Living With Water in Belfast, An Integrated Plan for Drainage and Wastewater Management in Greater Belfast, was published for public consultation in November 2020. Subject to approvals, the final plan will be published in autumn 2021. Considerable progress has been made in working with key stakeholders over the past year with joint proposals being taken forward with Belfast City Council and NI Water.
37. DfI Rivers also undertook a review of the Floods Directive website mapping format, with a view to making it more interactive.
38. In an effort to *“Provide Sustainable Integrated Drainage in Rural and Urban Areas (FRMD Aim 3)”*; NI Water is piloting stormwater separation projects, which involves redeveloping brownfield sites and removing combined sewer networks on these sites, replacing them with new developments serviced by separate storm and foul sewers. NI Water has completed such projects at Foyle College, Limavady Road, Londonderry and Olympia Leisure Centre, Windsor Park, Belfast. Over the PC15 period, the total impermeable area removed is now 296,313 m². This is in excess of its target of 30,000m² per annum which was set in PC15 and reduces the risk of flooding from combined sewers. NI Water is also engaging with the Living With Water Team and its consultants,

ARUP, on determining options for stormwater separation in Londonderry in conjunction with the Buncrana Road improvement scheme.

39. To “*Improve Flood Resistance and Resilience in High Flood Risk Areas (FRMD Aim 4)*”; DfI Rivers maintains registers of flood hot spots that are at risk from flooding. Established in 2013, the Flood Investment and Planning Group (FIPG) continues to provide a co-ordinated approach to the identification of flooding issues to be addressed on a multi-agency basis, including proposals for the investigation of flooding, and to propose potential solutions, prioritise investment, agree responsibilities and funding proposals, and make the case for investment. FIPG consists of representatives from Water and Drainage Policy Division, DfI Roads, DfI Rivers and NI Water who, working collaboratively, have contributed to the delivery of a number of flood alleviation investigations and schemes. During 2020/21, schemes were completed in Warrenpoint town centre and a scheme benefitting several areas in Ballymena. Several projects which were being tracked by FIPG were transferred to the Living With Water programme for further consideration/progression. These schemes include Ravenhill Avenue and Sicily Park (both in Belfast).
40. In April 2020, DfI Rivers completed a project evaluation of the Homeowner Flood Protection Grant Scheme, which demonstrated that, although costs were higher than originally envisaged, as an investment the scheme provided value for money and there is both a need for, and benefit from, a property level protection grant scheme.
41. DfI Rivers spent approximately £6.1m on drainage and flood alleviation schemes in 2020/21 which protected 83 properties.
42. In 2020/21, DfI Rivers repaired over 1km of designated culverts and 5.94km of fluvial defences. In addition to this, DfI Rivers also maintained over 398 designated rural open watercourses and 100% of all designated culvert inlet grilles. Rivers also inspected and maintained, as required, 94.47% of all designated urban open watercourses.

43. In September 2021, DfI Rivers awarded a £17m contract to Lagan Construction Limited, for the design and construction phase of the Belfast Tidal Flood Alleviation Scheme. The principal aim of this scheme is to provide a long term approach to tidal flood risk management for Belfast City Centre and the tidal River Lagan, from Belfast Lough to Stranmillis Weir. It is estimated that there are currently 1,500 properties at risk of flooding within Belfast from a significant tidal event. Climate change predictions estimate this could rise to over 3,900 properties by 2080 and over 7,300 by 2117.
44. DfI Rivers has also progressed the Shimna Flood Alleviation Scheme to procurement stage. The Northern Ireland Flood Risk Management Plans identified Newcastle as being one of 20 Significant Flood Risk Areas in Northern Ireland. Newcastle has experienced flooding regularly over the last 40-50 years, most recently in August 2020. The scheme is designed to reduce flood risk from the Shimna River to 312 properties and involves the construction of over 1400m of flood defences at an estimated cost of £6.5m
45. DfI Rivers is progressing its 10-year capital works programme for over 50 watercourse-related projects. This largely focuses on Strategic Flood Risk Assessments (SFRAs) identified in the Northern Ireland Flood Risk Management Plans. Upstream flood storage is currently being considered for the Newry flood alleviation scheme. The scheme is currently at the detailed design stage and is programmed to progress to construction stage by 2024/25. The Omagh flood alleviation scheme feasibility study, is to be revisited in 2021/22, to investigate upstream flood storage as an option. The Portadown flood alleviation scheme is at the design stage and progress to construction stage is anticipated late 2023. Belfast Tidal and Shimna, Newcastle flood alleviation schemes are both at the procurement stage with construction works expected to commence later this year.
46. A new DfI Rivers Asset Management Plan has been commissioned with delivery expected by autumn 2021. DfI Rivers' Asset Management & Mapping Unit has a database of all above and below ground assets that is used to manage and value the asset. Development of a historical flood database is

being explored. DfI is currently in discussion with Land and Property Services with regard to the utilisation of modern data capture techniques such as aerial photography, satellite imagery and drone video footage, to better capture flood incidents and improve data recording. Initial development has also been undertaken to establish a bespoke geographic information system-enabled recording application, to act as a single source of flood recording.

47. In preparation for “*Extreme Weather Events (FRMD Aim 5)*”, the Regional Community Resilience Group (RCRG) continues to deliver community resilience work across Northern Ireland, with DfI Rivers providing strategic leadership in this important area of work to manage flood risk. Community resilience developed under the guidance of DfI Rivers, is identified as one of the key measures to assist in the management of flood risk. DfI Rivers has now helped to establish 31 Regional Community Resilience Groups, to help local communities prepare for, and respond to, weather-related emergencies, with initial engagement in a further four areas, though this work has been impacted by COVID-19. Regional Community Resilience Groups continue work on flood warning and informing activities and the River Level Alert network continues to be expanded as necessary.
48. Following completion of a review into the Lough Neagh operating system, a pilot to develop a real time flood forecasting solution for Lough Neagh has been developed. Although this will not be used for formal flood warning, it will assist with multi-agency co-ordination and decision making, allowing DfI Rivers, as the lead government department responsible for the co-ordination of flooding emergencies, to provide advice to co-responders, communities at risk and the agricultural sector, during periods of concern.
49. Northern Ireland's second Climate Change Adaptation Programme (NICCAP2) was published in September 2019 and is a cross-departmental response to the risks and opportunities posed in the 2017 UK Climate Change Risk Assessment (UKCCRA). The Programme sets out Northern Ireland’s adaptation approach and actions for the period 2019-2024. Yearly reporting, as well as a

comprehensive mid-programme review, will provide the opportunity to report on progress of Delivery Plans as well as adding additional/new plans and policies.

50. Concerns about climate change and its predicted impacts on the water environment have taken a leap forward this year. Local councils, particularly Derry City & Strabane District Council and Belfast City Council, are now actively engaged in adaptation planning. A Belfast Climate Commission has recently been established to translate climate policy into action 'on the ground' and bring about transformative change. This impetus is likely to cascade to other council areas in the short term.
51. DfI has provided datasets and input into Climate Change Risk Assessment 2022 (CCRA3) and particularly into the Future Flood Risk Assessment project. CCRA3 was launched on 16 June 2021 and the Northern Ireland summary was launched in September 2021. DfI previously contributed actions and content relating to the water environment in the development of the second NI Climate Change Adaptation Programme (NICCAP2), the implementation of which is being coordinated by DAERA's Climate Change Unit.

Environmental Protection and Improvement

52. DfI and DAERA work closely to help develop and implement "*Sustainable Environmental Policy and Regulation (EP Aim 1)*".
53. NIEA hosted its Water Framework Directive Catchment Stakeholder Webinar in December 2020, to update and engage with the public about ongoing work around our aquatic environment, driven by the water framework regulations. The webinar attracted 133 participants. Attendees represented a wide range of interests including environmental NGOs, conservation groups, anglers, local councils, rivers trusts, farmers and academic researchers. Topics discussed included NIEA's water quality investigations and water pollution responses; the role of Marine Fisheries Division in monitoring bathing water quality and coastal change; and the third cycle draft River Basin Management Plans.

54. Following the consultation on the 'Significant Water Management Issues' report, DAERA published the draft third cycle River Basin Management Plan (2021-27) including a Programmes of Measures on 9 April 2021. The six-month statutory consultation period will closed on 10 October 2021 after which the final plan will be prepared for clearance by 31st March 2022 (ahead of publishing it by 9th April 2022). The final plan will outline the measures that will be undertaken to protect and improve our water over the next six years.
55. The Shared Waters Enhancement & Loughs Legacy (SWELL) is a four-year, €35m project focused on the construction of new wastewater treatment works and upgrades to sewerage networks on both sides of the border to address wastewater pollution in Carlingford Lough and Lough Foyle. In 2020/2021, NI Water successfully commissioned new wastewater infrastructure at Warrenpoint wastewater treatment works (WwTW) (£6.19m) and Newpoint WwTW (£3.31m) located at Carlingford Lough, as well as at Strabane WwTW (£3.23m) and Donemana WwTW (£2.61M), within the Lough Foyle drainage basin. Associated Northern Ireland Electricity network upgrades (£84k between 3 sites) were also completed under the scheme.
56. NIEA has engaged Agri-Food and Biosciences Institute (AFBI) on a research project on further catchment source apportionment modelling. This DAERA-funded and commissioned Evidence & Innovation Project will identify any catchment models applied to surface water and groundwater problems that have been applied, to date, in Northern Ireland catchments. The information for the review comes from three main sources (i) current practice at AFBI and other agencies (ii) peer-reviewed scientific literature (ii) unpublished reports and other sources. A scoping study will follow to identify and evaluate models that are most appropriate for Northern Ireland's hydrological regimes (including its specific geo-climatic characteristics).
57. NI Water launched a campaign to inspire people to 'Join the Refillution', aimed at encouraging everyone to stop buying single use plastic bottles and instead refill a reusable one with tap water. NI Water's campaign 'Join the Refillution' celebrated its second anniversary in May 2021. The campaign since its launch

in May 2019, has been embraced by schools, groups, businesses and local councils. Ten local councils have joined the campaign, with Causeway Coast and Glens Borough Council having its own plastic pollution campaign called H2O on the Go, launched in 2018. Over the past two years, schools have shown great enthusiasm in supporting the Refillution with over 200 schools taking the 'Plastic Promise Pledge' against single use plastic water bottles and over 83,000 pupils and teachers receiving free reusable water bottles.

58. To work towards "*Sustainably Managing the Catchment to Improve Water Quality (EP Aim 2)*"; DAERA established a multi-agency Priority Catchment Working Group to develop a pilot scheme addressing cross cutting water quality issues in the Dundrum Bay catchment. The working group is chaired by DAERA Marine and Fisheries Division and partners include NIEA, NI Water, AFBI, the Ulster Farmers' Union, the Northern Ireland Grain Trade Association, and the Rivers Trust. The Rivers Trust will play a key facilitation role, helping to get buy-in from farmers in the catchment, develop relationships and also in implementing the scheme, which will build on the approach of the Environmental Farming Scheme (EFS). It is hoped that, by working with these partners, this pilot can inform approaches in other catchments with cross cutting water quality issues.

59. DAERA's EFS aims to deliver specific environmental measures in order to restore, preserve and enhance biodiversity; improve water quality; and foster carbon conservation and sequestration in agriculture. The EFS contains a 'Higher Level', which is aimed at environmentally designated land and priority habitats, and a 'Wider Level' which is aimed at the wider countryside. Water quality measures are largely being delivered through the 'Wider Level' of EFS because it targets more intensively farmed land, where agricultural pressures on water quality are greatest. After the first four tranches of EFS, some 4122 'Wider Level' Agreements and 914 'Higher Level' Agreements, are in place. Tranche 5 'Higher Level' opened in April 2021 and Tranche 5 'Wider Level' opened in August 2021. Tranche 5 applications will be processed and eligible agreements will commence in January 2022. Tranche 6 for both EFS levels is planned to open in 2022.

60. Uptake of water quality measures has been good, with almost 68% of 'Wider Level' agreements including at least one of the five specific water quality options. In total, through the first four tranches, some 2,686km of watercourses have been protected by fencing and 206km of riparian zones created. The water quality measures implemented through EFS will help to reduce nutrient inputs and sedimentation arising from farming activities. Therefore, they will contribute to the Executive's Draft Outcomes Framework.
61. In the second cycle River Basin Management Plans (2015-2021), NIEA's Catchment Teams' efforts have been focused on water bodies failing to reach their WFD objective, due to only one failing parameter, and where those water bodies that have deteriorated in status.
62. Training and support for nutrient management and land management continues to be delivered to farmers on a sectorial basis by the Business Development Groups (BDG). During 2020/21, 20 new environmental BDG groups were formed, catering for an additional 434 members. This brings the total for BDG memberships to over 3500.
63. DAERA's Forest Service met its business plan target for 2020/21, supporting 283 hectares of new privately-owned woodland, supplying a wide range of ecosystem services, including flood mitigation.
64. In addition, a further 12.9 hectares have been identified and attributed in the West Tyrone Forestry Planning Area. Conifers planted adjacent to watercourses are removed in the course of harvesting operations in line with Sustainable Wood Production Plans. These areas are converted to water buffers, comprising open ground and native woodland that is either planted or allowed to colonise or regenerate naturally. During 2021, unplanted water buffer areas that have become colonised or naturally regenerated will be assessed and attributed as established native woodland, where appropriate.
65. Going forward, it will be important to ensure that government policy on woodland expansion to help mitigate climate change and deliver other

ecosystem services, including enhancement of biodiversity, protection of the water environment and safeguarding of soil carbon, is incorporated into future agricultural and environmental policy development. Greater promotion of natural flood risk management techniques will also be important; and this could be supported by strengthening the references in a future revision of Sustainable Water.

66. To provide “*Effective and Efficient Wastewater Collection and Treatment (EP Aim 3)*”; DAERA and NIEA are the environmental regulators of the water environment in Northern Ireland, implementing regulatory regimes for both water abstraction and discharges to the environment. NIEA continues to work with both NI Water and industry on improving compliance with Water Order Discharge Consents and Abstraction Impoundment Licenses.
67. Throughout 20/21, DAERA has been working with Queens University Belfast (QUB) and NI Water, to develop a province wide wastewater surveillance programme. Together, DAERA, DoH, DfI, NI Water and QUB have developed a SARS-Cov-2 Environmental Monitoring Hub in Northern Ireland. During 2020/21 and to date, a sampling regime has been developed, sampling approximately 37% of the Northern Ireland population for SARS-Cov-2. This surveillance programme has secured funding of £2.8 million (Resource) and £1 million (Capital) to further develop the programme during 2021/22. Plans are also in place for continued delivery in the period 2022-2025, with the intention that surveillance of wastewater will become a tool for Public Health in its response to viruses, Antimicrobial Resistance (AMR) and other issues of concern.
68. As a result of COVID-19 restrictions, the private wastewater discharge monitoring programme was impacted during 2020/21. A full monitoring programme recommenced during 2021/22. A risk-based approach was applied ensuring that those operations presenting the most risk to public health were kept under surveillance.

69. NIEA has commenced a significant reform of water regulation, working across departments and industry, to carry out a root and branch review of water-related regulatory regimes. Governance structures are under development and major advances have been made throughout 2020/21, to deliver some of the principles of the reform set out below:
- (i) **Enabling Development:** Significant engagement with NI Water on finding solutions to enable development in a constrained wastewater asset. A critical element of this is the consideration and development of a storm water off-set policy. NI Water and NIEA have taken forward a case study to assist in the development of the policy. The operational policy, where the environment allows, will put in place mechanisms for the removal of clean water from the sewer to create capacity in the network without detriment to the environment. Following this work, NIEA and NI Water agreed a high-level proposal for stormwater off-setting, in August 2021, to enable development, where there is a constraint in NI Water's sewer network.
 - (ii) **Private Sewerage Reform:** NIEA is reforming the application process applied to private sewerage infrastructure in conjunction with NI Water. Throughout 2020/21, NIEA worked with NI Water to seek solutions for those housing developments which could not connect to a public sewer and had been granted planning approval with a private package plant. Operational Policies have been reviewed to ensure that the application process takes in to account the NI Water adoption requirements to avoid problematic systems once consented. The work in 2020/21 will provide the foundations for further reform in the processes and alignment with NI Water's development application process;
 - (iii) **NI Water Compliance Assessment Reform:** The development of a Compliance Reform Road Map, highlighting the key milestones that both NIEA and NI Water need to achieve on the initial six-year journey of change to environmental compliance assessment. Continued development of the necessary tools are needed, in particular the design of a new compliance

assessment database, to include data relating to flow and priority substances, in addition to the current sanitary parameters; and

(iv) Reform of Consenting Methodology: Continued review and development of operational consenting procedures to deliver improvement to water quality. The Marine Consenting Policy has been reviewed to include pilot projects which will allow for flexibility. This flexibility will ensure improvements to water quality but also recognise the need for consideration of what is realistically achievable in specific cases. The revised marine consenting policy was finalised in August 2021.

70. Within its wastewater sites, NI Water has rolled out Real Time Control (RTC) technology to 13 sites and process improvement work at a further seven wastewater sites. This work has significantly contributed to realisation of energy benefits in the PC15 period of c£4.8m. NI Water has also rolled out Best Efficiency Point pumping control at 15 wastewater pumping stations. This has improved the pumping performance of large wastewater pumping assets. NI Water is also trying to control odour within the wastewater production line and reduce the energy utilised with this activity. An odour control trial is progressing at the North Coast WwTW and the outcome of this trial, will inform future rollout at further wastewater sites.
71. In 2021, NI Water implemented a number of energy efficiency projects across its wastewater assets including improvements in its pumps and control systems. Its energy efficiency work also incorporates better analytical tools and monitoring equipment for future performance visibility and control. This will help to unlock significant energy and carbon savings across NI Water's asset base, reducing operating costs and providing a better value service for customers.
72. During PC15, NI Water has installed telemetry at 279 combined sewer overflow/emergency overflow sites, to monitor discharges at these locations. The installation of these has been prioritised initially on designated bathing and shellfish waters. NI Water is continuing with this monitoring programme in

PC21 and this forms an essential part of the compliance reform programme currently under development with NIEA.

73. To ensure that it can “*Maintain Sustainable Levels of Water in the Environment (EP Aim 4)*”; NIEA works with NI Water on the review of abstraction licences and these reviews are based on sound evidence and strong Habitat Regulation Assessments to protect the environment. An extensive monitoring programme has been put in place by NI Water, guided by NIEA, to gather the appropriate level of evidence required to review abstraction licences. NIEA has reviewed a number of abstraction licences ensuring the protection of the environment whilst also meeting the need for drinking water supply. Critically, during the drought period in June/July 2020, NIEA worked with NI Water to develop appropriate method statements/emergency contingencies for three sites under drought order application, securing the protection of the environment during low flow conditions.
74. To assist in “*Improving River and Coastal Water Morphology and Biodiversity (EP Aim 5)*”; DAERA is consulting on the draft third cycle River Basin Management Plan (the draft Plan). The proposed working target is to achieve Good Status, in 70 % of Northern Ireland’s water bodies, by 2027, from the current baseline of 38 % at ‘Good or better’ status. The draft Plan identifies key pressures originating from sewage-related and agricultural activities. The draft Plan identifies existing and continuing measures, as well as new measures, to address and reduce the impacts of the key pressures affecting our water resources in Northern Ireland.
75. DfI and DAERA reconvened the Coastal Forum in June 2021. The Forum is the agreed mechanism through which members, including local councils, DfI, DAERA and the National Trust, work in partnership to progress coastal management issues. It had previously met in May 2019 and November 2019 and was co-chaired by the DfI and DAERA Permanent Secretaries. An outcome from these meetings was the formation of a Coastal Forum Working Group, which met in August 2019, October 2019, January 2020, January 2021 and April 2021. The Working Group has produced a draft Coastal Forum Work

Programme, which was endorsed by the Coastal Forum at its June 2021 meeting.

The Coastal Forum noted the very effective partnership work undertaken with the Coastal Planning Working Group to develop the Position Paper to inform Councils' consideration of coastal change when preparing Local Development Plans and noted the importance of baseline evidence being available to planners. The Position Paper was endorsed by the Forum.

The Coastal Forum was also briefed by DAERA on the significant progress of the three projects contributing to the Northern Ireland 3D Coastal Survey: Lot 1: Topographic LiDAR survey, Lot 2: Satellite Derived Bathymetry data and Lot 3: Bathymetric LiDAR Pilot.

76. DAERA in conjunction with key water stakeholders, is reviewing the Programme of Measures in the Marine Strategy Part Three. The aim of this work is to inform the new programme of measures, which is planned for publication in late 2021.
77. DAERA has also undertaken work to align the draft shellfish protocol with considerations included in marine policy documents. This has resulted in a revised aquaculture process map, which took into account the key policies of the Marine Plan and the Water Framework Directive.
78. DAERA also carried out extensive salmonid restoration work which included:
 - (i) adding 60 tonnes of spawning gravel to the Moyola River to improve the spawning area;
 - (ii) adding 300 tonnes of spawning gravel to the River Bush, as well as carrying out work to improve spawning beds;
 - (iii) adding 60 tonnes of spawning gravel to the Agivey River to improve the spawning area;
 - (iv) installation of a habitat unit on the Six Mile Water, including holding, nursery and spawning habitat, and narrowing of over-widened stretch;

- (v) easement of historical barrier to migration on the Clady River;
 - (vi) adding 475 tons of appropriately-sized spawning gravel to the Garvary River and localised minor watercourses in the north west part of the Lower Erne catchment;
 - (vii) enhancement of 3 km of the Ballygawley River, and 0.4 km of the Blackwater River, comprising of the in-stream construction of paired deflectors, two-stage channel and rubble mats for the development of parr/fry production. Bank side revetment works were also carried out using 3800 tons of cobble stone;
 - (viii) desilting of 500 metres of naturally occurring spawning habitat on the Upper Blackwater; and
 - (ix) erection of approximately 5 km of river bank livestock fencing, installation of 19 livestock drinkers and the planting of 2000 native trees to develop additional buffer zones.
79. Through the INTERREG VA funded Catchment Care programme, DAERA also carried out additional work to complement the instream works on the Ballygawley River, which included 6km of river bank livestock fencing and 200m of soft engineering techniques to reduce bankside erosion at key points. In addition, 36 livestock drinkers were also installed, reducing poaching of the river banks and 1700 native hardwood trees were planted along the river corridor to develop riparian buffer zones.
80. The Loughs Agency also carried out salmonid restoration works which included in stream habitat restoration, riparian tree planting, fencing and erosion management on the following rivers; Clanrye, Derg, Faughan, Burndennet, Finn, Glenelly, Strule and Roe.

Water and Sewerage Services

81. NI Water strives to “*Provide Efficient and Affordable Water and Sewerage Services (WSS Aim 1)*”; and this is overseen and monitored by the Northern Ireland Authority for Utility Regulation (“the Regulator”), which sets challenging

targets for year on year efficiency improvements. In order to fully assess how NI Water is performing, the Regulator uses the Overall Performance Assessment (OPA) framework to monitor the overall level of service that NI Water provides to its customers, by combining 11 individual service measures and scoring them against a reasonable range. Scores are then weighted in order of importance and combined to give an overall picture of service level performance.

82. Despite the impact of COVID-19, NI Water outperformed its PC15 OPA target (of 236) for 2020/21 by 28 points, with a score of 264. Over the 2020/21 year, NI Water met or exceeded planned delivery in all, but three, of the 45 Key Outputs, these being:

- Leakage;
- DG5 properties at risk of flooding - number removed from risk register by company action; and
- Delivery of improvements to nominated unsatisfactory intermittent discharges (UIDs) as part of a defined programme of work;

As full PC15 funding was not provided to meet Final Determination levels, this impacted on NI Water's ability to meet these three key outputs.

83. Operational emissions from the water industry accounts for nearly 1% of the UK's total carbon emissions. This is because water treatment is energy and chemical intensive and transporting water requires a great deal of pumping. Grid electricity accounts for the vast majority of NI Water's carbon emissions. NI Water's initial focus in PC15 (2015-21) was on reaching net zero, and this centred on energy efficiency including renewables.

NI Water's Strategy (2021-46) includes an aim to de-carbonise the business by taking a sustainable consumption path and it is recognised that this can play a key role in supporting the wider societal shift to a de-carbonised economy. Achieving this aim will fundamentally change how NI Water procures

and builds infrastructure, runs operations and manages land. This will also require the need to reduce leakage and the demand for water.

84. In its aim to *“Provide High Quality Services to All Water and Sewerage Customers (WSS Aim 2)”*; NI Water has introduced sewer risk modelling and capacity mapping, to complement work on the register of properties at risk of internal (DG5) and external flooding. The target of 11 properties to be removed from the DG5 register by company action in 2020/21, was achieved.
85. NI Water has also developed an Interruptions to Supply Strategy that sets out what it needs to focus on to improve supply interruption performance and achieve better service for its customers. The implementation of this Strategy has helped to reduce the number of minutes a property is affected, from 56 in 2017/18, to 11 in 2020/21.

Throughout 2020/21, NI Water has continued to educate the public on key messages through its Bag It & Bin It and Fats, Oils and Greases campaigns. These messages are delivered via community talks, school presentations and attendance at events/exhibitions. NI Water continues to educate the public using a variety of communication channels and targeted PR with localised stories of blockages to highlight the message. NI Water also engaged with all 11 council areas to highlight these important issues.

86. NI Water places great importance on *“Providing High Quality Customer Service and Customer Information (WSS Aim 3)”*; and continues to make efficiencies through its ambitious Achieving Customer Excellence programme. Part of this programme involves an extensive data quality project to improve the overall accuracy of the information held on NI Water’s corporate systems relating to various customer accounts. NI Water has deployed a modern meter data management system to collect and record meter readings on site and return to the corporate billing system in real-time with an out-turn success rate for 2020/21 of >99.2%. NI Water is also starting deployment of automatic meter reading equipment and utilising mobile telephone technology to remotely read key meters, whilst investigating the potential for SMART metering.

87. In 2020/21, NI Water reduced the volume of written complaints received by 4% compared to the previous year, 100% of which were responded to within the target of 10 days.
88. NI Water's volume of unwanted telephone contacts was also below the 75,000 target for 2020/21, at 70,000. However, this has undoubtedly been supported by the subsequent lack of significant operational events and the cessation of billing for 3 months in response to COVID-19.
89. During 2020/21, NI Water was also able to resolve 90% of issues at the first time of contact. Future improvement on current performance levels is likely to require capital investment in the water and sewerage infrastructure.
90. NI Water's Net Promoter Score (NPS), which is a globally recognised measure of customer advocacy, was measured through daily customer surveys, following an interaction. The NPS score can range from -100 to 100. In 2020/21, NI Water's NPS score was retained from the previous year at 42, which was informed by responses to c7,500 customer surveys.

NI Water has now installed over 5,000 Automatic Meter Reading (AMR) meters, which will reduce the likelihood of manual error/meter misread and increase the accuracy of billing.

91. NI Water's web self-service, is now well established for several services, e.g. bill payments and requesting a septic tank de-sludge, of which >64% of requests are recorded in this way. NI Water continues to encourage and promote the use of self-serve with its customers. In addition, its Interactive Voice Response platform has been enhanced, further improving options for customers and removing calls from its contact centre. In 2020/21, >16% of payments were made via this platform.
92. Following an update to NI Water's Strategic Priorities, the company's Key Performance Indicators (KPIs) were subsequently reviewed and rebadged as

Headline Performance Indicators (HPIs). Despite, its budgetary constraints, NI Water has met, or exceeded, planned delivery in all but two of the 12 indicators.

During 2020/21, NI Water failed to meet the following HPIs:-

- (i) Target 7 (reduction in leakage) - NI Water's leakage teams continued to work around the clock to locate and repair approximately 220 leaks per week. Despite reducing leakage by over 2.85MI/d in 2020/21 to 157.71MI/d, NI Water did not meet the annual leakage target of 153MI/d.

NI Water's highly skilled technicians use a variety of leakage detection methods to find the leaks, whether they are on burst water mains or in customer properties. Common techniques involve using listening sticks and ground microphones.

In 2020/21, NI Water tested a number of initiatives to detect leakage such as acoustic loggers and satellites. Acoustic loggers pinpoint leaks by measuring the noise of escaping water that follows a leak or burst and then sends an alert, together with details of its location, allowing NI Water to focus effort in that area. Satellite technology uses various wavelengths of the visible and invisible light spectrum to locate leaks. The adoption of these technologies will assist NI Water in trying to achieve its leakage targets through PC21.

- (ii) Target 11 (DG5: Reduction in number of properties at risk of out of sewer flooding: properties removed from the at-risk register) – rephasing of construction, as a consequence of the engineering complexity and traffic management constraints of the Ravenhill Avenue sewerage scheme, meant that the final PC15 target for the removal of properties at risk of flooding could not be achieved by the end of 2020/21, with 52 properties removed from the DG5 register in PC15 rather than the 62 target.

93. In order to “*Provide Resilient and Secure Water and Sewerage Service (WSS Aim 4)*”; NI Water's Water Resource & Supply Resilience Plan was published

in June 2020 and the technical guidance for the preparation of the next plan was issued to NI Water on 14 May 2021. The next plan will have a greater focus on sustainability, biodiversity and carbon, considering e.g. groundwater sources.

94. During PC15, NI Water has constructed 3 clear water basins at Lough Fea, Killyhevlin and Drumaroad water treatment works (completion early PC21) to improve the potable water storage resilience in its network.
95. NI Water ran its annual advertising and PR campaign to highlight the importance of preparing for winter from November 2020 to February 2021. The campaign included 112 articles of coverage.
96. NI Water not only provides us with valuable water and sewerage services, but it also *“Utilises its Estate to Promote Recreation, Biodiversity and Cultural Heritage (WSS Aim 5)”*; NI Water intends to plant over 1 million trees over the next 10 years, which started in February 2021 with planting at Fofanny Dam in the Mourne. As the second biggest landowner in Northern Ireland, after the Forest Service, NI Water is delivering a large-scale planting programme across 11,300 hectares of land.
97. NI Water has commenced a review of its Biodiversity Action Plan and completed an initial project to repair the Mourne Wall at a total cost of £1.6m. In addition, it has improved facilities at a number of sites such as Silent Valley and NI Water’s Heritage Wastewater Centre, Belfast. These sites have impacted positively on the social, culture, industrial and natural heritage of Northern Ireland.

NI Water Funding

98. The Minister for Infrastructure, Nichola Mallon MLA, allocated £344.5 million to NI Water for 2021/22 from her Department’s budget. This is the first year in a long time that NI Water has been fully funded. If NI Water is to have the ability to meet future customer needs, especially in respect of wastewater treatment capacity to facilitate economic growth and housing development, it is vital that

it is fully funded in future years and Price Control periods. If not, it will lead to NI Water providing negative planning consultation responses for large areas of Northern Ireland, which may result in the refusal of planning applications. The scale of investment that NI Water requires for future Price Control periods, to address the legacy of underfunding, will require the ongoing financial commitment of the NI Executive.

EU Funding

99. There has been ongoing engagement between NI Water and Irish Water in progressing the two projects ('Source to Tap' & SWELL) that were awarded EU funding under the INTERREG VA Programme (2014-2020) for the water sector within both jurisdictions. In April 2021, Source to Tap was granted an extension to continue for a further six months, with the project officially coming to a close at the end of September 2022. The SWELL project was awarded €35m and this year, the halfway point, a major milestone was reached with the completion of new wastewater infrastructure at Warrenpoint Wastewater Treatment Works (WwTW) and Newpoint Wastewater Pumping Station located in the Carlingford Lough drainage basin and Strabane and Donemana WwTW in the Lough Foyle drainage basin.

100. In addition, the Department for Infrastructure, alongside the Department for Housing, Planning and Local Government (DHLGH) are continuing to work with NI Water and Irish Water on two potential projects under the Special EU Programmes Body (SEUPB) PEACE PLUS Programme. These projects are: (1) SWELL2 and (2) a drinking water quality project, which fall under Theme 5 of the programme, "Supporting a Sustainable Future". They aim to protect and improve water quality of shared loughs, rivers and lakes, host educational and stakeholder engagement events and engage with farmers on sustainable water management techniques. If successful in the bids, these PEACE PLUS projects will build upon related work, and partnerships developed, under INTERREG funding for the "SWELL" and "Source to Tap" projects.

The UK's Exit from the EU

101. Much of the legislation governing the management of water, in terms of quality, quantity and the wider environment, has been developed under EU Frameworks and Directives. Relevant legislation has been amended to ensure its operability after IP completion day. Work is also ongoing with Defra and the Ministry of Housing, Communities and Local Government to ensure that DfI and DAERA are fully engaged in the development of relevant common frameworks, which will be the means of ensuring the appropriate level of commonality of approach to policy development across the devolved administrations after the United Kingdom has left the European Union.

Conclusion

102. This fifth Annual Report on Sustainable Water – A Long-Term Water Strategy highlights the further progress stakeholders are making to improve our water environment. This has been achieved despite the ever increasing constraints on budgets across all areas involved in the Strategy, which have the ability to impact on the delivery of the Executive's medium to long-term objectives and, critically, include facilitating future economic growth and development. Delivering the Strategy will also help to fulfil commitments in the Executive's Draft Outcomes Framework.
103. The impact of the UK's withdrawal from the EU is still evolving, and this will require careful management to minimise any potential impact on the delivery of the Strategy. The longer-term impacts of COVID-19 will also need to be more clearly defined. However, the pandemic has reinforced the vital role that water plays in protecting the health and wellbeing of our citizens, and this has underscored the need to manage this natural resource in a more sustainable way, to help ensure that there are sufficient water resources to meet the future demands of the population.