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nature
a home

Price Control 2021 Draft Determination

16th December 2020

Introduction

We welcome the opportunity to provide comments on the PC21 price control draft determination for NI Water which will cover the period April 2021 to March 2027. We look forward to engaging further with the Utility Regulator and NI Water to help shape and support the delivery of a sustainable approach to water service management and delivery, particularly the delivery of sustainable catchment management and nature based solutions to help tackle the climate and biodiversity crises and deliver NI Water's strategic aims.

Summary points:

- Comments from NI Water over the last number of months have highlighted that without a substantial uplift in funding, difficult decisions lie ahead that could result in trade-offs between economic development and environmental protection. The emerging narrative from NI Water that inadequate funding will lead to inadequate environmental protection is a very worrying situation which could have stark implications for the environment.
- We welcome the proposed investment of £5.3million to fund SCaMP and similar projects throughout the PC21 period and we are pleased to see an additional 2 FTE staff have been included to support SCaMP activities. However, funding allocated to SCaMP is largely similar to the amounts allocated in PC15, considering inflation this actually represents a cut. Given the scale of the nature and climate emergency and the agreed need for accelerated action, there is a need for a significant uplift in the amount of funding proposed.
- In delivering SCaMP across the chosen catchments we would stress the importance of maximising the opportunity to deliver benefits for nature and climate, as well as water quality. Doing the 'bare minimum' to improve water quality would present a missed opportunity to lead the delivery of large scale strategic nature based solutions to tackle the climate and biodiversity crises.
- To sustainably address both the climate and ecological emergencies, the delivery of renewables must be in harmony with nature.
- Tackling climate change should be considered in broader terms than solely 'generating' and 'consuming' renewable energy. Funding is required to deliver strategic long-term investment in nature-based solutions, aligned with NI Water strategy commitments, to drive positive outcomes for water quality, biodiversity, climate change action, health and wellbeing, and the economy. Large landowners, such as NI Water must lead the restoration of degraded carbon emitting habitats, to prevent the release of carbon and bolster the role of our natural carbon sinks. Funding should be specifically allocated and ring-fenced for this purpose.
- Outwith SCaMP funding, we understand an additional £675,000 has been allocated to plant approx. 2,000 hectares of trees. It is vital that the right tree is planted in the right place and that the planting of native broadleaf species is prioritised. NI Water should similarly set a specific target for peatland restoration with ring-fenced funding to deliver large scale peatland restoration. Given the six-year timeframe of the Price Control, and the clear UK policy direction emerging, it would be a major omission if a similar target for peatland restoration was not included.
- We would urge the Utility Regulator to utilise environmental economists to ensure that the value of investing in the environment and return on investment is adequately understood and recognised within the Price Control determination.

Background

The natural environment provides multiple benefits to society and the economy. It enriches our lives and provides us with vital services from flood protection and pollination of our crops and flowers, to boosting our health and wellbeing. Our freshwater network of rivers and lakes support life, health and well-being, our economy, wildlife and leisure activities.

Since the previous Price Control period there has been increased awareness and acceptance of the climate and ecological emergency. The climate and nature emergencies are being acutely experienced across our water environment. For instance, we experienced the wettest [February on record](#) followed by an exceptionally dry spring; these climate impacts will become more common and severe with stark impacts for our water environment and for health and well-being in general.

Northern Ireland (NI) supports multiple internationally significant habitats including blanket bog and large inland and coastal water bodies, such as Lough Neagh, the largest freshwater lake in the British Isles. Lough Neagh supports around 100,000 wintering waterbirds, and myriad lakes, fens and raised bogs. NI holds species found nowhere else in the UK which are all dependant on a functioning and healthy water environment, including the Irish Hare, Irish Damselfly, Irish Whitebeam, Cryptic Wood White and Pollan. With 650km of coastline, the sea loughs, estuaries and marine environment are also a significant component of NI's biodiversity¹.

Northern Ireland's rivers, lakes, wetlands and coasts are some of the best-loved parts of our country, and water bodies often sit at the heart of the local community. However, we are currently failing to manage our freshwater environment in a way that reflects the importance of this critical resource and its true value to society. Urgent action is needed in NI to address the fact that less than half (36.6%) of NI's water bodies are below 'good or better' status and NI is unlikely to meet the 2021 objective of 70% of all water bodies reaching 'good' status. The scale of the challenge we face in NI, is apparent in the 2018 data set out in the consultation document:

- 76.2% of lakes are moderate to worse, with no improvement since 2015
- 68.7% rivers are at moderate or worse, with a slight overall decline in condition
- 60% of water bodies are classified as moderate or worse for transitional and coastal water bodies, with only 4% improvement since 2015
- 34.7% groundwater bodies are poor, with no change since 2015.

The ongoing combination of pollution incidents, diffuse pollution from agriculture, unsustainable abstraction, non-native invasive species (NNIS), climate change and extreme events, and an increasing demand on our water supply, amongst others, are continuing to threaten our water environment. Diffuse pollution from farm, road, and built development run-off contributes directly to aquifers, rivers, lake and wetland contamination. Better integrated and sustainable land use management and planning and sustainable catchment management will be essential to addressing the many issues that continue to threaten our water environment.

Green Recovery from Covid-19

As the UK, and NI in particular, chart a path out of the Covid-19 crisis, it is vital that we do not exacerbate the existing climate and biodiversity crisis. A blinkered, short-term 'economy at all costs' approach will accelerate climate break-down and biodiversity decline. There has never been a more important time to demonstrate the value of nature in making the case for 'building back better' through a 'green recovery', putting nature and climate at the heart of the recovery through investment in nature-based solutions.

2020 was identified as a critical year for agreeing decisive global action to tackle both climate change and the ecological emergency. In recognition of the crisis we face the NI Assembly passed a motion declaring a Climate Emergency² and the NI Executive's New Decade New Approach contained a commitment to develop a NI Climate Change Act alongside a Green New Deal. DAERA has launched a public discussion document on a Northern Ireland Climate Bill and the UK Committee on

¹ [State of Nature Report 2019](#)

² <https://www.bbc.co.uk/news/uk-northern-ireland-51364077>

Climate Change has stated that Northern Ireland must achieve at least an 82% reduction in emissions by 2045 and with strong political support could achieve a 94% reduction. Clearly the urgency around climate action has ratcheted up considerably since the last PC period; this needs to be reflected in a significant uplift in funding for nature based climate action given NI Water's extensive land ownership.

Drinking water quality improvements cannot always be guaranteed by investing in water treatment facilities, particularly when water quality issues are as a result of management issues within the catchment. Sustainable nature-based solutions to water treatment should be reviewed and delivered where appropriate, with natural water treatment measures having proven successful in other water companies³. In these situations, catchments should be prioritised for sustainable catchment management planning, which will identify the cause of water quality issues and inform sustainable solutions. Sustainable catchment management is a more cost effective and long-term solution to improving water quality than investing in treatment works.

Addressing management of the landscape in a more holistic manner will enable increased resilience for people and nature for a changing climate including for extreme events such as floods and drought. An increased focus on nature-based solutions to climate change will play a critical role in mitigating and adapting to climate change within the land sector.

Key Outputs to be Delivered in PC21

We welcome the inclusion of the following key output in the draft determination:

'Measures to improve sustainability and reduce the impact on climate change including: continuing sustainable catchment management (SCAMP); moving to 100% renewable energy consumption by the end of PC21 and investment in renewable energy generation.'

However, the draft determination includes a lack of detail around how this output will be achieved and what level of funding and commitment will be given to support the delivery of catchment-based approaches. We would welcome more clarity on how this output translates into the methodology and price controls. Furthermore, while a commitment to renewable energy is welcomed in principle, NI Water must ensure that its investment supports only the deployment of renewables in areas of low ecological risk, which are also appropriately sited and managed. Given the connection between water and electricity generation, we would take this opportunity to make specific reference to hydropower. Hydropower developments vary in size, type and operation, and the specifics of the design and management have a major influence on the severity of environmental impacts - even small to medium scale hydro schemes can have significant and lasting impacts on wildlife due to disturbance during construction, permanent loss of habitat, drainage of wetlands and bogs, and disturbance to river continuity and natural river flows.

Renewable energy construction and operation must not compromise the achievement of nature conservation objectives and be in line with the strict tests established by the Water Framework Directive. Given the requirements of the Water Framework Directive, we believe that modernisation and the upgrading of existing infrastructure should be considered as the first option for increasing capacity in hydropower generation. Upgrading of infrastructure should also play a key role in addressing environmental impacts of the existing schemes.

Tackling climate change should also be considered in broader terms than simply generating and consuming renewable energy. NI Water has a key role to play in tackling climate change and reducing greenhouse gas emissions by delivering nature based solutions. We would encourage both the Utility Regulator and NI Water to explicitly reference the role of nature based solutions in tackling climate change and specifically allocate and ring-fence funding for this purpose. The potential of nature based solutions is addressed later in this response. Investing in nature based solutions, is a wise strategic use of public money and will provide long-term value for money and return on investment.

³ <https://norfolkriverstrust.org/ingoldisthorpe-wetland-creation-natures-own-water-treatment/>

Sustainable Catchment Management Programmes (SCaMP)

As one of the largest landowners in Northern Ireland, NI Water has the potential to lead the way, working in partnership to develop projects which deliver their strategic objectives, whilst securing benefits for climate and biodiversity.

The Utility Regulator and NI Water, through the Price Control mechanism, have a key role to play in facilitating a green recovery through adequately funding SCaMP and investing in the delivery of nature based solutions at scale. Ongoing investment is required through SCaMP involving Northern Ireland Water (NI Water) and NGOs working together to address land management issues that negatively affect both wildlife and water quality. The Utility Regulator Price Control mechanism must be designed to ensure that NI Water is sufficiently resourced to deliver SCaMP and direct invest towards the delivery of nature-based solutions.

Previous examples of successful partnership delivery should provide a model for future application of SCaMP. In Partnership with NI Water, RSPB has been involved in a large-scale peatland restoration project on the [Garron Plateau](#) in North Antrim, the largest single area of blanket bog in NI. This landscape provides numerous nature-based solutions for climate, as well as providing drinking water for nearly 12 thousand homes and businesses in the surrounding area. The 4650ha site is protected due to the presence of blanket bog, fens, mires, lakes, ponds and heathland. The site is also home to a range of priority species, including iconic birds such as Hen Harrier and Merlin.

The restoration of Garron was achieved by raising the bog's water table through blocking a large network of on-site drains. Blocking drains rewets the peat, stabilising the site's hydrology and allowing the specialised peatland plants to recolonise. The unique natural balance of the site has been enhanced through habitat restoration which has improved drinking water quality and reduced NI Water's treatment costs. The Garron project demonstrates the win-win outcomes and considerable return on investment that can be delivered if public money is invested in nature-based solutions. Now we need action to deliver similar restoration at scale.

We welcome the Utility Regulator supporting the proposed investment of approx. £5.3million to fund SCaMP and similar projects throughout the PC21 period and we are pleased to see additional 2 FTE staff have been included to support SCaMP activities. NI Water completed catchment management plans for all its 'live' catchments in PC15. At the start of PC21 there will be 23 active catchment management plans in place and NI Water plans to progress from **planning to implementation** of solutions to contribute to achieving SCaMP objectives. We are concerned that the amount allocated to SCaMP for **implementation** in PC21 is largely similar to the amount that was allocated in PC15 for **planning**. Successful **implementation** across 23 catchments is likely to cost a lot more than the planning process and as a result we are concerned that the Price Control will not maximise the benefits that could be delivered in each catchment. For example, the potential to maximise the delivery of nature based solutions (see below) across catchments may not be achieved.

We would encourage the Price Determination to include adequate support for the NI Water's approach to catchment scale management and support public finances being directed towards the Sustainable Catchment and Management Planning (SCaMP) model and the delivery of nature based solutions within Pricing Controls.

Nature Based Solutions

We commend NI Water for having sections of their corporate strategy dedicated to nature and climate change to ensure prudent management of one of our most precious natural assets, and indeed their commitment to 'net-zero'. As mentioned above, achieving 'net zero' is about more than only renewable energy production and consumption. It is critical that large landowners, such as NI Water invest in the restoration of degraded carbon emitting habitats, to prevent the release of carbon and bolster the role of our natural carbon sinks.

The PC21 determination should make explicit reference to the role of nature based solutions in tackling climate change and lowering carbon emissions in Northern Ireland. Nature-based solutions to climate change are the ways that nature helps us mitigate climate change by locking up and storing carbon, and supports us to adapt to its impacts, while helping reverse the decline in nature.

NI Water has a key role to play in driving better catchment scale management and landscape-scale restoration that can deliver nature based solutions to climate change. Adequate funding is required to deliver strategic long-term investment in nature-based solutions to drive positive outcomes for water quality, biodiversity, climate change action, health and wellbeing, and the economy. Nature-based solutions must be fully integrated within the Price Control mechanism. We would urge the Utility Regulator to utilise environmental economists to ensure that the value of investing in the environment is adequately understood and recognised within the Price control mechanism.

Peatland restoration

One key example where, with adequate funding, NI Water can play a key role in delivering NBS's is peatland restoration. Peatland has a critical role to play in addressing the nature and climate crises. In Northern Ireland, this mossy, wetland soil covers around 12% of our land area. After decades of draining, overgrazing, burning, tree planting, and extraction, the majority of our peatland is currently in a damaged and deteriorating state. A recent peat landslide at Meenbog in County Donegal shows the unintended consequences that can result from inappropriate land use and the perverse outcomes of pursuing renewable energy targets with a lack of attention for other land use considerations⁴. Of the 242,000 thousand hectares of peatlands in NI, approximately 86% is not intact, and as little as 1% has been restored in some way over the last 30 years.⁵

Peatland restoration provides notable benefits for water quality and treatment costs. For example, damaged peatland leads to drying out of the soil which can directly threaten water quality through increased water discolouration and dissolved organic carbon (DOC) resulting in increased treatment costs. This is a common trend observed across many upland water catchments in the UK and is linked to desiccation of peat as it dries out and oxidises⁶. Damaged peatlands can also contribute to downstream flooding, as rain water flows quickly downstream from peatlands through drainage ditches and channels⁷. An added benefit of peatland restoration is that capacity to hold water is increased and flow of water off the bog is reduced.

Damaged peatlands are emitting their precious carbon stores back into the atmosphere and are unable to provide this host of ecosystem benefits. In Northern Ireland, peat is a net carbon emitter and contributes approx. 9% to the NI greenhouse gas inventory.

Our new research shows that an ambitious programme of restoration is vital to reduce emissions from our peatlands, demonstrating that even peat restoration targets recommended by the Committee on Climate Change do not go far enough.

⁴ <https://www.bbc.co.uk/news/uk-northern-ireland-foyle-west-54994865>

⁵ Artz, R., Evans, C., Crosher, I., Hancock, M., Scott-Campbell, M., Pilkington, M., Jones, P., Chandler, D., McBride, A., Ross, K. & Weyl, R. 2019. The State of UK Peatlands: an update. IUCN.

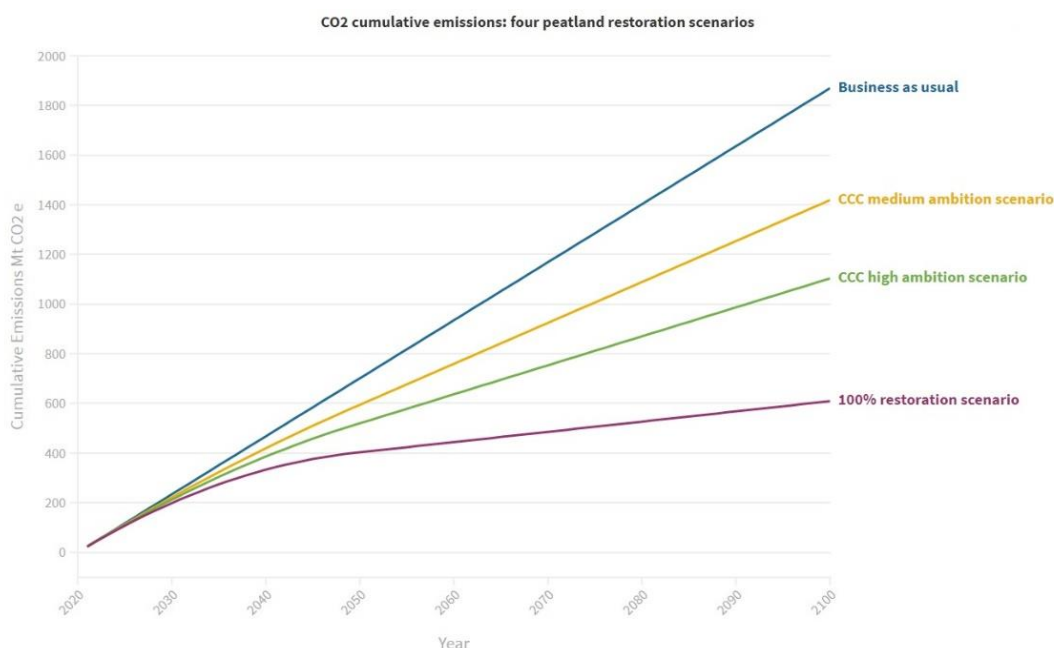
Evans, C., Artz, R., Moxley, J. & Renou-Wilson, F. 2017. Implementation of an Emissions Inventory for UK Peatlands. Centre for Ecology and Hydrology.

ONS. 2019. UK Natural Capital: peatlands. Office of National Statistics.

⁶ O'Brien, H. E., Labadz, J. C., Butcher, D. P., Billett, M. and Midgley, N. G. (2008). *Impact of catchment management upon dissolved organic carbon and stream flows in the Peak District, Derbyshire, UK*. BHS 10th National Hydrology Symposium, Exeter

⁷ IUCN UK Peatland Programme (2011). *Commission of Inquiry on Peatlands*. International Union for THE Conservation of Nature, UK.

This graph shows four scenarios for CO₂ equivalent emissions from UK peatlands up to 2100.⁸



- **Cumulative emissions** from peatlands if no further restoration took place would amount to 1870 Mt CO₂e by 2100.
- **Medium** and **high ambition** scenarios for peatland restoration projected by the Committee on Climate Change would lead to 1419 Mt CO₂e and 1103 Mt CO₂e respectively.⁹
- The most effective way to minimise further emissions, to 609 Mt CO₂e, is to **restore our peatland in full**.

Full restoration would greatly reduce GHG emissions and ensure that the massive carbon stores remain locked up. We can't prevent all emissions from these areas, but the better the condition, the greater their integrity, and so the lower the risk to climate.¹⁰ We've seen first-hand how peatland restoration in some areas has already helped reduce emissions from these valuable habitats¹¹. We would welcome NI Water setting a target for peat restoration in a similar way to targets set for tree planting¹².

Partnership approaches between government, NGO's, the agriculture sector and business will be crucial. Strategic projects such as the Source to Tap Programme and RIPPLE have successfully delivered catchment scale co-ordinated actions to reduce pollution, provide targeted habitat creation/restoration with a focus on balancing the needs of people and nature.

NI Water has a key role to play and should be adequately supported through core funding to ensure that it is maximising its potential to contribute to climate mitigation by leading the application of landscape-scale nature based solutions across Northern Ireland.

Woodland Creation

⁸ CO₂ equivalent (CO₂e) is a metric measure used to compare the emissions from different greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

⁹ <https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/>

¹⁰ For emissions from different bog types, see: Evans, C., Artz, R., Moxley, J. & Renou-Wilson, F. 2017. Implementation of an Emissions Inventory for UK Peatlands. Centre for Ecology and Hydrology.

¹¹ Between 2018-19 over 1000 existing drains were blocked as part of the project, allowing for the restoration of 493 hectares of land within Garron. This will avoid the emission of 1992 tonnes of CO₂ equivalent every year

¹² <https://www.bbc.co.uk/news/uk-northern-ireland-55078860>

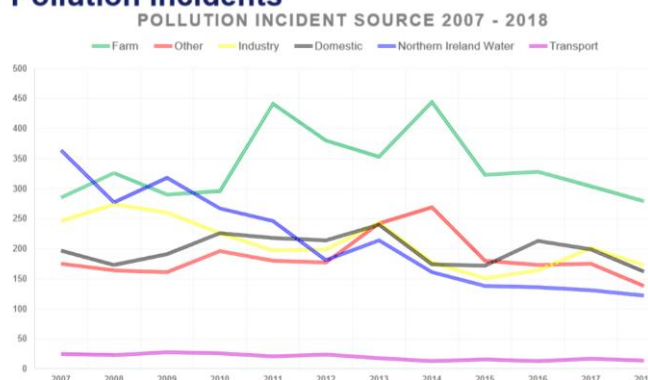
The Price Determination will enable the planting of 300,000 trees during PC21, which will make a considerable contribution to delivering NI Water's ambition to plant 1 million trees on its estate over the next ten years¹³. The preference for tree planting reflects the increased political attention that tree planting has attracted in the context of the UK's net zero ambitions. It is vital that the right tree is planted in the right place and that the planting of native broadleaf species is prioritised. Planting the 'right tree in the right place' can provide important nature-based solutions for water quality and flood risk management, as well as other multi-benefit outcomes for nature, people and climate. It is also important to recognise that peatland restoration has been identified as a major policy priority across the UK. NI Water should set a similar target for peatland restoration with ring-fenced funding to deliver large scale peatland restoration. Given the six-year timeframe of the Price Control, and the clear policy direction emerging, it would be a major omission if a similar target for peatland restoration was not included.

Furthermore, NI Water has a critical role to play, working alongside Forest Service, to remove in appropriately sites trees to provide added benefits for nature and the climate. Commercial forestry is a significant land use in NI, with 4.3% of land area made up of plantations of non-native Sitka Spruce. These have often been planted in unsuitable areas, such as on blanket bog or in sensitive river catchments and have had a detrimental impact on important biodiversity¹⁴, as well as undermining net greenhouse gas balance. Forests should be removed from areas of deep peat and the restocking of forestry on peatland sites should be halted. The afforestation of both blanket and raised bogs has a significant detrimental impact on peatland habitats. Research indicates that restocking on deep peat soils (>50cm) has a negative effect on both biodiversity and the long-term net greenhouse gas balances¹⁵.

We welcome the Forest Service commitment to tree removal through its open habitat restoration plans. For example, NI Water have worked in partnership with Forest Service to remove trees and restore habitats at Tullychurry¹⁶. We would encourage NI Water to continue pushing Forest Service to increase the scale of ambition to undertake extensive restoration of peatland habitats, particularly in water catchments. With sufficient resources NI Water can be a key delivery partner working alongside Forest Service to deliver tree removal and habitat restoration at scale.

Agricultural Land Use

Pollution incidents



¹³ <https://www.bbc.co.uk/news/uk-northern-ireland-55078860>

¹⁴ <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf>

¹⁵ http://www2.rspb.org.uk/Images/Forestry%20and%20climate%20change%20report%20Feb%202020_tcm9-478449.pdf

¹⁶ <https://storymaps.arcgis.com/stories/fe3455a345bf45ce9b72d70ae75f933b>

Given the higher prevalence of pollution incidents from agriculture compared to other sectors in NI (as shown in the graph above), for a truly effective catchment approach there is a need to support farmers with measures where NI Water do not own the land. This is necessary to reduce pollution at source and ensure a holistic approach to sustainable catchment management.

As part of the roll out of a new agricultural policy framework and associated land management schemes there is a need to work with farmers and land managers on utilising nature-based solutions to address many current issues linked to land management, including the climate and biodiversity crises. Partnerships based on catchments, as demonstrated through SCaMP (Sustainable Catchment Area Management Practice), should also be used to incentivise strategic nature-based solutions which will be more impactful if approached at a catchment scale to deliver natural flood management. For example, in certain situations, innovative planting schemes, such as 'wet woods' can provide a cost-effective buffer against pollution, whilst providing a multitude of other benefits¹⁷.

Continued use of incentives will be essential for achieving the recovery of nature, delivering net zero and creating more resilient farm businesses. For example, farmers may be paid for buffer strips around or through their fields which provide food for pollinators and capture and filter run-off. The Government will need to match this commitment with long-term funding at the right scale and ensure there is a baseline of minimum standards considered as good practice.

Wastewater Infrastructure

Wastewater infrastructure, that part of the system which takes and treats sewerage, is under considerable strain due to ageing infrastructure which is unable to cope with increasing demand from new developments. The inadequacies in our wastewater system have been the product of inter-generational underfunding and increasing structural demands on the system. This could mean more incidents of untreated water entering our rivers, loughs and seashores with resulting negative impacts on public health, on wildlife and on the quality of our beaches and coastal bathing waters. A step-change in the level of funding made available to NI Water is required to address this situation and it requires a serious public discussion on how we, as a society, fund our indispensable water infrastructure.

We are supportive of NIWs commitment to replace out of date combined sewer infrastructure which is not fit for purpose, and the use of green infrastructure such as Sustainable Urban Drainage Systems (SuDS). SuDS provides the ideal opportunity to bring urban wetlands and other wildlife friendly green spaces into our towns and cities and link these with existing habitats creating blue and green corridors. However, we have been disappointed at rate at which SuDS solutions have been developed so far. We are supportive of Section 4 of the Water and Sewerage Services Act (Northern Ireland) 2016¹⁸ which extends powers to NIW to adopt and require construction of SuDS, and the Institute of Civil Engineers SuDS Route Map¹⁹ published in 2018. The few schemes that have been developed by NIW and the Department for Infrastructure should be used as examples of good practice. Done properly, they can deliver benefits for the whole community in terms of biodiversity, climate regulation, regeneration, learning, health recreation and play. Carrying on as usual is no longer an option and doing things differently is now an essential requirement for managing surface water, especially if we are to adapt to a changing climate and protect our rivers and beaches from pollution.

Urban development

Runoff in urban areas is causing detrimental impacts across catchments spreading chemicals, waste products and litter, including plastics and micro-plastics into our water systems. This pollution travels

¹⁷ <https://www.bbc.co.uk/news/uk-northern-ireland-53082804>

¹⁸ <https://www.infrastructure-ni.gov.uk/sites/default/files/publications/infrastructure/water-and-sewerageservices-act-ni-2016.PDF>

¹⁹ <https://www.ice.org.uk/getattachment/knowledge-and-resources/best-practice/sustainable-drainagesystems/ICE-ACO-SuDS-Route-Map-Booklet-Feb2018.pdf.aspx>

throughout the catchments and enters coastal waters where it can accumulate with marine debris and fishing waste directly impacting seabirds, such as gannets and seagrass meadows. The management of, clean up and treatment of this pollution is costly and undermines the maintenance of natural capital.

The concept of resilience and promoting robust and healthy freshwater ecosystems to absorb environmental extremes and complex changes must be an integral part of public policy and planning. Additional investment is required to make the system resilient with climate change leading to an increased frequency of adverse weather conditions, more flooding, more droughts which inevitably leads to more water usage restrictions.

The use of green infrastructure and SuDS should be mandatory in any greenfield or brownfield developments. The combination of blue and green infrastructure such as wetlands, green roofs and walls, reedbeds, street tree planting and woodlands, and rain gardens delivers the multi-functionality needed to drive action for the climate and nature crises in urban areas. The installation of green infrastructure is often more economical in both the short and long-term with potentially reduced maintenance costs. The multi-benefits for flood risk management, air quality, biodiversity, amenity, health and wellbeing, and water quality justify mandating these measures for all new developments and any retrofitting through legislation and embedding into planning policy and building regulations.