
PR24

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A3-15 WINEP 25 YEAR ENVIRONMENT PLAN

NES29



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1. INTRODUCTION

We have developed a comprehensive programme of work under the Water Industry National Environment Plan (WINEP), including the 25 Year Environment Plan (25YEP), for PR24.

This enhancement case includes investments that contribute to the governments 25YEP goals¹. It is informed by the 25YEP Driver Guidance (25YEPDG), which sets out the non-statutory requirements that allow water companies to go above and beyond their regulatory obligations. It also supports delivery of our priorities to enhance operational performance, improve resilience, protect customers, and deliver positive environmental and social impact.

Delivering our priorities, including the 25YEP goals, will require a multi-amp perspective, opportunity to test and learn through innovation, increased collaboration, and partnership working. To support this, we propose to deliver the following investments in AMP8:

- Improving Bluespaces – Biodiversity and water quality improvements which are accessible to customers.
- Reducing flood risk by supporting local partnerships – through our Northumbria Integrated Drainage Partnership (NIDP).
- Investing in catchments – through gathering evidence using citizen scientists to support a catchment improvement plan for the Ouseburn.
- Developing our programmes of sustainable drainage systems (SuDS) and climate change resilience and holistic catchment management for future amps.

These investments are not covered by other driver guidance and are eligible for inclusion under the 25YEP drivers. They address customer priorities and contribute to 25YEP goals. We have reflected the direction provided by the Environment Agency when prioritising investments to include under the 25YEP drivers.

Delivering our 25YEP investments included in this enhancement case will require investment of £74 million over AMP8, in 2022/23 prices. These costs are summarised in Table 1.

¹ A Green Future: Our 25 Year Plan to Improve the Environment, page 10

TABLE 1: SUMMARY OF COSTS TO ACHIEVE OUR 25 YEP SOLUTIONS OVER AMP8

Driver	Option	Data table & line	Capex (£m) ²	Opex (£m)	Totex (£m)
25YEP_INV	Ouseburn Catchment Partnership (NW)	CWW3	0.0748	-	0.0748
25YEP_INV	Holistic catchment investigation	CW3	0.706	-	0.706
25YEP_INV	River restoration for climate change resilience	CW3	0.419	-	0.419
25YEP_INV	SuDS on operational sites (NW & ESW)	CWW3	0.220	-	0.220
25YEP_INV	NIDP Investigation	CWW3	1.155	-	1.155
25YEP_IMP	Bluespaces	CW3	6.637	-	6.637
25YEP_IMP	NIDP improvement	CWW3	64.974	-	64.974
Total			74.187	-	74.187

² Note: Numbers may not add due to rounding

2. NEED FOR ENHANCEMENT INVESTMENT

2.1. ALIGNMENT WITH STATUTORY PLANNING FRAMEWORKS

The need for this enhancement case is driven by our priorities, including the desire to protect customers from environmental hazards such as flooding and deliver greater and wider environmental outcomes. While not statutory, the investments proposed in this enhancement case align with the key strategic priorities set out in the Strategic Policy Statement (SPS) for Ofwat. They also support the four key ambitions put forward by Ofwat in the PR24 Final Methodology.

The need for this enhancement case falls under the Water Industry National Environment Programme (WINEP), where the 25YEPDG allows, where supported by customers, water companies to include non-statutory actions not covered by other PR24 driver guidance, defined as:

1. Action providing greater wider environmental outcomes (natural environment; net zero; catchment resilience; and access, amenity, and engagement) whilst achieving a statutory (S) or statutory plus (S+) obligation. The delivery of wider environmental outcomes is non-statutory in relation to costs and is open to challenge by Ofwat. The action should be included in the WINEP under the relevant S or S+ driver.
2. Action not required by primary nor secondary legislation – this should be included in the WINEP as separate non-statutory action under the 25YEP driver.

In applying the 25YEP opportunities, we have identified Tier 1 improvements and investigations under the following driver code categories as set out within the 25YEPDG:

TABLE 2: 25YEP NON-STATUTORY DRIVERS

Driver Code	Description	Legal Obligation	Tier 1 outcome	PR24 data tables enhancement category
25YEP_IMP	Locally significant environmental measures not eligible under any other driver, but with clear evidence of customer support	Non-Statutory	Water company actions contributing to meeting 25YEP goals	25 Year Environment Plan
25YEP_INV	Investigations into a locally significant environmental issue not eligible under any other driver, but with clear evidence of customer support	Non-Statutory		25 Year Environment Plan

The improvements and investigations proposed in this business case, alongside those investments included in our broader WINEP programme, contribute towards several of the goals set out in the 25YEP which include:

- Clean air
- Clean and plentiful water

- Thriving plants and wildlife
- Reduced risk of harm from environmental hazards such as flooding and drought
- Using resources from nature more sustainably and efficiently
- Enhanced beauty, heritage and engagement with the natural environment
- Mitigating and adapting to climate change
- Minimising waste
- Managing exposure to chemicals
- Enhancing biosecurity

Our plan has been developed in accordance the processes described in the WINEP methodology which sets out the overarching process for designing, developing, and delivering water company actions to protect and improve the environment. Further details of how our proposals align with 25YEP objectives and goals and wider stakeholder expectations are included within the proposal summaries in Section 2.2 below.

The information presented in this business case is consistent with the submissions made to the Environment Agency as part of the WINEP process.

2.2. NEED FOR ENHANCEMENT EXPENDITURE IN AMP8

2.2.1 Introduction and Summary of Needs

We are embracing the opportunity to go above and beyond our regulatory obligations and accelerate delivery of projects that respond directly to the Government's 25 YEP and support our priorities. We have a proven track record for delivering innovative environmental improvements that create benefits for customers and communities. Recent achievements include:

- Delivery of our bluespaces programme in AMP7, with the ambition of improving 250km by 2025.
- Northumbrian Integrated Drainage Partnership (NIDP) progress and identification of flood risk opportunities.
- Undertaking work to assess the potential impact of climate change on resilience.
- Using catchment-based approaches and working in partnership with others.

The 25YEP drivers provide an opportunity to deliver further environmental improvements. We believe now is the right time to accelerate investment for the following reasons:

- The Government's 25YEP includes a commitment to improve at least three quarters of our waters to be close to their natural state as soon as possible. Currently, only 14 per cent of England's rivers are classified as being in 'good' ecological status by the Environment Agency.
- Opportunity to get better value over the long term, as early action to trial nature-based solutions will help us to identify more effective and affordable solutions in future periods.
- Customers expect us to do more to protect the environment. Local interest groups ask that our rivers and coasts are a place where people can enjoy swimming, paddling, and time in nature without fear of illness.

- Creating jobs for our communities through investing in catchment partnerships, Bluespaces and river restoration projects.

We also believe that if we are to meet future pressures associated with climate change, population growth and urbanisation in an affordable way, a step change is needed to improve how we work together. Our proposed investment in Bluespaces, NIDP, catchment partnerships, and sustainable drainage will support this step change.

The needs included in this enhancement case are informed by our AMP7 experience, the key priorities not funded through other statutory drivers, and the Government’s 25 YEP goals. The needs we have identified for AMP8 include the following:

TABLE 3: NEEDS IDENTIFIED FOR 25YEP FOR AMP8

Driver	Need	Description	25YEP Goal
25YEP_IMP	Bluespaces (ESW and NW)	Water quality and biodiversity Improvement to Bluespaces where customers can access the water environment.	Clean and plentiful water Thriving plants and wildlife Enhanced beauty, heritage and engagement with the natural environment
25YEP_IMP	Ouseburn Catchment improvement	Investment to support delivery of the catchment improvement plan.	Clean and plentiful water Thriving plants and wildlife Enhanced beauty, heritage and engagement with the natural environment
25YEP_IMP, 25YEP_INV	NIDP; Addressing all sources of flooding in a collaborative integrated way	Investment to continue the flood risk investigations to deliver improvements in amp 9 and improvement work delivered through NIDP initiative for 60 flood risk reduction schemes	Reduced risk of harm from environmental hazards such as flooding and drought Mitigating and adapting to climate change Clean and plentiful water Thriving plants and wildlife
25YEP_INV	SuDS on operational sites	NW promotes the use of SuDS to manage surface water. We wish to lead by example by deploying SuDS on our operational sites.	Reduced risk of harm from environmental hazards such as flooding and drought Clean and plentiful water Thriving plants and wildlife
25YEP_INV	River restoration for climate change resilience	Investigating & working up projects to restore rivers in order to support greater resilience to climate change, with a view to delivering costed projects in AMP9 & AMP10.	Mitigating and adapting to climate change Clean and plentiful water Thriving plants and wildlife
25YEP_INV	Holistic catchment delivery	Supporting the development of PR29 through catchment led investigations.	Clean and plentiful water Thriving plants and wildlife Mitigating and adapting to climate change Reduced risk of harm from environmental hazards such as flooding and drought Enhanced beauty, heritage and engagement with the natural environment

These needs are described within the following sub-sections which include details of our preferred options, associated rationale/ justification and benefits, timing, costs and risks.

2.2.2 Need to improve “Bluespaces” – ESW & NW (25YEP_IMP)

To contribute to meeting the 25YEP goals, there is a need for us to go above and beyond the statutory requirements. This includes, as defined by the 25YEP_IMP driver, investment in locally significant environmental measures not eligible under any other driver but with clear evidence of customer support.

The Bluespaces programme is considered an appropriate water company action under this driver as it contributes to meeting 25YEP goals and is supported by our customers who have indicated that they want us to work with others to improve water environments to which they have access. The programme was initiated in response to customer feedback at PR19, and customers have since engaged in detail with the Bluespaces programme through dedicated customer research undertaken to help develop and refine our approach in AMP7³. Investment in Bluespaces is also aligned with the 25 Year Environment Plan which aims to connect people with the environment to improve health and wellbeing⁴.

At PR19 we set out our ambition to improve Bluespaces for customers. We define the water environment as the environment close to all surface water within our regions, including streams and rivers, lakes and reservoirs, wetlands, canals, coasts and beaches. This initiative is business-wide, covering both our Northumbrian Water (NW) and Essex & Suffolk Water (ESW) operating and supply areas, and is focussed on helping us achieve our ambitious goals to be leading in catchment management and to have the best rivers and beaches in the country.

At PR19 we included a bespoke performance commitment for above and beyond improvements to the accessible water environment in recognition of the following factors:

- Our customers expect us to work with others to improve the water environment and would like us to focus on some aspects where we do not have traditional responsibility to improve their experience of engaging with water in the environment.
- Our stakeholders expect us to show regional leadership, influence strategies, and invest further to support partnership working and link the activities and aspirations of different players to achieve greater improvements for the water environment.
- Further investment in natural and social capital in our catchments will help us be more resilient in delivering water and wastewater services to our customers through protecting and enhancing the environment which we rely on.

Our plan in AMP7 also recognised wider stakeholder expectations:

- CCWater plays an important role in the industry by representing water and sewerage consumers. Consumers trust that their water company is able to manage and operate their sewer networks and sewage treatment works responsibly and efficiently, minimising their impact on the environment (CC Water, 2019).

³ Bluespaces Customer Evidence_PR24 WINEP Submission

⁴ 25 Year Environment Plan, Chapter 3: Connecting people with the environment to improve health and wellbeing, page 71

- Blueprint for Water expects water companies to set long-term strategic plans. It wants to see healthy rivers, clean beaches and coastal waters, safe drinking water, less waste, reduced flooding and thriving wildlife.
- The Climate (and Ecological) emergency is now recognised globally, nationally, and within our own regions, with a climate emergency declaration having been declared by parliament in May 2019 and a number of Local Authorities and Combined Authorities having passed emergency motions. As a key regional player, NWG is expected to play its own part in undertaking activities and interventions to help adapt to and mitigate the impact of climate change, which can include catchment and nature-based investment.
- Catchment Partnerships have helped develop the water environment approach for PR19 through engagement in a series of Thinking Ahead workshops in 2017 run by NWG which were incorporated into PR19 planning. Through these 7 sessions, we engaged directly with 91 partner organisations. Sessions with Catchment Partnerships were also run through the Water Environment Feasibility Study in 2020, with potential project ideas captured in the Bluespaces Mapping Portals, and partner suggestions incorporated into the development of the Bluespaces scheme. Since these sessions, ESW has been working with 9 partners to develop and deliver 16 projects in Year 1 and Year 2, and Year 3 (in delivery).

There is a compelling opportunity to continue the AMP7 Bluespaces programme and deliver additional improvements in AMP8 through the WINEP. We know customers want us to work in partnership to deliver a wide range of improvements to the water environment in areas where they can directly benefit⁵.

We have set ourselves the stretching goal to improve 500km of Bluespaces by 2030, across NW and ESW regions. This will require an additional 252 km of improvements in AMP 8, split into 84 km for ESW and 168 km for NW.

Our Bluespaces programme clearly links to other planning frameworks, as shown in Table 4 below:

TABLE 4: BLUESPACES LINKS TO OTHER PLANNING FRAMEWORKS⁶

RBMP	WRMP	DWMP	FRMP	Other	Comment
✓	✓	✓	✓		Schemes aiming to invest in catchments and achieve broad environmental improvements may contribute to a range of other planning frameworks concerned with water quality, water resources, drainage, wastewater and flood risk.

It is clear there is customer support for investing in Bluespaces, and that there is a need to invest in AMP8 if we are to have a chance at meeting the Government’s 25YEP goals. By investing in this way now in amp 8, we believe these actions will minimise further action in the future for statutory drivers like WFD, which will save customers money in the long term. We

⁵ Sources of evidence include: River and Bathing Water Quality Customer Research 2017 & 2018; PR19 Customer Engagement; Water Environment Feasibility Study 2020.

⁶ NW_Bluespaces_25YEP_ODR

believe there is a wider opportunity as part of this investment to deliver environmental improvement that also improves the health and wellbeing of the communities we serve.

2.2.3 Need to improve the Ouseburn Catchment – NW (25YEP_IMP)

The Ouseburn catchment is a high priority waterbody (Ouseburn from Source to Tyne) within the lower Tyne, impacted by many urban and rural sources of pollution. The Ouseburn Catchment partnership, a sub-partnership of the Tyne Catchment Partnership, has been driving collective action across the Ouseburn from Source to Tyne waterbody for many years. However, the catchment is complex with diverse pressures and many stakeholders operate in isolation at an issue-scale limited by financial budgets rather than achieving a co-ordinated approach.

Work in AMP7, using citizen science techniques alongside traditional methods, has helped enhance our existing knowledge and our evidence base to better understand the needs and opportunities for this catchment. The needs for Ouseburn improvements have also been developed through stakeholder engagement with catchment partners through the North East Catchments Hub (NECH). The outcome of this work is a catchment improvement plan. Investment in PR24 is needed to support delivery of the catchment improvement plan.

2.2.4 Need to address flood risk as part of NIDP – NW (25YEP_IMP & _INV)

It is widely recognised and acknowledged that drainage systems are complex and have numerous interactions, both known and unknown. It is therefore important that our approach to addressing the challenges drainage presents is collaborative and that relevant stakeholders actively participate in the process. Our Northumbria Integrated Drainage Partnership (NIDP) makes this possible by bringing together Northumbrian Water, the North East's 13 Lead Local Flood Authorities and Environment Agency to reduce our communities' risk of flooding from all sources.

The need to improve flood risk remains a key priority for us in AMP8, is included in the 25YEP drivers, and is supported by our customers. The NIDP partnership, recognised as an example of leading practice, is a vehicle for us to address this need. The partnership is managed by a governance body with representatives from all the region's Risk Management Authorities.

One of the key aims of the NIDP is to identify opportunities to deliver surface water management schemes within catchments to reduce the risk and impact of flooding. Catchments are taken from the investigation stages where opportunity areas are identified, through to the outline business case stage to determine funding sources. The award-winning partnership approach is based around collaboration to identify priority investment areas where benefits can be delivered for multiple stakeholders.

To meet the wider objectives of NIDP, the governance group have developed high level guidance and direction around:

- Agreeing and developing a strategic level risk-based prioritisation methodology for the identification of high-risk drainage areas.

- Promoting implementation of the prioritisation methodology to direct investment to the most needed areas.
- Supporting and facilitating the timely sharing of data and information between parties for the purposes of understanding and managing integrated flood risk.
- Managing the application of the methodology by sharing knowledge and experience.
- Overseeing the delivery of detailed studies at high-risk locations as identified in the earlier prioritisation location.
- Ensuring that suitable mechanisms are in place to communicate approach with other parties working on flood risk.
- Championing the approach of first understanding the ‘right thing to do’- ahead of the preference of any single organisation.

NIDP partners work together to prioritise and jointly fund integrated flood risk studies and joint delivery schemes to tackle flooding from all sources affecting communities across the North East. The NIDP has been recognised nationally as an exemplar of partnership working, shortlisted at the Water Industry Awards 2018 & 2023 and winning the Project Excellence Partnership Award at the 2018 Flood and Coast Conference. We have included investment in our PR24 plan to continue the flood risk investigation and improvement work being delivered through this initiative.

Our NIDP investment programme clearly links to other planning frameworks, as shown in Table 5 below:

TABLE 5: NIDP LINKS TO OTHER PLANNING FRAMEWORKS

RBMP	WRMP	DWMP	FRMP	Other	Comment
✓	✓	✓	✓	SODRP	Schemes aiming to invest in catchments and achieve broad environmental improvements may contribute to a range of other planning frameworks concerned with water quality, water resources, drainage, wastewater and flood risk.

Source: Northumbrian Water

The NIDP follows the following guidance:

- The DWMP Framework on collaborative working with NIDP projects being identified as best practice in the Framework for the production of DWMP’s Appendix E – Case Studies.
- Storm Overflow Discharge Reduction Plan requirements to “work closely with local partners, such as local councils, highway authorities, planning authorities, and the Environment Agency to ensure that their plans strategically link to other plans, such as local flood risk management strategies”.
- National Infrastructure Commission recommendation on Surface Water Flooding that “Government should require “upper tier local authorities, water and sewerage companies, and, where relevant, internal drainage boards in the new flood risk areas to produce and deliver costed, joint investment plans for managing surface water that achieve the agreed local objectives and follow the ‘solutions hierarchy’”.

2.2.5 Need to improve River Resilience to Climate Change - ESW & NW (25YEP_INV)

Being resilient to climate change is at the heart of this need. We recognise the extreme weather patterns that come with a changing climate will place strain on our natural environment in which we operate and have identified a need to enhance the resilience of our rivers. We have included this need under the 25YEP_INV driver to enable better understanding of where there is a lack of resilience and what solutions can best address this.

Specifically, this need includes river restoration feasibility studies to address climate change resilience, delivered in partnership.

2.2.6 Need for SUDS on Operational Sites - ESW & NW (25YEP_INV)

We recognise that implementing source control for surface water through sustainable drainage measures (SuDS), including wetland creation, is key to reaching our longer term targets for reducing flood risk. To lead by example, we have identified a need to increase the use of SuDS at our operational sites. We want to promote the use of sustainable drainage solutions and play an industry leading role in their scale-up. Investment in AMP8 is necessary to develop an efficient and effective programme of SuDS installations and support development of additional SuDS interventions for PR29.

We are committed to sharing our learnings with peers, helping others within our industry and more broadly to understand the nature and scale of SuDS opportunities on our own sites.

2.2.7 Need for holistic catchment delivery - ESW & NW (25YEP_INV)

There is a need to improve our skills and capabilities in working at a catchment level, to make sure we can most effectively identify the root cause of issues we face and respond in the most efficient and effective way. A catchment approach will help make sure our future programmes of work reflect the needs of the communities and stakeholders we serve and help us to deliver greater value for customers and the environment. Specifically, this need includes working with catchment partnerships across our region to investigate and inform the investment required for PR29.

2.3. LINK TO LONG TERM STRATEGY

2.3.1 Link to long term strategy

Our 25 YEP enhancement case forms part of our [long-term strategy](#) (NES_LTDS). As we progress through to delivery, we will need to review our progress and adapt our future plans to take into account changing circumstances. These include how customer and stakeholder views about priorities evolve; new technologies that emerge; how supply chain capacity develops; changes in weather patterns; and customer behaviour changes.

Reflecting our long-term delivery strategy allows us to seek early certainty on the investment we do not expect to change and have included in this enhancement case, while acknowledging the factors highlighted above could mean choosing different pathways in future.

We will consider those choices as we progress the development and delivery of catchment improvement plans and interventions identified through our innovative NIDP, Bluespaces and other 25YEP plans. Our PR24 business plan, covering 2025-30, includes those projects we consider will help us to drive better, more efficient, and nature-based solutions to addressing the 25YEP goals.

Specifically, the Government's 25YEP requires us to invest to:

- Reduce nitrogen and phosphorus pollution, through catchment and nature-based solutions where possible.
- Improve drainage and environmental water quality, and reduce surface water flooding risk, through our Drainage and Wastewater Management Plan (DWMP).

Our long-term strategy sets out our ambition to continue to reduce sewer flooding over the next 25 years. The investment proposed for NIDP contributes toward our broader plan and target of reducing internal and external sewer flooding by 60% by 2050.

Investments included in this enhancement case support all aspects of our Long-Term Strategy (LTDS) core pathway, including:

- ensuring sustainable water supplies
- protecting the local environment
- maintaining resilience; and
- delivering net zero.

All our 25YEP investment from Bluespaces to river restoration has a positive impact on delivery of net zero, employing nature-based solutions and focussing on improving the local environment. It also serves as enabling investment as it allows us to collect the data needed to inform future investment programmes. Specifically, this investment will help keep options open by:

- funding the investigations necessary to identify and define future investment needs. This includes gathering evidence to understand the cost, benefits and risk of alternative solutions to the traditional grey options to address the needs of a catchment.
- Funding delivery of alternative and collaborative solutions such as improved Bluespaces so that the performance improvement and benefits delivered can be better understood, measured and monitored over AMP8.

Additionally, while we are not legally obligated to deliver this investment by 2030, we consider it is necessary to make this investment in the 2025-30 period to measure the effectiveness of alternative solutions to inform AMP9 programme, develop collaborative partnerships to support more effective and efficient delivery of solutions in the future, in recognition that nature-based solutions, partnerships, and restoration projects naturally take longer to establish. We therefore consider this investment is necessary in 2025-30 to deliver our LTDS.

We expect that our work in the areas identified, including Bluespaces and improving flood risk, will have a positive impact beyond the immediate improvement to our water and wastewater environment. As we become more adept at measuring and monitoring the benefits, including secondary benefits, it will support the continuous improvement of our prioritisation framework and help to unlock additional sources of funding. It will also reduce the need for significant investment in the long term, if our assets and receiving environment are more resilient to climate change and have improved quality and biodiversity.

2.3.2 Factors outside of our control

There are factors outside our control that contribute to the need for this investment. This includes stakeholders and others who play a role in our water and wastewater systems. This might be, for example, the agriculture sector whose activities can have a direct impact on water quality and the environment. It can also include local environmental and community groups with a particular interest in supporting improved blue spaces or flood risk management.

What we have seen over AMP7 is a shared need emerge to improve the environment and our resilience, including by reducing flood risk. We contribute directly to these needs through our discharges of treated effluent, maintenance of sewer networks, and abstraction of raw water. Our role and impact must be considered alongside that of others in our region to make sure we clearly understand the needs and their root cause and are positioned to develop the most effective and efficient solution to address the issues. This can only be achieved through the collaborative, partnership working we have proposed in this enhancement case. There is a need to upskill our ability to work collaboratively and through catchment partnerships.

Also driving these needs is our clear and compelling desire to go beyond the regulatory requirements in AMP8. We want to maintain our industry leading position in areas including drainage through the NIDP, Bluespaces, and as we progress into AMP8 sustainable drainage on our operational sites as well.

2.4. CUSTOMER SUPPORT FOR THE NEED

We included a bespoke performance commitment for “above and beyond” improvements to accessible water environments in our 2020-25 business plan. This was because our customers expected us to work with others to improve the water environment and wanted us to focus on some aspects where we did not have traditional responsibility to improve their experience with water in the environment (see our research for PR19). Our stakeholders also expected us to show regional leadership through supporting partnership working to achieve greater improvements for the water environment. In 2017, we ran a series of partnership workshops with 91 organisations to develop our Bluespaces plans for 2020-25 – since then, we have worked with a small number of partners to deliver these. The Government’s [Environment Improvement Plan](#) commits to increasing the accessibility of green and blue spaces.

The Northumbria Integrated Drainage Partnership was formed in 2014, consisting of Northumbrian Water, the Environment Agency, and the fourteen Lead Local Flood Authorities covering the North East of England. This partnership approach has overcome the barriers associated with complex institutional and funding arrangements which divide drainage responsibilities between these bodies, housing developers, and property owners. Our partners across these organisations have told us that they support continuing with this partnership (including, for example, in their formal response to our DWMP consultation). The Government's [Surface Water Management](#) plan highlights the importance of planning together to get the full range of information, co-design effective solutions, and make the best use of resources – and describes partnership working as one of its clear expectations.

The Government's [Environment Improvement Plan](#) sets a target to restore 75% of our water bodies to good ecological status, and we [consulted on our own long-term delivery strategy goal](#) to make sure that 75% of our rivers achieve good ecological status. To achieve this aim, we need to understand how improvements can be made – including resilience to climate change. The Water Forum challenged us to do more to understand the impact of climate change on the environment, and we are expected to improve our understanding of climate change to mitigate risks identified in the UK Climate Change Assessment (CCRA3), as directed by WISER.

Our customers tell us that the environment is important to them. However, when we explore individual environmental outcomes and measures, those relating to river water quality are considered to matter less, and require less investment, compared to other environmental measures ([NES42](#)). Customers do not prioritise this as highly as investment in reliable supplies of water.

Customers supported our ambition but are not generally willing to pay for improved performance on river water quality ([NES42](#)). Customers believed that polluters should pay, and there are mixed views on whether bill payers should pay for improvements related to environmental issues ([NES43](#)).

In our pre-acceptability research, a slight majority of customers did not want to invest in environmental improvements. This conflicted with [our 2021 Water Environmental Improvements research](#) which showed that customers highly valued making investments with the aim of improving water environments for the benefit of customers and were willing to pay for improvements. Customers said they wanted to see the programme continue past 2025. In 2022, our People Panels discussed [public value](#) – with customers saying that they are broadly in favour of improvements if they can be delivered at an acceptable cost and not to the detriment of the core services we are responsible for delivering.

As part of our [Affordability and Acceptability Testing qualitative research](#) (NES49), customers discussed investment in regional flooding and supported our plan of working with the Northumbria Integrated Drainage Partnership to reduce risk of flooding of all types across the region. Customers thought that a “medium” phasing option was preferable, with a relatively low bill impact – and an important benefit in reducing flooding. Customers also noted the importance of working in partnership.

Our Bluespaces programme has been very successful and has had strong support from both customers and stakeholders in the past. For 2025-30, though, customers expressed concerns about affordability in the context of other statutory investments. These investments are cost-beneficial under customer valuations of the benefits.

We carefully considered if we should remove this from our plan – and our “must do” plan did not include this investment. In our qualitative affordability and acceptability testing, customers strongly supported our preferred plan including our work on Bluespaces. We provided customer evidence to the Environment Agency as part of our submission to include Bluespaces within the WINEP programme. We concluded that we should include this in our business plan for 2025-30, as this has strong stakeholder support, delivers benefits for customers and the environment, supports strong partnership working across our regions and is in line with the Government Environment Improvement Plan – and customers supported this in the affordability and acceptability research ([NES49](#)).

Our Northumbria Integrated Drainage Partnership has strong support from stakeholders and is a leading approach to partnership working in line with the Government’s Surface Water Management plan. This includes support from Phil Rothwell Chair, Northumbria Regional Flood and Coastal Committee, who states in his letter “*The benefits of integrated water management extend far beyond flood risk reduction, with wider economic and environmental improvement being of particular value. Failure to allow and direct investment towards this would be a significant backwards step, to the detriment of all.*” (See Appendix A).

Our customers supported this investment option and phasing in our [Affordability and Acceptability Testing qualitative research](#) (NES49). We concluded that this should be in our business plan.

“Respondents felt that the investment to tackle regional flooding was of high importance. For many, they were strongly in favour of the investment benefits of the partnership working within the Northumbria Integrated Drainage Partnership”. They also noted both the low bill impact associated with this investment and the relatively high impact of not addressing flooding. Others felt that the high importance of this investment was underpinned by the impact of climate change, with flooding likely to be an increasing problem in the near future. Many respondents opted for the medium phasing option [as used in our final business plan], noting favourably the relatively low impact of this choice and the highly beneficial impact of the investment”.

[Qualitative Affordability and Acceptability Research](#) (NES49).

The Water Forum supported this decision and encouraged us to include both Bluespaces and NIDP in our business plan.

3. BEST OPTION FOR CUSTOMERS

Our process for identifying the best option for customers for the 25YEP drivers was informed by our approach to the statutory drivers and WINEP guidance. It was also based on our experience in AMP7 and the nature of the needs identified above. Consistent with other WINEP enhancement cases, we have reflected the following principles in selecting the best options for customers.

TABLE 66: WINEP OPTIONS DEVELOPMENT PRINCIPLES

Expectation	How this has been met
Environmental net gain	We have undertaken an assessment of environmental net gain of the options by assessing the potential environmental impacts including the natural environment, net zero, catchment resilience, access, amenity and engagement of each option and monetised alongside the whole life cost, choosing the one that provides the greatest overall environmental benefit/cost ratio.
Natural capital	We have assessed each of our options against the full range of natural capital metrics and wider environmental objectives as part of our WINEP assessment to the Environment Agency.
Catchment and nature-based solutions	We have considered a range of nature-based solutions across all 25YEP driver investments including SuDS, natural flood management, and river restoration.
Proportionality	We have taken a proportional approach to options development based on green book principles. Where there are more than three options, we have screened out those which have fewer natural capital benefits, higher costs and higher carbon.
Evidence	The evidence to our options is described within Section 3 and 4 of this document. Further supporting evidence of our solutions development and our data sets is available in our Options Development Report and Options Assessment. Our WINEP submission has been independently audited by a third party (Jacobs) and there are no outstanding actions.
Collaboration	We have collaborated with the Environment Agency to define the list of sites. Collaboration with the EA as well as local stakeholders and planning authorities will continue as part of the delivery process.

3.1. BROAD RANGE OF OPTIONS

3.1.1 Range of options to meet the need

Due to the non-statutory nature of the proposed investment, we have considered one option for each need included in this enhancement case. For the investigations proposed, including our programme of SuDS on operational sites, holistic catchment delivery and river resilience, there is only one relevant option. The studies proposed are those required to understand the underlying challenges and opportunities and develop an appropriate and affordable programme of interventions to deliver in future regulatory periods.

For the needs included under the 25YEP IMP driver for AMP8 we have taken a bespoke approach to developing the programme of interventions. We have worked with stakeholders, leveraged years of experience and expertise, and reflected on the successes and lessons learnt from our current environmental programme to inform our 25YEP IMP activities.

For some options included in this enhancement case, the specific projects to address priorities identified will emerge as we progress through AMP8. This is the case for Bluespaces as well as the Ouseburn catchment.

For NIDP Flood risk improvements, which also require partnership working to identify and deliver the best value options for the catchments, we are further ahead in our options development process due to the work undertaken in AMP7 and as part of developing our DWMP. Our early assessment of options available will be refined and co-funding opportunities pursued as we progress through AMP8.

A summary of the options included in this enhancement case is provided in Table 7 below, with greater detail on option selection in the sections that follow.

TABLE 77: THE OPTIONS TO ADDRESS (25YEP_INV AND 25YEP_IMP) NEEDS

Need	Need Description	Option Description	AMP8 TOTEX (2022/23 Prices)
Bluespaces (ESW and NW)	Improvement to Bluespaces where customers can access the water environment.	Supporting projects via grant funding to improve water quality, quantity, or biodiversity in areas with public access building on current Bluespaces ODI scheme.	6,637,428
Ouseburn Catchment improvement	Investment to support delivery of the catchment improvement plan.	Supporting targeted catchment partnerships to deliver holistic water environment improvements, e.g. grant funding via The Rivers Trusts	74,750
NIDP Investigation	Investment to continue the flood risk investigation and improvement work being delivered through NIDP initiative	Investigation	1,155,000
NIDP Improvement	Investment to continue the flood risk improvement work being delivered through NIDP initiative	NIDP improvements to flood risk	64,974,411
SuDS on operational sites	NW promotes the use of SuDS to manage surface water. We wish to lead by example by deploying SuDS on our operational sites.	SuDS on water company assets feasibility study	110,032
Holistic catchment delivery	Supporting the development of PR29 through catchment led investigations.	Investigation	705,978
River restoration for climate change resilience	Investigating & working up projects to restore rivers in order to support greater resilience to climate change, with a view to delivering costed projects in AMP9 & AMP10.	Investigating & working up projects to restore rivers in order to support greater resilience to climate change, with a view to delivering costed projects in AMP9 & AMP10.	419,481
TOTAL			74,077,080

3.1.2 Options for Investigations

As the needs identified under the 25YEP_INV driver require investigations, and therefore have one distinct solution, they were not subject to further optioneering.

Needs addressed by investigations include the following:

- NIDP Investigation;
- SuDS on operational sites;
- Holistic catchment delivery; and
- River restoration for climate change resilience.

3.1.3 Options to improve “Bluespaces” – ESW & NW (25YEP_IMP)

In AMP7, bluespaces improvements are being delivered across 10 management catchments in our NWG regions (5 NW management catchments). Currently, the Bluespaces programme is in its fourth year of delivery and has achieved over 64 km of improvements, against its 50km PR19 target, with more projects planned for the final years of AMP7.

The programme was developed as a partnership approach, relying on extensive and high-quality engagement with partners to identify and develop external opportunities, draw in match funding to support deliverable projects, and deliver wider environmental improvements in partnership. The programme has significant co-funding opportunity for AMP8 which we have incorporated into our options development.

Our preferred option to improve Bluespaces has been informed by our AMP7 programme⁷ of work and our pledge to improve a total of 500km by 2030. Our approach allows us to develop and deliver projects in partnership with organisations and community groups from the public, private, voluntary and education sectors in our region including the Till & Tweed, Northumberland Rivers, Tyne, Wear and Tees. This includes popular tourist locations and sites of value to local communities. Our approach focuses on packages of improvements across access and recreational facilities, wildlife and biodiversity, and water quality.

At a high level, we propose to expand the existing AMP7 Bluespaces programme and deliver a further 252km of improvement in AMP8. This will involve working in collaboration with our partners to develop and deliver projects to enhance rivers and streams, lakes and reservoirs, wetlands, coasts and beaches. By focusing on areas of water environment that the public can get to, we can deliver improvements which are visible and make a difference to individuals and communities, while raising awareness of partnership working to improve the water environment in our regions.

Figure 1 below shows how the areas of improvement we are targeting link with the 12 water environmental indicators we use to assess the benefits of Bluespaces projects.

⁷ Our Projects (nwg.co.uk)

FIGURE 1: INDICATORS OF IMPROVEMENT FOR BLUESPACES

Aspect of Improvement	Benefit Indicator	
Access, Facilities & Recreation (A)	A1	Increases access to, engagement with and enjoyment of the water environment
	A2	Benefits health and wellbeing
	A3	Influences positive environmental behaviours
Wildlife & Biodiversity (B)	B1	Improves the quantity, quality and connectivity of habitats
	B2	Improves the conservation status and or abundance or distribution of species
	B3	Reduces risk or impact of invasive non-native species (INNS)
Water Quality (C)	C1	Reduces pollutants entering waters from point or diffuse sources
	C2	Contributes towards improved status or no deterioration of rivers or bathing waters or protecting drinking water
	C3	Improves state and function of water, including naturalisation, visual appearance, litter and odour
Additional Key Benefits (D)	D1	Provides resilience and adaptation to climate change and/or reduces the risk of flooding
	D2	Provides benefits to local communities, the local economy or NWG
	D3	Supports strategic project or investment into strategic partnership or landscape/regional activity

These indicators are linked to those used in the Government’s 25-year plan for the environment. This can be found at <https://www.gov.uk/government/publications/25-year-environment-plan> We have proposed investment related to Bluespaces of c.£6.6m in the period 2025-2030.

We do not yet have a conclusive list of sites at which to target our Bluespaces investment. These will be developed with partners during AMP8. We have a robust governance process in place to determine which schemes to progress. This includes working with a Bluespaces advisor who supports partners through a process of joint scheme development. The types of options likely to emerge from this process include, for example, water quality and biodiversity improvements. Schemes are only eligible for NW funding if these improvements are delivered in a space where our customers have access to them⁸.

The option for delivering bluespaces improvements under the 25YEP driver is presented in Table 8.

⁸ <https://www.nwg.co.uk/responsibility/environment/bluespaces/our-scheme/>

TABLE 88: BLUESPACES OPTION⁹

Option Title	Option Description
Bluespaces Improvements Scheme	Scheme for investment in bluespaces improvements at a unit cost of £26,339 per kilometre (km). Target of 168/84 km proposed for NW/ESW, at a total AMP8 programme cost of £6.6m, with c.50% co-funding anticipated for projects being delivered.

There is only one developed option for this need. The targets for the Bluespaces programme have been determined from company ambition to meet Rivers and Coasts pledge for bluespaces improvements (500 km by 2030, requiring 252 km from 2025-30 split 168 km for NW and 84 km for ESW).

3.1.4 Options to improve the Ouseburn catchment- NW (25YEP_IMP)

The investment included in this enhancement case is to co-fund the delivery of the Ouseburn Catchment improvement plan. The specific interventions to be delivered will be defined as part of the catchment improvement plan, for delivery in AMP8. Alternatives to this investment would include direct action taken by NW to improve the Ouseburn catchment. By investing in the catchment partnership, work to improve the catchment can be progressed sooner, and additionally unlocks co-funding opportunities.

The need for improvement in the Ouseburn catchment has been identified through stakeholder engagement, including with catchment partners through the North East Catchments Hub. Opportunities for improvements as currently understood for the catchment are shown in Table 9. We understand that other improvement opportunities may arise in response to evidence gathering in AMP7 and development of the catchment improvement plan.

The option for delivering Ouseburn catchment improvements under the 25YEP driver is presented in Table 9.

TABLE 99: OUSEBURN CATCHMENT OPTION

Option Title	Option Description
Ouseburn catchment improvements	Improvements to the Ouseburn catchment will be delivered in AMP8 towards delivery of the catchment improvement plan. An evidence gathering project using citizen science techniques alongside traditional methods is providing water quality data to identify the best opportunities for improvements towards delivery of a catchment improvement plan. Seed funding of £74,750 would leverage considerable co-funding likely 100% to develop the Ouseburn Catchment Integrated Plan and citizen science programme and delivery of schemes identified.

3.1.5 Options for NIDP Flood Risk Improvements – NW (25YEP_IMP)

This enhancement case includes additional investment in our innovative Northumbria Integrated Drainage Partnership (NIDP). This investment forms part of our WINEP 25 Year Environment Plan. The total programme investment for the NIDP

⁹ NW_Bluespaces_25YEP_ODR

is forecast to be c.£140m inclusive of matched funding, of which c.£65m is the proposed as our contribution under the 25YEP_IMP driver.

The options appraisal for this investment area is unique to the 25YEP driver as it involves the collaborative identification of needs, a shared vision through the NIDP, and co-created options to address flood risk through joint delivery and funding initiatives. Reducing flood risk is at the heart of this initiative, which is a key component of our DWMP. The NIDP seeks to identify sustainable, non-traditional approaches to delivering improvements and the optioneering process undertaken by this group is subject to rigorous governance (outlined in 2.2.4). The process is summarised at a high level below:

Stage 1 Broad range of needs identified and prioritised

The collection, collation and analysis of existing flooding data from all sources to define issues and opportunities for integrated working between Northumbrian Water, the Environment Agency and the Local Authority. Stage 1 allows us to identify all the flooding issues in a drainage catchment, whether these are sewer flooding, surface water flooding from overland flow or flooding from watercourses and rank them in order of priority based on the number of homes they impact.

Stage 2 Option development and cost benefits

A diagnostic study where we carry out a more in-depth survey, investigation and hydraulic model enhancement to address specific issues and develop opportunities at the top priority locations identified in stage 1. This includes option development and an assessment of cost of the proposed options.

Stage 2 includes a detailed assessment of benefits and beneficiaries to demonstrate the impact of the proposed project. If we can show that the project delivers an appropriate level of benefits (i.e. it doesn't cost more to construct than the value of the property that it protects) this enables us to make applications for joint funding to progress to design and construction. This is covered in Section 3.3.5.

Solution development looks at grey and green infrastructure for sewer, surface and fluvial flood risk, reduce surface water entering the combined network, and where possible increase biodiversity and amenity value for residents. Examples of these options include new surface water drainage; above ground surface water attenuation; rain gardens; new combined drainage, swale, and bunds, for example.

Several solutions will be identified for each individual location and be included in our collaborative options identification and appraisal process, looking at best value including environmental benefits. A cost benefit assessment is undertaken for these solutions and, where cost beneficial they are progressed. The cost benefit assessment methodology applied follows the Environment Agency's Flood and Coastal Erosion Risk Management appraisal guidance manual

NIDP Programme Forecast

The total programme investment for the NIDP is forecast to be c.£140m inclusive of matched funding, of which c.£65m is proposed as our contribution under the 25YEP_IMP driver. We have developed a long list of options to progress in AMP8 at an anticipated c. £65m contribution from NW (Table 10).

TABLE 10: 10 NIDP IMP OPTIONS AND COST ESTIMATE

Project Name	Total Project Expenditure – PROJECT TOTAL	Adjusted funding gap	NWL Contribution	Proposed level of Grant in Aid to claim
NIDP – Barnard Castle Flood Alleviation Scheme	£3,874,000	62%	£2,405,455	£1,468,545
NIDP – Redcar (Oak Road & Borough Rd) Flood Alleviation Scheme	£4,048,883	59%	£2,375,943	£1,672,940
NIDP – Stockton East (Derwent Street) Flood Alleviation Scheme	£5,349,241	43%	£2,302,376	£3,046,865
NIDP – Stockton East (Beaconsfield Road) Flood Alleviation Scheme	£2,353,025	79%	£1,852,516	£500,509
NIDP – Stockton East (Ashton Road) Flood Alleviation Scheme	£10,303,979	72%	£7,423,388	£2,880,591
NIDP – Redcar (The Fleet & Dormantown) Flood Alleviation Scheme	£3,180,872	81%	£2,584,801	£596,071
NIDP – Easington (Third Street) Flood Alleviation Scheme	£3,400,000	57%	£1,935,000	£1,465,000
NIDP – Walker (Moorland Crescent) Flood Alleviation Scheme	£2,792,000	54%	£1,497,000	£1,295,000
NIDP – Alnwick (Town Centre) Surface Water Flood Alleviation Scheme	£7,986,366	68%	£5,444,329	£2,542,037
NIDP – Loftus Flood Alleviation Scheme	£1,870,000	40%	£748,000	£1,122,000
NIDP – East Chopwell Flood Alleviation Scheme	£1,866,667	40%	£746,667	£1,120,000
NIDP – Darlington South Flood Alleviation Scheme	£2,370,000	40%	£948,000	£1,422,000
NIDP – Wallsend (Archer Street) Flood Alleviation Scheme	£3,284,000	49%	£1,614,000	£1,670,000
NIDP – Ushaw Moor (Broom Crescent) Flood Alleviation Scheme	£2,176,000	59%	£1,286,000	£890,000
NIDP – Hartlepool North (Jesmond Gardens) Flood Alleviation Scheme	£850,000	40%	£340,000	£510,000
NIDP – Newburn Flood Alleviation Scheme	£2,633,327	40%	£1,053,331	£1,579,996
NIDP – Thornaby South and Ingleby Barwick Flood Alleviation Scheme	£1,350,000	40%	£540,000	£810,000
NIDP – Stanhope and Crawleyside Flood Alleviation Scheme	£1,541,667	40%	£616,667	£925,000
NIDP – Hexham Flood Alleviation Scheme	£7,949,985	40%	£3,179,994	£4,769,991
NIDP – Kibblesworth Bank Flood Alleviation Scheme	£366,000	40%	£146,400	£219,600
NIDP – Blyth (First Avenue) Flood Alleviation Scheme	£6,215,267	40%	£2,486,107	£3,729,160
NIDP – Spennymoor Flood Alleviation Scheme	£3,960,167	40%	£1,584,067	£2,376,100
NIDP – Bedlington and Cambois Flood Alleviation Scheme	£1,700,000	40%	£680,000	£1,020,000
NIDP – Birtley Flood Alleviation Scheme	£984,400	40%	£393,760	£590,640
NIDP – Pallion/Hendon Burn Flood Alleviation Scheme	£1,500,000	40%	£600,000	£900,000
NIDP – Willington Quay Flood Alleviation Scheme	£665,372	40%	£266,149	£399,223

Project Name	Total Project Expenditure – PROJECT TOTAL	Adjusted funding gap	NWL Contribution	Proposed level of Grant in Aid to claim	
NIDP – Seaton Valley (Seghill) Flood Alleviation Scheme	£2,516,608	40%	£1,006,643	£1,509,965	
NIDP – Felton Flood Alleviation Scheme	£1,046,640	40%	£418,656	£627,984	
NIDP – Gateshead Central Flood Alliviation Scheme	£425,000	40%	£170,000	£255,000	
NIDP – Prudhoe (Stanley Crescent) Flood Alleviation Scheme	£1,450,000	40%	£580,000	£870,000	
NIDP – Thornfield Road Flood Alleviation Scheme	£790,000	40%	£316,000	£474,000	
NIDP – High Clarence Flood Alleviation Scheme	£505,000	40%	£202,000	£303,000	
NIDP – Lower Ouseburn Flood Alleviation Scheme	£877,333	40%	£350,933	£526,400	
NIDP – Powburn Flood Alleviation Scheme	£1,130,000	40%	£452,000	£678,000	
NIDP – Jarrow (Hedworth West) Flood Alleviation Scheme	£1,495,333	40%	£598,133	£897,200	
NIDP – Peterlee Flood Alleviation Scheme	£1,625,000	40%	£650,000	£975,000	
NIDP – Herrington Flood Alleviation Scheme	£1,588,000	40%	£635,200	£952,800	
NIDP – Chester le Street Flood Alleviation Scheme	£5,588,870	40%	£2,235,548	£3,353,322	
NIDP – Rowlands Gill (Station Road) Flood Alleviation Scheme	£1,201,667	40%	£480,667	£721,000	
NIDP – Ebchester Flood Alleviation Scheme	£650,000	40%	£260,000	£390,000	
NOC501E/ 000A/255A	NIDP – Chirton (Balkwell Avenue & Langley Road) Flood Alleviation Scheme	£2,800,000	25%	£700,000	£2,100,000
NOC501E/ 000A/257A	NIDP – Chirton (Redesdale Road and Mindrum Tce) Flood Alleviation Scheme	£2,500,000	25%	£625,000	£1,875,000
NOC501E/ 000A/244A	NIDP – Corbridge (Brunwell Ct & Guessburn, New Ridley) Flood Alleviation Scheme	£174,000	25%	£43,500	£130,500
NOC304E/ 000A/054A	NIDP – Corbridge (New Ridley Road, Stocksfield) Flood Alleviation Scheme	£340,500	25%	£85,125	£255,375
NOC306E/ 000A/057A	NIDP – Great Ayton (OA6 Easby Ln) Flood Alleviation Scheme	£1,591,000	25%	£397,750	£1,193,250
NOC501E/ 000A/213A	NIDP – Sedgefield (The Leas) Flood Alleviation Scheme	£873,000	44%	£386,000	£487,000
NOC501E/ 000A/279A	NIDP – Easington (Dixon Rise) Flood Alleviation Scheme	£1,237,000	25%	£309,250	£927,750

NOC501E/ 000A/281A	NIDP – Easington (Yoden Way) Flood Alleviation Scheme	£1,931,000	35%	£671,000	£1,260,000
NOC501E/ 000A/214A	NIDP – South Stanley (Avon Rd) Flood Alleviation Scheme	£3,986,000	31%	£1,245,000	£2,741,000
NOC500E/ 000A/034A	NIDP – South Stanley (Cookson Place) Flood Alleviation Scheme	£838,000	37%	£308,000	£530,000
NOC501E/ 000A/231A	NIDP – South Stanley (Park Road) Flood Alleviation Scheme	£4,528,000	28%	£1,275,000	£3,253,000
NOC501E/ 000A/259A	NIDP – South Stanley (The Middles) Flood Alleviation Scheme	£472,000	25%	£118,000	£354,000
NOC501E/ 000A/269A	NIDP – Haydon Bridge (South Bank) Flood Alleviation Scheme	£895,222	25%	£223,806	£671,417
NOC501E/ 000A/016A	NIDP – Whickham South (Broom & Whaggs Lane) Flood Alleviation Scheme	£1,500,000	53%	£796,000	£704,000
NOC501E/ 000A/202A	NIDP – Whickham South (Gateshead Road) Flood Alleviation Scheme	£700,000	37%	£259,000	£441,000
NOC500E/ 000A/094A	NIDP – Whickham South (Hole Lane) Flood Alleviation Scheme	£920,000	38%	£350,000	£570,000
NOC501E/ 000A/080A	NIDP – Annfield Plain and Stanley (New Front Street) Flood Alleviation Scheme	£4,842,000	48%	£2,332,000	£2,510,000
NOC501E/ 000A/278A	NIDP – Annfield Plain and Stanley (West Kyo) Flood Alleviation Scheme	£2,398,000	25%	£599,500	£1,798,500
NOC501E/ 000A/283A	NIDP – Ushaw Moor (Scripton Gill) Flood Alleviation Scheme	£535,000	25%	£133,750	£401,250
NOC501E/ 000A/284A	NIDP – Wallsend (Wallsend High St) Flood Alleviation Scheme	£1,659,000	43%	£711,000	£948,000
Total		£140,180,391	46%	£64,974,411	£75,205,980

We are following the Environment Agency’s governance process, adapting our own approach and reflecting the different needs of the varied stakeholder included in the NIDP. We are able to share customer insights including support for green and NBS as part of our work in the partnership, which is considered in the options appraisal process.

The option for delivering NIDP investment under the 25YEP_INV and IMP driver is presented in Table 11.

TABLE 1111: NIDP CATCHMENT OPTION

Option Title	Option Description
NIDP Flood improvement	<p>NIDP led investigations and improvement to flood risk.</p> <ul style="list-style-type: none"> • NIDP is a mechanism to deliver flood risk improvement, multiple additional benefits, and encourages collaborative working. • NIDP is our preferred option as it follows the guidance on multiple organisation benefits, is, delivered by industry leading, award-winning partnership agreement, and been going for 10 years.

3.1.6 Options Need to improve River Resilience to Climate Change – NW & ESW (25YEP_INV)

As the needs identified under the 25YEP_INV driver require investigations, and therefore have one distinct solution, they were not subject to further optioneering.

3.1.7 Options for SuDS on operational sites – NW (25YEP_INV)

As the needs identified under the 25YEP_INV driver require investigations, and therefore have one distinct solution, they were not subject to further optioneering.

3.1.8 Options Holistic catchment delivery – NW & ESW (25YEP_INV)

As the needs identified under the 25YEP_INV driver require investigations, and therefore have one distinct solution, they were not subject to further optioneering.

3.2. PRIMARY AND SECONDARY SCREENING OF OPTIONS

3.2.1 Primary and secondary screening of technologies at a programme level

For each investigation (25YEP_INV) and improvement (25YEP_IMP) need included in this enhancement case there is only one option available for the non-statutory scheme, therefore no primary and secondary screening of options was required.

3.3. BEST VALUE

3.3.1 Benefit Scoring

For the options proposed to address the 25YEP_IMP needs identified we have carried out a benefits assessment for each improvement. Each benefit assessment used a bespoke approach depending on the needs of match funders and scheme design.

NIDP

The NIDP options have been assessed against the FCERM cost benefit methodology, this is due to the match funding contribution from the EA's FCERM Medium term plan. To secure match funding the cost benefit methodology needs to follow [that set criteria](#), namely reduction in property flood risk. Where feasible benefits for biodiversity and water quality and quantity were also quantified but were not monetised. The benefits shown in tables 13 and 14, are for the schemes where studies have been completed to stage 2 level, other benefits will be quantified for the remaining schemes currently progressing through the study stages which are expected to increase the benefits significantly.

Bluespaces

As Bluespace schemes are codeveloped at the time of delivery, it is not possible to quantify the benefits of each of these schemes, however the environmental benefits which have been created so far from our current amp 7 schemes have been listed in Table 12 to demonstrate the scale and breadth of the benefits that the Bluespaces projects can deliver. These have not been monetised as they are benefits from current delivered amp 7, and not expected values for amp 8 projects.

Ouseburn Catchment Improvement

Benefits were not calculated for the Ouseburn catchment project, as the feasibility and development of the current catchment restoration plan is not yet complete to fit with business plan timescales. The current catchment restoration plan in development is funded through the [CastCo project](#), and will follow on from that project, to deliver a collaborative plan to restore the catchment targeting multiple pollution sources delivering multiple benefits which mirror the objectives of the 25 YEP.

Investigations

Investigations did not have a benefits assessment completed, as they will not deliver measurable benefits in AMP8, the investigations will include an output to assess the benefits of any schemes proposed in AMP9.

3.3.2 Investment Appraisal

The benefits assessment aims to support our PR24 WINEP Options Development and Appraisal process by providing a framework for assessing the benefits of options being considered for inclusion into the WINEP (the constrained list of options). The outcome of the assessment is a high-level indication of the likely benefit/impact an option may have on the WINEP WEOs relative to the baseline situation. We have applied a consistent benefits assessment approach to the investments included in this enhancement case, albeit for the single, preferred option.

Costs and benefits have been adjusted to 2022-23 prices using the CPIH Index financial year average. The impact of financing is included in the benefit to cost ratio calculation. Capital expenditure has been converted to a stream of annual costs, where the annual cost is made up of depreciation/RCV run-off costs and allowed returns over the life of the assets. Depreciation (or run-off) costs are calculated using the straight-line depreciation over the appraisal period. To discount the benefits and costs over time, we have used the social time preference rate as set out in 'The Green Book'.

3.3.3 Investment Appraisal – Bluespaces (NW & ESW)

Investment in the Bluespaces improvements option will help us deliver a range of benefits to our communities and the environment. Benefits including biodiversity, water quality improvement, water purification, recreation (including angling), education and volunteering are just a few of the broad range of benefits on offer from this investment.

Our current work on improving Bluespaces provides examples of environmental work funded through this initiative:

- Wetland and Pond Creation
- Species Rich Grassland Restoration
- Tree and Hedge Planting
- INNS Control (Giant Hogweed etc)
- Riparian Fencing and Buffers

The specific projects to be delivered through this option will incorporate the delivery of broader benefits in their development and prioritisation. As there is limited information on the exact scope of measures to be delivered, these benefits have not been quantified/monetised. We have, however, seen a significant and broad range of benefits delivered from our current Bluespaces programme, which includes 25 active and 26 completed projects, summarised in Table 12.

TABLE 12: BENEFITS FROM AMP7 BLUESPACES INVESTMENT

Category	Unit	Benefit
Length of hedgerow planted	m	260
Length of hedgerow enhanced/restored	m	600
Number of trees planted	Nr	7,180
Area of new woodland created (including scrub)	ha	7

Category	Unit	Benefit
INNS addressed	Nr	17
Habitat features installed (bird boxes, bat boxes, otter holt, etc)	Nr	35
Area of grassland created	ha	12
Area of grassland enhanced/restored	ha	43
Area of new wetland created	ha	417
Area of wetland enhanced/restored	ha	84
In-channel improvements/passage improvements/features created	Nr	38
River enhanced	Km	36

It is worth noting that there are also minor benefits that have been identified and are likely to be delivered including those relating to improved air quality, climate regulation, flood regulation and Water supply. These minor benefits have not been quantified/monetised, in line with the benefits assessment methodology.

We are confident that our proposed investment in AMP8 will continue to deliver benefits, supported by our increased maturity and experience in working in this way.

3.3.4 Investment Appraisal – Ouseburn catchment (NW)

Investment in ‘above and beyond’ improvements to support delivery of the catchment improvement plan in a key lower Tyne waterbody (Ouseburn from Source to Tyne), may result in WFD improvement and wider environmental benefits. The major benefits for the Ouseburn improvements option, as part of the 25YEP_IMP driver are biodiversity, water quality and volunteering.

The benefits assessment undertaken is a high-level assessment only, providing solely an indication of the nature and scale of the benefits. Due to the exact location, extent, and nature of the mitigation measures within the waterbody not yet being known for all options (as partnership projects to be developed closer to delivery, building on improvements planned from 2025), benefits cannot be accurately quantified at this time.

Our high-level assessment has indicated the Ouseburn Catchment Restoration option will enable delivery of a range of wider benefits, including:

- Biodiversity, water quality and water purification: Measures such as river restoration, installation of woody debris, vegetation management, therefore likely to provide benefits to biodiversity, water quality, water purification. However, as there is limited information on the exact scope of measures these benefits have not been quantified/monetised.
- Volunteering: Delivery of improvements and match funding through partners will create volunteering opportunities. However, as there is limited information on the exact scope of measures these benefits have not been quantified/monetised

- Minor benefits have also been identified for air quality, climate regulation, flood regulation, water supply, recreation, recreation (angling) and education. Improvements following CaSTCO citizen science project outcomes to deliver on the ground projects for 'river health' will improve water quality. Enhancement to biodiversity and river restoration projects will provide knock-on improvements to a variety of WEOs. These minor benefits have not been quantified/monetised, in line with the benefits assessment methodology.

3.3.5 Investment Appraisal – NIDP Flood risk improvements (NW)

Our approach to investment appraisal for NIDP schemes is collaborative, reflecting the broader needs of all partners including EA and local flood authorities. Investment appraisal looks at multi-benefit opportunities for the different organisations included in the partnership; some benefits will be directly attributable to NW customers and others indirectly attributable.

The costs and benefits of options identified are jointly assessed and prioritised by NIDP members. Due to the collaborative approach and the nature of flood risk, which is subject to change due to other factors, our process for investment prioritisation is fluid, allowing for an iterative programme of investment that can adapt with better information and when it is in customer interest to do so.

The most significant benefit delivered by our NIDP programme is reduced flood risk. Additionally, wider benefits will also be delivered, including:

- **Hazard regulation-flood:** reducing the flood risk through developing a strategic approach/partnership for reducing flood risk to local communities.
- **Minor benefits** have also been identified for climate regulation and water quality. These minor benefits have not been quantified/monetised.
- **Water quality:** reducing flood frequency and risk can lead to less infiltration of pollutants into groundwater used as drinking water sources. It can also reduce the amount and improve water quality of runoff (agricultural, urban etc.) that reaches watercourses.
- **Climate regulation:** reducing flood risk can increase resilience to climate change.

The options proposed for AMP8 have been informed by the study work undertaken by the NIDP in AMP7. They target flood risk improvement by addressing all sources of flood risk, reduce surface water entering the combined network, and where possible increase biodiversity and amenity value for residents. The schemes proposed are eligible for co-funding and we have made an estimate as part of this submission as to the level of co-funding we will achieve.

A broad-based benefits analysis was performed during the NIDP Stage 2 studies (2022), capturing and measuring the costs and benefits of the current proposed schemes and is included in Table 13. Note the significant number of residential properties where flood risk is expected to be reduced of 3,288. Table 13 outlines the flood risk benefit of completed AMP7 studies. Alongside the flood risk reduction benefits, work undertaken through the NIDP will deliver material environmental benefits as well, shown in Table 14.

TABLE 12: EXTRACT OF TABLE OF BENEFITS SUMMARY NIDP STAGE 2 STUDIES (2022)

Council	Durham	Durham	North Tyneside	Durham	South Tyneside	Redcar & Cleveland	Durham	Durham	Durham	Newcastle	North Tyneside	Gateshead	
Drainage Area	Annfield Plain	Bowburn	Chirton	Easington	High Shields	Marske	Sedgefield	South Stanley & Craghead	Ushaw Moor	Walker	Wallsend	Whickham South & Sunniside	
Drainage Area Number	04-D08	07-D31	05-D38	08-D03	05-D48	11-D33	11-D48	07-D14	07-D27	05-D35	05-D37	05-D11	
Description of Benefit													TOTAL
Properties with reduced flood risk	967	85	1198	908	553	TBC	142	1142	754	551	1058	566	7924
Non residential Properties with reduced flood risk	63			60		TBC			20		26		169
Residential Properties moved EA Flood Risk Category	596	30	485	377	193	TBC	83	575	230	223	291	205	3288
Properties that have reported flooding with reduced flood risk	13	15	22	8	33	TBC	17	89	47	65	120	36	465
School with on site improvements to support surface water management and / or with reduced flood risk	1		1	3	2	TBC	1	1	2		1		12

TABLE 13: NIDP PROGRAMME ENVIRONMENTAL AND DAMAGE AVOIDED BENEFITS

Benefit	Measure
New habitat and improved biodiversity	4.2 ha
Runoff area reduction, that no longer drains to treatment	78.48 ha
Additional surface water discharged per year a watercourse rather than conveyed by the combined drainage system	24,000 m3
Property Flood Damages Avoided	£154,900,000
Additional Benefits Identified	£53,500,000

DWMP Cost and Benefit

The NIDP priority projects benefits (Table 12) are included in the DWMP data tables under *Planning Objective 1 – Internal Modelled Hydraulic Risk*. The DWMP measures the benefit in number of properties predicted to be at risk for a 1 in 20 year return period storm.

For AMP8, the direct benefit to NW customers is the reduction of 454 properties at modelled hydraulic risk (Table 14). The overall benefit assessed for NIDP schemes is typically greater as it delivers wider benefits for others included in the partnership. These benefits may be attributable to areas outside our region and separate from our customers served. The NIDP prioritised schemes will manage the increase in flood risk in AMP8 until the Flooding programme commences in AMP9.

Consistent with the DWMP process we have complimented our service planning framework approach with valuations from the CIRIA B£ST¹⁰ tool values (industry standard) as well as using the Mott MacDonald business planning tool to assess carbon to ensure we maximise societal and environmental benefits.

The CIRIA B£ST tool will allow for additional benefits to be captured (such as improved water environment), but this has not yet been applied for the preferred solutions as they must first progress through Outline Business Case with the EA.

TABLE 14: SUMMARY OF THE BENEFIT FOR THE NIDP PROGRAMME AS CONTAINED IN THE DWMP FOR OBJECTIVE 1 – INTERNAL MODELLED HYDRAULIC RISK¹¹

Measure	Measure	Unit	Total at end of AMP8 (2030)
NIDP Flood improvement	Baseline	nr	16,200
	Number of properties predicted to be at risk for a 1 in 20 year return period storm	nr	16,200
	Post Enhancement	nr	15,746
Benefit is the reduction in properties predicted to be at risk		nr	454

As previously noted, due to the fluid nature of the NIDP programme, the latest programme differs from the published DWMP. As individual partner contributions are allocated on benefits received, it is expected that the benefits achieved for the number of properties predicted to be at risk for a 1 in 20-year storm will be similar to that quoted in the DWMP.

Due to the implementation of green solutions that include permanently removing surface water from the combined sewer system, many more properties receive the benefits of a reduced risk of flooding although not achieving the 1 in 20-year storm threshold. For instance, risk may be reduced from 1 in 5 to 1 in 10 year (20% probability to 10% probability).

¹⁰ CIRIA B£ST is a free tool B that provides a structured approach to evaluating a wide range of benefits from blue-green infrastructure (particularly SuDS and natural flood management) often based upon the overall performance of the chosen intervention. It follows a simple structure, commencing with screening and qualitative assessment to identify the benefits to evaluate further. Where feasible, it provides support to help quantify and monetise the potential benefits and can help underpin collaborative working.

¹¹ Extract from DWMP data tables under Planning Objective 1 – Internal Modelled Hydraulic Risk

3.3.6 Investment Appraisal – Need to improve river resilience to climate change (NW & ESW)

Not applicable, investigation only.

3.3.7 Investment Appraisal – SuDS on operational sites (NW & ESW)

Not applicable, investigation only.

3.3.8 Investment Appraisal – Holistic catchment delivery (NW & ESW)

Not applicable, investigation only.

3.4. UNCERTAINTY

We have assessed uncertainties for solutions proposed to address 25YEP_IMP drivers. There is uncertainty inherent in solutions being proposed which include reliance on collaborative and partnership delivery mechanisms. The option risks have been assessed and are included in the ODR submission made to the EA and available to Ofwat. An extract from the ODR submissions showing a summary of option risk is included by need below.

3.4.1 Uncertainty – Bluespaces (NW & ESW)

The main risks relating to the option for Bluespaces are summarised in Table 16.

TABLE 16: SUMMARY OF OPTION RISK FOR BLUESPACES¹²

Risk category	RAG rating	Comment
Driver compliance	Green	Activity is above and beyond regulatory obligations and all activity will contribute to delivery of 25 Year Environment Plan ambitions even if targets not met
Delivery	Yellow	Partnership approach relies on delivery of Bluespaces projects by partners and their capacity to work with NWG to develop and deliver projects Match funding approach with 50% partner contributions to projects assumed presents a possible risk to delivery of bluespaces projects, though we believe this is achievable Evidence of customer support may not be high enough to allow enough investment to meet the targets NWG has set
Outcome	Yellow	As above
Cost	Green	Low risk – unit cost approach means programme and delivery costs are appropriately funded with risk and uncertainty elements included as per PR24 methodology
Resources	Green	Costed for in unit cost approach
Technology	Green	NA

¹² ESW_Bluespaces_25YEP_ODR

Risk category	RAG rating	Comment
Supply chain		NA
Public perception		Potential to increase ESW's environmental impact and reputation through this project, which is a positive opportunity

3.4.2 Uncertainty – Ouseburn Catchment (NW)

The main risks relating to the Ouseburn Catchment are summarised in Table 17.

TABLE 1715: SUMMARY OF OPTION RISK FOR BLUESPACES¹³

Risk category	RAG rating	Comment
Driver compliance		Activity is above and beyond, and all activity will contribute to delivery of 25 Year Environment Plan ambitions even if targets not met.
Delivery		May not be enough funding to allow this to be delivered independently, match funding is essential, though we believe this is achievable. This will be used as match funding to deliver a programme of improvements. Co-funding is estimated to be in the region of £100,000. Evidence of customer support may not be high enough to allow enough investment to meet the targets NWG has set.
Outcome		As above
Cost		Low risk – Seed funding of £50,000 would leverage considerable co-funding to develop the Ouseburn Catchment Integrated Plan and citizen science programme and delivery of schemes identified.
Resources		Costed for in seed funding of £50,000 and overall funding of £150,000.
Technology		NA
Supply chain		NA
Public perception		Potential to increase NWG's environmental impact and reputation through this project, which is a positive opportunity.

¹³ ESW_Ouseburn_25YEP_ODR

3.4.3 Uncertainty – NIDP Flood Risk Improvements (NW & ESW)

The main risks relating to the option for NIDP are summarised in Table 18.

TABLE 18: SUMMARY OF OPTION RISK FOR NIDP

Risk category	RAG rating	Comment
Driver compliance	Green	Activity is above and beyond, and all activity will contribute to delivery of 25 Year Environment Plan ambitions even if targets not met.
Delivery	Yellow	Matched partner funding is not secured to enable the programme to be delivered. This is low risk (but high impact) as funding has been success since the inception of the NIDP.
Outcome	Yellow	As above
Cost	Green	Low risk
Resources	Yellow	Costed for from an internal perspective, though some risk of external resource availability to support delivery of collaborative programme.
Technology	Green	NA
Supply chain	Green	Supply chain resources are available and secured.
Public perception	Green	Potential to increase NWG’s environmental impact and reputation through this project, which is a positive opportunity.

To manage the uncertainty around delivery of our NIDP projects we have several mitigations in place. For example, we ‘over-programme’ our work to mitigate risks of projects being re-prioritised or becoming not cost-beneficial to deliver. This supports continued delivery of schemes and benefits and helps maintain programme momentum. Further flooding may also occur during the lifecycle stages and this may also impact on priorities. Once outline business cases are approved by the Environment Agency and Grant in Aid funding secured, projects progress to completion. It is expected that changes will continue to occur during the remainder of AMP7 and into AMP8.

Lessons learnt from the NIDP are being shared with other collaborative groups including the Greater Manchester Integrated Water Management Plan and the Greater London Authority. This helps us to share risks and challenges with a wider group of stakeholders, beyond the NIDP members, and leverage the skills and experience of others to help overcome any challenges.

3.5. THIRD PARTY FUNDING

The 25YEP options will be facilitated by innovative catchment and partnership work and feature catchment and nature-based solutions (C&NBS). Within AMP8, the Northeast Catchments Hub (NECH) is also expected to assist in delivery of the schemes included in this enhancement case, for example with the holistic catchment delivery investment.

The inclusion of C&NBS in our 25YEP_IMP interventions offer the opportunity for us to draw in co-funding and co-finance which could make improvement schemes more cost-effective for customers, while also delivering greater value through

multiple benefits. The development of these high-benefit schemes requires time and feasibility activities, and the tight WINEP timescales for PR24 have only allowed identification of potential schemes at a high level. As schemes develop through the enabling stages into detailed design, and co-benefits and partners are identified, matched funding and green finance opportunities will be explored.

The NIDP is a collaborative multiple source flooding programme that requires funding from each party. Investigations are equally funded with implementation costs being apportioned depending on benefits. Non-water company funding is secured through FCERM GiA.

Although match funding is not yet guaranteed for any of these proposals, we expect a significant contribution for each scheme including investigations that exceed the guideline contributions within the WINEP guidance of 20%.

Table 19 outlines the predicted match funding contributions for each option and may be available for some options as benefit in kind rather than direct monetary contributions.

TABLE 19: INDICATIVE 3RD PARTY CONTRIBUTIONS TO 25 YEP SCHEMES

OPTION NAME	NWG CONTRIBUTION (£M)	EXPECTED TOTAL OPTION COST (£M)	3RD PARTY CONTRIBUTION (£M)
Bluespaces (ESW and NW)	6.637	9.956	3.319
Ouseburn Catchment improvement	0.0748	0.224	0.1496
NIDP Investigation	1.155	2.310	1.155
NIDP Improvement	64.974	140.180	75.206
SuDS on operational sites	0.220	-	Time in kind only
Holistic catchment delivery	0.706	1	0.294
River restoration for climate change resilience	0.419	0.500	0.081

3.6. DIRECT PROCUREMENT FOR CUSTOMERS

We assessed our 25 YEP programme against the DPC guidance (see our [assessment report](#), NES38). This report concludes that the 25 YEP programme is unlikely to be suitable for DPC. This is principally because none of the schemes individually are expected to be above the £200m totex threshold.

3.7. CUSTOMERS VIEWS INFORMING OPTION SELECTION

In section 2.4, we discuss customer support for the need for investment. Our customers also support our approach to partnership working where possible.

In our [Defining the Future](#) research in 2021, stakeholders and larger business customers said that “partnership working was extremely important” and recommended that we should, for example, engage with younger people around environmentally based partnership working. Stakeholders noted that, for example:

“Northumbrian Water can’t do that alone. They are not solely responsible for rivers, beaches, and wildlife. So clearly, they have to work in partnership and talk to other organisations that are working in that space. And they do. It is about talking to us... There is a real leadership role for Northumbrian Water because it is a large organisation and it has got the capacity, and it could really help to support the capacity of the whole environment sector.” Tees Valley Nature Partnership, in [Defining the Future](#).

“Northumbrian Water do a lot of river catchment and environmental work in house themselves and I think that’s great, what they’re doing, but I think they could do more. I think they could also... be doing more partnership working and helping to fund partnership projects as well, rather than just funding their own work. They do fund partnership projects, to clarify, but I think they could do more.” Tweed Forum, in [Defining the Future](#).

Our household customers were more likely to say that we should “talk to others” about partnerships, rather than talking to customers about their views.

In our [qualitative affordability and acceptability research](#) (NES49), our customers noted the benefits of the added investments through partnership working that would be available if we funded the NIDP now. For example:

“It has got to be medium [our final business plan option], because its daft not to. We won’t get that other £65m, so... yes”.

“If that much investment is getting thrown at it and we’re not paying directly then it doesn’t affect our bills other than the 0.6% [the impact on customer bills from NIDP]. It is 100 mile an hour, yeah absolutely. Do the medium investment.”

A notable number of respondents suggested that they would be willing to consider a higher level of investment to accelerate this work. Customers said that “when thinking about themselves as the customer (the bill payer) they would be more likely

to have chosen the low phasing impact since they had not been directly impacted by flooding themselves”, compared to thinking about themselves as a citizen and the benefits to the community more generally.

4. COST EFFICIENCY

4.1. APPROACH TO COSTING

4.1.1 Cost efficiency for “Bluespaces” – ESW & NW (25YEP_IMP)

The Bluespaces programme has been delivering improvements through an approach proposed in PR19 and developed in AMP7, supported by a bespoke financial ODI. In PR19, we followed Ofwat’s methodology to value improvements in km bluespaces at £7,680 per km for reward and £15,000 per km for penalty. The method used to develop this funding level in PR19 was taken from customer valuation evidence and based on a number of assumptions, while being a completely new measure representing a new way of investing in and demonstrating improvements to the environment which has developed significantly since PR19.

We consider that the valuation per km used for PR19 does not reflect the true value of the programme or reflect the real cost of improvements delivered in bluespaces projects to meet customer expectations, many of which have been creatively co-funded. There are also significant programme overheads to achieve improvements which go beyond regulatory obligations and require partnership working, which need to be included in a delivery cost per km for the programme.

For PR24, we have developed a methodology to cost improvements and build up WINEP scheme costs as a justified unit cost per km, ensuring that the delivery of bluespaces improvements can be funded at the appropriate level to ensure sustainability of the programme and deliver to meet customer expectations (Table 20).

TABLE 20: BLUESPACES UNIT COST ELEMENTS FOR AMP8¹⁴

Cost Element	Full Cost	Assume 50% Co-funded	Unit Cost per km
1 Improvement cost per km (Appendix B)	£28,343	£14,171.67	£14,172
2 Project delivery per km	£6,684	£3,342.00	£3,342
3 Uncertainty/Risk @30% capital elements (1&2)	£10,508	£5,254.10	£5,254
4 Programme management per km	£3,571	NA	£3,571
		Total Unit Cost per km	£26,339

Bluespaces projects are built up of combinations of improvements across elements, and there is no typical project as every project is designed to meet the needs of its own environmental challenges and receives varying amounts of contributory funding from partners. The average cost to fully deliver bluespaces improvements, across one aspect only, is **£26,339** (Table). We have used this average improvement cost for one aspect only, to work up an investment cost per km, assuming that additional underlying improvements across other aspects would be funded through NW’s regulatory programme (e.g. water quality or biodiversity improvements in WINEP), and that this scheme provides the additional investment required to

¹⁴ NW_Bluespaces_25YEP_ODR

create bluespaces improvements benefiting accessible water environment which can be funded to deliver against the measure. Co-funding would also enable flexibility in the actual improvements to be delivered to benefit each km.

In addition to this average improvement cost per km, the Bluespaces programme requires an average overhead of £6,684 to cover project management, compliance materials and resources which are specific to the delivery of this programme (Table 21).

TABLE 21: BLUESPACES PROJECT OVERHEAD ELEMENTS¹⁵

Bluespaces Project Overheads	Cost per km
Partner Project Management	£3,184
Baseline survey requirements	£1,500
Permitting and Legal Costs	£2,000
Total	£6,684

We consider that both the improvement cost per km and the project overhead cost are appropriate for co-funding and have built this into our unit cost. Ofwat expects that all non-statutory projects are co-funded, with an aspiration of 20% across the WINEP programme. We are confident that this type of scheme will be able to bring in at least that level of co-funding; the programme we have been developing through AMP7 relies on partner funding to develop eligible and deliverable projects and has been successful in leveraging in match funding at an average rate of 1:5.

However, we do not believe this leveraging rate is sustainable for planning purposes, particularly given the current environmental funding climate and significant uncertainty around agricultural investment in the environment. Instead, we assume a co-funding rate of 50% across the improvement and project management overheads areas. We also include funding per km for programme management which we do not consider should be match funding, at a rate of £3,571 per km. This would support resource to develop and deliver the programme, across both NW and partners. This is based on 4 FTE across the project over the full 5-year programme to support both NW and ESW areas.

To work up the NW programme costs, the unit cost per km of £26,339 has been combined with the NW target of 168 km and ESW of 84km. The total AMP8 Totex cost for NW Bluespaces Improvements is £4,424,952 and for ESW Bluespaces Improvements is £2,212,476. As there is only one option on the feasible options list, for Bluespaces (For NW and ESW) the least cost option is the same as the best value option.

A summary of the associated costs and benefits is set out in Table 22.

¹⁵ NW_Bluespaces_25YEP_ODR

TABLE 22: PREFERRED OPTION COSTS AND BENEFITS FOR BLUESPACES

Option Title	Option Description	Whole Life Cost (30 yr NPV)	Capital Carbon (tCO2e)	Benefits
ESW Bluespaces Improvements	Scheme for investment in bluespaces improvements at a unit cost of £26,339 per kilometer	£1,110,615	N/A	Unquantified benefits for biodiversity, water quality, water purification, recreation, recreation (angling), volunteering, education; and minor benefits for air quality, climate regulation, hazard regulation – flood and water supply.
NW Bluespaces Improvements	Scheme for investment in bluespaces improvements at a unit cost of £26,339 per kilometer	£2,221,230	N/A	Unquantified benefits for biodiversity, water quality, water purification, recreation, recreation (angling), volunteering, education; and minor benefits for air quality, climate regulation, hazard regulation – flood and water supply.
Total		£3,331,845		

4.1.2 Cost efficiency for NIDP – NW (25YEP_INV and 25YEP_IMP)

There are several ways in which we have built cost efficiency into our NIDP programme. For example, through delivering joint training to all parties included in the NIDP to increase efficiency and reduce administrative barriers. This joint training, along with the timely sharing of data and information between parties for the purposes of understanding and managing integrated flood risk, help to make sure investment is targeted in the most effective way.

To address the potential gaps that can emerge when projects are re-prioritised, we ‘over-programme’ our NIDP initiatives, maintaining a longer list of projects so that we can swap out where one is no longer cost beneficial and replace it with one that is, helping maintain momentum and retain the skills and capabilities of the people needed to deliver this initiative.

Cost efficient delivery of projects is also key. To support this, Northumbrian Water frameworks are utilised to provide engineering and contractor resources for the NIDP. Securing resources at a fair rate has been identified as a risk by the region’s Strategic Flood Risk Management Partnerships. NW’s framework removes this risk from the NIDP. Resources and costs will be reviewed between organisations throughout AMP8 with appointments being allocated to those best placed to efficiently deliver best value.

Cost efficiency of the specific projects is a key component of their initial assessment, where the opportunities put forward by NIDP partners are subject to a robust cost-benefit analysis. A fluid approach with ongoing review and analysis of projects helps to identify those where costs escalate, and projects become no longer cost-beneficial to deliver. We continue to leverage our experience in delivering catchment and nature-based solutions, with the increased scale and scope of these initiatives supporting efficiencies and cost savings in AMP8.

5. CUSTOMER PROTECTION

5.1. PERFORMANCE COMMITMENT

This enhanced investment is non-statutory and targets the delivery of wider environmental benefits through innovative catchment and partnership working and increased use of C&NBS. There are some reductions in flooding risk and some impacts on biodiversity and river water quality, but these would not cover the investment.

5.2. PRICE CONTROL DELIVERABLES

Our approach to determining Price Control Deliverables (PCD) is outlined in Section 12.3 of **A3 – Costs** (NES04). In Table 23 below, we assess our 25YEP enhancements to test if the benefits are linked to PCs, against Ofwat’s materiality of 1%, and to understand if there are outcome measures that can be used. Our assessment has highlighted that the benefits we expect to deliver through our AMP8 WINEP programme will not be measured through PCs. Therefore, we propose a PCD to make sure customers are protected through delivery of our WINEP programme.

TABLE 23: ASSESSMENT OF BENEFITS AGAINST THE PCD CRITERIA

Enhancement scheme	Benefits linked to PC?	Materiality	Possible outcomes?
25YEP (NES29)	Pass – benefits are environmental or investigations	Pass – 6%	Outcome difficult to measure effectively and vary between schemes (particularly investigations). Customers could be protected through an output measure based on delivery of schemes.

Our WINEP programme is set by the Environment Agency, which determines the statutory and non-statutory investments we should make. The Environment Agency assures that WINEP actions are delivered to the agreed timeframe, and environmental obligations are met. We therefore propose a PCD that makes sure that costs are returned to customers either where the Environment Agency has decided that a project is no longer required, or where we have not delivered to the agreed timeframe and/or environmental obligations have not been met (according to the Environment Agency). A summary of our PCD for WINEP programme delivery is outlined in Table 24.

TABLE 24: SUMMARY OF THE PRICE CONTROL DELIVERABLE FOR OUR WINEP PROGRAMME DELIVERY TO PROTECT CUSTOMERS

Description of price control deliverable	Delivery of WINEP projects as specified in our WINEP enhancement cases (NES17, NES18, NES19, NES28, NES29, NES30, NES31, NES34).
Measurement and reporting	We will report on the delivery of WINEP projects at the next price review (PR29), including specifying the individual projects that have been delivered, not delivered, or that the Environment Agency has decided are no longer required (under the Environment Agency’s WINEP alterations process). This is in addition to the WINEP guidance which specifies how we will need to report progress against delivery of the WINEP actions and tracking and reporting WINEP delivery in a transparent and auditable manner.
Conditions on allowance	Projects must be delivered to the specification agreed with the Environment Agency under WINEP.

Assurances

The Environment Agency will confirm that WINEP actions have been delivered to the agreed timeframe, and that environmental obligations have been met. As set out in the WINEP Guidance¹⁶, there will be regular liaison between water companies and the Environment Agency to discuss progress, risks and issues associated with delivery of the WINEP programme and to identify any alterations. The Environment Agency uses the WINEP measures sign-off, technical review and audit guidance for assurance that the environmental obligations as set out in the WINEP are completed as planned.

Price control deliverable payment rate

We will return funds back to customers for individual projects, as specified in in Table 77.

Impact on performance in relation to performance commitments

There are some benefits to greenhouse gas emissions in NES29.

We propose a single PCD for most of our WINEP programme delivery (with the exception of storm overflows). This should:

- Be set according to individual project costs, rather than a “per project” unit cost. This is because these costs vary considerably, and a single rate would create an incentive to deliver more of the cheapest projects (at the expense of more expensive projects). Ofwat’s guidance in IN23/05 identifies this incentive and expects us to set out scheme level deliverables where costs vary significantly across schemes (so our approach here is consistent with the guidance).
- Not include an automatic penalty for non-delivery (beyond returning the costs to customers). This is because this PCD includes projects where the Environment Agency has decided these are no longer required, which should not lead to a penalty. If we did not deliver a project that is required (and where we had not agreed a change with the Environment Agency), we would not meet our statutory obligations and so this does not require an extra incentive to deliver.
- Change according to the Environment Agency’s WINEP alterations process. In 2020-25, our ODI for WINEP delivery does not automatically take into account projects that are removed from WINEP by the Environment Agency – but this should be for the Environment Agency to determine. Costs should be returned to customers for projects that are not required, without further interventions needed from Ofwat.

This is an aggregated PCD across all our WINEP schemes except for storm overflows. We chose to aggregate these PCDs because most of our WINEP enhancement cases or projects would not be individually material, and these share the same reporting, assurance, and conditions.

There are formal partnership contracts signed for NIDP and Bluespaces, which take effect once the projects are ready to progress. For NIDP we go through the national process with Defra to gain FCERM funding.

¹⁶GOV.UK, 2023, [Water industry national environment programme \(WINEP\) methodology - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/water-industry-national-environment-programme-winep-methodology)

6. APPENDIX A

FIGURE 2: LETTER OF SUPPORT; NORTHUMBRIA REGIONAL FLOOD AND COASTAL COMMITTEE

28 September 2023

Dear Heidi,

Northumbrian Water - Price Review for Period 2025 – 2030
Northumbria Integrated Drainage Partnership

I write on behalf of the Northumbria Regional Flood and Coastal Committee (NRFCC). As you will be aware, RFCC's play an important role in helping protect communities from the impacts of flood risk and coastal erosion. The Northumbria RFCC co-ordinates the activities of the Risk Management Authorities tasked with mitigating these risks in the committee's area.

Much of the flood risk in the North East of England is a complex combination of surface water, sewer or fluvial risk, where no one Risk Management Authority working alone would be able to address that risk entirely. Our Northumbria Integrated Drainage Partnership (NIDP) has been highly effective in addressing this difficult problem. We have developed a 10-year programme of studies, delivered several award-winning schemes and gained significant national admiration of our partnership working.

In recognition of the importance of the NIDP in the Committee's area, the NRFCC have invested in co-funding a programme co-ordinator and contributed to many of the studies and proposed schemes being developed by the partnership. The contribution towards the NIDP programme demonstrates the commitment of the Committee to deliver these essential works. The NIDP programme will however only be able to continue to deliver, and secure multiple benefits, if the investment priorities of the respective partner organisations align.

The Committee welcomed the joint OFWAT and Environment Agency letter outlining a joint approach for water companies in considering flood and coastal resilience in the context of their statutory roles and duties¹. This letter provided direction for water companies to improve the resilience of communities to flood and coastal risks, enhance the natural environment and deliver value for customers. The same objectives we are looking to implement through NIDP.

I appreciate that a significant amount of work has been undertaken over the past few years in the development of your Drainage and Wastewater Management Plan and the resulting water company business plans that are currently being finalised through the Price Review process. I understand that the plan aims to continue to support the NIDP with a rolling programme of studies, to prime future investments, and aims to unlock £140m of funding to reduce the risk of flooding from all sources, £65m of which would be from Northumbrian Water. The joint investment programme would better protect up to 2,500 properties.

¹ [FCERM - Draft joint approach \(ofwat.gov.uk\)](#)

The NRFCC also appreciates the statutory duties placed on water companies, and supports the benefits that these statutory drivers will bring for our communities and the environment. We therefore appreciate the inclusion of many priorities within proposed business plans, particularly those relating to storm water overflow reductions.

Notwithstanding this, the importance of continued support to allow water companies to include integrated water management schemes within their future business plans, while not a statutory driver, is essential for our communities and wider society. On behalf of NRFCC, I strongly support continued investment in the NIDP and endorse the submitted plan.

The benefits of integrated water management extend far beyond flood risk reduction, with wider economic and environmental improvement being of particular value. Failure to allow and direct investment towards this would be a significant backwards step, to the detriment of all.

The NRFCC greatly appreciate the help and cooperation Northumbrian Water have provide in recent years and very much hope that we will be able to continue working together to reduce flood risk to our communities over the coming years. I would be very pleased to meet with you and your team if this would be of value.

Yours sincerely,

Phil Rothwell
Chair, Northumbria Regional Flood and Coastal Committee

NRFCC@environment-agency.gov.uk

Tyneside House, Skinnerburn Road, Newcastle Business Park, Newcastle upon Tyne, NE4 7AR