

Drainage and Wastewater Management Planning

Strategic context – Stage 1

Planning the Outcomes that can be achieved by working together

FOREWORD

Thank you for reading the strategic context document for Northumbrian Water's first Drainage and Wastewater Management Plan (DWMP). This is a critical document as we aim to ensure our region can have confidence in a reliable and resilient drainage and wastewater system for the years ahead.

We are now progressing with the production of our DWMP, which is due for completion by June 2022. I would like to thank all those who contributed to the strategic context workshop in November 2019 and through the consultation in January 2020. We have used both the outputs from the workshop and your feedback from consultation to prepare the final document.

The DWMP will inform Northumbrian Water's business plan submission for the next regulatory periodic review in 2024. We anticipate that for subsequent planning periods, the DWMP will become embedded within our planning processes as a key element in our approach. This is why it is so important to get the first DWMP right and the strategic context is the basis for how Northumbrian Water will achieve this.

To get the best outcomes for all in our region, we need to work collaboratively with customers and all organisations who have an interest in these issues – including stakeholders with an interest in planning, development, risk management and the environment. We look forward to continuing engagement throughout this process.

This is just the first step on our journey but by working together to develop and implement our DWMP, we can make great strides to reduce flooding and protect the environment for future generations.

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Document Review and Sign off sheet

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Contents

1. Introduction to the Strategic Context	4
2. Drainage and Wastewater Management Plan: what is it?	4
3. The foundation of a DWMP.....	6
4. Delivery Programme.....	7
5. Governance Structure	8
6. Stakeholders' role in shaping the DWMP	10
7. Key Drivers	12
8. Defining the Planning Objectives and the Planning Horizons	13
9. DWMP Planning tools.....	16
10. Reporting structure	18
11. Next steps.....	19
12. How to get in touch?	21

1. Introduction to the Strategic Context

Drainage and Wastewater Management Plans (DWMPs) were highlighted as a key recommendation of the 21st Century Drainage Programme¹, which recognised the need to move towards a more consistent basis for long term planning of drainage and wastewater services.

A DWMP will set out how Water and Sewerage Companies intend to build, improve and maintain their assets for a robust and resilient drainage and wastewater system.

This document aims to set out an overview of the DWMP² and requirements, but more specifically articulate Northumbrian Water's vision for a North East DWMP.

The 'Strategic Context' setting is the first step of our DWMP journey. Alongside the Working Together³ Framework, this document aims to raise stakeholders' awareness of the objectives of the DWMP. This will identify key drivers that will act to challenge systems in the future, but also and more importantly, identify a set of planning objectives to enable co-understanding and thereon co-creation of 'best value' solutions. It is acknowledged that this is the first time that a DWMP will be produced and therefore there will be some uncertainty and some debate on the degree of refinement in producing a list of proposed options and choosing the preferred ones collectively.

This document aims to be a start towards reaching alignment between stakeholders, and it will be revised and updated through the implementation of the DWMP, as industry best practice through the Steering Group and Implementation Group is taken into account, before the final DWMP is published in summer 2022.

We therefore welcome your views and feedback through the DWMP process to help Northumbrian Water (NWG) shape its DWMP vision.

2. Drainage and Wastewater Management Plan: what is it?

The DWMP Framework was published in September 2018, and was a key recommendation of the 21st Century Drainage Programme. The vision of the 21st Century Drainage Programme is to enable the UK water industry, working in partnership with others, to make plans for the future that will ensure the sustainability of our drainage infrastructure, and the services it provides to customers and the environment. Over 40 organisations from across the UK- governments, regulators, local authorities, environmental charities, academics and community groups joined Water UK to identify the future challenges and also to work together to address them.

The framework has built on existing approaches developed by the water industry, local authorities and other stakeholders. It aims to facilitate the development of planning processes that are flexible, transparent and aligned to the requirements of a wider group of stakeholders and the needs of the environment, which have been set out in the Working Together document mentioned above.

¹ <http://www.water.org.uk/wp-content/uploads/2018/12/21CD-Context-doc.pdf>

² <https://www.water.org.uk/policy-topics/managing-sewage-and-drainage/drainage-and-wastewater-management-plans/>

³ <https://www.water.org.uk/policy-topics/managing-sewage-and-drainage/drainage-and-wastewater-management-plans/>

The need for a North East DWMP (NE DWMP) is recognised and NW as the Water and Sewerage Company, WaSc, responsible for providing these services for the North East, will deliver the first NE DWMP.

We also would like to acknowledge in Essex and Suffolk, our customers should be referred to Anglian Water and Thames Water, respectively for their understanding of how their drainage and wastewater issues will be addressed now and in the future. Furthermore, we also note that within the North East, some of our customers receive their water services from Hartlepool Water, owned by Anglian Water. However as NWG is the provider of their wastewater services, our customers will be referred to our DWMP. We also note that our operating area crosses over with Yorkshire Water and United Utilities. We have acknowledged this in our stakeholder engagement and worked with the relevant Local Authority as a conduit to other relevant stakeholders in North Yorkshire and Cumbria respectively.

Highlighting the role and the benefits of the DWMP towards enabling long term planning, NWG will seek to:

- Set out NWG's assessment of long term drainage and wastewater capacity, and also the drivers, risks and scenarios being planned for
- Assess with the help of stakeholders, where (largely drainage) infrastructure managed by other stakeholders may impose additional risks to the drainage and wastewater services
- Identify those option that offer best value to customers and the environment, ensuring robust, resilient and sustainable drainage and wastewater services in the long term.

The benefits of this approach will;

- Show how NWG will shape its long term plans to support economic growth, resilient communities and we will protect and how enhance the environment;
- Provide a systematic understanding of service, system risks and vulnerability – as closely aligned to business as usual as reasonable practicable;
- Demonstrate a structured and auditable approach to identifying and developing options and working with stakeholders to provide a robust and affordable plan;
- Facilitate and identify partnership opportunities for co-delivery, co-funding and in some cases identifying where reasonable and practical, delivery by others;
- Facilitate innovation in the development of sustainable and affordable plans;
- Provide a clear, transparent and consistent planning approach with sufficient agility and flexibility to adapt to changing drivers;
- Promote informed debate about acceptability of different levels of risk
- Provide greater confidence to customers, regulators, and stakeholders in strategies identified and resultant outcomes;
- Provide a basis for effective engagement with customers and stakeholders on levels of service, environmental performance and resilience, now and in the future and the choices and costs to customers in providing that service.

The scope of the DWMP includes wastewater and drainage networks (foul, combined and surface water sewers), interconnecting drainage systems (such as highway drains and culverted watercourses), wastewater pumping stations, and wastewater treatment works systems; looking at a combination of flooding and environmental impact.

It is important to note that although the responsibility of developing and producing the DWMP is being led by NWG, there is a clear need to work closely with stakeholders in setting a clear and reasonable expectation of what a first DWMP will look and feel like.

3. The foundation of a DWMP

NWG has been investing in and carrying out drainage and wastewater planning for a number of years. We will be building on a number of existing reports and modelling stock improvements such as our Drainage Area Studies and the Tyneside Sustainable Sewerage Study which provided a comprehensive review of the infrastructure in our Tyneside catchment and identified key areas for investment to address the future challenges. The knowledge and decision making borne from these approaches have enabled award winning partnerships such as the Northumbria Integrated Drainage Partnership (NIDP) to be formed. In these partnerships, we continuously strive to identify risk/opportunity areas which are prioritised and common to the Flood Risk Management Authorities but which also focuses on environmental improvements.

Furthermore, our business planning processes, like other WaSCs were underpinned by the understanding of what the future needs of the catchments were, and which were set in Strategic Planning Policies. The intention is to respond to these needs along with further considerations of customer acceptability, defining acceptable levels of risk and considering affordability of delivering these investment plans within a regulatory framework. This work underpins much of the requirements of the DWMP framework.

Although we recognise that we have been doing long term planning and proactive planning for many years, the DWMP framework challenges us to make this process more visible and understood by both internal, external stakeholders and customers. We have seen challenging performance commitments set in previous Asset Management Plans(AMP)cycles and even more so in AMP7 (2020-25). We have seen as a result of investment decisions, an impact on performance such as reducing the number of customers' properties affected by sewer flooding, reducing pollution events and achieving compliance. It is recognised that going forward, it will become harder to make sound investment decisions based on what has happened in the past but will also need to respond to future challenges. It is therefore critical to understand the issues collectively and work together to maximise benefits across different stakeholders' investment plans. We continue to put our customers at the heart of what we do.

The DWMP supports our long term vision and builds on our existing strategic plans, with the aim to provide a consistent national picture of drainage and wastewater management across the UK.

Question 1: Is the need for a NE DWMP clear? What part could you see your organisation play in its delivery? Are there any other plans which you think are complementary to the objectives of a NE DWMP?

4. Delivery Programme

It is anticipated that the NE DWMP will inform our business plan submissions, for the next price review in 2024 (known as PR24). For subsequent planning periods, the DWMPs will become embedded within NWG's planning processes as business as usual. We are working internally to align the requirements of the DWMP framework to our internal change and system management programme, Intelligent Asset Management (IAM).

To allow sufficient time for customer and stakeholder engagement on the PR24 plan, which is currently anticipated to be submitted in Q3 (September) 2022, there is an expectation that the draft NE DWMP will be published by the end of June 2022, allowing a six month consultation period.

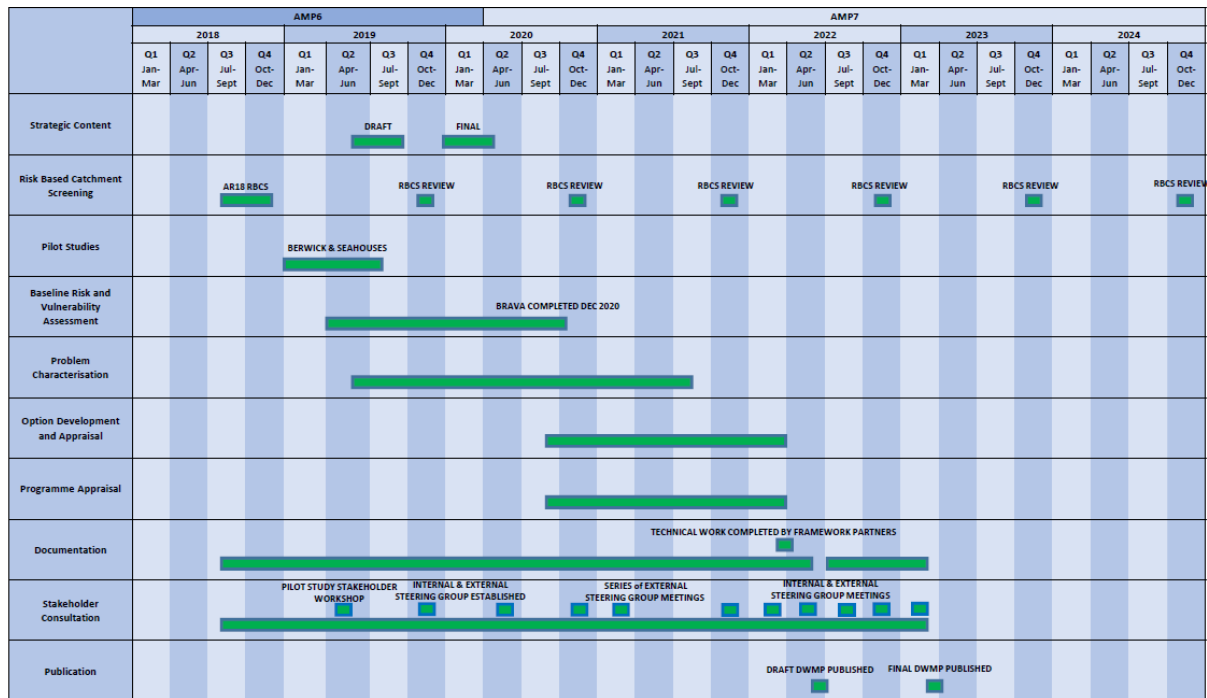


Figure 1. Northumbrian Water's Delivery Programme– Please [Appendix 1](#) for more details

5. Governance Structure

The DWMP Framework recommends a three level system⁴ consisting of:

1. Level 3, L3s (a basic Tactical Planning Unit –TPU)
2. Level 2, L2s (aggregation of L3s into a Strategic Planning Area –SPA)
3. Level 1, L1 (regional level water company DWMP)

Northumbrian Water has designated its L3s (TPUs) at a Drainage Area (DA) Level, and we currently have 485 DAs, covering 99% of the NE population. The DWMP framework makes a recommendation that when defining the L2 areas, companies should endeavour to align these with River Basin Districts (RBD) management catchments. However in the North East, we have two RBD management catchments (Northumbria and Solway Tweed). The spatial coverage of both being quite distinct and also vast has required us to consider an alternate proposal to the recommended approach.

NWG, through consultation with both internal and external stakeholders, has defined seven Strategic Planning Areas (7 SPAs)- please see Figure 2 below and [Appendix 2](#), with boundaries that have an optimum combination of NW planning systems, Lead Local Authority boundaries (both Lead Local Flood Authority and Lead Local Planning Authority) and Environment Agency (EA) catchment areas to facilitate engagement.

In line with the Framework recommendations, it is envisaged that NWG will set up one stakeholder strategic planning group (SPG) covering all of the 7 SPAs, in order to drive consistency and also optimise the process. In a bid to avoid introducing additional levels of bureaucracy, NWG is proposing to use existing stakeholder engagement groups such as the NIDP, CaBA meetings, improving the Environment Steering Group, Strategic Flood Risk Groups, the Northumbria Regional Flood and Coastal Committee, Planning Liaison meetings, EA/NWG compliance liaison meetings amongst others to have informed discussions about acceptable levels of risk before then making a recommendation to be endorsed by the Strategic Planning Group⁵.

The NE DWMP governance structure will enable visibility of how the journey of each SPA through the DWMP process, in a manner which is practical and proportionate to minimise bureaucracy and optimise stakeholder engagement.

⁴ Please refer to Figure 3-2- Framework Management Structure of the DWMP Framework cited above

⁵ Strategic Planning Group to be defined and created to exist as an External Steering Group.



Figure 2. Strategic Planning Areas – L2s

Question 2: Do you think the proposed governance is adequate and suitable? Are there any other iterations that you could suggest? If so, could you please make suggestions and contact us.

6. Stakeholders' role in shaping the DWMP

It is widely recognised and acknowledged that drainage systems are complex and have a number of interactions, both known and unknown. It is therefore important to state that we cannot develop a NE DWMP on our own. Whilst NWG has been tasked in its delivery, it is critical that relevant stakeholders actively participate and offer adequate support in its creation.

Other plans such as the next Flood and Coastal Erosion Risk Management (FCERM) programme, River Basin Management Plan (RBMP), Flood Risk Management Plan (FRMP) and the AMP7 Water Industry National Environmental Programme (WINEP) will need to be considered in the DWMP Process.

The success of the NE DWMP will rely on the active engagement of a number of stakeholders. The role expectations and benefits of stakeholder involvement are outlined below:

Environment Agency

The Environment Agency, are responsible for many activities such as improving the environment and reducing the risk of flooding and coastal erosion to properties and businesses, among others. In the NE region, NWG's operating boundaries aligns with the EA NE Area.

Lead Local Flood Authorities

Lead Local Flood Authorities, LLFAs, are responsible for developing, maintaining and applying a local flood risk strategy. This clarifies who is responsible for local flood risk and enables effective partnerships to be formed between the lead local flood authority and the other relevant authorities. There are currently fourteen LLFAs in our operating area.

Local Planning Authorities and Developers

Local Planning Authorities (LPAs) are usually the planning departments of the district or borough council. The National Planning Policy Framework (NPPF) defines a local planning authority as, 'the public authority whose duty it is to carry out specific planning functions for a particular area'.

In supporting growth, we actively engage with our regional developers and landowners through our Developer Services team who provides guidance through the planning process to the adoption of assets.

Environmental Partners

We work within the Catchment Based Approach (CaBA), playing a leading role within the North East to work collaboratively to improve the environment in the North East. At regional level, we represent and support the North East Natural Environment Leaders Network, Cross-Catchment Host Group, and North East Urban Water Group. We engage strongly with the five North East Catchment Partnerships (Tweed Forum, Northumberland Rivers, Tyne, Wear and Tees), and the two urban-focused Local Nature Partnerships (North East England Nature Partnership and Tees Valley Nature Partnership). Furthermore, our new Improving the Water Environment Performance Commitment and Outcome Delivery Incentive (ODI) will drive us to go above and beyond regulatory commitments by working with our partners to enhance accessible areas of rivers and beaches for the benefit of our customers and communities.

Highway Authorities

Our drainage system is intrinsically linked to the public highway, roads, footpath and other connecting systems. It is therefore important to work closely with partners who are responsible for the provision of components of the transport infrastructure to identify opportunities to reduce and control these contributing flows.

Customers

Our customers are at the heart of what we do. To raise awareness of their role in the DWMP, we aim to raise the profile of the DWMP process with elected members of the Regional Flood and Coastal Committee, with representatives of the Consumer Council for Water and also with customer focus groups that we will also seek to engage as we progress the DWMP.

We recognise that the list above does not represent all of the stakeholders that would have an interest in the long term planning of an effective and efficient drainage and wastewater system.

Partnership Groups

We are extremely proud to build on the strong foundation of the Northumbria Integrated Drainage Partnership (NIDP) consisting of fourteen of the LLFAs, the EA and NW. Our award winning partnership approach, which is formulated on a true collaborative approach of identifying priority investment areas, provides an excellent platform to springboard into the DWMP ethos. Whilst the NIDP approach looks at existing and past issues, the DWMP focuses on testing the vulnerability of these areas against future scenarios.

Similarly we have a strong environmental partnership foundation in our AMP7 'Improving the Environment' commitment, which will also be a key group to influence and seek combined opportunities.

Question 3: If not mentioned, how do you think your organisation can play a role? What is your organisations' expectations of the DWMP?

7. Key Drivers

There are multiple drivers that act as challenges to the effectiveness of drainage and wastewater systems, now and in the future.

We have summarised a number of them below, but are aware that these may not be the only ones:

- Environmental challenges ; climate change, population growth (including demographic shifts, changes to occupancy rates etc.) will stress our current systems and put additional pressure on the environment
- Customer expectations ; enhanced levels of service and visibility of decision making are growing, driven by changes in technology and social media, customer behaviours in a competitive sector with new, fresh and innovative ways of raising awareness and promoting customer and community responsibility will also affect the ways drainage systems exist and operate in the future
- Resilient systems and services ; in the face of the above challenges, we recognise the need to do more collectively ; by having the ability to anticipate trends, variability and legislative changes, and therefore adequately plan to address these but also have the flexibility and resilience, to cope and recover from disruption. We also recognise that there are a number of pressures such as scenario planning for rising mine water discharges and we will need to understand how these impact on our services.

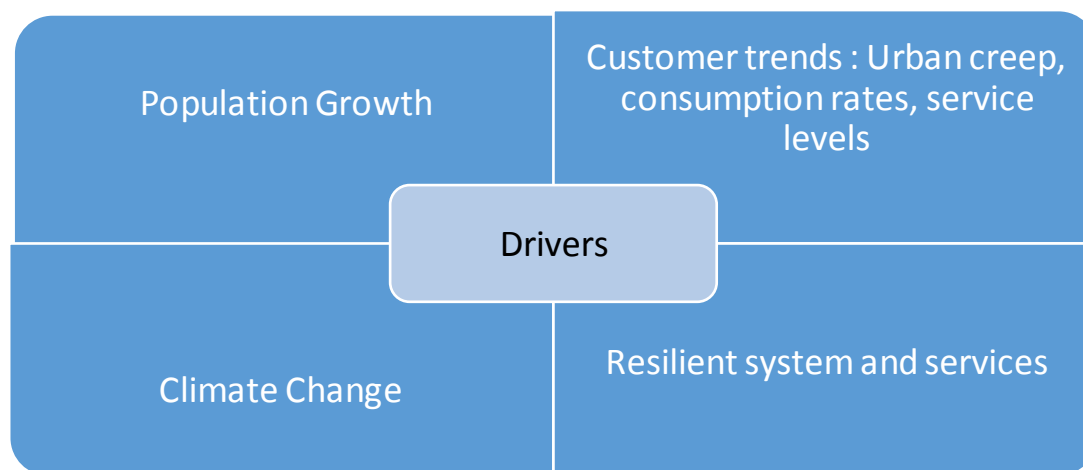


Figure 3. Key Drivers

Question 4: Are the drivers mentioned above suitable? It is important to recognise that there are a number of challenges that will affect effective drainage in the future. Are there any other drivers that you consider should be included?

8. Defining the Planning Objectives and the Planning Horizons

Planning Objectives

The DWMP Framework requires that NWG establishes its planning objectives against which catchment constraints are to be assessed and interventions developed. NWG's planning objectives reflect alignment to our AMP7 performance commitments, common or bespoke, that provide a significant contribution to enable us to achieve the desired outcomes. The NE DWMP Planning Objectives will set out how the DWMP requirements will be measured now and in the future. These will also inform and be monitored in a dynamic way, in order to formulate catchment derived strategies. The idea is that these are dynamic so that the assessment carried out informs delivery needs for a planning horizon but also identifies opportunities ahead in future planning horizons.

The NE DWMP Planning Objectives have been derived so that they are consistent with the methodology set by Ofwat for Price Review 2019, PR19, and there is the need to align it further as the methodology for PR24 evolves. As the DWMP objectives are wider than NWG's asset base, it is also important to work with our stakeholders to make sure that DWMP Planning Objectives are also shared by all of our stakeholders, or at least with the understanding that they are indicators to assist in the co-ordination of planning approaches.

From our DWMP pilot, our current proposal is to put forward the following eight Planning Objectives:

- PO 1 – Reduction in **Internal Property Sewer Flooding** risk as a result of hydraulic incapacity
- PO 2 – Reduction in **External Property Sewer Flooding** risk as a result of hydraulic incapacity
- PO 3 –Reduction in total population at risk of **Sewer Flooding 1 in 50 year storm** ; supporting RMA delivery
- PO 4 –Reduction in risk of detriment to **Bathing Water Quality** through intermittent discharges
- PO 5 –Reduction in risk of detriment to **River Water Quality** through continuous and intermittent discharges
- PO 6 – Reduction of non-compliance risk that could lead to a potential **Pollution**
- PO 7 – Reduction of risk resulting from poor **Asset Health**
- PO 8 –Improvement in **Wastewater Treatment Works** and Intermittent Discharge Permit **Compliance**



Figure 4. Planning Objectives

We recognise that to build new assets to cope with the future impacts will be unsustainable and we seek to work across these planning objectives to understand how multiple benefits can be achieved by managing flows in a different manner and optimising performance of existing infrastructure.

Question 5: Are these Planning Objectives relevant to your organisations? Through a number of stakeholder meetings, we have taken on board comments that the language used is sometimes difficult to convey what the Planning Objectives mean to individual organisations. Would it be more appropriate to refer to the Planning Objectives as Outcomes? Would you have any suggestions on how to better articulate these terms, so that they are relevant to your organisation and easy to understand?

Planning Horizons

NWG has defined its baseline as 2020 and its long-term planning horizons to align with the framework recommendations as shown below;

- **5 year horizon (2025)** – the 5 year horizon provides a focus for prioritising investment in the next AMP cycle, where greater levels of confidence are anticipated;
- **10 year horizon (2030)** – the 10 year horizon; there is a lower level of confidence over growth, climate change projections and other impacts. However investment over in a period of 10 years, and 2 AMP cycles allows for better alignment with other investment programmes, where collaborative opportunities exist and span over investment cycles.
- **25 year horizon (2045)** – this is the minimum ‘long-term’ horizon, enabling a better understanding of longer term impacts and identifying better planning and delivery opportunities. Furthermore NWG recognises the 25 year planning horizon to be aligned to its PR19 longer term planning vision and also to the achievement of some of its ambitious goals.
- **40 year horizon (2060)** – although the levels of confidence of the impacts decrease with more uncertainty around the planning objectives, we felt that it was important to reach towards an ambitious horizon and also to align to our Water Resources Management Plan vision for the NE.

The scenarios for each of the respective planning horizons are shown below;

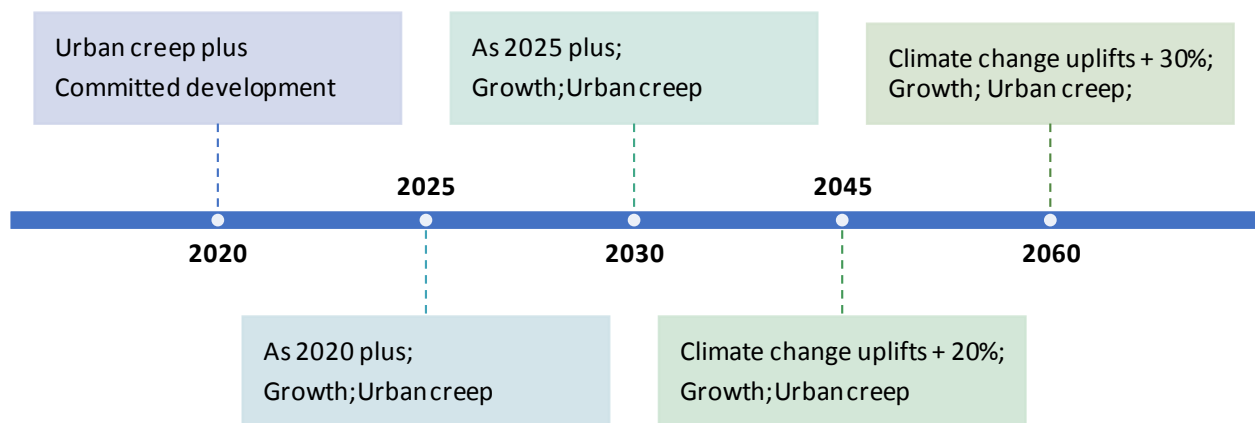


Figure 6. Planning Horizons

Question 6: Are the suggested planning horizons adequate? Do they offer the right balance between short/medium and long term planning needs to be identified? Are these aligned to your organisation’s strategic horizons?

9. DWMP Planning tools

In developing a detailed understanding of our systems and all of the interactions, we have identified a number of existing tools that will be used but we are also developing a set of new tools to help in the delivery of the DWMP;

Tool	Function	Status
Network Hydraulic model(s)	The existing NWG sewer network hydraulic model library will be utilized and some new hydraulic models will need to be built. Existing hydraulic models will be updated to current industry practice, and in some cases will be updated with field data collected through surveys. Hydraulic models will be simulated in both 1D and 2D to replicate above and below-ground flows. A detailed interaction between the sewer network and any receiving watercourses will not be modelled and a simplistic approach will be taken for the representation of boundary conditions, e.g. tidal/non-tidal influences. The models will be used to inform how sewer network flooding, intermittent and continuous discharges and general system performance is predicted to change across the planning horizons in response to the various catchment pressures. The sewer network models will include a basic representation of the wastewater treatment system; however, do not include for any assessment of process.	Update existing/ New
Receiving Water Quality models	The Source Apportionment GIS (SAGIS) software is to be used to assess the potential for receiving waterbody WFD classification deterioration. The risk of deterioration is possible as a result of increased frequency and volume of intermittent and continuous discharges from the sewer network in response to the various catchment pressures. Outputs from the sewer network hydraulic model will be used to inform the SAGIS model. No allowances will be made for climate change impact on receiving waterbodies.	Update existing
WwTW Capacity models	We are currently exploring how best to use our current WwTW capacity models to identify where capacity may be an issue at some sites.	In development
Strategic Studies Prioritisation Tool	The tool will need to be updated as part of the DWMP Process to reflect the additional levels of assessment and issues.	In progress

Opportunity Prioritisation		
Tool	Function	Status
Surface Water Disconnection Tool	This tool identifies a surface water sewer catchment that currently discharges to a foul/combined sewer. The tool quickly identifies the nearest watercourse and/or surface water sewer from the downstream end of the surface water sewer that it could be diverted to. The routine also identifies surface water sewers with higher flow rates that may present a stronger opportunity. The input data includes; • Links and Nodes (pipes and manholes); • Study area boundary; • Input watercourse data; • Ground model. The outputs from this tool will be interrogated to identify surface water separation opportunities to support Planning Objective for risk reduction.	New
SuDS Retrofit Tool	Land use assessment tool that identifies the most appropriate retro-fit SuDS intervention for all surfaces within a catchment. The tool takes into account; • Study area boundary; • Road centre lines; • Watercourse locations; • Sewer network data; • BGS (Ground permeability); • Land use (from Land Use Routine); • “StormOnly” Sewer Network. The outputs from the tool will be used to inform the option development process.	New
Option Optimizer Tool	Tool to quickly identify the most appropriate sewer network optimization options for a given location, e.g. which lengths of sewer are under-capacity and require an upsize to prevent a deterioration in system performance.	New
Option Workbook	Auditable record of decisions taken to short-list the long list of possible interventions to feasible opportunities. A workbook template has been developed to document all of the key decisions taken, and to ensure that reasoning behind any options that have not been short-listed this time around are not lost.	New

Table 1. DWMP Planning Tools

Question 7: Are the tools mentioned above beneficial to your organisation? Are there other tools that you might use currently or are in the process of developing which you think would be relevant?

10. Reporting structure

Northumbrian Water will report and publish its NE DWMP at the L1 Level of Governance. The reporting structure in line with the framework recommendations are:

- A **customer facing document**; that will outline in easily understandable format why the plan has been developed and what it sets to achieve and how it has been produced.
- A **non-technical summary**; a guide to explain how stakeholders' needs have been included in the process and the derivation of recommendations.
- A **technical summary**; a more detailed version of the above.
- A **plan**; providing the detail of the approach, outputs and interpretation. The plan should also include a step by step description of the DWMP.
- **Technical appendices**; with supporting evidence and audit trail of decision making approaches.
- **Spatial and interactive platform**; which will include 'live' updates of the progression of the plan along with the final outputs.

Question 8: Are the above reporting requirements suitable? Would you prefer a paper based platform to share the findings or would a web based spatial platform be more appropriate? Could you share with us any good examples of such platforms?

11. Next steps

The 'Strategic Context' as the first step of the DWMP Process, aims to set the direction of the DWMP and also to raise awareness with stakeholders, of their role in the process. It is envisaged that the Strategic Context will evolve as the needs of National stakeholders such as Defra, Ofwat, EA, NIC and others become clearer. Setting the ambitions and visions on a more local view, will also have an impact on the evolution of the NE DWMP.

It is important to note that the Risk Based Catchment Screening, which is carried out on an annual basis and which has a bearing on prioritisation catchments for subsequent analysis, is equally a very important step of the process. We will be publishing our 2nd cycle of the RBCS in December 2019.

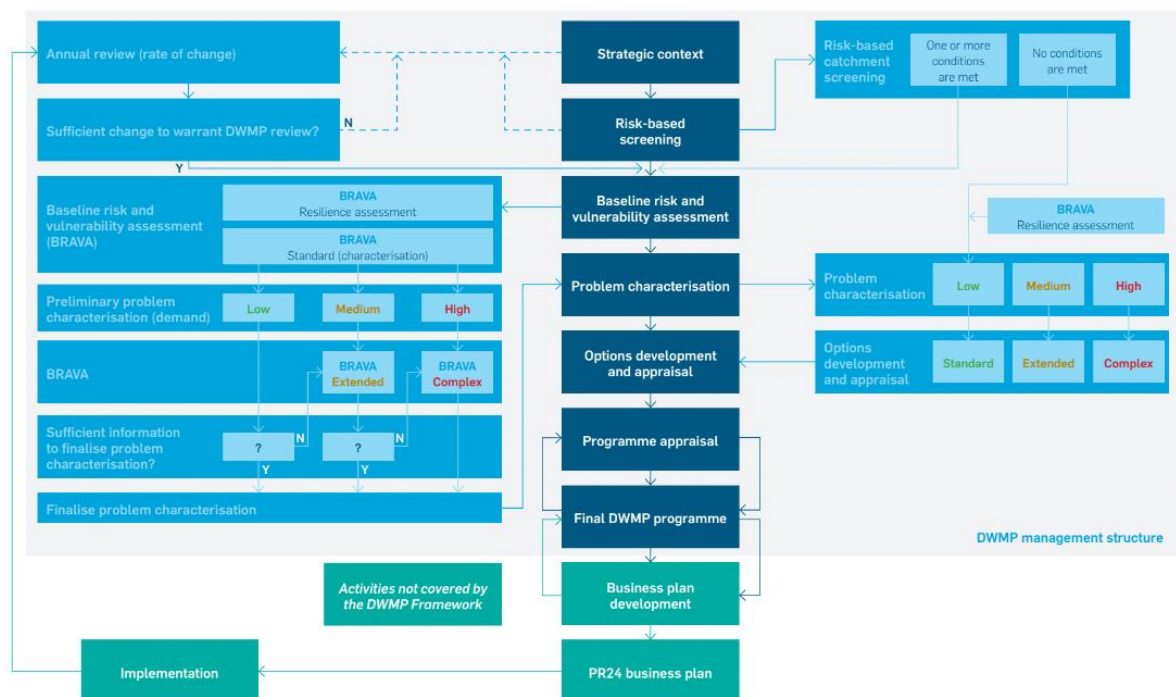


Figure 7. DWMP process steps (Ref DWMP Framework)

Stakeholder engagement arrangements

Across L2 Strategic Planning Areas, there is the need to define and create a formal cross stakeholder and engagement process in the form of a Strategic Planning Group (SPG). Northumbrian Water proposes a formal management/ steering group approach below, which we would welcome your views on.

A proposal has been taken to a number of stakeholders such as the NRFCC, NIDP and some of the Environmental Partnership meetings. We would like to use the opportunity of articulating the Strategic Context of the NE DWMP to discuss and agree with our stakeholders what would be the composition and Terms of Reference of this group.

The current proposal is set below ⁶ ; Proposed Strategic Planning Group		
NW Internal		
Chair	NW DWMP Sponsor	Richard Murray
Supported by	NW DWMP Programme Manager	Steena Nasapen-Watson
	NW DWMP Project Manager	Lynn Preston
	NW DWMP Technical Lead	Adrian Lee
External Stakeholders		
Environment Agency	EA DWMP Lead -NE	Laura Mollon
	EA Pipeline Programme Lead- NE	Jim Heslop
Water Forum	EA lead- NW Account Manager	Roger Martin
	CCW	Steve Grebby
	NFU	James Copeland
NRFCC	NRFCC Chair	Phil Rothwell
NIDP	NIDP Chair (on behalf of all NE LLFAs)	Aaron McNeill
Local Planning Authorities	TBC	TBC
Developer Representative	TBC	TBC
Highway Authorities	TBC	TBC
Key Environment Groups	Improving the Wider Environment Rep	TBC
	CaBA NE Rep	TBC
Others?		

Table 2. Proposed Strategic Planning Group

Question 9: If identified on the above table, would you be happy to be engaged further? If identified but not having been confirmed, could you provide a contact detail for your organisation? And lastly if not identified and you would like to be part of the Strategic Planning Group, or would like to make a suggestion of who should be, what would be the best way for us to engage?

⁶ Please note that both titles and individuals might be subject to change through the progress of the DWMP

12. How to get in touch?

Northumbrian Water welcome your views and feedback on this document through a formal consultation which will run from the 20th of December 2019 to 4pm on the 31st of January 2020. A link has been supplied to all attendees of the Strategic Context workshop on the 27th of November 2019. Please do not hesitate to forward it to members of your organisation who you think should also like to provide any comments or feedback.

Please do not hesitate to contact us on dwmp@nwl.co.uk if you require any assistance, or have any further queries.

Questions Summary

Question 1: Is the need for a NE DWMP clear? What part could you see your organisation play in its delivery? Are there any other plans which you think are complementary to the objectives of a NE DWMP? Pg 6

Question 2: Do you think the proposed governance is adequate and suitable? Are there any other iterations that you could suggest? If so, could you please make suggestions and contact us. Pg 9

Question 3: If not mentioned, how do you think your organisation can play a role? What is your organisations' expectations of the DWMP? Pg 11

Question 4: Are the drivers mentioned above suitable? It is important to recognise that there are a number of challenges that will affect effective drainage in the future. Are there any other drivers that you consider should be included? Pg 12

Question 5: Are these Planning Objectives relevant to your organisations? Through a number of stakeholder meetings, we have taken on board comments that the language used is sometimes difficult to convey what the Planning Objectives mean to individual organisations. Would it be more appropriate to refer to the Planning Objectives as Outcomes? Would you have any suggestions on how to better articulate these terms, so that they are relevant to your organisation and easy to understand? Pg 14

Question 6: Are the suggested planning horizons adequate? Do they offer the right balance between short/medium and long term planning needs to be identified? Are these aligned to your organisation's strategic horizons? Pg 15

Question 7: Are the tools mentioned above beneficial to your organisation? Are there other tools that you might use currently or are in the process of developing which you think would be relevant? Pg 17

Question 8: Are the above reporting requirements suitable? Would you prefer a paper based platform to share the findings or would a web based spatial platform be more appropriate? Could you share with us any good examples of such platforms? Pg 18

Question 9: If identified on the above table, would you be happy to be engaged further? If identified but not having been confirmed, could you provide a contact detail for your organisation? And lastly if not identified and you would like to be part of the Strategic Planning Group, or would like to make a suggestion of who should be, what would be the best way for us to engage? Pg 20



DWMP

Strategic Context Document responses

May 2020

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

OVERVIEW AND ACTIONS

Overview.....	3
Foreword	4
Topics and Questions.....	5
Question 1	7
Question 2	9
Question 3	11
Question 4	13
Question 5	15
Question 6.....	17
Question 7.....	18
Question 8.....	20
Question 9.....	21

APPENDICES

Appendix A - Programme.....	22
Appendix B – Planning Objectives.....	24
Appendix C – Glossary.....	25

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

Overview

The Drainage and Wastewater Management Plan framework provides the basis for more collaborative and integrated long term planning by companies, working with other organisations that have responsibilities relating to drainage, flooding and protection of the environment. It makes use of the tools and approaches, developed by the 21st Century Drainage Programme to enable companies to target investments more effectively and provide customers and stakeholders with better information about the UK's drainage and wastewater services.

The Northumbrian Water Strategic Context Document aims to set out an overview of the Drainage and Wastewater Management Plan Framework and requirements, but more specifically articulate Northumbrian Water's vision for a North East DWMP. This document aims to raise stakeholders' awareness of the objectives of the DWMP, identify key drivers which will act to challenge systems in the future, but also and more importantly, identify a set of common planning objectives, enabling co-understanding and thereon co-creation of affordable solutions.

The Strategic Context Document aims to be a start towards reaching alignment between stakeholders, and it will be revised and updated through the implementation of the DWMP, as industry best practice through the Steering Group and Implementation Group is taken into account, before the final DWMP is published in summer 2022.

Following a partners workshop in November 2019, the first draft of the document was released for comment on 19 December 2019. The following organizations were invited to comment on the document:

CC Water, The Coal Authority, Darlington Council, Durham City Council, Environment Agency, Gateshead Metropolitan Council, National Farmer's Union, North Tyneside Council, North Yorkshire County Council, Northumberland County Council, Redcar & Cleveland Council, South Tyneside Council, , Stockton Council, Sunderland City Council, Teesside University and internal stakeholders within Northumbrian Water.

Following the deadline for responses on 6 March 2020, the comments were collated and reviewed. This report summarises the questions and our responses to the comments.

Please refer to **Appendix C** for a glossary of the terms used throughout.

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

Foreword

Thank you for reading the strategic context document for Northumbrian Water's first Drainage and Wastewater Management Plan (DWMP). This is a critical document as we aim to ensure our region can have confidence in a reliable and resilient drainage and wastewater system for the years ahead.

We are now progressing with the production of our DWMP, which is due for completion by June 2022. I would like to thank all those who contributed to the strategic context workshop in November 2019 and through the consultation in January 2020. We have used both the outputs from the workshop and your feedback from consultation to prepare the final document.

The DWMP will inform Northumbrian Water's business plan submission for the next regulatory periodic review in 2024. We anticipate that for subsequent planning periods, the DWMP will become embedded within our planning processes as a key element in our approach. This is why it is so important to get the first DWMP right and the strategic context is the basis for how Northumbrian Water will achieve this.

To get the best outcomes for all in our region, we need to work collaboratively with customers and all organisations who have an interest in these issues – including stakeholders with an interest in planning, development, risk management and the environment. We look forward to continuing engagement throughout this process.

This is just the first step on our journey but by working together to develop and implement our DWMP, we can make great strides to reduce flooding and protect the environment for future generations.

Richard Warneford
Waste Water Director

Email: richard.warneford@nwl.co.uk

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

Topics and Questions

Question number	Topic	Page	Question
Q1	Delivery Programme	P6	Is the need for a NE DWMP clear? What part could you see your organisation play in its delivery? Are there any other plans which you think are complementary to the objectives of a NE DWMP?
Q2	Strategic Planning Areas	P9	Do you think the proposed governance is adequate and suitable? Are there any other iterations that you could suggest? If so, could you please make suggestions and contact us.
Q3	Stakeholders' role	P11	If not mentioned, how do you think your organisation can play a role? What is your organisations' expectations of the DWMP?
Q4	Drivers	P12	Are the drivers mentioned above suitable? It is important to recognise that there are a number of challenges that will affect effective drainage in the future. Are there any other drivers that you consider should be included?
Q5	Planning Objectives	P14	Are these Planning Objectives relevant to your organisations? Through a number of stakeholder meetings, we have taken on board comments that the language used is sometimes difficult to convey what the Planning Objectives mean to individual organisations. Would it be more appropriate to refer to the Planning Objectives as Outcomes? Would you have any suggestions on how to better articulate these terms, so that they are relevant to your organisation and easy to understand?
Q6	Planning Horizons	P15	Are the suggested planning horizons adequate? Do they offer the right balance between short/medium and long term planning needs to be identified? Are these aligned to your organisation's strategic horizons?

DWMP
STRATEGIC CONTEXT
DOCUMENT
RESPONSES

Q7	Planning Tools	P17	Are the tools mentioned above beneficial to your organisation? Are there other tools that you might use currently or are in the process of developing which you think would be relevant?
Q8	Reporting Structure	P18	Are the above reporting requirements suitable? Would you prefer a paper based platform to share the findings or would a web based spatial platform be more appropriate? Could you share with us any good examples of such platforms?
Q9	Proposed Strategic Planning Group	P20	If identified on the above table, would you be happy to be engaged further? If identified but not having been confirmed, could you provide a contact detail for your organisation? And lastly if not identified and you would like to be part of the Strategic Planning Group, or would like to make a suggestion of who should be, what would be the best way for us to engage?

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

Please note that organization and personal names have been removed from the consultee responses throughout.

Question 1

Q1	Delivery Programme	P6	Is the need for a NE DWMP clear? What part could you see your organisation play in its delivery? Are there any other plans which you think are complementary to the objectives of a NE DWMP?
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Consultee Responses

Yes the need for a NE DWMP is clear. As stated stakeholders across the region have already been successfully working collaboratively to engage in long term and proactive planning. South Tyneside Council (STC) has played an important part in this with the studies/partnerships mentioned directly resulting in benefits to hundreds of residents/customers across the Borough. South Tyneside is committed to aiding in the delivery of the NE DWMP as a stakeholder and is keen to explore further co-funding/co-delivery opportunities. Additionally STC are dedicated to flood risk reduction and environmental protection/improvement.

The need has been clearly explained in the Strategic context - Stage 1 document. Other complimentary plans include the River Basin Management Plans (Northumbria and Solway Tweed) for our region, Flood risk management Plans and WINEP (AMP7 and AMP8). Note: mentioned on Page 10.

The need for a DWMP is clear and it is important for all RMA's and partners to be included in the delivery. The NE DWMP should enhance and support the work of the NIDP. The DWMP should align with the FCERM National and Local Strategies, also with key issues for the RMA's

The need for the DWMP is clear however the potential scope and reach of the DWMP has been constricted by the strategic context document. The aim of the DWMP process, is that all the strategic planning for environmental and flooding improvements is integrated to give benefits to the customer and the environment. The strategic context document Indicates just the capacity of Northumbrian waters network is planned for excluding the wider drainage network and the drainage areas into which it drains. The EA has a strategic role to play in steering the development of the plan however more consideration needs to be given to the engagement with the Environment Agency and the governance of the plan (see Q2).

Although the Strategic Context identifies the scope of the DWMP as looking at a combination of flooding and environmental impacts, the document appears to focus on flooding impacts with insufficient reference to the range

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

of mechanisms by which infrastructure causes environmental impacts, including through physical modifications. There are 3 strategic plans which need to be referenced in the DWMP. The WRMP, there is potential to engage with the WRMP and to share data and options to have an integrated approach between water and waste water. The data used in the DWMP and the data used in the WRMP need to be the same using the same projections (climate change and population projection etc.) for this to happen. There may be scope to have joint strategies like having a maintained base flow in some rivers to protect the flow allowing enough dilution for larger works like in the Tyne estuary. The RBMP also needs to be referenced in the DWMP, it is due to be published in 2021. The RBMP brings together actions undertaken to improve the water environment, this is not only water quality, but ecology, hydrology, ground water. This wider scope needs to be considered in the DWMP. It would also be useful to include the Local Flood risk management strategies, statutory documents produced by local authorities. These should be referred to in the plan. Section 19 Flood Reporting (Flood and Water Management Act) should also be referred to in the plan.

Yes

Would be happy to work with NW/consultants to collate and provide information required to support NE DWMP.

Northumbrian Water response to comments:

We are delighted that the partners are keen to continue and build on the partnerships formed through other groups including the NIDP. We are keen to reinforce these relationships through the DWMP. The scope of the DWMP is defined by the Framework document and associated timescales. The Strategic Context Document sets out how we propose to implement the Framework. The DWMP will help us plan and prioritise for PR24 taking consideration of a number of factors of which sewer capacity is just one. We are assessing a number of planning objectives covering water quality indicators. The potential options to arise from the DWMP will consider best value which includes environmental impact. To this end, we intend to canvass customers on what constitutes best value for them which may be sustainable/SUDS type options rather than traditional infrastructure. We anticipate that the RBCS and BRAVA will highlight where there is the opportunity to work together on future studies. Where possible we are aligning with the data used in the WRMP while ensuring that we are in line with the other water companies. We are working hard to meet the BRAVA deadline as we find our way through the DWMP Framework. We will take the comments back to the National Steering Group and agree that there are many potential opportunities for closer collaboration on future rounds of the DWMP.

Please refer to **Appendix A** for our current programme.

DWMP

STRATEGIC CONTEXT

DOCUMENT

RESPONSES

Question 2

Q2	Strategic Planning Areas	P9	Do you think the proposed governance is adequate and suitable? Are there any other iterations that you could suggest? If so, could you please make suggestions and contact us.
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Consultee Responses

Proposed governance looks to be adequate and suitable.

The SPG needs to have some very clear terms of reference and clear lines of engagement and recording of decisions and interactions with existing stakeholder engagement groups. It is good to avoid additional levels of bureaucracy, but also important to record where agendas crossover and interact.

Governance seems appropriate. Suitable consideration of cross boundary issues included and the 3 level approach seems suitable.

It's currently unclear how the governance will work in practice. It would be useful to have the different groups which will be part of the governance structure listed? Will the outputs go into the WINEP, or be separately listed in the business plan? If the outputs are to be integrated into the WINEP how will the outputs and governance work around the existing working groups (very little engagement has happened so far with these groups) how will the planning for the NIDP fit into this? At what point will the catchment partnerships, and the compliance groups feed into the governance structure? The proposed governance framework is to divide the water company area into 485 L3 Tactical Planning units (TPUs) and merge L2 and L1 levels to create 7 Strategic Planning Areas (SPAs). Is it proposed that one strategic planning group (SPG) cover all of the 7 SPAs? NWG is proposing to use existing stakeholder engagement groups such as the NIDP, CaBA meetings, improving the Environment Steering Group, Strategic Flood Risk Groups, the Northumbria Regional Flood and Coastal Committee, Planning Liaison meetings, EA/NWG compliance liaison meetings amongst others to have informed discussions about acceptable levels of risk before then making a recommendation to be endorsed by the Strategic Planning Group. It is not clear if one or more or all of these groups would be involved in discussions. It is not clear whether it is for groups or NWG to make any recommendation to the SPG. The current proposal appears to limit any discussions with these groups to be about acceptable levels of risk. It is recommended that opportunities to enhance and mitigate should also be part of any discussions. The proposed boundaries appear logical and an approximate fit with drainage catchments. There is no precise fit when attempting to divide an area by both drainage catchments and local authority or other administrative boundaries. All options will present a compromise. In section 6 the Tweed Forum completes the set of 5 Catchment Partnerships operating in the Northumbrian Water area.

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

yes

Supportive of the use of existing stakeholder engagement groups to discuss acceptable levels of risk but would like detail of the commitment (time and resources) for the SPG.

Northumbrian Water response to comments:

We are in the process of appointing representatives to the External Steering Group. To assist in this process, we are calling for volunteers in our DWMP Newsletter. Once these people have been identified, we agree that it would be useful to list the groups feeding into the governance structure and aim to include this. As stated above, while the primary objective of the DWMP is to plan future work for PR24, we believe that the RBCS and BRAVA will highlight opportunities for further partnership working which will then become recommendations from the BRAVA. These types of recommendations will be fed into the various working groups such as the WINEP group so that they can be taken forward as separate projects if so desired. We envisage one strategic planning group to cover all 7 SPAs but with representation from all 7 SPAs on the group.

DWMP

STRATEGIC CONTEXT

DOCUMENT

RESPONSES

Question 3

Q3	Stakeholders' role	P11	If not mentioned, how do you think your organisation can play a role? What is your organisations' expectations of the DWMP?
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Consultee Responses

Liaison meetings have representatives in attendance and are an excellent opportunity to discuss current issues and view the forward work programme(s) at an early stage. We can raise the importance of the DWMP internally with members, senior management and residents.

LLFA's are already included through the NIDP and will play a key role.

We acknowledge and support Northumbrian Waters work with Partnerships and recommend this be continued and expanded to integrate environmental improvement as a necessary component of the DWMP and every flood risk project, but also to consider environmental improvement projects as the starting point of opportunities to reduce flood risk and improve NWG assets. The role expectation is that we will influence the design of the DWWMP to produce innovative ideas to improve the environment whilst also protecting people and businesses from flooding. The best way to do this is to regulate how NWG operate their assets and to jointly plan for improvements which will mitigate the risk of environmental harm, non-compliance, and flood risk. We also wish to see the DWMP addressing the ecological impacts of existing and past physical modifications of rivers on which the water company relies to carry out its drainage function, in addition to testing the vulnerability of priority investment areas against future scenarios. It is not expected that resolving this issue is reserved solely to the NIDP approach which tends to focus on addressing existing and past flooding issues as a starting point. Addressing the environmental impacts of drainage infrastructure should be given a stronger emphasis. The area team will work with their national colleagues to influence the structure of the DWWMPs so that they can give the best environmental and flooding outputs before these plans become statutory.

Consultee

Sharing data could be improved (following partnership agreements being put in place).

Northumbrian Water response to comments:

The DWMP considers a number of issues over various time horizons. The problems are then assessed against best value to give a prioritised list of issues. Best value identifies the wider benefits of resolving an issue which may be improved water quality or fewer CSO spills for example. At optioneering stage, there is a long list and short list of options including SUDS. As

DWMP
STRATEGIC CONTEXT
DOCUMENT
RESPONSES

already stated, where there are multi-stakeholder benefits to be gained we would be looking to work in partnership to get the best value for everyone.

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

Question 4

Q4	Drivers	P12	Are the drivers mentioned above suitable? It is important to recognise that there are a number of challenges that will affect effective drainage in the future. Are there any other drivers that you consider should be included?
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Consultee Responses

All drivers mentioned are suitable. Climate change/resilience could be expanded to include climate change mitigation and adaptation which will be the key going forward. Increase in development (linked to population growth) will be a challenge.

The drivers are sufficiently high level to cover a broad range of challenges. There may be some challenges that could cross-over one or more of the headings. Legislative changes may introduce new challenges on DWMP by influencing a number of areas including regulation of the Water Industry, Industry and Traders, Agriculture etc.. Climate change may have an indirect impact on DWMP challenges for example changes in groundwater levels and infiltration into networks (in addition to the impact of rising minewater discharges mentioned).

Whilst the drivers mentioned are important to us all, they seem to lack the key element of economic growth, which is the key driver for most, if not all local authorities. This includes the effect the DWMP may have on critical infrastructure, business and employment and the strategic transport network.

This question references only drainage but the scope of the DWMP also includes wastewater and addressing environmental impacts. The proposed drivers focus only on future change but should also include the identified need in the period of the plan to resolve historical issues integral to drainage and wastewater functions. Currently, only 16% of England's waters are close to their natural state. At the current rate of progress/investment it will take over 200 years to reach the Government's 25 Year Environment Plan ambition of 75% of waters close to their natural state. Climate change and population growth makes achieving the target even harder. If we are to close the 'outcome gap' we need to do things differently. We would ask that an additional key driver be included, rising mine water levels. Work has already been undertaken to produce maps which identify areas where the ground water levels are higher than the sewer network. The sewer network from this work has been banded into 3 risk categories. We suggest that areas of the network banded amber and red be included into the Brava hydraulic models. Rising mine water levels will affect the capacity of sewers and contribute to increased flooding events, environmental deterioration, and a compliance risk to the effected STW's. It will also have an impact on the supply and provision of clean water supplies. As the DWMP has the same strategic aims as we are working towards with the CA, we strongly recommend that rising mine water be considered as a key driver so this work can move forward in an integrated way instead of being separately considered.

Yes

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

It's also really important to engage with developers throughout this process and look to get high quality SuD's into new development that both reduce flood risk and have a positive environmental impact. The long term maintenance and mangagement is also key, NWG's efforts towards adoption are central to improvement this area.

Northumbrian Water response to comments:

It is anticipated that by planning a prioritised programme of work for PR24, economic growth will naturally follow improved drainage infrastructure. The DWMP includes new development in the future scenarios. The BRAVA and optioneering will identify best value options which may enable an element of current work that can be built on over time. At this stage, we do not have the time or data to include rising minewater in the DWMP, however we will raise the query at national level to see if it can become an element of DWMP in future rounds.

DWMP

STRATEGIC CONTEXT

DOCUMENT

RESPONSES

Question 5

Q5	Planning Objectives	P14	Are these Planning Objectives relevant to your organisations? Through a number of stakeholder meetings, we have taken on board comments that the language used is sometimes difficult to convey what the Planning Objectives mean to individual organisations. Would it be more appropriate to refer to the Planning Objectives as Outcomes? Would you have any suggestions on how to better articulate these terms, so that they are relevant to your organisation and easy to understand?
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Consultee Responses

All objectives are directly or indirectly relevant to us.

*This is probably an example of the fact that the wording is difficult to convey what the Planning Objective means, but I would suggest that Planning Objective PO8 should read '**Reduction of risk to** Wastewater Treatment Works and Intermittent Discharge permit Compliance rather than Improvement of.....*

The term planning objective can mean different things to other organisations, it would be clearer if the DWMP referred to key delivery outcomes to enforce what is trying to achieve. Whilst I understand that PO3 describes the water industry standard metric and is recommended for DWMP, it seems like a missed opportunity not to align with other risk management authority and key funding stream metrics i.e FCERM GiA.

We understand the meaning of the Planning Objectives. The objectives could be more specific. The terms reduction and improvement are qualitative and could be met by an incremental change over an unspecified timescale. We recommend that the percentage of reduction or improvement or achievement of a target perhaps related to industry best practice or AMP 7 ODIs should be adopted, and by a target year. It may be assumed this is the period of the DWMP but it could be longer for more difficult issues. We recommend PO5 is amended to "water body WFD status" to provide a more holistic objective aligned with statutory WFD. The proposed PO5 objective identifies an acceptance that drainage and waste water activities impact on rivers beyond the bounds of NWG's infrastructure assets. This objective would seem to relate with the stated aim to, 'seek to work across these planning objectives to understand how multiple benefits can be achieved by managing flows in a different manner and optimising performance of existing infrastructure.'

Yes

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

Northumbrian Water response to comments:

The term Planning Objective arises from the Framework Document. We do acknowledge that it can mean different things to different people so we are endeavouring to rename the categories for a wider audience. We recognise that more than one Planning Objective can relate to different issues and this is set out in our BRAVA and Problem Characterisation methodologies which are in the process of being finalised.

As a first step, we believe that the POs broadly sit under three main umbrella terms – Flooding, Environmental and Wastewater Treatment. Please refer to **Appendix B** for our initial work on simplification of the Planning Objectives.

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

Question 6

Q6	Planning Horizons	P15	Are the suggested planning horizons adequate? Do they offer the right balance between short/medium and long term planning needs to be identified? Are these aligned to your organisation's strategic horizons?
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Consultee Responses

Our Vision 2011-2031, Our Emerging Local Plan due to be adopted 2021 and will run to 2036.

The planning horizons are adequate, it is important that the key focus is on the short and medium deliverables, with a feel for a long term version and strategic aspirations

We would agree that the planning horizons are adequate. We are happy that NWG have decided to align the planning timescales with the WRMP. Would it be feasible for the climate change uplifts to be applied at any shorter time scale?

Yes

Consideration of the FCERM (draft) Strategy, 25 year Environment Plan, Surface Water Management Action Plan 2018.

Northumbrian Water response to comments:

The application of climate change uplifts from 2030 onwards was agreed industry-wide. This could be revisited at project-level should an issue progress as a partnership project.

DWMP

STRATEGIC CONTEXT

DOCUMENT

RESPONSES

Question 7

Q7	Planning Tools	P17	Are the tools mentioned above beneficial to your organisation? Are there other tools that you might use currently or are in the process of developing which you think would be relevant?
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Consultee Responses

All objectives are directly or indirectly relevant to us.

The tools mentioned are useful, local authorities also hold local information including flooding and asset capture information, which maybe of assistance and can be shared.

Network Hydraulic models – Could the ground water input be incorporated into these Network Hydraulic models, in the same format as tidal and non-tidal influences. Work has already been undertaken to split the predicted ground water height against NWGs network into 3 boundaries. Receiving water quality models – SAGIS is a good tool but currently is limited to Phosphorus, a new run of the SAGIS model will include Nitrates and ammonia, and metals Data. Current timescales are, updates in by September 2020, Model build 6 months October to March 2021, Model calibration 6 months April 2021 to September 2021. NWG is helping to trial the new version. Is NWG intending to run no other water quality models? Will all the EDM data be supplied to incorporate the impact of the current frequency of spill, from Storm and CSO discharges? Will the results from the SOAF investigations be incorporated into the optioneering and outputs some are scheduled for completion by 2021? Why will there be no consideration for climate change impact and potentially lower flows in receiving watercourses? A publication is due in April on the change in flows over time due to climate change and population growth. The water resources team may have had early site of this document (Will Robinson) which could be useful for the modelling exercise. WWTW Capacity models – some work has already been done on WWTW capacity and planned growth deterioration on the environment, can these be updated and rerun using the new WFD classifications released in April? Will the accumulation of smaller sites closing and a newly designed larger works be considered in the options outputs where capacity and environmental harm from growth are identified, rather than just surface water removal? Option optimiser – Will the option optimiser consider the capacity and frequency of CSO spills as well as internal and external flooding? If so will this be assessed to the Tyne, Wear and Tees formula or to formula A?

Yes

DWMP

STRATEGIC CONTEXT

DOCUMENT

RESPONSES

Refreshed data sharing agreements would be useful.

Northumbrian Water response to comments:

We have considered incorporating ground-water levels into the hydraulic model but do not feel it is appropriate. The issue is that the level would be assumed and could mask real issues when scenario testing. We would also need information on pump-rates and when the pumps are on/off where minewater is concerned. These are valid points which could be discussed nationally and considered for future rounds of DWMP. We are in close contact with Laura Dixon and Sue Horsfall to ensure that the DWMP work and the SAGIS tool are complementary and fit into Business as Usual. Where WWTW capacity is highlighted as an issue this will come out of the BRAVA and go into the optioneering phase of the DWMP. CSO spills form part of the DWMP assessments.

DWMP STRATEGIC CONTEXT DOCUMENT RESPONSES

Question 8

Q8	Reporting Structure	P18	Are the above reporting requirements suitable? Would you prefer a paper based platform to share the findings or would a web based spatial platform be more appropriate? Could you share with us any good examples of such platforms?
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Consultee Responses

An update at the L2 level of governance would be useful for each SPA - is there a potential to include this as an appendix or will this information be shared through the SPG? A web based platform would be most appropriate to share findings.

The reporting requirements should as versatile as possible to allow a range of different stakeholders to access the platform. Electronic platforms are great and preferred to paper based but consideration needs to be given to the ICT limitations and restrictions of stakeholders in particular local authorities and other Government organisations.

The use of both a web based platform for visual and mapping outputs and a document for the detail of the plan. A web based platform for both these options would be preferable.

Yes

Northumbrian Water response to comments:

We are working on a web-based platform which will be accessible by partners. The intention would be to implement a range of permissions depending on level of User to enable people to look at an overview and drill down into the detail as appropriate.

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

Question 9

Q9	Proposed Strategic Planning Group	P20	If identified on the above table, would you be happy to be engaged further? If identified but not having been confirmed, could you provide a contact detail for your organisation? And lastly if not identified and you would like to be part of the Strategic Planning Group, or would like to make a suggestion of who should be, what would be the best way for us to engage?
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Consultee Responses

We would be happy to engage further with a view to assessing the time and resource requirement in being a stakeholder on the SPG. Additionally it would be useful to have somebody from NW to present to all relevant internal contacts to ensure they is an understanding council wide.

The LLFA's are proposed to be represented through the chair of NIDP, would it not be appropriate to engage the chairs of the strategic groups to ensure the sub regions are properly represented?. The LLFA contacts within each Authority should be able to provide links to the Planning and Highways departments, within their Authority depending on the specific requirements.

There are currently 3 people listed representing us as stakeholders. As there are currently lots of people and different teams which could potentially be involved as stakeholders please limit the main contact to 1 individual who will liaise with the national, and internal teams to feedback to Northumbrian water. When the structure of the governance and strategic planning groups are more clearly outlined, additional staff could be named on this.

Yes

Northumbrian Water response to comments:

Comments noted. We agree that having too many representatives can become unwieldy so having a single contact for each authority would be helpful. If the information is based on a web-platform, it should be easy to keep people informed of what is available and seek comments.

DWMP
STRATEGIC CONTEXT
DOCUMENT
RESPONSES

APPENDIX A
PROGRAMME

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

	AMP6												AMP7																				
	2018				2019				2020				2021				2022				2023				2024								
	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sept	Q4 Oct-Dec					
Strategic Content						DRAFT		FINAL																									
Risk Based Catchment Screening (RBCS)			FIRST RBCS				RBCS REVIEW				RBCS REVIEW				RBCS REVIEW				RBCS REVIEW				RBCS REVIEW				RBCS REVIEW						
Pilot Studies					BERWICK & SEAHOUSES																												
Baseline Risk and Vulnerability Assessment (BRAVA)						BRAVA COMPLETED DEC 2020																											
Problem Characterisation							DEFINING OUR RISK																										
Option Development and Appraisal												DEFINING HOW TO MANAGE OUR RISK																					
Programme Appraisal												PRIORITISING OUR APPROACH																					
Documentation			SUPPORTING INFORMATION AND CONSULTATION												TECHNICAL WORK COMPLETED BY FRAMEWORK PARTNERS												FINAL CONSULTATION						
Stakeholder Consultation				PILOT STUDY STAKEHOLDER WORKSHOP				INTERNAL STEERING GROUP ESTABLISHED		EXTERNAL STEERING GROUP ESTABLISHED		CUSTOMER & KEY STAKEHOLDERS																					
Publication																	DRAFT DWMP PUBLISHED				FINAL DWMP PUBLISHED												

DWMP
STRATEGIC CONTEXT
DOCUMENT
RESPONSES

APPENDIX B
PLANNING OBJECTIVES

FLOODING

- PO1 Internal Flooding
- PO2 External Flooding
- PO3 Resilience

ENVIRONMENTAL

- PO4 Bathing Water Quality
- PO5 River Water Quality
- PO6 Pollution

**WASTEWATER
TREATMENT**

- PO7 Asset Health
- PO8 Compliance

DWMP

STRATEGIC CONTEXT DOCUMENT RESPONSES

APPENDIX C GLOSSARY

AMP	Asset Management Period or Plan
BRAVA	Baseline Risk and Vulnerability Assessment
CAF	Capacity Assessment Framework
CSO	Combined Sewer Overflow
DWMP	Drainage and Wastewater Management Plan
L1	Northumbrian Water Group Northern Operating Region
L2	Strategic Planning Areas (Northumberland, Tyneside etc)
L3	Northumbrian Water Group Drainage Areas
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
NIDP	Northumbria Integrated Drainage Partnership
NWG	Northumbrian Water Group
PC	Performance Commitment
PO	Planning Objective
PR	Periodic or Price Review
RBCS	Risk Based Catchment Screening
RBD	River Basin District
RMA	Risk Management Authority
SOAF	Storm Overflow Assessment Framework
SPA	Strategic Planning Area
SPG	Strategic Planning Group
SuDS	Sustainable Drainage Systems
WINEP	Water Industry National Environment Programme