WINEP Submission August 2023

Advanced WINEP (Rainwater Management)

August 2023 Final

United Utilities

Water for the North West

Contents

Appendices

1. Executive summary

1.1 Rainwater Management Strategy

1.1.1 Driven by the targets in the Environment Act, the legislative impact and investment required in the North West by 2050 is substantial. The government's Storm Overflows Discharge Reduction Plan (SODRP) will drive significant investment to reduce the impact and frequency of storm overflows.

1.1.2 The North West of England has 40% more urban rainfall than the industry average[1], which results in United Utilities Water's (UUW's) sewer network receiving more rain into a highly combined system (54% combined sewers compared to the national average of 33%). This contributes significantly to UUW having the highest storm overflow activations in England (based on 2022 event duration monitoring (EDM) data[2]).

1.1.3 Therefore UUW has developed an approach to managing storm overflow activations which aims to:

- Drive down the frequency of storm overflow activations as fast as possible;
- Address harm from overflows as soon as possible;
- Focus on managing rainwater at source to deliver better value;
- Plan with stakeholders early to maximise opportunities to align;
- Get a head start on scaling up delivery; and
- Drive nature based solutions that capture rainwater at source.

1.2 Our Advanced WINEP Proposal (Rainwater Management Programme)

1.2.1 Our Advanced WINEP proposal is a Rainwater Management Programme which will unlock earlier, innovative investment and partnerships on rainwater management and storm overflows. It will focus on unlocking rainwater management solutions in catchment areas where storm overflows need to be improved in order to meet Storm Overflow Discharge Reduction Plan (SODRP) targets after completion of the AMP8 WINEP. This programme aims to invest in 'best value' and 'least regret' actions, with a focus on driving rainwater management interventions which will reduce or eliminate the future requirement of investing in grey storage to meet the government targets.

1.2.2 The programme will drive £247 million (FY21 prices) of investment of which £197 million would be enhancement cost allowance and the remaining £50 million leveraged from partnership funding to deliver wider benefits, enabled by removing conventional regulatory barriers of timeframes, geography and penalties to allow us to flexibly co-plan and co-deliver with stakeholders. If we achieve higher leveraged funding for direct benefit, we will reinvest the surplus in delivery of further interventions.

1.2.3 The £197 million of enhancement cost allowance would be linked to a price control deliverable committing to the delivery of 57,796m^3 of storage avoided on overflows requiring improvement under the government's SODRP. The interventions will vary but examples include rainwater gardens, swales, permeable paving, as well as natural flood risk management to attenuate flow upstream.

1.2.4 Stakeholders and customers want to see more sustainable drainage solutions in the places where they live and work, when they are assessed as best value. Our strategic partnerships support this approach. Research conducted by UUW in March 2023[3] found that the majority of customers who took part in the

[1] Ofwat urban rainfall calculations (https://www.ofwat.gov.uk/publication/urban-rainfall-calculations/).

[2] Defra data services (https://environment.data.gov.uk/).

[3] DJS on behalf of United Utilities, 6 Captials Qualitative Research Report (https://www.unitedutilities.com/globalassets/z_corporate-site/about-us-pdfs/p -winep-6-capitals/6-capitals-research-report-final.pdf), March 2023.

focus groups prefer sustainable drainage solutions over storage tanks because they are a more natural and visually appealing way of addressing localised flooding and bring benefits to nature and society as well as health and wellbeing. This preference aligns well to rainwater management interventions which are a more resilient option to underground storage and often permanently remove rainwater from the wastewater system.

1.2.5 The programme is comprised of seven "Named" storm overflow schemes which have been developed, and an "Agile Opportunity" category which allows us to work in a more agile way with stakeholders. The breakdown of the costs and forecast outputs are shown in Table 1. We assume that 20% of the overall programme will be funded through partnership co-funding with the remaining 80% being supported through an enhancement cost allowance. The co-funding assumption is at a programme level and will vary scheme by scheme. We feel this percentage is appropriate due to the programme being a blend of "Named" schemes (i.e. stakeholders aligning to us) and "Agile Opportunity" schemes (i.e. we can align to stakeholders).

Table 1 - Advanced WINEP programme breakdown (FY21 prices)

Project	Total capex of Advanced WINEP cost (RWM)	UUW capex of Advanced WINEP cost (RWM)	Partnership capex of Advanced WINEP cost (RWM)	Total opex of Advanced WINEP cost (RWM)	Rainwater management (Ha)	Avoided storage (m3)
BBN0133 CSO	[✂]	[✂]	[✂]	[✂]	4.2	1,021
BRY0053 CSO	[✂]	[✂]	[✂]	[✂]	20.6	1,892
ROC0163 CSO	[✂]	[✂]	[✂]	[✂]	29.5	13,424
TAM0006 CSO	[✂]	[✂]	[✂]	[✂]	13.7	722
TAM0062 CSO	[✂]	[✂]	[✂]	[✂]	1.6	24
TRA0031 CSO	[✂]	[✂]	[✂]	[✂]	7.8	330
TRA0078 CSO	[✂]	[✂]	[✂]	[✂]	4.6	63
Agile Opportunities	[✂]	[✂]	[✂]	[✂]	120.1	40,320
Total	**[✂]**	**[✂]**	**[✂]**	**[✂]**	**202.2**	**57,796**

1.2.6 Our proposal is focussed on the urban areas in the southern part of our operational region, particularly Greater Manchester. This area requires substantial investment over the next 25 years to address SODRP targets for storm overflows and increase resilience to climate change. In addition, our strategic partnerships in Greater Manchester could support our co-funding ambition. The programme is flexible enough, however, to include other areas such as Northwich, Warrington and Liverpool, if the criteria are met.

1.2.7 The strength of strategic alignment in Greater Manchester is demonstrated by the personal support for the proposal that has been pledged by Andy Burnham, Mayor of Greater Manchester (Appendix A). Delivery in this area will also benefit from the development of the Integrated Water Management Plan (IWMP)[4] for the city, which will make it easier to align our desire for rainwater management solutions with a diverse range of investment plans across the city.

1.2.8 Customers will be protected by three tests (location, volume and value, Section 2.2) that rainwater management scheme must satisfy to qualify for investment, to ensure we deliver best value and improvements towards the government's storm overflow targets. We also propose a Price Control Deliverable (PCD) to protect customers in the event of under delivery.

[4] Greater Manchester Integrated Water Management Plan (https://democracy.greatermanchester-ca.gov.uk/documents/s27343/10A%20Integrated%20Water%20Management%20Plan.pdf).

1.3 Benefits of a Rainwater Management Programme

1.3.1 Our Advanced WINEP proposal will provide an opportunity to demonstrate how greater regulatory flexibility can allow us to increase the co-funding of this element of the WINEP and in turn deliver wider benefits in addition to improving river water quality through a reduction in the frequency of storm overflow activations. Interventions delivered may provide additional benefits to the environment and society in a range of ways including sequestering carbon, reducing flood risk, enhancing drought resilience, increasing biodiversity and improving access to amenity and recreation. Conventional grey infrastructure solutions to storm overflows do not offer these additional benefits.

1.3.2 In addition to the benefits delivered from the individual rainwater management schemes, additional benefits of delivering a rainwater management programme include:

- Developing knowledge that will be shared with current and future potential stakeholders, as well as regulators (Environment Agency, Ofwat), Defra, local authorities and the sector more generally, to evolve future WINEPs to unlock greater value for customers;
- Growing and sharing experience of delivering nature-based solutions (NBS) and natural capital markets through integrating with the "Mainstreaming NBS" Ofwat innovation fund project[5] led by UUW. We are committed to sharing learning with other areas across England and Wales to support and inform the water industry's PR29 approach. We also want to exchange knowledge with other companies who take forward a successful Advanced WINEP proposal so that collaborative lessons learned can be developed to support regulators and share best practice;
- Enabling us to scale up activity on better management of rainwater in the North West, which is a key strategy to address storm overflows over the longer term. This aligns with and shows progress against the National Infrastructure Commission's (NIC's) recommendations on surface water flooding (2022)[6] , which centre on capturing more rain before it enters the sewer system by planning and delivering collaboratively with others (such as local authorities); and
- Unlocking a flexible approach to delivery of rainwater management opportunities identified through Greater Manchester's IWMP thereby supporting embedment of this approach and in line with Greater Manchester Trailblazer Devolution Deal (2023)[7].

[5] Mainstreaming NBS Ofwat innovation fund project https://www.ofwat.gov.uk/wp-content/uploads/2021/11/United-Utilities-PR24-Unlocking-nature-based-solutions-to-deliver-greater-value.pdf.

[6] National Infrastructure Commission, Reducing the risk of surface water flooding (2022).

[7] HM Government, Greater Manchester Combined Authority Trailblazer deeper devolution deal (2023).

1.4 How our proposal aligns to Ofwat's Public Value Principles

1.4.1 Table 2 below sets out how our proposal aligns to Ofwat's Public Value Principles.

Table 2 - How the Rainwater Management Proposal aligns to Ofwat's Public Value Principles

Principle 1	Companies should seek to create further social and environmental value in the course of delivering their core services, beyond the minimum required to meet statutory obligations. Social and environmental value may be created both in direct service provision and through the supply chain.	This proposal is focussed on delivering rainwater management solutions which provide further social and environmental benefits in urban areas. It goes beyond our regulatory requirements set out in the AMP8 WINEP by investing in overflow catchment areas targeted in future AMPs, therefore allowing us the time and flexibility to work with stakeholders and align investment (Section 0). It will also support supply chain adaptation to rainwater management solutions, making it easier for all companies to rapidly adopt these solutions across the industry.
Principle 2	Social and environmental benefits should be measurable, lasting and important to customers and communities. Mechanisms used to guide activity and drive decision-making should support this, for example, through setting and using company purpose, wide external engagement, and explicit consideration of non-financial benefits.	Our customer research tells us that our customers value sustainable solutions which incorporate social and environmental benefits over conventional underground storage. We propose a series of metrics that we will track as the programme develops and is delivered.
Principle 3	Companies should be open with information and insights on operational performance and impacts (both good and bad). This will support stakeholder engagement, facilitate collaboration, and help identify opportunities for delivering additional social and environmental value.	We will report progress in delivering this programme via the Annual Performance Report and share lessons learnt across the industry, wider stakeholders and regulators (Section 7). We are also keen to share and listen to learning at regular checkpoints being established for Advanced WINEP projects.
Principle 4	Delivery of social and environmental value outcomes should not come at greater cost to customers without customer support.	Our rainwater management rate (Section 2.3) has been calculated to ensure that customers are paying for the avoidance of future storage (Section 3.4) to address storm overflow activations and the social and environmental outcomes are either paid for by stakeholder co-funding, the market or acquired with no additional cost. This is in line with our best value assessment based on values the customers have expressed a willingness to pay for
Principle 5	Companies should consider where and how they can collaborate with others to optimise solutions and maximise benefits, seeking to align stakeholder interests where possible, and leveraging a fair share of third-party contributions where needed. Companies' public value activities should not displace other organisations who are better placed to act.	Our programme has a target to achieve £50 million of co-funding for £197 million of enhancement cost allowance investment which we believe is achievable based on the scale of wider investment in the Greater Manchester area alone (Section 4.7) and which can be identified through the Integrated Water Management Plan (IWMP). The IWMP will provide the opportunity to strengthen our alignment with wider stakeholders, such as Local Authorities and Transport for Greater Manchester.
Principle 6	Companies should take account of their capability, performance and circumstances in considering the scope for delivering greater social and environmental value.	We have a track record of delivering innovative nature based solutions in partnership including the Wyre NFM project, Catchment Nutrient Balancing in the Petteril, peatland restoration and delivering of sustainable drainage solutions through our Green Recovery programme. Additionally, UUW has sustained one of the top two ratings in the Environment Agency's Environmental Performance Assessment since 2011.

1.5 Measures to protect customers

1.5.1 As part of the Rainwater Management Programme, we have set out a number of ways in which we will protect customers from inefficient spend or under delivery. These are summarised in Figure 1 below and are covered in more detail in the submission.

Figure 1 - Methods by which customers will be protected from over spending or under delivery of the proposal

Rainwater Management Rate We will not expect customers to fund more than £[✂] per equivalent hectare disconnected unless a full best value assessment demonstrates it is in customers' interest to do so.	**Partner engagement** We will test engaging partners in a way that identifies integrated opportunities to increase co-funding between partners to decrease risk and increase value for money.	**Transparent Tests** We will assess all schemes using three tests. If they do not meet our tests, they will not progress.
Proportionate investment We will apply a factor to the Rainwater Management Rate depending on the proportion of benefit the intervention will have on storm overflow activations. Not all schemes will qualify for the full rate.	**Co-funding** Our Rainwater Management Programme co-funding target is 20%, which can be in-kind (such as access to land) in addition to financial contributions.	**Price Control Deliverable** We will release funding back to customers where there is under delivery. This ensures risk is balanced as part of delivering change.

2. Action description

2.1 What this proposal will achieve

2.1.1 This rainwater management programme is an early start on the storm overflow programmes scheduled for AMP9–AMP12 therefore enabling us to start the adaptive plan to meet the government's Storm Overflows Discharge Reduction Plan (SODRP) target of 10 spills by 2050 in AMP8. We have created this proposal in this way to unlock the flexibility needed to enable partnership and nature-based solutions to thrive, recognising that they take longer to identify, develop and commit to deliver than conventional grey solutions. This will reduce the requirement in future AMPs to build underground storage, which provides no additional benefits to the environment or society.

2.1.2 By getting ahead of the SODRP trajectory targets for storm overflow improvements, we remove regulatory constraints on the need to improve specific overflows to specific performance standards in one AMP releasing the potential for nature-based solutions through time to form partnerships and attract additional co funding.

2.1.3 The programme will deliver a range of sustainable rainwater management solutions (and targeted monitoring) which include:

- Disconnection of rainwater from combined sewers to ground, waterbody or surface water sewers;
- Sustainable drainage systems (SuDS) e.g. swales, rain gardens, permeable paving, and attenuation basins;
- Rainwater harvesting (RWH) e.g. property level water butts; and
- Natural flood management (NFM) e.g. leaky dams and tree planting.

2.1.4 These interventions recognise the holistic nature of managing rainwater in a catchment, from NFM in less urban areas, through to SuDS and sewer disconnection in the more urban areas and rainwater harvesting at individual properties. These interventions require lots of engagement with third parties and co-planning with stakeholders to deliver these schemes.

2.1.5 We will record progress against the below programme metrics in the Annual Performance Report:

(1) Rainwater disconnected from the combined sewerage system (hectares);

(2) Rainwater attenuated from the combined sewerage system (hectares);

(3) Rainwater managed using Natural Flood Management (hectares);

(4) Avoided conventional storage for future AMPs (AMP9+) (m^3);

(5) Leveraged funding for direct benefit LBE (£); and

(6) Leveraged funding for wider benefit LBE (£).

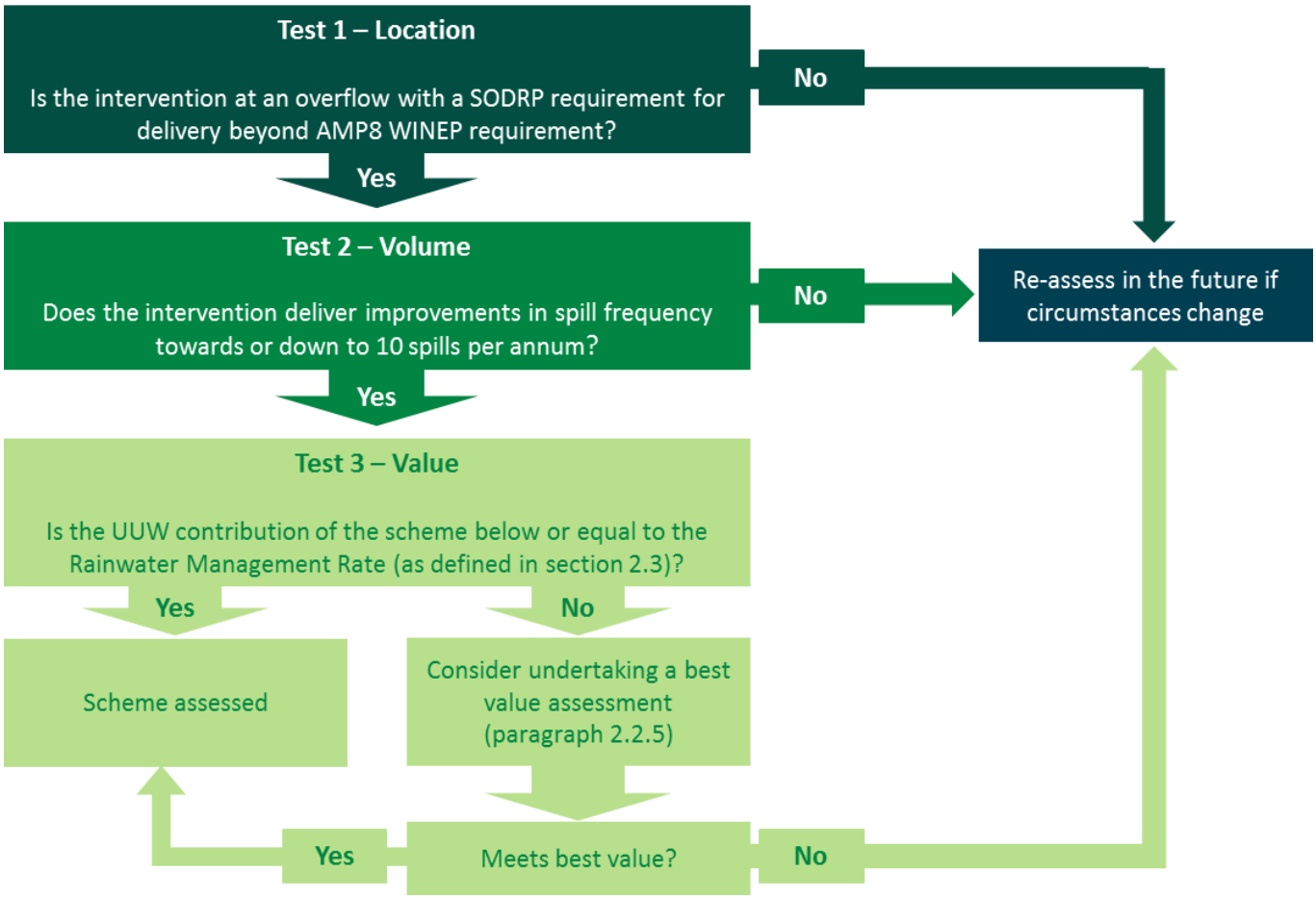
2.1.6 Metric 1 aligns with data currently reported routinely for annual performance reporting, and we propose to use the same method to measure Metric 2 and Metrics 3. Metric 4, 5 and 6 are not routinely measured, however we feel that these metrics are crucial to demonstrate the benefit that customers in future AMPs can expect to receive. Therefore we will calculate the avoided conventional storage for all schemes in the programme (Section 3.4 for method) and report the percentage of co-funding achieved in line with the approach which will be set out in our PR24 Business Plan submission (see Section 4.1).

2.2 How the proposal works in practice

2.2.1 The intention of this proposal is to allow us to operate in a more agile way to deliver rainwater management solutions in partnership so we have intentionally not populated most of the programme with “Named” overflows; instead we have categorised the programme based on confidence and maturity to articulate how the proposal will work in practice.

2.2.2 The programme will be made up of two categories of schemes, “Agile Opportunities” and “Named” and Figure 2 visually represents the three tests which will be applied to all schemes to ensure best value for customers.

Figure 2 - The three tests which will apply to all candidate schemes to assess eligibility to the programme



"Agile Opportunity" Category

2.2.3 The "Agile Opportunity" category allows us the flexibility to deliver across the region where there are opportunities to work with stakeholders. This flexibility makes it easier to align investment programmes and therefore maximise co-funding. This flexibility will enable us to take advantage of emerging schemes being delivered by stakeholders, therefore minimizing disruption to communities and maximising available funding options. "Agile Opportunity" schemes will be eligible for the Rainwater Management Programme if there is an opportunity to deliver a rainwater management solution which meets one or more of the programme metrics above (paragraph 2.1.5) and complies with the three tests in Figure 2.

2.2.4 We do not have a target number of schemes for the "Agile Opportunity" category as it could be filled with a range of small to large schemes which will all support our adaptive plan. The key is that schemes must pass the tests in Figure 2 of location, volume and value (Section 2.3 for Rainwater Management Rate). This means any interventions will be delivering improvements towards meeting the SODRP requirements.

2.2.5 There may be circumstances where it is appropriate to do a full bottom up best value assessment as part of test 3. This might be the case where the cost to improve an overflow to meet the SODRP targets is higher than the norm and it would be in customers' interests to allow a higher rainwater management rate because the alternative grey infrastructure option is very expensive. If this were the case, we would ensure that we demonstrate how the proposed intervention forms part of the best value solution for the overflow with options developed for alternatives to the proposed rainwater management intervention. This would be done in line with the approach used for the WINEP options submission.

2.2.6 Through early engagement, we have already identified an opportunity to work with a local authority delivering public realm improvement in 2025. These improvements are in an area that is connected to the combined sewer network which would benefit an eligible overflow. The plans include significant changes to the public realm, including introduction of natural green features and construction of new

impermeable area. This is the type of scheme that could be included in the "Agile Opportunity" category because of the opportunity to influence the design of the public realm scheme and have the flexibility to invest to reduce storm overflow activations. Activities would likely include a blend of rainwater management interventions such as disconnection of rainwater from a combined network to a surface water network, attenuation using SuDS enabled green features (tree pits and rain gardens) and rainwater harvesting from green roofs. All of these could provide avoided conventional storage in future AMPs as well as avoiding future disruption experienced by the local community. In a conventional WINEP approach, this example opportunity to align would be missed due to the timing of investment, as it would be very challenging to align project timescales.

2.2.7 For the "Agile Opportunity" category all overflow catchment areas in UUW's operational area which require improvement to SODRP targets beyond the AMP8 WINEP will be eligible. We expect that this category will mostly comprise schemes within the Greater Manchester area because of the level of strategic alignment with stakeholders being driven by the Integrated Water Management Plan (IWMP) for the area. Testing how an IWMP will work alongside a flexible rainwater management approach will be important to understand how it can be applied nationally.

2.2.8 The approach we set out to identify and deliver schemes in the "Agile Opportunity" category will allow us to develop and share learning with other areas in our region (for example the Liverpool City Region) where it would be advantageous to start an adaptive plan which includes rainwater management once investigations in AMP8 are completed.

2.2.9 We have also made a start on identifying further schemes that could be part of the "Agile Opportunity" category, including with flood risk officers at the local Environment Agency. That engagement has shown there would be an opportunity to align our rainwater management programme with the flood risk programme if the proposal is approved. This would provide the rainwater management programme with an opportunity to maximise the co-funding opportunity from Grant in Aid (GiA), which nationally is £5.2 billion.

2.2.10 Working together with the Environment Agency on Flood and Coastal Erosion Risk Management (FCERM) we have been able to align strategic capital investments and concluded that Northwich and Warrington present significant opportunities to collaborate and manage rainwater to achieve multiple benefits. There are other known priority areas, for example, the implementation of NFM in the uplands, or places like Grasmere in the Lake District which we will develop further with potential partners. Examples of the types of NFM interventions we might support in these cases could be leaky woody dams, peatland restoration, river restoration, storage ponds and wetlands. In each case they must be part of the best value solution to reduce storm overflow activations. In some cases we will need to mitigate the impact of surface water separation on river flood risk by implementing NFM solutions in the upstream catchment.

"Named" Category

2.2.11 For the "Named" category schemes we have identified overflows in the Greater Manchester area which would benefit from rainwater management solutions as part of the overall solution to meet SODRP requirements. These have been subject to best value assessments using both the CIRIA B£ST tool and the Wider Environmental Outcomes (WEO) set out in the methodology for the AMP8 WINEP. We are proposing to use the CIRIA B£ST tool for full best value assessments for Advanced WINEP as it better aligns with the wide range of ecosystem service benefits that rainwater management solutions can provide. In AMP7, we have successfully used the B£ST tool to support assessment of best value under our Enhancing Natural Capital for Customers Performance Commitment. We therefore already have an agreed methodology for how this tool would be applied to consistently value our delivery of rainwater management solutions. This will help us to demonstrate the additional social and environmental value (e.g. health, biodiversity and carbon sequestration) that can be achieved over and above the benefit of reducing storm overflow activations.

2.2.12 The "Named" category originally included eight overflows in our draft submission. Since then we have undertaken further best value assessments of these schemes to understand the benefit cost ratio of rainwater management solutions compared to a grey solution (Table 3).

Table 3 - Costs and wider benefits achieved through rainwater management solutions in the "Named" category

Sensitivity Testing									
	NPV of Cost		Conventional WINEP Value (WEO) + Risk Cost + Carbon			Advanced WINEP Value (BEST) + Risk Cost + Carbon			
Assessed Project	Grey	RWM	Grey		RWM	Grey		RWM (exc amenity and recreation)	RWM
BBN0133	£4,230,398	£3,595,609	↓	4.8	↑ 5.3	✗	4.8	✓ 9.4	16.0
BRY0053	£5,951,245	£11,943,459	↑	3.4	↓ 1.6	✗	3.4	✓ 8.7	21.7
ROC0163	£17,866,260	£29,090,441	↑	1.1	↓ 0.7	✓	1.1	✗ 0.9	⚑ 2.9
TAM0006	£4,076,846	£10,576,320	↑	4.9	↓ 1.8	✗	4.9	✓ 14.0	35.3
~~TAM0047~~	~~£1,486,587~~	~~£9,769,926~~	~~↑~~	~~13.6~~	~~↓ 2.0~~	~~✓~~	~~13.6~~	~~✗ 6.5~~	~~⚑ 13.9~~
TAM0062	£706,292	£1,015,575	↑	28.6	↓ 18.6	✗	28.6	✓ 87.9	210.0
TRA0031	£1,446,475	£4,497,934	↑	13.9	↓ 4.2	✗	13.9	✓ 25.5	72.6
TRA0078	£789,985	£2,720,546	↑	25.6	↓ 7.0	✗	25.6	✓ 33.2	91.2

(Note: TAM0047 removed from "Named" programme following cost benefit assessment but remains in the table so that the change is visible)

2.2.13 Based on the assessment summarised in Table 3 we have removed TAM0047 from the "Named" category as it is not the best value solution when assessed using B£ST, unless access and recreation are included. Whilst we believe it is important to value these benefits we understand there is some concern about relying on them as a primary driver of the option choice.

2.2.14 The ROC0163 scheme is also dependant on the benefits of access and recreation, however we are proposing that scheme remains in the "Named" category for a number of reasons.

- Firstly, the Rochdale Wastewater Treatment Works drainage area requires in the region of 340,000m^3 of storage to meet SODRP targets, which is not practical to build (in terms of access to land and being able to drain tanks down). Therefore, we are building an adaptive plan in that area and a first step in that plan will be to exploit as many rainwater management opportunities as possible.
- Secondly, through our existing practice of working closely with stakeholders we are aware of projects that are currently being planned that could open up the opportunity to co-fund. These include the Environment Agency's Rochdale and Littleborough River Roch Flood Alleviation Scheme and a Flood and Coastal Resilience Innovation Project. Wider partnership opportunities are also being explored with the IWMP team within Greater Manchester to expose further opportunities in the ROC0163 catchment.
- Finally, we note that a key issue impacting the best value assessment is the extent of the operating and maintenance costs for the rainwater management option for ROC0163. By working with stakeholders, we will seek a more cost effective way to maintain the features and therefore this could significantly alter the best value assessment.

2.2.15 By October 2024, we will have completed further work to understand whether we can refine the rainwater management solutions and explore partnership opportunity for this overflow. We will evaluate at this point whether ROC0163 should remain as a "Named" scheme on the basis of the latest best value assessment. In the event that it is removed from the "Named" category we propose to increase the scale of the "Agile Opportunity" category by an equivalent amount.

2.2.16 All seven "Named" schemes have a defined solution based on an engineering study and we have also modelled the spill reduction that the rainwater management interventions are forecast to deliver. This information is shown in Table 4 below.

Table 4 - Modelled spill reduction achieved through rainwater management solutions included in the "Named" category

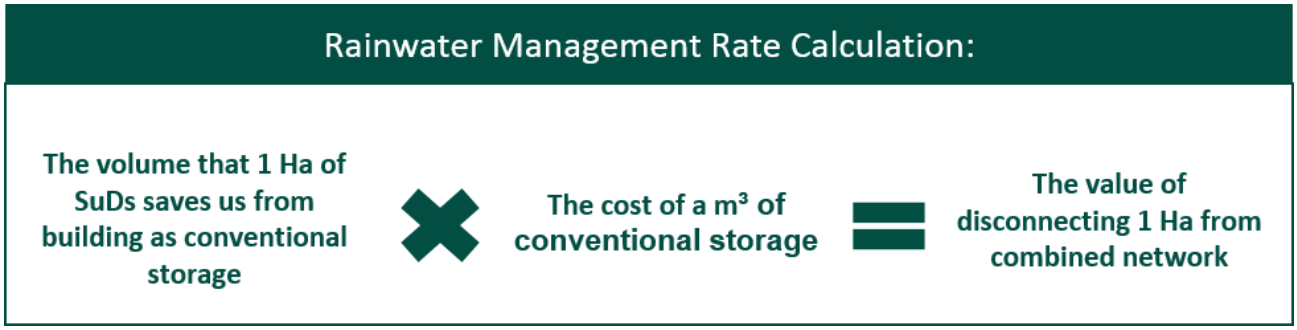
Action	Modelled spill frequency	Modelled spill reduction What can the intervention deliver in terms of spill reduction?	Adaptive plan AMP9-12 modelled requirement to achieve SODRP (spill reduction & volume)
BBN0133	53	RWM = 17 spills/ annum reduction	26 spills / 500m3
BRY0053	55	RWM = 17 spills/ annum reduction	28 spills / 545m3
ROC0163	38	RWM = 15 spills/ annum reduction	13 spills / 5,050m3
TAM0006	36	RWM = 11 spills/ annum reduction	15 spills / 665m3
TAM0062	18	RWM = 8 spills/annum reduction	At SODRP target (modelled)
TRA0031	31	RWM = 21 spills/annum reduction	At SODRP target (modelled)

2.3 Delivering cost effective interventions for customers

2.3.1 We will deliver rainwater management solutions only where they are best value for customers. For the "Agile Opportunity" schemes, we need to be able to operate in an agile way to maximise the potential to align with partner organisations. As a result of this we have developed a rainwater management rate (Figure 3) which we propose will act as a cap on the amount UUW will invest in rainwater management options without completing the B£ST assessment. This rate is set at a level where the scheme is highly likely to be cost beneficial as it is informed by the best value assessment completed for our AMP8 WINEP which relied on the WEO methodology set out in the guidance. Use of this approach will avoid significant and disruptive pauses that would otherwise occur whilst all the modelling work required to complete a best value assessment was completed for each individual scheme.

2.3.2 This rate has been set to ensure that we are not expecting customers to pay more than is necessary to meet the SODRP targets and that we seek co-funding from stakeholders willing to pay for delivery of additional social and environmental benefits to close any cost gap. This enables us to unlock the ability to incrementally deliver a reduction of rainwater in combined sewers as part of our adaptive plan.

Figure 3 - Rainwater management rate calculation



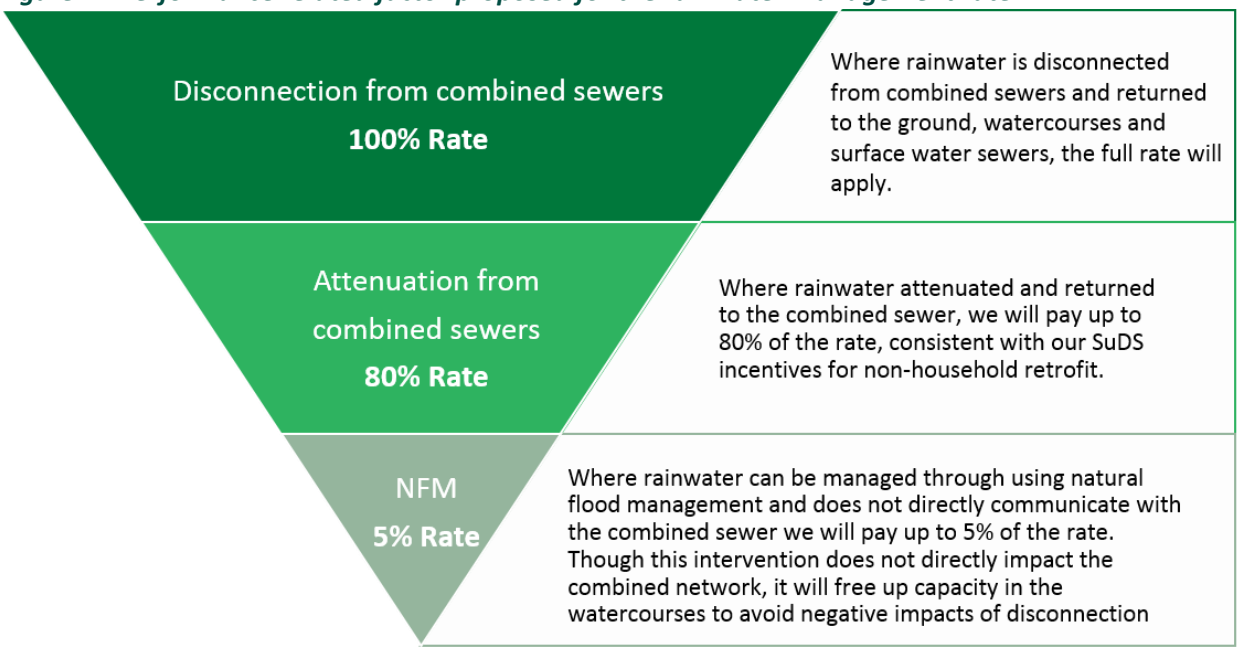
2.3.3 We have calculated the rate based on the hybrid solutions which were supported by the best value assessment for our named AMP8 WINEP schemes. Our hybrid programme includes delivery of 132 hectares of SuDS, which avoids the need for 44,447m^3 of storage. We have therefore determined that each hectare of SuDS avoids 336m^3 of storm sewage storage. We then multiply this volume as per the equation in Figure 3 by our unit rate for delivering storm sewage storage which is £[✂]/m^3. This gives us the Rainwater Management Rate of £[✂]k for each hectare of surface water are disconnected from the sewer system. This is the Rainwater Management Rate which acts as a UUW contribution cap we

would use for any scheme that does not have a full best value assessment undertaken using the B£ST tool. Our approach to developing the rainwater management rate has been externally assured and is discussed in Section 8.

2.3.4 To further protect customers we would apply a performance related factor to the rainwater management rate (Figure 4), which will amend the maximum contribution for solutions based on the level of rainwater sustainably managed away from our network. Where rainwater is disconnected from combined sewers and returned to the ground, waterbody or surface water sewers, the full value will apply. Where rainwater is attenuated and returned to the combined sewer, the rate would be up to 80% of the full value, consistent with our existing SuDS incentives for non-household retrofit. For attenuation, we will use a recommended method from Chapter 24 of the CIRIA SuDS Manual to determine the amount of betterment. This accounts for what difference we will see as a result of the intervention, and rewards attenuating higher volumes of rainwater. The percentage reduction will determine the amount of funding for which the scheme is eligible.

2.3.5 In the event of NFM delivery, customers will pay up to 5% where rainwater can be managed through NFM and does not directly communicate with the combined sewer. We have applied a value to NFM because this type of intervention frees up capacity for full sewer disconnections to enter the watercourse without causing any negative impacts.

Figure 4 - Performance related factor proposed for the rainwater management rate



2.4 How our proposal supports our Long Term Delivery Strategy

2.4.1 Our Advanced WINEP supports the long-term adaptive pathway described in our Drainage and Wastewater Management Plan (DWMP)[8] and Long Term Delivery Strategy for PR24. Adaptive planning is an approach, which allows us to understand and plan for future risks through scenario testing. Adaptive planning approaches allow us to deliver resilient and improved services over the long term and optimise the delivery of interventions in a timely and affordable way.

2.4.2 We are planning for significant additional rainfall as a result of climate change at the same time as driving down the numbers of storm overflow operations. Due to the regional factors described in Section 1.1 a long term and complex programme of interventions and investment is required to achieve our long term aims for storm overflows.

[8] UUW DWMP, https://www.unitedutilities.com/corporate/about-us/our-future-plans/Our-long-term-plans/dwmp-publication-may-2023/.

2.4.3 We have optimised our plans to ensure that low regrets interventions are delivered first in our core pathway. These are options that are at the top of the option hierarchy deployed in the DWMP (which prioritises action to manage issues at source) and optimise existing assets ahead of building new storage.

2.4.4 Adaptive planning to manage storm overflows allows us to phase delivery, monitor changes and adapt the approach accordingly. Our adaptive plan for wastewater has identified a number of low regrets short-term measures, prioritising nature-based and sustainable drainage solutions to manage rainwater at source particularly in high-risk urban areas that have more storm overflows and storm overflow activations.

2.5 How our proposal impacts our AMP8 Storm Overflow Performance Commitment

2.5.1 The primary objective of our Advanced WINEP is to innovate and break boundaries to deliver rainwater management solutions in AMP8 to support future SODRP objectives. Working in the catchment and seeking to maximise the value of schemes by developing partnerships takes time; time to develop the solutions and time for nature based solutions to mature to deliver the full benefit. Nevertheless, interventions that take rainwater out of the system will support storm overflow performance commitments in AMP8 and AMP9.

2.5.2 Due to the unknown nature of what schemes will come in to the "Agile Opportunity" category we have calculated the impact on the Performance Commitment (PC) based on the assumption that the interventions delivered through the Rainwater Management Programme will deliver an average reduction in spill frequency per pound of capex spent. This is based on the DWMP capex spend required from AMP9–12 to deliver our SODRP requirements.

2.5.3 This leads to a modest impact on the storm overflow PC of 0.15 spills per annum once the programme is fully delivered. We have forecast and built this spill benefit into our common performance commitment for AMP8.

2.5.4 Table 5 below sets out our forecast delivery profile with associated spill benefit. This benefit is aligned and built into our AMP8 storm overflow performance commitment, which will be submitted as part of our business plan in October 2023.

Table 5 - Forecast delivery profile with associated average spill reduction

Deliverable	Unit	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Cumulative delivery of equivalent conventional storage avoided	m^3	8,086	19,682	36,476	49,517	57,796	**57,796**
Cumulative overflow spill benefit of interventions	Average spill reduction across all overflows	0.02	0.05	0.1	0.13	0.15	**0.15**

3. Proposed assurance plan

3.1.1 In this section, we set out our programme assurance plan which outlines the key milestones of our Rainwater Management Programme.

3.1.2 This section also outlines our proposal to protect customers from under delivery of the Rainwater Management Programme through using the Price Control Deliverable (PCD) mechanism.

3.1.3 In addition to the PCD, we have also proposed annual reporting metrics that are aligned to the two categories ("Agile Opportunities" and "Named") with the addition of "Confirmed" and "Delivered" categories; phased across AMP8.

3.2 Programme assurance plan

3.2.1 Key milestones and activities within the programme level assurance plan are shown in Figure 5. This includes:

- An annual profile of delivery of schemes as measured through cubic metres of conventional storage avoided (aligns with PCD);
- Anticipated opportunity identification and delivery profiles for "Named" and "Agile Opportunity" schemes; and
- The anticipated rate at which the budget would be spent.

3.2.2 We will report "Agile Opportunity" schemes as identified when the schemes have been processed and approved internally by UUW for commercial agreements to be arranged. The number of 'identified' schemes will be reported in Annual Performance Reporting.

3.2.3 In order to ensure there are no surprises we propose annual reporting of progress through the Annual Performance Report. In addition to this, we recognise the innovative nature of this project means that there is an expectation of regular sharing of lessons learnt with regulators and other companies. This will be particularly important as work commences on the PR29 methodology for both the WINEP and price review (Section 7). UUW is particularly committed to this as it also aligns closely with the needs of the Ofwat Innovation project on unlocking barriers to nature-based solutions, which UUW is the lead company on.

3.2.4 Due to the innovative nature of this programme we propose that it is the PCD metric of cubic metres of conventional storage avoided is the key metric and that reconciliation will be at the end of the AMP8. This is proposed as it will be harder for UUW to control the pace of schemes delivered. The other metrics are provided to give a baseline against which to measure the maturity of the programme but they do not link to the PCD.

3.2.5 UUW has a strong track record of robust governance procedures for capital programmes to ensure delivery and manage risk. The Rainwater Management Programme will be managed in line with these existing business procedures with elements of bespoke assurance to enable stakeholder led delivery (Figure 6). Further detail of each stage of the programme and projects can be found in Appendix B and Appendix C respectively.

3.2.6 An integrated delivery team will assess all projects utilising UUW's corporate assurance model supported by the Programme Management Office (PMO) function. For those projects being led by a stakeholder the integrated delivery team will ascertain the appropriate level of assurance and will work with the stakeholder to develop a bespoke assurance model based on their skills, capacity and experience.

Figure 5 - Programme level assurance plan with key milestones and targets

	April 2025	July 2025	March 2026	July 2026	March 2027	July 2027	March 2028	July 2028	March 2029	July 2029	March 2030
Key dates	Start of AMP8					PR29 WINEP methodology					End of AMP8
Engagement with Advanced WINEP community		◆		◆		◆		◆		◆	
Knowledge transfer to share learnings for PR29				◆		◆					
Annual reporting of programme metrics (APR)		◆		◆		◆		◆		◆	
% Advanced WINEP Programme delivered (CAPEX - UUW and co-funded)			14.5%		37%		72%		85.5%		100%
% of "Agile Opportunity" schemes identified	5%		25%		65%		85%		95%		100%
Cumulative m^3 of conventional storage avoided			8,086m^3		19,682m^3		36,476m^3		49,517m^3		57,796m^3
Stakeholder engagement and partnership working	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬

3.2.7 Schemes that have passed the tests (location, volume and value) and secured investment approval will be promoted into the Rainwater Management Programme. To ensure that schemes in the programme are targeting hydraulic drivers and not maintenance needs in an overflow catchment. The integrated delivery team will be responsible for securing specialist resource and leveraging innovation through the supply chain to deliver the best outcomes for our customers. Monthly cost verification sessions and assurance reviews will support the successful delivery of projects with regard to time, cost and quality assurance.

3.2.8 At 'operational handover' (Figure 6) we will categorise the scheme as 'Delivered' as we expect that the intervention is fully operational and the primary benefit will start to be realised. 'Operational handover' could be to a UUW operational team or a third party, however in either case we will ensure that long term maintenance plans are in place to ensure that the primary benefit continues to be realised over the life of the asset.

3.2.9 We expect to maintain a large number of interventions and long-term maintenance plans will be included for each intervention. However, maintenance activities may also be undertaken by a number of other parties dependant on the intervention, location and agreements with local stakeholders e.g. a school may maintain their own raingardens and combine this with education.

3.3 Ensuring our rainwater management programme is addressing hydraulic constraints

3.3.1 We understand the importance of ensuring this programme only targets overflows requiring additional hydraulic capacity. UUW has very high network model coverage. In terms of storm overflows, this coverage combines with robust processes to verify models, identify operational and maintenance issues and remove those issues so as to identify if, and how much, additional hydraulic capacity is needed to meet new performance standards for overflows.

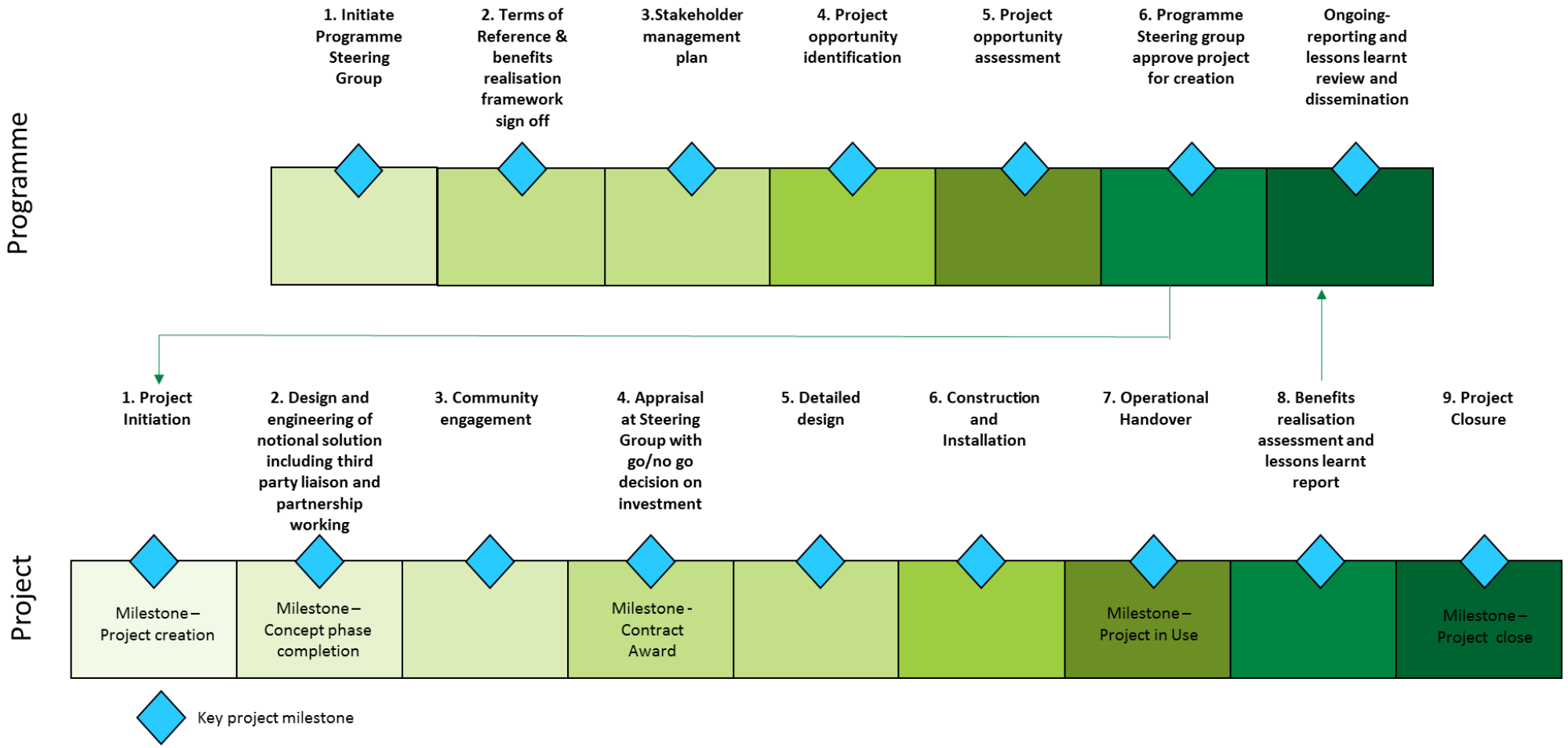
3.3.2 Extensive modelling was undertaken to develop our Drainage and Wastewater Management Plan (DWMP). As part of our performance and design horizon model set-up for options development, we remove the effects of any operational/maintenance issues identified from the modelling such that the PR24 model and solutions, to meet new performance requirements, only represent hydraulic capacity issues.

3.3.3 This means we are able to verify for each overflow whether or not it requires enhancement investment to reach the Storm Overflow Discharge Reduction Plan targets. We ensure this approach is embedded into our ways of working through our company model guidance and the industry code of practice, where there is a requirement for historic verification of actual performance versus the model prediction. This now includes a check of the storm overflow activations measured through Event Duration Monitoring (EDM) and that forecast from the hydraulic model. This is indirectly equivalent to a Stage 1 of a Storm Overflow Assessment Framework (SOAF)[9] investigation (which aims to confirm where a high frequency of storm overflow activations measured by EDM is due to hydraulic capacity issues). This provides reassurance that the need for enhancement expenditure is genuine and not a double count with base cost allowances.

3.3.4 We will use this data source to screen potential schemes as part of test 1 under Advanced WINEP. This will ensure we only include schemes in the programme that benefit overflows that require additional hydraulic capacity. We therefore have confidence that any improvements delivered through Advanced WINEP will be enhancement costs.

[9] Storm Overflow Assessment Framework (SOAF) (https://www.water.org.uk/wp-content/uploads/2018/12/SOAF.pdf).

Figure 6 - Overview of the stages within the Rainwater Management Programme and projects



3.4 Protecting customers through a Price Control Deliverable (PCD)

3.4.1 This section outlines our proposed approach as to how customers will be protected in the event of under delivery of the Rainwater Management Programme in AMP8. We have considered the discussion with the industry at the PCD workshop held on 24 May 2023 and guidance note released by Ofwat in July 2023 to develop our proposal. We will protect customers from benefits not realised, whilst allowing flexibility to deliver innovative rainwater management interventions and pushing the regulatory boundaries of future WINEPs.

3.4.2 We propose that the Advanced WINEP is allocated to a price control deliverable which will provide repayment to customers in the event of non-delivery by the company. We will report on our progress against this programme annually to provide transparency to regulators. Due to the innovative nature of the Advanced WINEP, we do not propose an additional PCD penalty in excess of repayment to customers.

3.4.3 Our proposed PCD metric is the equivalent cubic metres of conventional storage avoided through interventions delivered in AMP8. We will calculate this by adding the "Named" Schemes (modelled cubic metres of storage avoided) together with the "Agile Opportunity" schemes (equivalent conventional storage avoided). The "Agile Opportunity" schemes equivalent disconnection will be measured in hectares (as per programme metrics in 2.1.5), so we will convert those to cubic metres using the calculation:

- Equivalent hectares disconnected x the volume that 1 Ha of SuDS saves us from building as conventional storage = equivalent conventional storage avoided

3.4.4 The equivalent conventional storage avoided has been profiled out across AMP8 based on the delivery profile to create the PCD (Table 6) and delivery of this metric will be reported annually via Annual Performance Reporting (APR).

Table 6 - The cumulative Rainwater Management Programme target that will form the Price Control Deliverable (PCD)

	Unit	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Cumulative delivery of equivalent conventional storage avoided	m^3	8,086	19,682	36,476	49,517	57,796	57,796

3.4.5 If delays are experienced and rainwater management solutions are not delivered in AMP8 as per the target above, a unit rate of £[✂][10] per m^3 not delivered (by the end of AMP8) of the £197 million investment from enhancement cost allowances will be returned to customers, along with a further time value of money adjustment for late delivery against our assumed profile. This is to be reconciled at the end of AMP8/2030 to support in-period innovation, partnership work and flexible delivery of this programme. This is our current view of how customers should be protected via the PCD, although we recognise that PCDs are a new and emerging approach for AMP8 and we are happy to undertake further work with Ofwat to refine this if needed.

3.4.6 We will report annually, as described in the next section, to give confidence on progress and to ensure transparency. The annual report will be assured in line with our APR process.

[10] This incentive is calculated net of assumed cost sharing with customers.

3.5 Rainwater Management Programme Annual Reporting

3.5.1 In addition to the above profile, we also recognise the importance of regulators and key stakeholders being able to track progress against the rainwater management programme metrics at various stages of scheme maturity. Therefore we propose that these will be reported at the end of each financial year in our Annual Performance Report (Table 7).

3.5.2 We propose that progress is reported on the actual measure delivered e.g. hectares disconnected. As highlighted above, we will translate from hectares to cubic metres for the PCD.

Table 7 - Rainwater Management Programme maturity template to be completed and reported annually

Programme metrics	Unallocated	Identified	Confirmed	Delivered	Programme LBE
Rainwater disconnected from combined sewer network	Ha	Ha	Ha	Ha	Ha
Rainwater attenuated from combined sewer network	Ha	Ha	Ha	Ha	Ha
Rainwater managed using NFM	Ha	Ha	Ha	Ha	Ha
Avoided conventional storage for future AMPs (AMP9+)	m^3	m^3	m^3	m^3	m^3
UUW financial LBE	£	£	£	£	£
Leveraged funding for direct benefit LBE	£	£	£	£	£
Leveraged funding for wider benefit LBE	£	£	£	£	£

4. Stakeholder engagement and co-funding

4.1 Co-funding

4.1.1 Our proposed programme will target driving £247 million investment in rainwater management schemes from a combination of funding, enabled by removing conventional regulatory barriers of timeframes, geographies and penalties to allow us to flexibly co-plan and co-deliver with stakeholders. No more than £197 million of this funding will come from enhancement cost allowances with the remaining £50 million made up of leveraged funding. As there isn't a one size fits all approach, we will tap into diverse funding models, which can provide efficiencies, deliver our regulatory requirements as well as maximising multiple benefits and reducing uncertainty and risk.

4.1.2 When defining co-funding, we identify two separate categories which leveraged funding can be split into:

(i) **Leveraged funding for direct benefit** – helping to reduce customer bills by reducing the cost of delivering our core duties; and

(ii) **Leveraged funding for wider benefit –** provides even more social and environmental benefits for customers, communities and the environment in the North West. The benefits are complementary to our core duties, but go beyond them, and therefore are appropriately funded outside the bills of water customers.

4.1.3 It is important to distinguish between these two categories to be as open and transparent as possible. We have developed a set of principles, which will guide our allocation of co-funding into one of the two categories. Where we can clearly apportion benefits and co-funding splits we will do this. Where we have a combination of funding we will follow our key principles and assign co-funding accordingly.

4.1.4 We do not expect to achieve significant co-funding for the "Named" schemes as UUW are driving them so we would be looking for stakeholders to align with us. For the schemes delivered through the "Agile Opportunities" part of the programme, there is greater opportunity around co-funding as we have the option to align with stakeholders.

4.1.5 Our aspiration is that levels of co-funding might exceed 20% in at least some cases. However, we are realistic that the greater the degree of co-funding, the more likely this is to be in support of delivering of wider benefits that are beyond the scope of our core duties. If we achieve higher leveraged funding for direct benefit than our 20% assumption, we will reinvest the surplus in delivery of further interventions. This will ensure we continue to make good progress in driving our rainwater management strategy, which will benefit customers as we have a substantial future programme of work we need to deliver for storm overflows.

4.1.6 We will leverage co-investment to deliver interventions that yield benefits and deliver value for customers. This will be by either securing upfront commitment from stakeholders and other beneficiaries to fund initiatives (through conventional co-funding) or through financial and philanthropic investment. An example of obtaining co-funding is through our strategic partnership with the EA and GMCA in Greater Manchester as set out in Section 4.7 below. These funding strategies will be explored depending on the schemes and priority areas identified through the Advanced WINEP, and they may be used separately or in combination.

4.2 Funding models

4.2.1 We expect that the majority of the £50 million will come from conventional co-funding with stakeholders, though in a small number of cases it may be appropriate to explore innovative approaches.

4.3 Conventional co-funding

4.3.1 Due to the size of the programme, we expect that conventional co-funding with stakeholders will be the primary route of funding. Then, and only where appropriate, we will consider other investment routes (this section and Section 4.4 below).

4.3.2 We will maximise opportunities for leveraging our ongoing strategic partnerships, such as the one in Greater Manchester with the Environment Agency and the Combined Authority as well as the one with The Rivers Trust (Section 4.7). These will help us to secure co-funding upfront, based on the objectives we are jointly expecting to deliver, looking to aggregate costs and ecosystem service benefits, aligning budgets, creating revenue streams from these budgets and integrating planning and delivery. Budgets that can offer opportunities for alignment include, for example, grant funds, transport infrastructure, asset resilience payments, budgets for business risk reduction, and delivery of wider social impact benefits.

4.3.3 Under conventional co-funding, we will also look at aggregation mechanisms such as the Landscape Enterprise Networks (LENs) approach. We trialled the LENs approach in the Petteril catchment in Cumbria, whereby demand-led needs across a geographical area are aggregated to deliver joined-up investment. LENs works by establishing a regional trading system of collaborative value chains, each driving specific outcomes for different groupings of businesses/organisations (buyers). It pools together funds more effectively to deliver multiple ecosystem services in a more targeted way.

4.3.4 It works similar to payment for ecosystem services (PES): a voluntary transaction between a service buyer and seller that takes place on the condition that either a specific ecosystem service is provided, or

land is used in a way to secure that service. Both mechanisms have mainly been delivered in rural areas across the country and LENs is now starting to focus on the delivery of ecosystem services benefits in urban areas.

4.3.5 For example, in the wider Eden catchment (of which the Petteril is a tributary), we are working with the Environment Agency, local authorities and other stakeholders through a Natural Environment Investment Readiness Fund (NEIRF) project to expand the LENs approach to more urban areas and look at NFM in combination with surface water management to reduce impact on combined systems and property resilience.

4.3.6 We will use the experience we are developing through these types of mechanisms and apply them to our Advanced WINEP proposal, especially in the priority areas such as Greater Manchester and other potentially similar places that offer opportunities to reduce storm overflow activations in the future.

4.4 Innovative investment

4.4.1 Where appropriate we will also support and explore innovative forms of investment such as debt-based funds, which are provided by institutional investors expecting to see revenue streams and risk-adjusted returns. This might be applicable in circumstances where a scheme is not viable unless a range of buyers of ecosystem services are attracted and those buyers may not be cash rich and therefore cannot invest upfront but are interested in securing the benefits and outcomes that will be delivered, blending social and wider environmental benefits.

4.4.2 Rather than stakeholders and beneficiaries (buyers of benefits) providing the upfront capital, which is often not fully available, a loan is secured, leveraging financial mechanisms such as impact bonds or payment plans.

4.4.3 This is an approach we pioneered working with stakeholders to develop the Wyre NFM project (Figure 7) and something that is being widely explored through other NEIRF projects across the country, to release capital which is then paid back to investors with a return on investment over a period of time. The payment is usually based on revenue streams created through budgets provided by buyers of the benefits being delivered or investment credits. We would be willing to support this type of investment where appropriate.

4.4.4 This success of this project has been recognised with it winning an Edie award for nature and biodiversity project of the year in 2023[11].

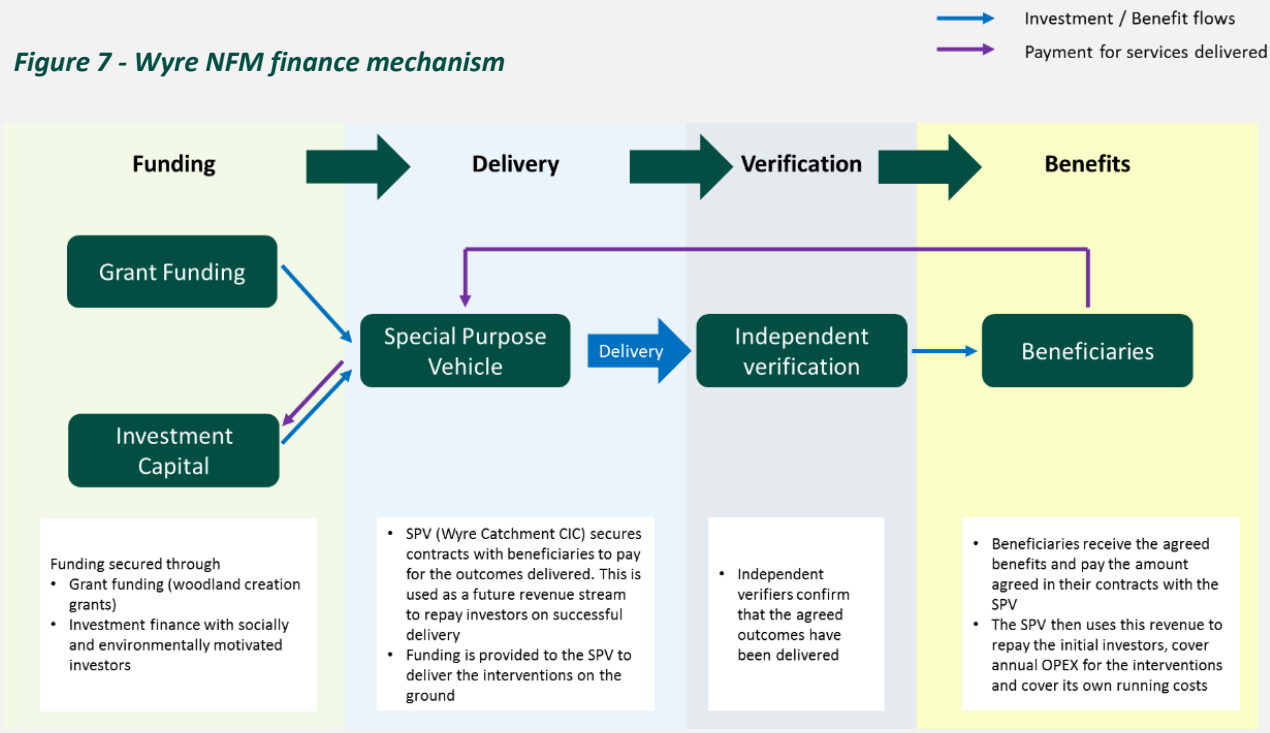
[11] edie Awards 2023: Sustainability winners (https://www.edie.net/edie-awards-2023-sustainability-winners-revealed-at-prestigious-ceremony/).

Wyre NFM innovative finance case study

UUW identified a joint need with stakeholders to develop mechanisms that would enable greater use of NFM. Due to the specific nature of this project, the fact that NFM delivery was relatively new and exact benefits uncertain, and the fact that beneficiaries involved in this do not have significant budgets for upfront funding, a new way of delivering this activity was required.

As the benefits of this investment would be spread across multiple organisations, one alone could not deliver this and a standard co-funding route where stakeholders provide upfront capital funds to enable delivery was not appealing as it prevented some of the beneficiary organisations from participating due to their budget constraints. As a result, we developed an innovative new funding approach which used a special purpose vehicle (the Wyre Catchment Community Interest Company) to secure investment in the project from external investors who are interested in a financial return. This investment is combined with grant funding and used to deliver the interventions on the ground and the benefits that accrue from these interventions are sold to the beneficiary organisations in line with pre agreed contracts over a 9-year term. These revenues are then used to run the Wyre Catchment Community Interest Company and repay the initial investors with a return on investment. The details of the mechanism are outlined below:

Figure 7 - Wyre NFM finance mechanism



A key benefit to this model is that it spreads the cost of delivery over a longer time period, enabling more organisations to commit to pay for the benefits that they will receive. The presence of the investors in this model also allows risk to be shared more broadly as the beneficiaries are only paying for outputs that are actually delivered and there are also mechanisms in the contract that reduce payments if the interventions don't perform as expected. This means the investors take on the delivery risk and also share the performance risk with the beneficiaries. This approach helps us to mitigate both the delivery risk of large-scale catchment activity and also the performance risk of the NFM interventions.

In addition to the benefits associated with managing the delivery and performance risk by purchasing benefits that are delivered as opposed to paying upfront for interventions this approach also results in a smaller overall contribution to the cost of delivery. UUW is contracted to purchase flood risk reduction benefits for £50k per year over a 9-year contract term. This equates to an overall contribution of approximately £450k over the contract period which covers both capital and operating costs. If UUW had delivered these interventions alone, the overall capital cost would have been £1.6 million, before taking in to account ongoing operation and maintenance costs.

4.5 Philanthropic/other funding

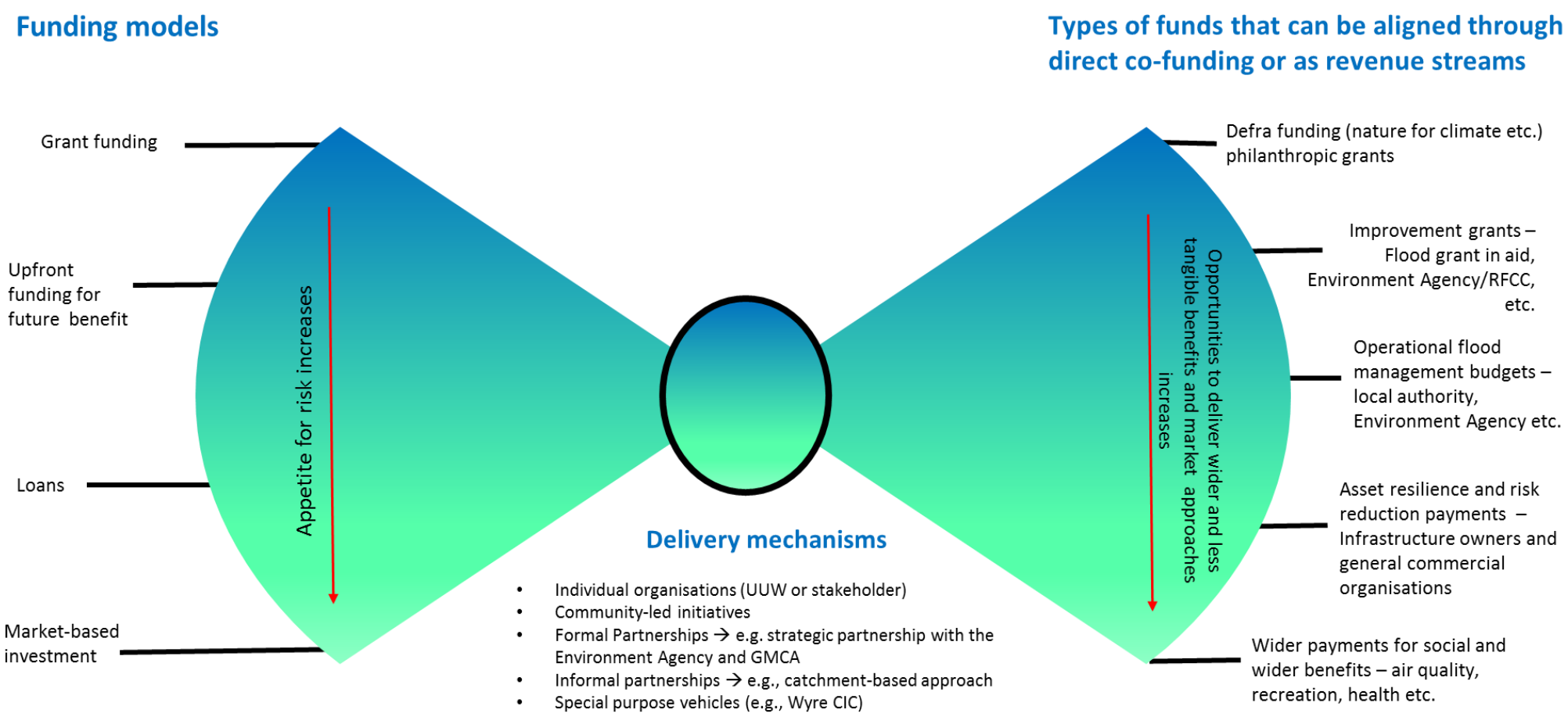
4.5.1 Funds and grants which are awarded from philanthropic contributions are typically based on a specific requirement or eligibility criteria. It is expected that obtaining philanthropic or charitable grants will need to be even more agile than the other funding above but can be blended with other types of funding.

4.6 Delivery mechanisms

4.6.1 Figure 8 below shows the range of different mechanisms we expect might be used to deliver the Rainwater Management Programme:

- **Individual organisations (UUW or stakeholder)**: one organisation such as UUW will deliver the scheme and leverage co-funding from other stakeholders who have an interest in the outcomes;
- **Community-led initiatives**: similar to individual organisations, but community focused. This will look into, for example, local communities and citizens delivering and looking after green features, such as SuDS for schools, community rain gardens, adopting water butts and so on. There are a number of initiatives that catchment-based stakeholders and volunteering schemes already deliver, and we would look to maximise these schemes particularly through our existing partnerships such as in Greater Manchester and Natural Course;
- **Formal Partnerships**: e.g. trilateral partnership with the Environment Agency, Greater Manchester Combined Authority (GMCA, Section 4.7), has developed a legal and commercial collaborative agreement alongside the IWMP, and also the Rivers Trust and the RSPB; and
- **Special purpose vehicles**: e.g. Wyre Capital Investment Committee (CIC), and NEIRF projects, which looks to create a formal legal entity to manage revenue streams from direct co-funding blended with debt-based models.

Figure 8 - Funding models and delivery mechanisms that can leverage different types of funds and budgets to deliver more value



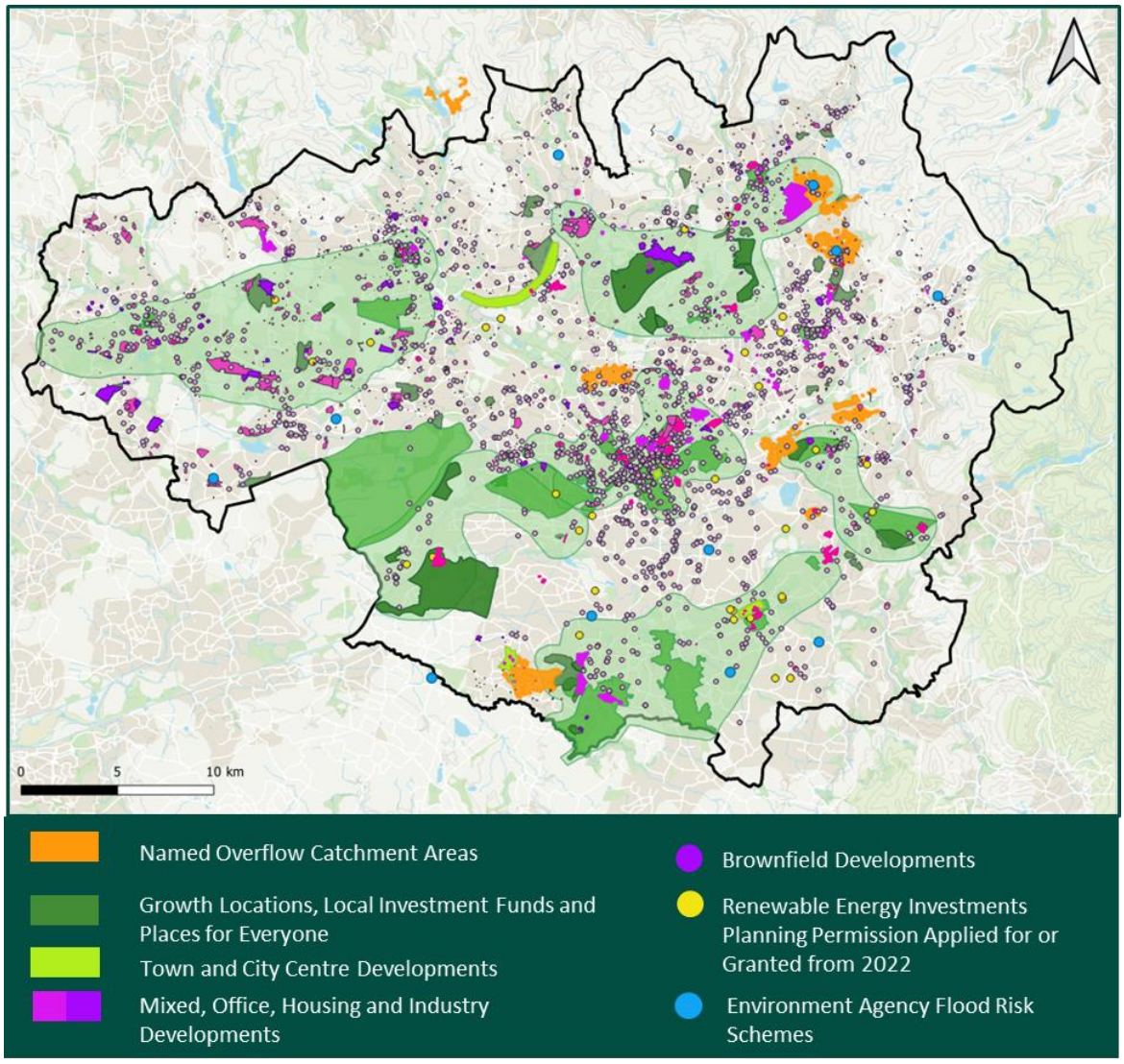
4.7 How our strategic partnerships can help us to leverage co-funding opportunities

4.7.1 We recognise that we need to work closely with others who share our ambitions if we are going to be successful in delivering rainwater management at source. In previous years, we have formed strategic partnerships to help unlock the changes we see as necessary, which we believe will complement this proposal.

4.7.2 The Greater Manchester Mayor has written a letter to support our Advanced WINEP proposal (Appendix A), because the city region recognises the contribution that a Rainwater Management Programme will make to people, place, nature, and prosperity.

4.7.3 The support recognises that our strategic trilateral partnership in Greater Manchester with statutory bodies will be a key advantage to the success of our Advanced WINEP proposal. This is due to the co-development of an Integrated Water Management Plan (IWMP), as per the mandate from the Greater Manchester Mayor in September 2022, to which each stakeholder has equally financially contributed. If this proposal is successful it will have access to a multi-sector opportunity portfolio (Figure 9) which will unlock co-funding, stakeholders and benefits at scale and pace from multiple sources.

Figure 9 – Map of planned investment in Greater Manchester which shows the variety of the portfolio in relation to the schemes in the "Named" category



Note: one of the schemes is outside of the political boundary of Greater Manchester, however sits within the Greater Manchester watershed, so the impact would benefit the city region downstream

4.7.4 The IWMP would also benefit from this proposal being successful by having a flexible funding programme that aims to accelerate sustainable drainage interventions in locations, which can demonstrably reduce storm overflow activations currently planned for investment in 2030 and beyond. This will enable the benefit of having the IWMP to be demonstrated early in its existence thereby growing the importance of the IWMP and influencing a long-term commitment amongst stakeholders to enhance and develop it.

4.7.5 The IWMP will:

- Carry legitimacy with the support of the Metro Mayor's political mandate thereby breaking down some traditional barriers to collaboration;
- Enable policies through local authorities to incentivise developers and communities to adopt green infrastructure measures and pilot trading schemes;
- Coordinate funding of the three main buyers of ecosystems services benefits in Greater Manchester (trilateral partnership) to pool together funding pots and align schemes that can deliver joined-up objectives, whilst reducing costs and/or adding value (Figure 9);
- Leverage the partnership to attract further co-funding from other potential buyers;
- Provide additional resource with the right skills to identify, triage, project sponsor and measure the benefits of integrated schemes which deliver added value to the city region; and
- Provide communications and marketing which will demonstrate water company activity and investment responding to the environmental challenges that will drive further engagement with our Advanced WINEP programme.
- Provide a model for integrated water management that could be adopted or adapted by other companies and authorities in other regions.

4.7.6 The scale of investment within the jurisdiction of the trilateral partners in Greater Manchester for the near term is approximately £1.4 billion (2023–27) (Table 8). This will provide an excellent co-funding opportunity for our Advanced WINEP proposal that has an ambition to leverage £50 million from other sources to match £197 million from enhancement cost allowance.

Table 8 - Investment funds available in Greater Manchester to leverage co-funding opportunities

Fund	Value (£)	Timescale
Green Spaces(GMEF)	2.6m	2024-2027
GM Active Travel	40.7m	2023
UK Shared Prosperity Fund	98m*	2024-2026
Flood and Coastal Erosion Risk Management	100m	2021-2027
Brownfield Housing Fund	150m	2024-2027
City Region Sustainable Transport Settlement	1,070m	2023-2027

*This is the figure for 2022/24 as the UKSPF for 2024/26 has not been announced

4.7.7 Our Advanced WINEP proposal supports the Trailblazer Devolution Deal (2023)[12] which looks to further invest in natural capital in the city region, and contribute to flood risk management and other adaptation activities as a result of the rainwater management solutions.

[12] HM Government, Greater Manchester Combined Authority Trailblazer deeper devolution deal (2023).

4.7.8 Our strategic partnership with the Rivers Trust and other Non-Governmental Organisations (NGOs) can help to:

- Aggregate buyers, sellers and benefits of green infrastructure;
- Leverage blended funding and public grants;
- Enable innovative funding mechanisms – Water Funds, Wyre NFM, Payment for Ecosystem Services, LENs, etc.;
- Leverage corporate investment through environment sustainability goals (ESG), Water Stewardship, social value;
- Create and disseminate knowledge and influence policy; and
- Community engagement and volunteering activities to adopt water butts, for example, and demonstrate benefits – start with areas where customers are most affected with flooding and therefore more likely to adopt butts.

4.7.9 We are the lead company on the "Mainstreaming Nature-Based Solutions", an Ofwat innovation project looking to remove barriers to rainwater management solutions to deliver greater resilience and multiple benefits, whilst attracting investment at scale. This £8.9 million programme of work brings together diverse technical expertise from regulators (including the Environment Agency and Ofwat) to policymakers, water sector, eNGOs, academics and finance sector. We will work with these stakeholders to share our learning from the Advanced WINEP proposal and take on board learning from others to maximise the likelihood of success.

4.7.10 Through our experience in driving nature-based solutions and working in partnership over the years, for example, with Natural Course, we have built the right level of expertise and evidence to support our proposed Advanced WINEP and therefore reduce uncertainty and deliver greater value.

5. Key risks and mitigation measures

5.1.1 A risk register highlighting key risks and mitigations has been developed to support our Advanced WINEP proposal. The risks which score the highest (12 and above) in the register have been included in Table 9 however the full live risk register can be found in Appendix D.

Table 9 - Top risks and mitigations for proposed Advanced WINEP

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R116	Assumptions (cost) unknown scope and costs on a proportion of the programme	Deadline 31/03/2025 - Increase clarity early on in the programme to develop programme maturity. As part of our delivery programme we have profiled when we will complete milestones for design, delivery and benefits realisation through the programme including a fast start which we will report progress against as part of APR submissions	High	High	High	16
R131	ROC0163 is very close to the required best value threshold, but more investigation is required to understand if costs can be reduced, benefits improved or partnership working can be agreed to progress the rainwater management interventions instead of the grey option	Deadline 31/10/2024 - We will conduct further investigations into the ROC0163 catchment, looking at optimisation, certainty of partnership funding, opex, cost of the conventional solution and continuous engagement with regulators to determine whether or not this project is suitable for the Advanced WINEP	Medium	Very High	Medium	15
R117	We do not know for certain when partnership funding and where partnership funding will materialise	Deadline 31/03/2030 - We have initially found there is £1.45 billion of investment in GMCA which we believe will support our co-investment targets. Ongoing stakeholder management and alignment with other projects to ensure we can collaborate on this	High	High	Medium	12
R118	The framework for collaborative and agile working with stakeholders on rainwater management is immature	Deadline 31/03/2025 - We have developed this through our Green Recovery project, so that it will be mature and exercised ahead of this programme. Implement learning through feedback sessions. Current University Student conducting research on effectiveness of partnership working in this	High	High	Medium	12

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R120	Barriers - Public perception of change. Risk that the public will not accept rainwater management solutions	Deadline 31/03/2025 - We understand that we need to engage communities sooner and with more time at an early stage. Where appropriate we will undertake community design panels so we can collaboratively design schemes and ensure that their opinions feature in the final design	High	High	Medium	12
R128	FY27 Spend - there is a risk that resources do not support FY27 peak expenditure	Deadline 31/03/2025 - Smooth delivery profile in line with market resource availability	Medium	High	Medium	12

6. Implications for Standard WINEP

6.1.1 The schemes eligible for this proposal are independent of any schemes in the AMP8 WINEP programme. Therefore, there is no implication for the AMP8 standard WINEP.

6.1.2 This Advanced WINEP will inform how the WINEP could be evolved to enable delivery of wider benefits and co-funding from AMP9 onwards. This is particularly important for storm overflows where estimates commissioned by Defra indicate that there might be £56 billion of investment required by 2050 to meet the targets set out in the SODRP[13]. As a result, this proposal has national significance and the potential to influence a significant scale up in the use of sustainable drainage solutions which aligns to the government's position that rainwater should be treated as a resource[14].

7. Sharing learnings

7.1 Incorporating shared learnings in our Advanced WINEP

7.1.1 Through our catchment systems thinking approach and the delivery of projects such as our Green Recovery SuDS programme we have built our experience in delivering rainwater management solutions and working effectively with stakeholders. We have also engaged with others in the industry and beyond to learn lessons from their delivery which have been incorporated to our Advanced WINEP as outlined in Table 10 below.

Table 10 - Summary of key learnings from previous projects and programmes which have been applied to our Advanced WINEP proposal

	Lead organisation	Lessons learnt
SuDS for Schools	UUW	Working with stakeholder budgets and how to use long term charging incentives to support SuDS delivery
IGNITION	UUW/GMCA	Potential revenue streams for investment based models for SuDS and challenges of accessing local authority funding
Wyre NFM	UUW/The Rivers Trust	Setting up and establishing investment led mechanisms and the use of Special Purpose Vehicles (SPVs) in delivery
Green Recovery SuDS	UUW	How best to engage with and involve stakeholder organisations and the potential funding available
Petteril	UUW	Setting up and establishing demand led co funding projects and the use of SPVs
Mansfield Green Recovery	Severn Trent Water	Optimising the environmental planning and community engagement processes to provide delivery confidence and improve speed
GLA SuDS design	Greater London Authority	How best to maximise local authority land and government land e.g. NHS sites

[13] Defra, Strom Overflow Discharge Reduction Plan, Foreword, 26 August 2022.

[14] Defra, Storm Overflow Discharge Reduction Plan, Section 2.5, 26 August 2022.

	Lead organisation	Lessons learnt
Environmental Bond	DC Water (USA)	The potential usage of environmental Impact Bonds and how debt based models could support risk management

7.2 How we will share learnings from the project

7.2.1 We recognise the importance of sharing the learning from our Advanced WINEP with other companies and organisations, both throughout and after the Advanced WINEP work completes. We identified early the opportunity to align our thinking and share knowledge with Anglian Water, which is also focused on the management of surface water to reduce storm overflow activations, and have recently taken the opportunity to align with Thames Water's Advanced WINEP plans too.

7.2.2 Primarily focused on working in partnership with a broad range of stakeholders to deliver a diverse range of benefits, our three Advanced WINEP proposals will give us the ability to better understand, test, work with regulators and share learning regarding:

- The opportunities for regulatory flexibility when delivering long term outcomes over a minimum 10 year period;
- The appetite for innovation and collaboration under future WINEP submissions;
- Market approaches to funding environmental benefits over and above traditional water company outcomes;
- Governance arrangements when working with a range of different stakeholders across the country;
- The opportunity to better understand non-standard costs, such as partnership development costs across different locations;
- How our procurement processes may adapt to facilitate co-funding and co-creation; and
- A better understanding of how best to value wider benefits to ensure their full value is considered.

7.2.3 The nature of the three advanced WINEP proposals are complimentary with significant areas of overlap in key areas but also different areas of focus. This will ensure that by working together to align our experiences and lessons learnt we will be able to develop a broader understanding of how to best deliver increased rainwater and catchment management options at scale, utilising partnership and market based funding. The below matrix (Table 11) maps how the three proposals will complement each other to support the development of this wider understanding.

Table 11 - Similarities and differences between the UUW and Anglian Water Advanced WINEP proposals

Learning	Anglian Water	United Utilities Water	Thames Water
Working with a Combined Authority	✗	✓	✗
Working with Two Tier Authority	✓	✗	✓
Working with Unitary Authority	✓	✓	✓
Leveraging partnership funding	✓	✓	✓
Market driven approaches	✓	✓	✓
Delivering in coastal environments	✓	✗	✗
Delivering in urban environments	✓	✓	✓

Learning	Anglian Water	United Utilities Water	Thames Water
Delivering in rural environments	✓	✓	✓
Delivering in upland environments (NFM)	✗	✓	✓
Using sustainable drainage solutions and surface water management	✓	✓	✓
Targeting specific overflows	✓	✓	✓
Adaptive hybrid solutions	✓	✓	✓
Unconstrained funding aligning to 3rd party opportunities	✓	✓	✓
Shared decision-making around best value	✓	✓	✓
Suitable operating/governance models	✓	✓	✓
Open data protocols to enable external innovation	✓	✓	✓

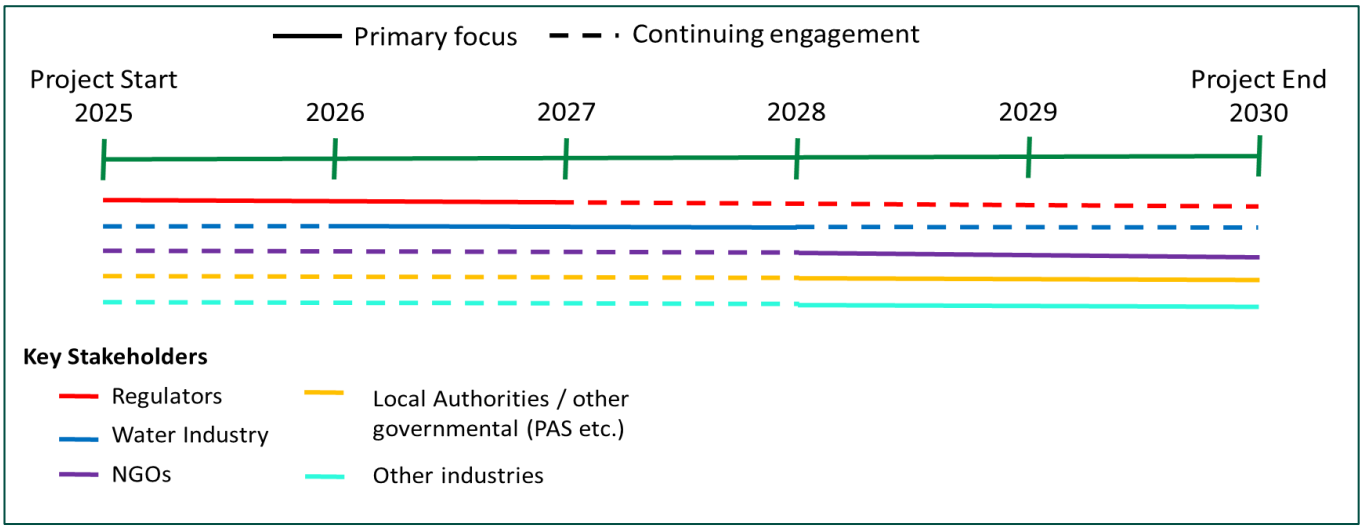
7.2.4 To ensure the benefits of these complimentary approaches are realised we will work together with Anglian Water and Thames Water to jointly deliver lessons learnt and stakeholder dissemination activities with the broader sector if our proposals are approved. Prior to delivery, we are committed to evaluating and tracking activities and time spent developing partnerships and building relationships to build a picture of the hidden costs of delivering in this way.

7.2.5 Where we have identified significant additional benefits that could support co funding, we will capture the full range of benefits delivered. We will also monitor the realisation of these benefits through tools such as the Defra metric, which will support capturing the biodiversity benefits. We will also allow for habitats information to be captured which will allow assessment of carbon sequestration through B£ST, or assessing the savings realised to future capital projects both in terms of cost and carbon.

7.2.6 In addition to this, we will log challenges and opportunities that occur during the identification and delivery of surface water management activity, identifying how obstacles have successfully been overcome or where we were unable to deliver and what prevented that from occurring.

7.2.7 In order to share this information effectively and ensure these lessons drive the maximum benefit for PR29 Figure 10 maps the key focus areas for our stakeholder management. Whilst all stakeholders are key and we will endeavour to keep them informed at all times, this approach recognises that some stakeholders may require a specific focus. At the start of the process the regulators will be the primary focus to ensure that the lessons learnt can be incorporated into the AMP9 process. As we move forward we will switch primary focus to other water companies so that they can benefit from our learning in how to effectively develop and deliver solutions and secure them within the PR29 WINEP. Finally, we will turn our focus to other industries and potential stakeholders such as local authorities and NGOs to support them in learning how best to engage in the process, maximising delivery and the potential for co funding.

Figure 10 - Timing of knowledge sharing activities by stakeholder category



7.2.8 In order to effectively engage we will utilise a range of different approaches. We will report annually on progress against delivery and lessons learnt providing a formal documented resource for use by the industry and wider stakeholders. In addition to this, we will also host focused information sharing sessions with targeted stakeholders as we look to continuously evolve our programmes. These will prioritise relevant stakeholders for particular elements of the delivery so we can ensure that the key messages are getting to the right stakeholders.

7.2.9 Whilst we jointly have a good knowledge of the potential interested stakeholders in this field, we will also work with professional bodies such as CIWEM and projects such as the mainstreaming nature based solutions innovation fund project to identify key stakeholders and share information more widely.

8. Summary of assurance

8.1 UUW's overarching assurance framework

8.1.1 UUW applies its published assurance framework to the development of its regulatory submissions. This framework is managed by a dedicated assurance work stream, which defines and oversees the implementation of the governance and assurance activity to evidence the quality of information presented.

8.1.2 Key elements of this framework comprise:

- Clear deliverables;
- Clear accountability;
- Comprehensive programme plan;
- Risk assessment;
- Three lines of assurance; and
- Governance.

8.2 Assurance undertaken as evidence of quality of information presented in this submission

8.2.1 A risk-based approach has been taken to assure the development of this Advanced WINEP plan in line with the published assurance framework referred to above. The risk assessment undertaken for this submission assessed the overall risk as medium, which, in line with the assurance framework, did not

require third line external assurance in addition to internal independent second line assurance and first line peer review.

8.2.2 However, due to the innovative nature of the proposals contained within this submission and the commitments made to delivering the stated outcomes, UUW engaged Turner & Townsend to undertake the second line assurance to provide both an independent and external review of the following key elements of the submission:

- The approach to developing the plan and proposals; and
- The calculations and assumptions that support the proposals.

8.2.3 Turner & Townsend concluded that:

> 'United Utilities have taken an innovative and novel approach to tackle the challenges associated with rainwater management and storm overflow discharges. The approach outlined to Turner & Townsend is ambitious and aligned well to the WINEP guidance, which encourages co-creation of solutions with partners and best value rather than lowest cost solutions. United Utilities have considered the WINEP principles and made demonstrable efforts to account for the wider benefits which could be delivered by a hybrid of grey and green/blue infrastructure.
>
> Turner & Townsend note that the proposed Advanced WINEP for rainwater management methodology may continue to evolve during the price review process through constructive dialogue with regulators.
>
> Given the innovative nature of the proposed Advanced WINEP for rainwater management, the team appears to have used justifiable numbers, from justifiable sources, in a justifiable way – and have considered, and sought to mitigate, key risks.'

8.2.4 Prior to submission of this plan on 7 August 2023, UUW executive sponsor confirmed that the Advanced WINEP Stage 1 Plan assurance had been completed and that the requirements set by the regulators had been met.

9. Proposed stage 2 activities and outcomes

9.1.1 The following section sets out the activities we plan to deliver upon confirmation that we have an agreed Advanced WINEP proposal which will ensure we are ready to deliver in AMP8 (Figure 11).

9.1.2 The key activities will include:

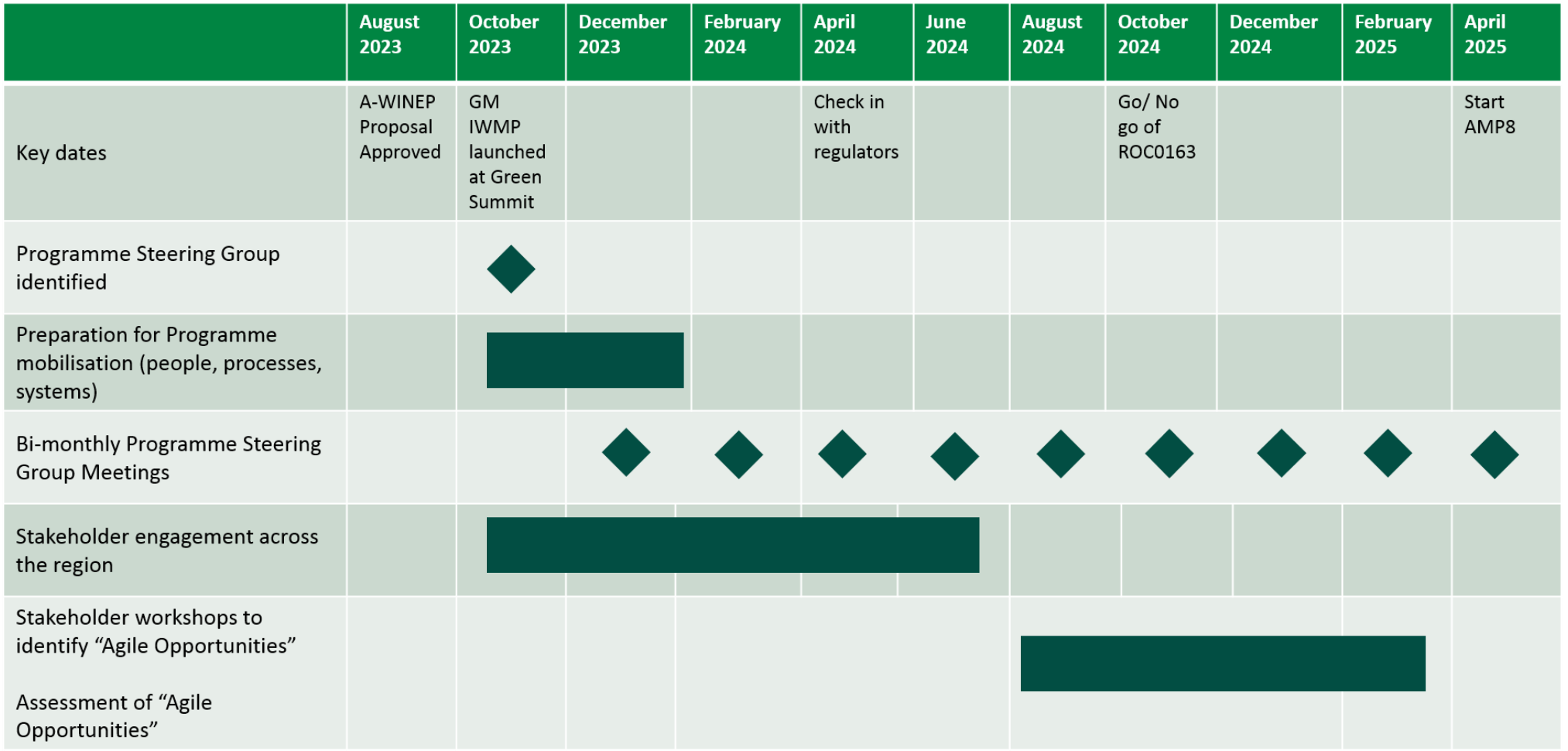
- Setting up the internal governance to support this programme by establishing a Programme Steering Group (PSG); meeting bi-monthly;
- Preparations to mobilise the programme, including but not limited to, on boarding people with the right skills and expertise, setting up processes to support successful delivery and ensuring our systems are set up to capture the measures of success;
- Engaging with our stakeholders to inform them of the Rainwater Management Programme, how it will work in practice and what it means for them. We will use existing engagement methods, including but not limited to a resource embedded in to the IWMP team in Greater Manchester to identify opportunities early and promote the programme, utilising the relationships and connections built from Green Recovery SuDS, actively promoting at catchment partnerships across the North West, and working closely with stakeholders in areas where there is place-based panning activities (Liverpool, Cumbria and Fylde);
- This will be followed up with stakeholder workshops to identify integrated opportunities (such as with Greater Manchester's IWMP delivery function) which can then be assessed against the three tests and confirm the volume of schemes in the Opportunity category prior to the start of AMP8;

- We will also further engage with local Environment Agency colleagues to further understand and assess the identified areas of Northwich and Warrington; and
- We will further mature the “Named” category schemes towards project creation.

9.1.3 Key outcomes for stage 2 are:

- A long list of schemes which are eligible for the Opportunity category and are ready to progress with a stakeholder in April 2025;
- A programme function and associated governance mobilised to take schemes from stakeholder engagement through to project completion by 2030; and
- Updated position on the best value assessment for ROC0163 with recommendation on whether to proceed or move to “Agile Opportunities” part of the programme.

Figure 11 - Plan of preparatory activities if proposal approved in August 2023



Appendix A Letter of Support from Andy Burnham, Greater Manchester Mayor

ANDY BURNHAM
MAYOR OF GREATER MANCHESTER

Louise Beardmore
United Utilities
Haweswater House
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP

31 May 2023 Ref: DH/GD

Dear Louise,

United Utilities Advanced Water Industry National Environment Programme (WINEP) proposal: Rainwater Management Programme

I am writing to offer my support for the United Utilities Advanced WINEP proposal for a Rainwater Management Programme in Greater Manchester that will deliver £250m of investment.

The Combined Authority has worked in partnership with United Utilities over many years including pilot projects such as IGNITION and Natural Course.

I chaired two round tables involving stakeholders (30 September 2022 and 31 March 2023) where the scale of the challenge of managing too much water (floods), too little water (droughts) and too dirty water (pollution) was presented and discussed.

Whatever the merits or demerits of past decisions by different parts of the system, one thing that we can agree on is that short-term solutions, tinkering at the edges or crossing our fingers and hoping for someone else to solve the problem (or for the problem to go away) won't solve the fundamental challenge of managing water differently.

At the latest roundtable we agreed that the GMCA, UU and EA should jointly produce an Integrated Water Management Plan (IWMP) to draw together a collective vision, objectives, and actions, and identify accountability and resources for delivery.

GMCA, Broadhurst House, 56 Oxford Street, Manchester, M1 6EU

BOLTON MANCHESTER ROCHDALE STOCKPORT TRAFFORD
BURY OLDHAM SALFORD TAMESIDE WIGAN

Our strategy for Greater Manchester sets out a route, over the next decade, to deliver this vision for the benefit of our people, our places and our planet.

Working collectively across our city region, with our communities, we will be focusing on improved wellbeing for the 2.8m people here, with better homes, jobs, skills and transport.

These ambitions align with the Integrated Water Management Plan which includes a range of activities to support the enhancement of the natural environment, reduce flood risk, improve the water quality of Greater Manchester, and develop the skills and jobs to deliver change.

I believe that the Advanced WINEP proposal developed by United Utilities will contribute to these ambitions and we are happy to work in partnership with you to support the following outcomes:

- Accelerate the implementation of sustainable drainage interventions in locations identified through the Integrated Water Management Plan and in doing so reducing carbon emission, increasing climate resilience whilst providing benefits to nature, society and pride in pour places
- Reduce the operation of storm overflows by attenuating or disconnecting rainwater in urban areas and preventing it from entering the combined system, reducing pollution, benefitting local waterways in Greater Manchester.
- Creating new jobs, developing skills and apprenticeship roles that benefit residents in Greater Manchester
- Integration and embedding the programme within the identified strategic growth locations to leverage multiple benefits.

We recognise the value of United Utilities' proposal to translate issues and opportunities into projects that deliver tangible benefits for the environment, people and place.

We look forward to being able to work with United Utilities to deliver this exciting multi-beneficial programme.

Andy Burnham
Mayor of Greater Manchester

Appendix B Stages within the Rainwater Management Programme

1. Initiate Programme Steering Group	2. Terms of Reference & benefits realisation framework sign off	3.Stakeholder management plan	4. Project opportunity identification	5. Project opportunity assessment
We recognise that this is a unique opportunity so a bespoke governance procedure will be created. Identification of key members of the Steering Group with partnership and Better Rivers representatives to be members Programme level funding source to be created to support project opportunity assessment (3 tests)	Terms of Reference to be developed and benefits realisation framework sign off	Identification of key stakeholders and appropriate communication plan to be developed	Interfacing with stakeholder investment plans for example the Greater Manchester IWMP we will look to align our objectives with others	For integrated opportunities identified, progress through 3 tests (Section 2) to ensure each project meets the minimum criteria
6. Programme Steering group approve project for creation	7. Ongoing- project escalations, project reporting and lessons learnt review and dissemination			
Steering Group assess project viability. If project is deemed viable, Programme Steering Group will approve the project for creation by the Programme Management Office (PMO)	Regular project updates and escalations. Confirmation of project delivery. These will be captured in the lessons learnt log and knowledge disseminated across the industry to inform PR29 submission			

Appendix C Stages of projects within the Rainwater Management Programme

1. Project Initiation	2. Design and Engineering of notional solution including third party liaison	3. Community engagement	4. Appraisal at Steering Group with go/no go decision on investment	5. Detailed design	6. Construction and installation
The concept phase of the project. This stage involves defining the project's objectives, high-level scope, and needs analysis. It includes securing initial funding, forming a project team, and conducting initial assessments	During this phase, engineering and design work is carried out to develop the project's specifications and plans. This phase involves working with local authorities and relevant stakeholders to secure the required permits, clearances, and licenses	During this phase, we will be looking to engage with the local community to gather thoughts and ideas with regard to the identified scheme. We would look to co-host community events with stakeholder organisations where appropriate	A business case outlining the solution and community engagement activities will be presented at the Programme Steering Group (PSG). The PSG will assess the business case against the programme requirements and either approve or not approve the investment request	The detailed design phase defines the scope for delivery. Implementation of community engagement plans and stakeholder management plans by the dedicated project team	The actual construction and installation work begins at this milestone. It involves site preparation and delivery of physical scope

7. Operational Handover	8. Benefits realisation assessment and lessons learnt report	9. Project Closure
At this stage, the completed project is handed over to the operational team. Training and knowledge transfer occur, and relevant documentation, manuals, and maintenance schedules are provided. This milestone marks the transition from construction to operation	After the project has been operational for a certain period, a post-implementation review is conducted to evaluate its performance, efficiency, and adherence to the overall project's goals. This review helps identify any areas for improvement and lessons learned for future projects which is documented and shared at the PSG	The final milestone involves closing out the project, including financial and administrative tasks. It includes finalising contracts, completing documentation, and archiving project records. Lessons learned during the project are documented for future reference

Appendix D Rainwater Management Programme Risk Register

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R116	Assumptions (cost) Unknown scope and costs on a proportion of the programme	Deadline 31/03/2025 - Increase clarity early on in the programme to develop programme maturity. As part of our delivery programme we have profiled when we will complete milestones for design, delivery and benefits realisation through the programme including a fast start which we will report progress against as part of APR submissions	High	High	High	16
R131	ROC0163 is very close to the required best value threshold, but more investigation is required to understand if costs can be reduced, benefits improved or partnership working can be agreed to progress the rainwater management interventions instead of the grey option	Deadline 31/10/2024 - We will conduct further investigations into the ROC0163 catchment, looking at optimisation, certainty of partnership funding, opex, cost of the conventional solution and continuous engagement with regulators to determine whether or not this project is suitable for the Advanced WINEP	Medium	Very High	Medium	15
R117	We do not know for certain when partnership funding and where partnership funding will materialise	Deadline 31/03/2030 - We have initially found there is £1.45 billion of investment in GMCA which we believe will support our co-investment targets. Ongoing stakeholder management and alignment with other projects to ensure we can collaborate on this	High	High	Medium	12
R118	There is not a mature framework for collaborative and agile working with stakeholders	Deadline 31/03/2025 - We have developed this through our Green Recovery project, so that it will be mature and exercised ahead of this programme. Implement learning through feedback sessions. Current University Student conducting research on effectiveness of partnership working in this	High	High	Medium	12
R120	Barriers - Public perception of change. Risk that the public will not accept rainwater management solutions	Deadline 31/03/2025 - We understand that we need to engage communities sooner and with more time at an early stage. Where appropriate we will undertake community design panels so we can collaboratively design schemes and ensure that their opinions feature in the final design	High	High	Medium	12

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R128	FY27 Spend - there is a risk that too much expenditure is planned in FY27 which may be constrained by resource availability	Deadline 31/03/2025 - Smooth delivery profile in line with market resource availability	Medium	High	Medium	12
R107	There is a threat that ground conditions are not fully understood leading to cost and schedule impacts	Deadline 31/03/2025 - Ground Investigation (GI) programme will be undertaken to inform design and allow solutions to be costed appropriately. The flexibility in the programme delivering between different buckets and including opportunity acts to control this. We have spread the capex across where we deliver and where we co-deliver and land has already been identified in areas such as car parks, highways or parks	Medium	Very High	Low	10
R113	Resource (capability) There is a risk that the current pool of internal resources do not have the skills required to deliver green style solutions	Deadline 31/03/2025 - Lessons learnt and training to be developed and completed to upskill new resources. We are recruiting a team internally to create roles for programme management, partnerships delivery, project delivery, management maintenance and benefits realisation and a technical team which will act as a home for assurance and assurance that designs and work outsourced to 3rd parties is consistent with our principles for delivery	Low	Medium	Medium	9
R114	Resource (capacity) There is a risk that the current pool of internal resources is not large enough to deliver the programme based on other large programmes of work such a Green Recovery and the AMP8 Accelerated delivery Programme	Deadline 31/03/2025 - Ensure that roles are competitively marketed across the industry to attract talent. We are recruiting a team internally to create roles for programme management, partnerships delivery, project delivery, management maintenance and benefits realisation and a technical team which will act as a home for assurance and assurance that designs and work outsourced to 3rd parties is consistent with our principles for delivery	Low	Medium	Medium	9

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R122	Flexibility is required to deliver rainwater management interventions more systematically. The risks associated with delivery is that legislation is complex and can discourage these types of solutions, whether through tight regulatory deadlines and implications for water companies, or aspects such as securing the right to discharge and how land can be purchased to construct SuDS	Robust project planning, identification of activities on the critical path and use of schedule float and schedule risk, early engagement and stakeholder management with appropriate regulatory authorities, regulatory compliance expertise to advise and guide the project teams	High	Medium	Medium	9
R126	There is a risk that due to the variation in hydraulic benefits delivered in catchments that the projected reduction in future storage is not achieved	Deadline 31/03/2025 - Modelling and optimisation programmes to be explored to identify where the greatest benefit can be achieved. For PR29 we will review overflow catchments in the Advanced WINEP and model post implementation to demonstrate what the actual storage savings are for the adaptive plan Deadline 31/03/2025 - At a project level, gateways will ensure that cost benefit is considered as they progress through project lifecycles and enable stopping progress where cost benefit thresholds are not met	High	Medium	Medium	9
R119	Barriers -Rights to discharge- If opportunities are deemed to be beneficial, the right to discharge will be required	Deadline 31/03/2030 - We have consistently raised this issue through consultations and continue to do so through opportunities to influence policy. We are following developments in the maturity of schedule 3 development to see if this issue will be addressed. Enhanced customer and stakeholder to ensure we deliver under agreement as opposed to requiring settlement	Low	High	Low	8
R101	There is a threat that that SuDS Studio does not pick up true deliverability, with SuDS identification and solution development being high level and largely theoretical	Deadline 31/03/2025 - We will learn and develop our approach through Green Recovery to inform the accuracy of base data. This will further inform PR29 assumptions. We will use data as targets and be flexible through design	Medium	High	Low	8

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R102	There is a threat that land ownership and availability is not understood leading to extended schedules and associated cost impacts	Deadline 31/03/2025 - We will conduct exercises with local authorities at the outset to understand land suitability for measures. In addition, we have spread the capex across where we deliver and where we co-deliver and land has already been identified in areas such as car parks, highways or parks. Deadline 31/03/2025 - Addition land agent resource required to support landowner negotiations	Medium	High	Low	8
R104	There is a threat that surface water connections could already be contaminated with foul flows	Deadline 31/03/2025 - Order more connectivity surveys and install monitoring equipment to understand the quality of run off. Deadline 31/03/2025 - Work with local universities to create PhD to understand impacts of separation water quality and improvement technologies	Medium	High	Low	8
R105	There is a threat that 3rd party negotiations would be difficult and time consuming as we do not have statutory powers and would need to negotiate ongoing access	Deadline 31/03/2025 - A specialist customer and stakeholder engagement plan to be supported by land agents	Medium	High	Low	8
R106	There is a threat that the UUW strategy including who owns, operates and maintains SuDS has not been clarified leading to uncertainties in whole life costs	Deadline 31/03/2025 - We are using industry learning and collaboration to build and mature our roles, responsibilities and strategies when delivering or contributing to the delivery of SuDS. We will provide a position statement as part of our AMP8 plan which will clearly state our position	High	Low	Medium	6
R108	There is a threat that networks downstream of SuDS may be adversely impacted by discharge changes	Deadline 31/03/2027 - We will monitor flows using Dynamic Network Management (DNM) and also explore holding flows back to ensure the level of service is not detrimental, taking learning from Roundhey Park project	High	Medium	Low	6
R112	Costs - Limited historical cost data available to support budget production for specialist delivery	Deadline 31/03/2025 - Bottom up estimating will be used to inform indicative programme budget. Regular cost catching will be done to inform benchmarking for the future	Medium	Low	Medium	6
R124	Delayed delivery or underspend against programme targets and impact to customers	Deadline 31/03/2031 - If we do not deliver in time will exercise the price control deliverable. Annual reporting process in place to highlight and issues that show deviation for programme targets	High	Low	Medium	6

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R103	There is a threat that car parks and buildings assumed as SUDs opportunities could already be separated meaning that UUW would not get the benefit and this could lead to the need to either identify alternatives or increase storage volumes	Deadline 31/03/2025 - We have flexibility within the programme to maximise potential for delivering over and above what has been deemed the most suitable sites. Further resources will be assigned and connectivity surveys will be completed to establish risks in catchments	High	High	Very Low	4
R127	Schedule 3 Flood and Water Management Act not implemented and agreements required to deliver	Deadline 31/03/2024 - Extra resources and skills to be developed in-house and support through land agents. If Schedule 3 does not materialise, it will inhibit the development of skills and resource across the sector resulting in a more challenging programme whereby components of sustainable drainage need to be adopted by local authorities	High	Very Low	Medium	3
R109	There is a threat that SuDS / separation discharged to river could increase the risk of flooding	Deadline 31/03/2025 - We have included a programme level amount for the use of NFM. We anticipate that we will use NFM to reduce flood risk in the uplands and separate pluvial and fluvial flow peaks where they are currently creating issues. We will also embed storage into disconnections where possible using nature based solutions to achieve this. Individual project design will aim to meet required discharge rates	High	Very Low	Low	2
R115	There is a risk that the existing benefits realisation framework may not be suited to the Advanced WINEP delivery	Deadline 31/03/2025 - A bespoke benefits realisation plan will be developed into the programme based upon existing learning from national and international projects. We have provided Wider Environmental Outcomes outputs and AMP7 ODI natural capital outputs. We will take green recovery to further research and explore refinement and appropriate quantification of benefits across a wide range of services	Medium	Very Low	Low	2
R123	We must share learning with regulators and the industry to inform PR29, and that requires delivery and proof of concept by 2027	Deadline 31/03/2024 - Set regular learning deadlines with steering group including regulators. We have profiled our delivery to ensure there are significant milestones hit in time to inform PR29 and we will report on how well we are doing against these milestones annually	Medium	Very Low	Low	2

Risk ID	Risk description	Mitigation strategy	Mitigation efficacy	Probability band	Cost band	Risk score
R110	There is a threat that where we build in SuDS opportunities above and beyond Jacobs outputs these will not have been through a deliverability assessment	Deadline 31/03/2025 - Any opportunities outside the current understanding will have a deliverability assessment completed. We will work closely with local authorities and risk management authorities to share the Jacobs outputs and get feedback on deliverability at the outset once approved. append	Medium	Very Low	Very Low	1
R129	Separation areas include where SuDS features are for attenuation and therefore there is a potential for double counting areas disconnected	Deadline 31/03/2025 - We will learn and develop our approach through Green Recovery to inform the accuracy of base data. This will further inform PR29 assumptions. We will use data as targets and be flexible through design	Medium	Very Low	Very Low	1
R130	The PCD is profiled based upon spend and spend may come before delivery in some cases	Deadline 31/03/2031 - We will work with regulators on an end of programme target to ensure that flexibility within the mechanism is retained to deliver solutions	Medium	Very Low	Very Low	1

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