UUW36

Total Value of UUW's 2025-20 Plan

October 2023

Chapter 6 supplementary document - third party report

This report summarises the assessment undertaken by experts at ARUP of the social and environmental value of United Utilities Water (UUW) business plan for the period 2025 to 2030.

United Utilities

Water for the North West

ARUP

United Utilities

Social and Environmental Value of the 2025-30 Plan

Summary Report

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Contents

Headlines

This report summarises our assessment of the social and environmental value of the United Utilities Water (UUW) business plan for the period 2025 to 2030, known as AMP8. We have assessed this value by bringing together the results of independently assured value assessments created and used by UUW to optimise their plan, combined with new assessments to explore the total social and environmental value.

The value to society and the environment of UUW's PR24 Business Plan is estimated at **£35.3 billion** with a 1: 2.7 return on investment over 30 years. By value to society and the environment, we mean the intended and unintended consequences generated by the execution of the Plan for a range of stakeholders, including UUW's customers, communities, the environment, and the wider economy.

This assessment includes £6.2bn[1] of UUW's enhancement expenditure in AMP8. Enhancement is expected to deliver £6.8bn of value over 30 years. This includes £1.8bn wider economic benefit from the creation of an estimated 24,000 supply-chain jobs in AMP8.

UUW expects to invest £6.5bn on Base expenditure in AMP8. The stretching performance delivered from Base will yield benefits in the region of £231m between 2025-2030. Base will also sustain the sanitation and clean water services that are essential to wellbeing and the economy in the North West of England. The provision of these services in the North West is estimated to deliver value in the region of £25.5bn.

UUW is expected to support approximately 6,000 FTEs directly[2] plus 1,600 jobs in the wider economy through induced effects per annum. The GVA benefit of direct and induced jobs supported by UUW in AMP8 is £2.8bn.

We consider the results presented in this study to be conservative and an underestimate of the true value delivered to society and the environment due to the considerations set out in Section 3. This gives us confidence in the values claimed in this report, and assurance that the investment proposed will deliver great social return, albeit not been able to measure the full amount at present. It also gives us the focus for further development in future iterations of the assessment.

Element of the Plan	Estimated value	Estimated cost	Confidence	Granularity of analysis
Enhancement – The social and environmental value, based on UUW's value assessment approach, including embodied greenhouse gas (GHG) emissions as disbenefit and improvement to operational GHG emissions.	£5.0 billion		Medium	Detailed
Enhancement wider economic benefit (GVA) – The economic contribution from the plan due to jobs supported by UUW from enhancement	£1.8 billion		Medium	High level
Enhancement total	**£6.8 billion**	**£6.2 billion**		
Base (water and wastewater services) – Value for the provision of water and wastewater services, derived from Social Return on Investment (SROI)[3] study.	£25.5 billion		Medium	High level

[1] £6.2 billion of enhancement expenditure excludes WINEP schemes under negotiation (£1.1bn) and removes DPC (£270m), both of which are taking alternative delivery routes which are yet to be confirmed.

[2] 6,000 jobs is based on FTE from FY23 Annual Report, and assumed no change to this for the purpose of this assessment.

[3] Valuing Impact (2022) Beyond volumes: exploring the societal value of corporate water stewardship projects. Available from: https://www.impact-thinking.com/beyond-water [accessed 29.08.23]

Element of the Plan	Estimated value	Estimated cost	Confidence	Granularity of analysis
Base (value added) – Value to be delivered over and above the £25 billion from stretching performance in AMP8	£231 million		High	Detailed
Base wider economic benefit (GVA) – The economic contribution from the plan due to direct jobs supported by UUW.	£2.8 billion		Medium	High level
Base total	**£28.5 billion**	**£6.5 billion**		
Plan total	**£35.3 billion**	**£12.7 billion**	**ROI: 2.7**	
Number of jobs supported – The number of jobs supported by UUW in AMP8 including direct employment, supply chain, and the wider economy.	32,000 jobs		Medium	High level

This report provides commentary and rationale for these headline figures. Our full approach, assumptions, and limitations are captured in a separate report submitted to UUW titled *Social and Environmental value of UUW's 2025-30 Plan: Methodology Report*.

Principles of our study

This report aims to quantify the social and environmental value associated with UUW's PR24 Business Plan. Our work has taken value assessment performed by UUW for its enhancement case projects and added an assessment value from base for providing water and wastewater services, the value added due to UUW's stretching performance, as well as economic effects such as gross value added and employment effects.

We have applied the following best practice principles in calculating the social and environmental values in this report.

- ***Precautionary*** – We have taken a cautious approach in making causal assumptions on the outcomes the investment will deliver, and have applied conservative values to monetise the outcomes, in order to avoid overstating the benefits of the Plan.
- ***Robust*** – We have taken steps to ensure the accuracy and appropriateness of data and calculations used in our assessment. We have used the latest PR24 Plan data[4] at the time of assessment and have engaged with the appropriate UUW teams to agree on the best available data to use as well as key assumptions.
- ***Proportionate*** – We have applied a proportionate approach to our method where the level of detail chosen for the different elements of assessments were in balance with the data and time available for the assessment.
- ***Complete*** – We have taken reasonable steps to ensure that all material costs and benefits associated with the Plan have been considered, based on information available to us at the time of assessment, so that the results present a complete picture of the overall impact of the Plan.
- ***Transparent*** – We have been transparent in our assessment on the methodology, the granularity of assessments, level of confidence we have in the results, as well as assumptions made. This is so that the results can be interpreted and used with the full knowledge and context of the process that has been used to calculate them.

[4] We used v16 of Enhancement benefit data (Sep 2023). For Base, we used Version 5 of OUT2 for AMP8 and AMP9 (dated 18 Aug 2023) and data for AMP10 – AMP12 was taken from LS2 data received 23 Aug 2023 from UUW's Long Term Strategy Manager.

1. Summary findings

1.1 Enhancement

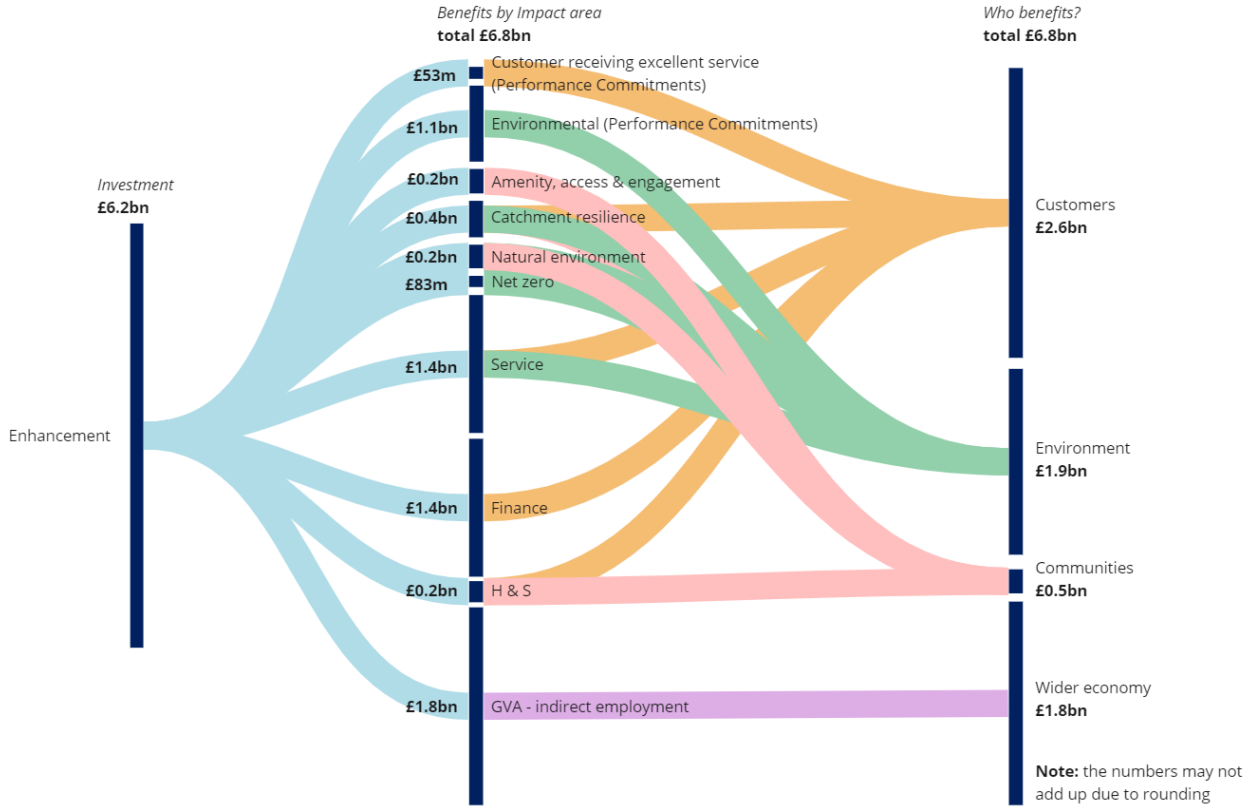
Element of the Plan covered in this section	Estimated value	Confidence	Granularity of analysis
Enhancement –The social and environmental value, based on UUW's value assessment approach, including embodied greenhouse gas (GHG) emissions as disbenefit.	£6.8 billion	Medium	Detailed

1.1.1 Result digest

Enhancement is expected to deliver approximately £5.0bn of value over a 30-year assessment horizon. The value delivered will benefit the customers which UUW serves, the environment impacted by UUW's operations, the communities who access UUW land and depend on safe operations.

In addition, Enhancement is estimated to create approximately 24,000 supply chain jobs with a GVA benefit in the region of £1.8bn. The overall benefit of Enhancement is estimated to be £6.8bn which gives a benefit to cost ratio of approximately 1.1. This is discussed in sections 1.4 - 1.5.

Figure 1: Social and environmental value delivered by AMP8 Enhancement



Benefits to society

The overall benefit of Enhancement to customers and communities is estimated to be **£2.6bn** and **£0.5bn**, respectively. This benefit is represented on the far right-hand side of Figure 1.

The main benefit of Enhancement for customers will be better asset health leading to greater resilience and improved levels of service.

Enhancement will also improve the environment in a way that benefits communities living in the North West; this is included in the £0.5bn community benefit. Benefits include greater recreational, volunteering and educational opportunities; and better catchment resilience which provides better flood protection for properties and improved water supply. Specific benefits to the environment are covered in the next section.

The wider economic benefits of Enhancement (£1.6bn) are discussed in section 1.5. They come from job creation in UUW's supply chain.

Some of the societal benefits of Enhancement are not fully captured because of global and local limitations in data and benefits assessment methods that continue to mature for all organisations working in this space. For example some of the benefits of Nature-based solutions to society, like aesthetic and amenity value, are not captured in the Value Tool. Therefore, we expect the true return on investment for these schemes to be higher than what is calculated.

Benefits to the environment

The overall benefit of Enhancement to the environment is estimated to be **£1.9bn**.

Improving environmental Performance Commitments (PCs) is estimated to achieve **£1.1bn** of benefit to the environment (shown on the left-hand side of Figure 1). This includes:

- Benefit from reduced leakage. Minimising leakage benefits the environment by reducing the amount of water that needs to be abstracted from reservoirs, lakes, rivers, streams, and groundwater, and it avoids resource use during water treatment and distribution. (Estimated at £290m)
- Benefit from water efficiency and saving programmes that reduce consumption, further reducing pressure on waterbodies from abstraction. (Estimated at £319m)
- Improvements in water quality through improved storm overflow performance, reduced phosphorus loads entering waterbodies and fewer pollution incidents. (Estimated at £338m)
- Lower operational greenhouse gas emissions (£407m), although this is partly offset by embodied carbon emissions in AMP8 (£-236m)

Service improvements will deliver another estimated **£470m** of benefit to the environment by improving sewerage and sludge management. (Part of the £1.4bn benefits against service in Figure 1)

Enhancement will also help UUW transition to net zero GHG emissions by 2050. UUW is proposing to invest approximately £196m on an AMP8 Net Zero Enhancement programme, along with wider benefits in other enhancement cases. If supported by Ofwat, the Net Zero Enhancement programme aims to achieve over 2 million tCO_2e of emission benefit by 2055. In AMP8 reductions will be achieved, for example, through:

- Immediate reductions in AMP8, reportable in Ofwat's common operational GHG emissions PC methodology, by reducing fossil fuel consumption, making efficiencies on site and transitioning to a green fleet (70,618 tCO_2e).
- Peatland restoration and woodland creation schemes (14,890 tCO_2e reduction in AMP8, through creation of Pending Issuance Units, PIUs)
- Improving the monitoring, measurement, and management of process emissions (84,782 tCO_2e reduction in AMP8, through creation of Pending Issuance Units, PIUs)
- Developing and delivering innovations in the latter half of AMP8

The benefit to the environment of UUW's Net Zero Enhancement investment through carbon sequestration through land management improvements on UUW's estate is estimated to be in the region of **£83m**.

The remaining benefit comes from improvements to the natural environment, like better water and air quality (an estimated **£0.12bn** of the £0.2bn natural environment benefit in Figure 1) and through water purification from habitats (approximately **£0.12bn** of the £0.4bn catchment resilience benefit in Figure 1).

1.1.2 Comments on our approach

Methodology: The benefit calculation for Enhancement was carried out by UUW using the PR24 Value Tool as part of its decision-making process. Benefits were assessed at project level against the service measures set out in the PR24 Value Tool, which has been through an assurance process with an expert third party and considered appropriate to use. The performance impact delivered by Enhancement has been forecast for 30

years from a baseline year of 2025-26, covering six AMPs from AMP8 to AMP13. The assessment was undertaken by UUW colleagues, and the results provided to Arup. Arup aggregated and challenged this data and added further assessment to develop this total assessment of social and environmental value. More details on the methodology can be found in the *Social and Environmental Value of UUW's 2025-30 Plan: Methodology Report*.

GHG emissions: We have included the embodied emissions associated with AMP8 Enhancement as a disbenefit (5-year Net Present Benefit (NPB), with all disbenefit accounted for in the AMP). The operational emissions reduction that will be delivered by the PR24 Plan is also reported under Enhancement (30-year NPB). UUW has also quantified avoided and total GHG emissions. These can be found in UUW's supplementary document in the Business Plan, called 'Our Strategy to Net Zero 2050'.

Trust and reputation were included in the Enhancement assessment to inform decision making. UUW recognised that the nature and scale of challenges facing the UK water sector can only be overcome through collaboration between stakeholders, which is underpinned by trust and relationships. If trust is eroded, the ability to work constructively with stakeholders is also damaged. While this is important for optimised decision making, these values have been excluded them from the results in this report because we focus on the most direct social and environmental value to customers and society. This means there is even more benefit and value from the proposed plans than is shown in this report.

Financial benefits: This is another key element of value included in the PR24 Value Tool and the Enhancement assessment. In formulating the Plan, UUW used financial risk valuations, such as risk of fines help select options that can avoid unnecessary costs. This is extremely valuable in decision making and helps to drive the financial efficiency of the Plan. Although at least some of the financial cost savings from reduced fines will ultimately benefit customers in lower water bills, we have not attributed this as a direct societal benefit. As such, we have excluded fines from the results in this report and have under stated the true benefits to society.

1.2 Base (water and wastewater services)

Element of the Plan covered in this section	Estimated value	Confidence	Granularity of analysis
Base (water and wastewater services) – Value for the provision of water and wastewater services, derived from Social Return on Investment (SROI) study.	£28.5 billion	Medium	High level

The value delivered by Base is:

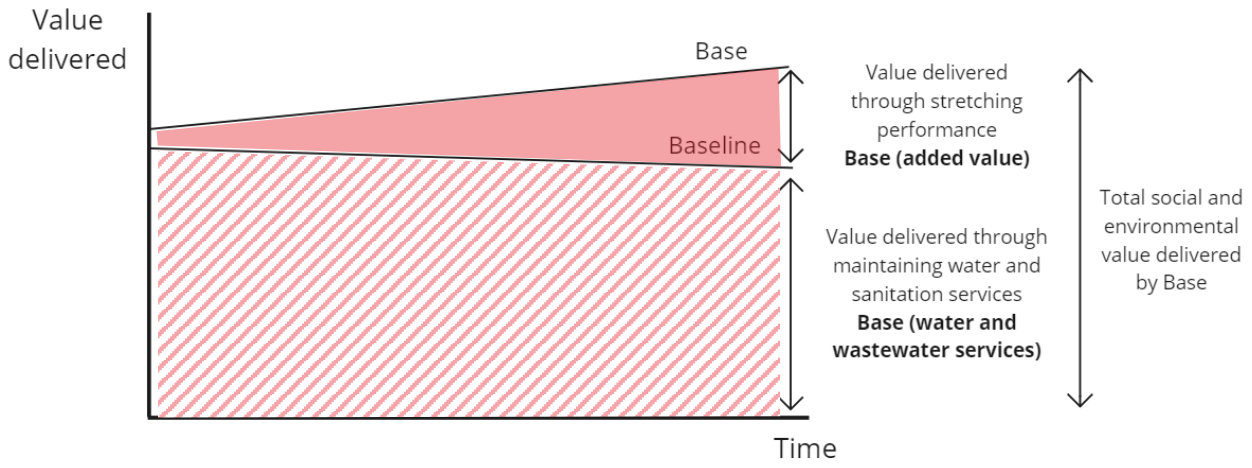
a) ***Base (water and wastewater services):*** Base expenditure is allowing UUW to continue to provide good quality clean water and sanitation services to the North West of England, which are fundamental to the wellbeing of our modern society and to support economic activities. This benefit is valued under this section.

b) ***Base (value added):*** Base expenditure will also deliver efficiency gains through improvements made to performance commitments. This benefit is valued under Section 1.3.

c) ***Base wider economic benefit (GVA):*** The economic contribution from the plan due to direct jobs supported by UUW. The methodology is explored in Section 2.5.

As shown in Figure 2, the two elements of value combined together form the total social and environmental value delivered by Base.

Figure 2: Value of Base expenditure quantified in this study



1.2.1 Result digest

We have valued the impact of Base (water and wastewater services) at **£25.5bn** using a methodology from the 2022 Social Return on Investment study carried out by Valuing Impact[5]. This is considered a conservative estimate. It reflects benefits to human wellbeing and income generation:

- ***Human wellbeing:*** the changes in quality of life brought about as a result of having water and sanitation services, which is measured using the disability-adjusted life year (DALY) indicator, a common indicator and method used by policy decision-makers, non-governmental organisations, research institutes, and in the private sector.
- ***Income generation:*** change in income generation brought about as a result of having water and sanitation services, assessed by the 2022 Valuing Impact study using primary data on cost reduction or increased income from job creations where possible.

It is worth noting that the value of Base (water and wastewater services) reflects the essential service that water and wastewater systems bring to our society, and is therefore not specifically tailored to UUW.

1.2.2 Comments on our approach

Base investment allows UUW to continue provide good quality clean water and sanitation services to the North West of England, which are fundamental to the wellbeing of society and supporting economic activities. This element is much harder to value. However, to give a sense of scale, we have provided estimations of the value delivered using the Social Return on Investment of water and sanitation projects based on the 2022 Valuing Impact study.

The study reviewed 22 water stewardship projects across nine project categories in 11 different countries. It suggested an average SROI of 3.95 across different project categories. The SROI amongst water access, sanitation and hygiene projects (WASH) were much higher, ranging between 8.8 and 23.4. This is suggesting that the value delivered by providing water access and sanitation is much higher than other project categories, such as irrigation, and industrial water efficiency. Although this is the case, to be cautious in our assessment, we have applied the conservative rate of 3.95 to estimate the value delivered by Base.

[5] Valuing Impact (2022) Beyond volumes: exploring the societal value of corporate water stewardship projects. Available from: https://www.impact-thinking.com/beyond-water [accessed 29.08.23]

1.3 Base (value added)

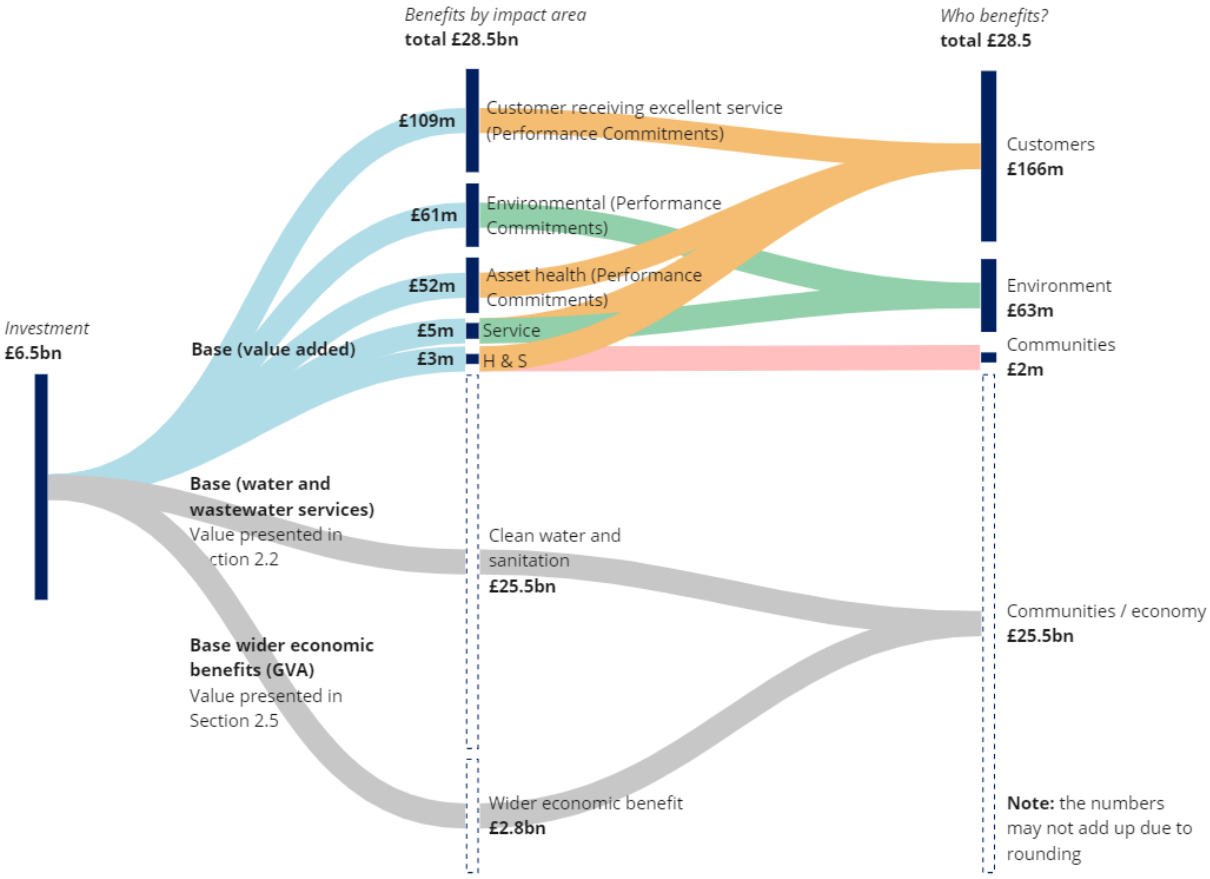
Element of the Plan covered in this section	Estimated value	Confidence	Granularity of analysis
Base (value added) – Value to be delivered over and above the £25.5 billion from stretching performance in AMP8, including improvement to operational GHG emissions.	£231 million	High	Detailed

1.3.1 Result digest

UUW is aiming to stretch its performance through Base investment. We have estimated that the efficiency gains delivered from UUW's AMP8 Base expenditure will deliver benefits in the region of **£231m** through improvements made to performance commitments against a baseline set by Arup in collaboration with UUW using UUW's data modelling. Figure 3 shows an overview of the value added' delivered by Base (value added), split by different impact areas and beneficiaries.

If similar level of Base expenditure is sustained beyond the AMP8 investment period, it will continue to deliver efficiency benefits over time against a deteriorating baseline. It is estimated that over 30 years (AMP8-AMP13), Base expenditure can deliver additional value of over £2.5bn, with the majority of benefits delivered through water (£1.0bn) and wastewater (£1.0bn) related performance commitments.

Figure 3: Social and environmental value added delivered by AMP8 Base



Benefits to society

Customers will receive approximately **£166m** additional value from stretching Base performance. Customers will benefit from:

- Service improvements, including reductions in internal and external flooding incidents, shorter water supply interruptions, and fewer occurrences where customers need to contact UUW about water quality. (Estimated £112m, constitutes £109m from customer receiving excellent service, and part of the £5m service benefits shown in Figure 3)
- Mains repairs, fewer sewer collapses and a reduction in unplanned outage. (Estimated £52m)

- Improved security performance. (Estimated £2m)

Communities will also benefit from fewer accidents, with an estimated benefit of **£2m**.

Benefits to the environment

The benefit to the environment of stretching Base performance is estimated to be in the region of **£63m**. This benefit comes from:

- Reductions in pollution incidents, storm overflow discharges, consumption, and leakage. (Estimated £61m)
- Reduced damage from flow and sludge disposal. (Estimated £2m)

1.3.2 Comments on our approach

We have adopted a programme-level assessment approach for Base (value added), where the impact of the overall expenditure has been broken down into four assessment areas, clean water, wastewater, bioresources, and other. Each assessment area was further broken down into impact metrics that best reflect the benefit of investment. Some of the impact metrics are common PCs e.g., water supply interruptions, pollution incidents, others capture risks, such as health and safety, security, and odour and nuisance.

The performance levels that are expected to be delivered by Base for any impact metrics that are common PCs are sourced from UUW's populated data tables as required by Ofwat to ensure that the data feeding into this study is aligned with the draft Plan submitted to Ofwat. For the impact metrics that are not common PCs, the performance expected from Base is assumed to be the same as the level of performance modelled for the start of AMP8 (year 2025-26).

For each of the impact metrics, a baseline level of performance has also been forecast based on expert knowledge of modelled and reactive failures. Where modelling is possible, this baseline has been modelled. Where this is not possible, assumptions have been developed together with the appropriate UUW colleagues to forecast a baseline using current performance. Finally, the movement from baseline performance to the level of the Base performance achieved by UUW's plan generated the net benefit delivered by Base (value added).

1.4 Jobs supported

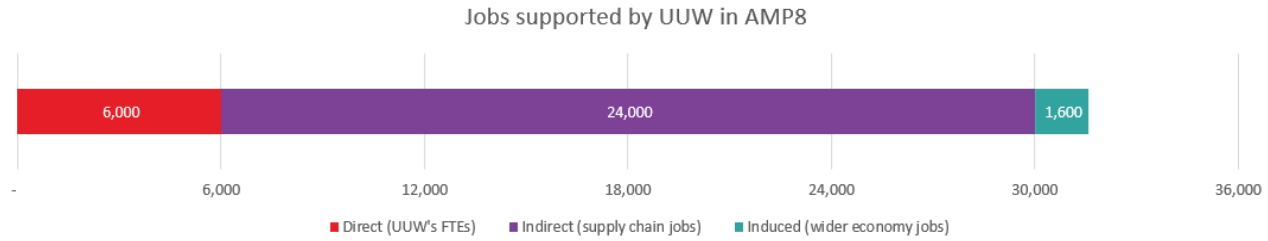
Element of the Plan covered in this section	Estimated value	Confidence	Granularity of analysis
Number of jobs supported – The number of jobs supported by UUW in AMP8 including direct employment, supply chain, and the wider economy.	32,000 jobs	Medium	High level

1.4.1 Result digest

We have assumed the direct employment supported by UUW in AMP8 will remain at 2022/23 levels of approximately 6000 Full Time Equivalent (FTE) employees (Figure 4). Direct employment also supports jobs in the wider economy through a proportion of the employees' income being re-spent on final products in the wider economy. It is estimated that UUW will support 1,600 jobs in the wider economy annually in AMP8.

The investments UUW is proposing to make through AMP8 Enhancement is estimated to create an estimated 24,000 supply-chain jobs.

Figure 4: Estimate of jobs supported by UUW in AMP8



1.4.2 Comments on our approach

The operation of UUW as a company and the investment made through Enhancement will have a positive impact on employment. We have quantified this impact through three elements:

- ***Direct jobs:*** direct FTE supported by UUW during AMP8. We have assumed that these jobs will be for the duration of five years.
- ***Indirect jobs:*** supply chain jobs supported by the AMP8 Enhancement expenditure. We have assumed that these jobs will be for the duration of one year.
- ***Induced jobs:*** supported by UUW's direct employment, which results from a proportion of the employees' income re-spent on final products in the wider economy. We have assumed that these jobs will be for the duration of five years.

For direct employment, we assumed that UUW employment level would remain constant throughout AMP8 from FY22/23 position at approximately 6,000 FTEs.

To quantify the supply chain jobs supported by the AMP8 Enhancement expenditure, we used a study published by the International Monetary Fund in 2021[6], which sets out the employment impact of public investments, including the water sector, based on labour mobility and intensity factors.

To estimate the impact on induced jobs, we applied the Scottish Government's Type 2 multipliers to the figure of direct employment in AMP8[7]. As the Office for National Statistics (ONS) does not produce Type 2 multipliers, the Scottish Government's figure is considered best available data to use for this assessment.

1.5 Wider economic benefit (GVA)

Element of the Plan covered in this section	Estimated value	Confidence	Granularity of analysis
Wider economic benefit (GVA) – The economic contribution from the plan due to jobs supported by UUW.	£4.6 billion	Medium	High level

1.5.1 Result digest

It is estimated that direct employment (~6,000 FTE) by UUW will generate £2.2bn GVA during AMP8 (Figure 5). It is estimated that direct employment will support 1,600 jobs in the wider economy and these will contribute an estimated £0.6m GVA to society.

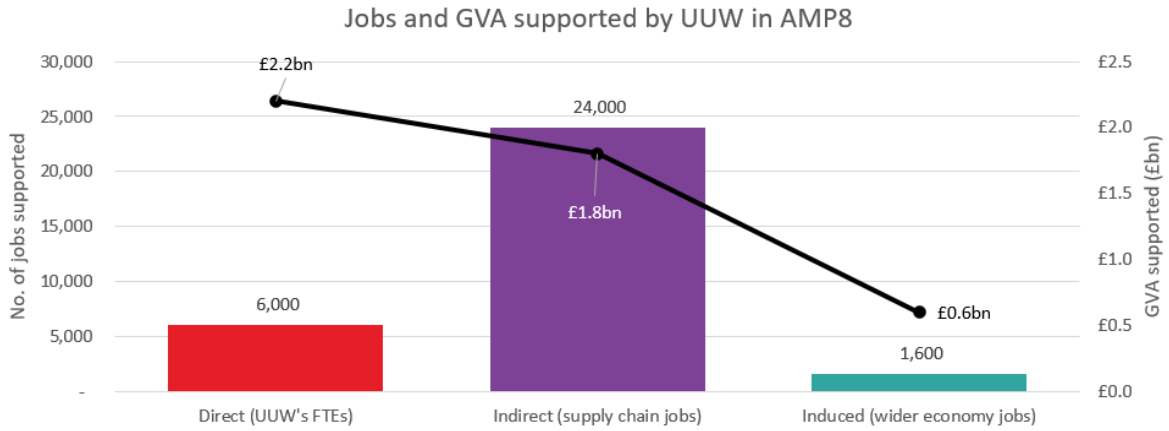
Enhancement will create approximately 24,000 supply chain jobs, delivering as associated £1.8bn of GVA during AMP8.

Therefore, the employment supported by UUW in AMP8 will generate GVA for the UK economy in the region of £4.6bn.

[6] IMF (2021) IMF Working Paper: The Direct Employment Impact of Public Investment. Available online: https://www.imf.org/en/Publications/WP/Issues/2021/05/06/The-Direct-Employment-Impact-of-Public-Investment-50251 (Accessed 23 August 2023).

[7] Scottish Government Riaghaltas na h-Alba (2022) Supply, Use and Input-Output Tables: 1998-2019. Available online: https://www.gov.scot/publications/input-output-latest/ (Accessed 23 August 2023)

Figure 5: Jobs and GVA supported by UUW in AMP8



1.5.2 Comments on our approach

The operation of UUW as a company and the investment made through Enhancement will have a positive impact on employment and the economy. We have quantified the economic impact through three elements:

- ***Direct GVA:*** generated by direct employment supported by UUW during AMP8.
- ***Indirect GVA:*** generated by Enhancement investments through the supply chain during AMP8.
- ***Induced GVA:*** generated from a proportion of the direct employees' income re-spent on final products in the wider economy during AMP8.

The GVA effect was quantified based on jobs supported by the Plan and using figures for GVA per hour worked in the North West.

2. Notes about methodology

We have set out the key assumptions and limitations of our assessment below. A full set of assumptions and limitations are captured in a separate report submitted to UUW titled *Social and Environmental value of UUW's 2025-30 Plan: Methodology Report*.

Performance forecast: The performance forecasts used in the Base (value added) assessment were modelled for the end of AMP years only. We recognise that the in-AMP profile for PC performance is often not linear, however, for the purpose of this study, the performance levels for the years in between have been interpolated following a linear trend between two modelled years.

Completeness of value assessment: Due to the programme-level assessment approach we took for Base value added, we were unable to carry out full-scale impact pathway mapping following an input-output-outcome model. This meant that there may be benefits generated from how outcomes were delivered that have been missed. For example, a green solution that delivers the same performance outcome as a grey solution could generate additional benefits on wellbeing, carbon sequestration, air quality improvement, and biodiversity. To capture these benefits either requires a project-level assessment, or further inclusion of the harder to measure outcomes.

What this means is that the results presented in this report are underestimates of the true value delivered to society and the environment. Whilst this follows our conservative approach to ensure that we don't overstate the benefits, it also provides a focus for further development in future iterations of the assessment.

Enhancement has been through a detailed project-level assessment, so was able to pick up the additional benefits generated through adopting alternative / non-grey solutions. However, the value assessment was bounded by the values included in the PR24 Value Tool and the EA Wider Environmental Outcomes approach. As discussed in Section 1.1.2, the Value Tool has been independently assessed as robust for its purpose. However, this area is evolving globally and there is always room for further development. For example, the next iteration could look to include more of the harder-to-measure benefits using latest value methods in areas such as biodiversity, knowledge and skills, and intellectual capital.

Value sources: Many of the values we have relied on in the assessment for both Base and Enhancement have been composite values i.e., they do not distinguish use and non-use values. This means that the total value of the benefits may be under-represented due to the need to avoid the risk of perceived double-counting. This limitation can be addressed by carefully designing customer valuation research to elicit both use and non-use data.

Time of assessment: This study was commissioned in parallel to UUW's PR24 business planning process. The nature of the study requires the input of the developed Plan, but at the same time, the report generated by the study was subjected to the UUW PR24 assurance timeline. Therefore, we had to select a point in time to carry out our assessment. This meant that, although we have taken reasonable steps to ensure that the Plan we have assessed is as close as possible to the final Plan submitted to Ofwat, there may be minor deviations due to the version used.

UUW's Enhancement assessment: As set out in Section 1.1, we have used the outputs of UU's value assessment for its Enhancement schemes through its PR24 Value Tool. Our assessment deviates in places from the benefit and value totals submitted in UUW's PR24 Data Tables as this report is attempting to articulate social and environmental value. Deviations include not including damaged reputation (customers, regulators and shareholders) and avoided fines, as explained in 2.1.2.

3. Value based decision making at UUW

UUW's current approach to value-based decision making is positioned amongst the leading practitioners of the UK water industry[8]. Based on our working knowledge from supporting infrastructure sectors globally, the UK water industry leads these sectors in the adoption of a multi-capitals approach. Multi-capitals accounting is an internationally recognised approach to understand how an organisation creates and depletes value and has been adopted by large organisations across multiple sectors, as well as the water industry in the UK.

UUW adopts a six capitals framework for value reporting in its key external communications, including its Integrated Annual Report and Financial Statements[9], and Sustainable Finance Framework[10]. In 2021, UUW introduced a framework to further embed and continually improve its six capitals approach across different aspects of its business operation, covering governance, frameworks and tools, culture and skills, and external communication.

In 2022, a Water Sector Multi-capitals Network was established on the back of an inaugural report 'Driving best value decision making within the water industry using a multi-capitals approach'. UUW was instrumental in producing the report and setting up the Network and has been an active member driving uptake of the multi-capitals approach in the water sector, building capability, and working to achieve better value creation.

In investment decision making, UUW has already moved from traditional decision making to approaches which have a much richer consideration of risk and value, where economic, social and environmental impacts are expressed in monetary terms to allow more considered decisions. UUW is working to go further to integrate six capitals considerations throughout its decision making to maximise potential benefits for customers and stakeholders.

For PR24, UUW developed its own Value Tool, which brings together benefit metrics from the common performance commitments, EA's Wider Environmental Outcomes[11], and other benefits such as trust and reputation, service improvement, financial savings, and health and safety. The Value Tool was assured by Deloitte as an appropriate methodology to be used. It was applied to all investment options under enhancement expenditure to allow programme optimisation.

In this study, we have adopted the UUW PR24 Value Tool as the primary method to carry out the value assessment of the Plan. This approach enables consistent value assessment through the whole Plan for Base value added and Enhancement. Furthermore, to help inform UUW's continued improvement, we have broadened the assessment of Base value added in this study to beyond those values captured by the UUW PR24 Value Tool where possible, to offer insights for future development. Detailed recommendations are captured in a separate report submitted to UUW, titled *Social and Environmental value of UUW's 2025-30 Plan: Methodology Report*.

[8] Yorkshire Water (2021) Capitals-based incentives – a contribution to the PR24 Future Ideas Lab, pp 18. Available from: https://www.ofwat.gov.uk/wp-content/uploads/2021/07/Yorkshire-Water-submission-%E2%80%93-Capitals-based-incentives-Future-Ideas-Lab.pdf [Accessed 18.07.23]

[9] UUW PLC (2023) Integrated Annual Report and Financial Statements for the year ending 31 March 2023. Available from: https://unitedutilities.annualreport2023.com/ [Accessed 17.07.23]

[10] UUW PLC (2022) Sustainable Finance Framework Allocation and Impact Report 2022. Available from: https://www.unitedutilities.com/globalassets/z_corporate-site/investor-pdfs/sustainable-finance-framework-allocation-and-impact-report-2022.pdf [Accessed 17.07.23]

[11] Environment Agency (2022) Water industry national environment programme (WINEP) methodology. Available from: https://www.gov.uk/government/publications/developing-the-environmental-resilience-and-flood-risk-actions-for-the-price-review-2024/water-industry-national-environment-programme-winep-methodology#:~:text=The%204%20wider%20environmental%20outcomes,and%20access%2C%20amenity%20and%20engagement. [Accessed 18.07.23]

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