

UUW81

Outcomes - Commentary

October 2023

Data Table Commentaries

This document provides a commentary and supporting information for the Outcomes PR24 data tables

Executive Summary

Our overall package of AMP8 Performance Commitments alongside our robust forecast of performance for the remainder of AMP7 provides ambitious levels of service at excellent value for money, demonstrating ambition in our service improvements whilst being mindful of cost pressures on customers and pace of delivery over AMP8 and the long term. Stretching performance ambitions from AMP7 to AMP8 target sustainable improvements in:

- Customers receiving excellent service every day;
- Reducing the environmental impact of our services; and
- Asset health.

Our plans target stretching future performance based on extrapolating forward historic trends in performance and historic targets across the industry, in-line with Ofwat's final methodology expectations. We provide compelling evidence to support our alternative proposals for internal sewer flooding, water quality contacts and storm overflow spill frequency. We also forecast the performance delivered from base and enhancement expenditure in AMP8.

The proposed PCLs for each performance commitment have been considered in the context of our long term delivery strategy, including pace and affordability, supporting customers' escalated ambitions and priorities for the water environment, climate change, nature and resilient services.

We are committed to delivering the best possible service for customers, recognising that customers want great service and excellent water delivered to their tap and wastewater effectively removed from their drains. We aim to build on our excellent track record of customer experience in AMP8, maintaining or improving our relative C-MeX position. We have similar ambitions for our relative performance on D-Mex in the same period and intend that our experience on both these measures will stand us in good stead for the new BR-Mex measure. We know that customers value a reliable and safe drinking water supply to their homes and target improvement in water supply interruptions and a significant improvement in water quality contacts, following on from our successful exiting of the DWI's transformation this year. Meanwhile, we propose a performance level for internal sewer flooding which takes account of compelling evidence of our operating circumstances and should be seen as ambitious in that context.

We have a strong track record on environmental performance and improvement and we aim to take this further in 2025-30, pushing the frontier forward on pollutions. We have achieved the top 4 star rating in the Environment Agency's EPA in five of the last eight years. We propose stretching water demand reduction targets for leakage and water consumption (both household and business users). Our track record in hitting leakage PCLs (17 years in a row up to 2022/23) and annual PCC targets (by the end of AMP7) shows that we are proposing stretching yet achievable performance commitment levels around water demand.

We understand and share concerns about the use of storm overflows and are committed to responding to the challenges we face. This won't happen overnight, it will take sustained effort and investment over time. The North West has more rainfall and more combined sewers than elsewhere in the country, as well as a very large network. We propose an ambitious plan for the next regulatory period to reduce the use of storm overflows, including our biggest environmental programme yet, targeting a significant improvement in storm overflow spill frequency.

We are proposing ambitious plans to protect and enhance biodiversity through WINEP, we outline a company specific PCL for Biodiversity whilst supporting Ofwat's approach to normalisation – based on company area, rather than company owned land.

We are proposing PCLs for asset health which reflect that maintaining healthy and resilient networks for today and in the future is important for the services we provide to customers. Our performance commitment level for mains repairs is proposed in the context of the relationship with our leakage targets. For unplanned outage we propose a significant performance improvement based on the continued exclusion of raw water quality

issues on the measure which is appropriate to ensure a level playing field for companies whether supplied by variable surface water sources or via consistent quality ground water sources.

We have included Ofwat's June 2023 indicative ODI rates in our business plan. As this is a requirement for company business plans, this does not imply that we endorse these values as being consistent with the value that customers in the North West place on these services, nor should it imply that we endorse the process or approach that Ofwat has taken to arrive at these values. We have also proposed suggested ODI rates for the three common PCs which Ofwat has not provided indicative ODI rates for: Operational Greenhouse Gases (Water and Wastewater) and Biodiversity. These rates are required in order to calculate the full picture of ODI risk and return. Ofwat's approach to calculating ODI rates changed significantly, choosing to calculate rates set on a top down basis as a percentage of RoRE. Whilst this could be an appropriate basis on which to set rates, it requires rates to be calibrated against the risks which the company's whole business plan faces and also against the particular activity which the rate relates to. We consider that this exercise has not yet been completed and therefore some rates are inappropriately calibrated either to incentivise companies, support customer interests or produce a balanced ODI risk profile.

Due to the recent timing of publication and change of valuation approach – at a relatively late stage in our business plan development process – there has been insufficient time to fully consider the impact of these rates on proposed investment plans. Given prior direction from Ofwat, we have not undertaken specific company research into ODI rates for common PCs. It has therefore been infeasible in the time available to formulate considered alternatives to Ofwat's indicative ODI rates.

Alongside the suite of PR24 common performance commitments, our three bespoke performance commitments centre on key areas of service and environmental performance which are not covered by the industry wide common PCs. Our bespoke performance commitments are designed to complement the suite of PR24 common performance commitments. They focus on key areas of service and environmental performance which are important to customers and stakeholders in the North West but which are not covered by the industry wide common PCs. We set stretching performance commitment levels for each bespoke PC, accompanied by financial ODIs which are fully supported by either triangulated customer research and insight or external market valuations.

The bulk of the ODI financial impact is expected to be produced by Ofwat's common PCs and the related ODIs which Ofwat will determine the value of. At this stage, the final value of these financial incentives is not yet known. Ofwat's indicative ODI rates have been calculated based on 2022/23 regulated equity. UUW is proposing a significant PR24 investment programme which it is expected will significantly increase the RCV over the course of 2025-30, and therefore the average AMP8 regulated equity. This has not been factored into Ofwat's indicative ODI rates, and therefore any subsequent change to ODI rates has not been reflected in our assessment of likely RoRE ranges.

UUW, in submission *UUW_BPC_001* April 2023, did not gain support for our proposed Bespoke Performance Commitments (BPC). The PR24 data tables have been designed with lines specifically allocated for Ofwat approved BPCs. UUW, in response to data table query ID-544 are therefore submitting a full set of additional data tables which have been amended for our proposed BPCs. The reference for this set of data tables is (*UUW102- Business Plan Bespoke Data Tables*). Please see Section 7 within this document and *Chapter 5 - Delivering great service* for further detail.

Contents

1. Performance commitments – combined commentary for tables OUT1 – OUT5	6
1.1 Business Retail Measure of Experience (C-MeX)	6
1.2 Developer Measure of Experience (D-MeX)	6
1.3 Business Retail Measure of Experience (BR-MeX)	6
1.4 Water supply interruptions	6
1.5 Compliance Risk Index (CRI)	7
1.6 Water Quality Contacts	7
1.7 Internal Sewer Flooding	8
1.8 External Sewer Flooding	10
1.9 Biodiversity	13
1.10 Operational greenhouse gases (Water)	14
1.11 Operational greenhouse gases (Wastewater)	17
1.12 Leakage	20
1.13 Per Capita Consumption (PCC)	22
1.14 Business Demand	22
1.15 Total Pollution Incidents	24
1.16 Serious Pollution Incidents	25
1.17 Discharge Permit Compliance	25
1.18 Bathing Water Quality	27
1.19 River Water Quality (Phosphorous)	28
1.20 Storm overflows	30
1.21 Unplanned outage	31
1.22 Mains repairs	32
1.23 Sewer collapses	32
2. Additional Information - Proposed caps and collars	34
2.1 Caps and collars	34
3. OUT6 commentary – summary information on outcome delivery incentive payments	35
3.1 Outcome delivery incentives	35
4. OUT7 commentary - outcome performance ODI's (financial)	36
4.1 Common Performance Commitments	36
4.2 Bespoke Performance Commitments	36
5. OUT8 commentary - PR19 outcome performance summary	37
5.1 Outcome performance summary	37
6. OUT9 commentary – Biodiversity – habitat information	38
6.1 Summary	38
6.2 Categorisation of company land expected at 31 March 2025	38
6.3 Further splits of company land expected at 31 March 2025	39

7.	OUT10 and associated bespoke performance commitment tables.....	40
7.1	Summary of our bespoke performance commitments.....	40
7.2	OUT10 – Underlying calculations for bespoke performance commitments	43
7.3	OUT1 – Overall outcome performance - Performance commitments	47
7.4	OUT2 - Outcome performance from base expenditure - Performance commitments	48
7.5	OUT3 – Outcome performance from enhancement expenditure - Performance commitments	48
7.6	OUT7 – Outcome performance – ODIs (financial)	49
7.7	LS1 – Forecast outcomes.....	51
7.8	LS2 – Forecast outcomes from base expenditure.....	52

1. Performance commitments – combined commentary for tables OUT1 – OUT5

1.1 Customer Measure of Experience (C-MeX)

- 1.1.1 In-line with Ofwat’s extended timelines for definition of customer experience measures for AMP8 we are working with Ofwat and the industry to develop and improve the MeX incentive suite.
- 1.1.2 We will determine our relative performance targets for this measure as and when the details of it are finalised. We will be aiming to build on our improving customer service performance to deliver an excellent service experience for all customer groups.

1.2 Developer Measure of Experience (D-MeX)

- 1.2.1 In-line with Ofwat’s extended timelines for definition of customer experience measures for AMP8 we are working with Ofwat and the industry to develop and improve the MeX incentive suite.
- 1.2.2 We will determine our relative performance targets for this measure as and when the details of it are finalised. We will be aiming to build on our improving customer service performance to deliver an excellent service experience for all customer groups.

1.3 Business Retail Measure of Experience (BR-MeX)

- 1.3.1 In-line with Ofwat’s extended timelines for definition of customer experience measures for AMP8 we are working with Ofwat and the industry to develop and improve the MeX incentive suite.
- 1.3.2 We will determine our relative performance targets for this measure as and when the details of it are finalised. We will be aiming to build on our improving customer service performance to deliver an excellent service experience for all customer groups.

1.4 Water supply interruptions

Historical performance

- 1.4.1 The current AMP7 PCL set at PR19 is a reduction from 00:06:30 to 00:05:00 by 2025. At PR19 we proposed company specific targets, based on a glide path from performance in the previous AMP.
- 1.4.2 The end of AMP6 position for *UUW* was 00:10:11 showing an overall improvement during the AMP and setting the foundations in processes and approach to continue this approach into AMP7.
- 1.4.3 Recent Industry performance is variable in-line with the challenges, often weather related, experienced with this measure. Large events associated with trunk mains or extreme weather can impact performance and this can also be impacted by the size of the company and how it is able to respond to the more extreme events. This can mean that the larger companies have more consistent performance but do not achieve upper quartile performance, whereas the smaller companies have more variable performance dependent on the multiple factors that influence a single year.

Overall performance

- 1.4.4 The proposals for AMP8 to support improving performance are to be delivered through enhanced operating models, infrastructure renewal/rehabilitation and optimised maintenance.

Performance from base

- 1.4.5 The majority of historical performance improvement is attributed to base expenditure, both reactive and proactive expenditure. During AMP8, significant focus on asset health will start to move to increasing proactive expenditure

1.4.6 As per table OUT2 performance from base was calculated by estimating the benefits derived from our actual and projected enhancement expenditure and adding this to observed or predicted levels of performance, thereby creating a counterfactual for if that expenditure had not occurred. The performance delivered through base in AMP8 has been reviewed to ensure it represents a stretching position relative to historic delivery programmes and associated performance.

Performance from enhancement

1.4.7 There are no specific enhancement cases for Water Supply Interruptions, but benefits are expected from the Leakage Enhancement case. The benefits have been forecast from PIONEER modelling to determine the operational performance benefits of mains renewal. This is aligned to those reported in CW15 for AMP8.

Underlying calculations for this performance commitment

1.4.8 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.5 Compliance Risk Index (CRI)

Historical performance

1.5.1 The existing (AMP7) PCL is 0.00, with a deadband of 2.00 to mitigate the risk from external factors outside of company control. Based on current performance, achieving the AMP8 PCL will be stretching.

1.5.2 Industry wide, CRI scores are showing deteriorating performance (increasing scores) indicating the majority of companies will incur an underperformance payment during AMP8. There is a wide range between companies (2020 to 2022 values) between 0.00 and 9.77.

1.5.3 The industry average is also skewed by water only companies and smaller water and sewerage companies. Performance in this area will continue to be more challenging in future years, with the broader context of climate change driven disruptions to raw water quality which disproportionately impacts surface water fed companies such as *UUW*.

Overall performance

1.5.4 We propose a PCL of 0.00 CRI score (equating to 100% compliance) in-line with customer and regulators' views.

1.5.5 We plan to adhere to a CRI deadband as proposed by Ofwat/DWI. We suggest an appropriate deadband would be set at 1.75 CRI points. We consider this to be appropriately stretching and ambitious. This is a lower deadband than the current AMP7 CRI deadband of 2.00, while also within a broader context of worsening nationwide CRI performance.

Performance from base

1.5.6 The levels of performance delivered through base expenditure are indicated in *UUW30 - Performance Commitments Technical Document*.

Performance from enhancement

1.5.7 Performance is from base only.

Underlying calculations for this performance commitment

1.5.8 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.6 Water Quality Contacts

Historical performance

1.6.1 Data from 2011/12 to 2021/22 is based on the analysis from the Apportionment between base and enhancement by PC analysis that calculated the performance achieved from base expenditure and enhancement expenditure for this period.

1.6.2 For 2022/23 to 2024/25 the proportional split between base and enhancement spend has been based on the average split for the first two years of AMP7. This is predominantly mains cleaning activity which, in AMP7, is apportioned to base but the presence of a regulatory notice means this is classified as enhancement type activity. In AMP8, however, this ongoing cleaning programme will be attributed to base as a BAU activity.

1.6.3 We have made significant progress against Drinking Water Inspectorate (DWI) notice for discolouration with 22% of Water Supply Zones within notice compared to 40% in when the notice was issued in 2021.

Overall performance

1.6.4 The proposed target is calculated based on forecast upper quartile position for all companies (based on 5 year rolling average). This helps to overcome variability in year on year performance whilst aligning to an overall improving trend through an AMP cycle, acknowledging that each company has challenges and variability within an AMP. This methodology also reduces the influence associated with company size.

Performance from base

1.6.5 As per OUT2, performance from base was calculated by estimating the benefits derived from our actual and projected enhancement expenditure and adding this to observed or predicted levels of performance, thereby creating a counterfactual for if that expenditure had not occurred. We took a cumulative view of enhancement expenditure, assuming that any benefits calculated for programmes of work in previous year(s) would continue to be felt in future years. The performance delivered through base in AMP8 has been reviewed to ensure it represents a stretching position relative to historic delivery programmes and associated performance.

1.6.6 The leakage enhancement has a forecast benefit for this measure associated with the replacement of cast iron mains. There are additional enhancement benefits associated with the Vyrnwy relining scheme and the Raw Water Quality enhancement. Benefit from historic mains cleaning is assumed to have a two year benefit period associated with regeneration of discolouration material over time.

Performance from enhancement

1.6.7 There are no specific enhancement cases for Customer Contacts, but benefits are forecast from the (*UUW61 – Water Supply Demand Enhancement Claims*), (*UUW60 - Water Quality Enhancement Claims*) and relining of the Vyrnwy Aqueduct. A stretching view on performance benefit from these enhancement cases has been assumed in OUT1-3.

1.6.8 Additionally, there is some residual benefit for mains cleaning activity in AMP7 carried forwards into AMP8 resulting in a difference (FALSE flag) between CW15 and OUT3 performance from enhancement. This is based on a two year benefit period for mains cleaning activities (100% in the first year after the activity takes place, reducing to 50% residual benefit for the second year).

Underlying calculations for this performance commitment

1.6.9 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.7 Internal Sewer Flooding

Historical performance

2011/12 to 2015/16

1.7.1 Consistent with Ofwat's historical performance trends v2 dataset, we report performance for the period 2011/12 to 2015/16 as N/A as substantive methodology changes since this period mean that performance is not directly comparable.

2016/17 to 2022/23

- **Overall outcome performance (OUT1)**

- Total performance in OUT5 (and by extension OUT1 via auto population) is reported as per Ofwat's historical performance trends v2 dataset and 2022/23 APR data. *UUW* has delivered, and is forecasting to deliver significant performance improvements over the course of AMP7.
- **Performance from base/enhancement (OUT2/OUT3)**
 - In its 'Information notice 23/07 assessing the influence of enhancement expenditure on historical performance trends for PR24', Ofwat states:

*“For internal and external sewer flooding, we intend to include historical enhancement expenditure within the PR24 base cost models. As such, we intend to use historical **outturn** performance trends to determine performance levels to be delivered from our modelled base expenditure allowances, **without adjusting for the impact of enhancement on historical performance**”.*

- Therefore, as Ofwat's base cost models include an implicit allowance for enhancement expenditure on 'reducing risk of sewer flooding for properties', we have not sought to separate out performance from base vs enhancement for historical internal sewer flooding performance. Our OUT2.4 performance from base forecast therefore states the outturn performance we aim to achieve from our base allowance in its totality, inclusive of enhancement expenditure. As such, the figures reported in OUT2.4 are identical to those figures reported in OUT5.7, and by extension, OUT3 reports the performance from enhancement expenditure as 0.

2023/24 to 2024/25

- **Overall outcome performance (OUT1)**
 - Forecasts of total performance for the remainder of the AMP (in OUT1.4 and OUT5.7) are reported as per the best available predictions reported in OUT8.4. Relative to our 2019/20 position, *UUW* is forecasting to deliver a 33.8% reduction in internal sewer flooding incidents per 10,000 sewer connections.
- **Performance from base/enhancement (OUT2/OUT3)**
 - We have not sought to split our historical outturn performance into base and expenditure and therefore OUT2.4 is identical to OUT5.7.

Overall performance

- 1.7.2 OUT1.4 and OUT5.7 state our proposed PCL for AMP8. A comprehensive explanation for how we arrived at our proposed PCL is outlined in *UUW30 - Performance Commitments Technical Document*.
- 1.7.3 In summary, our analysis has demonstrated that the number of internal sewer flooding incidents is highly sensitive to exogenous factors, including urban rainfall, proportion of combined sewers and food service establishment (FSE) density, and these exogenous factors are not equally distributed across operating regions. It therefore follows that a common PCL set at an unadjusted industry upper quartile is inappropriate if performance across companies is to be compared on a like for like basis and all companies are to be subject to the same level of stretch. Therefore, *UUW* has undertaken a reproducible econometric modelling analysis to define PCLs for all companies on a common basis, by adjusting for regional environmental operating circumstances, namely urban rainfall, the proportion of combined sewers and FSE density.
- 1.7.4 Recognising that sewer flooding is one of the worst service failures customers can experience, we are committed to pushing ourselves even further to the boundaries of what is achievable and honouring targets published in our PR19 draft business plan submission. We are therefore proposing that *UUW*'s PCL delivers a step change from the environmentally adjusted upper quartile to a position of 1.96 incidents per 10,000 sewer connections, equivalent to the 2030 outturn position of 715 incidents we proposed in this submission. Such an outturn position is beyond the environmentally adjusted frontier i.e. the minimum number of flooding incidents modelled to be achievable within the environmental operating circumstances of the North West, and will see us deliver a highly stretching 31.9% reduction in internal sewer flooding incidents over the course of the AMP.

Performance from base

1.7.5 When calculating the performance from base counterfactual in OUT2.4, we assumed 'base' to be inclusive of the implicit enhancement allowance for 'reducing the risk of sewer flooding for properties' (for which we submit an enhancement case), owing to the inclusion of this dependent variable within the scope of Ofwat's proposed base cost models. Any differential between OUT2.4 and OUT1.4 can therefore be attributed to co-benefits from enhancement cases that fall outside of this implicit allowance. Two enhancement cases outside of this allowance will have minor benefits for internal sewer flooding performance, namely the Rainwater Management enhancement case and our Advanced WINEP and WINEP submissions:

- The benefits of the Rainwater Management enhancement case were calculated with reference to our DWMP data tables, from which the need for this enhancement case was identified. The benefits were calculated by taking the difference between the 'performance from base' and 'performance from enhancement' AMP8 forecasts. The immediate performance benefits from this case were limited as the investment is designed to offset future deterioration in flooding performance due to climate change, thereby maintaining a stable baseline. The benefits were profiled to start one year after delivery;
- The WINEP benefits were calculated by relating the impermeable area removed for blue-green solutions to the associated baseline internal sewer flooding risk remaining using impermeable area curves from the DWMP.

Performance from enhancement

1.7.6 The benefits from these enhancement cases were added to the performance reported in OUT5.7 to create a counterfactual for if that enhancement expenditure had not occurred within OUT2.4. The majority of the performance improvements will be driven by base, inclusive of the 'reducing risk of sewer flooding for properties' implicit enhancement allowance and therefore the performance from enhancement reported in OUT3.4 is limited for this measure.

1.7.7 Performance from enhancement is aligned to the minor benefits forecast from the Rainwater Management enhancement case (*UUW65- Wastewater Quality Additional Requirements Enhancement Claims*) benefits in CWW15 for AMP8. These have been calculated based on the modelled benefit of the solutions identified to manage surface water in areas vulnerable to the impact of climate change.

Underlying calculations for this performance commitment

1.7.8 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.7.9 The difference between OUT3 and CWW15 (FALSE flag) can be explained by the different treatment of potential sewer flooding co-benefits from the Advanced WINEP between the two tables. In OUT3, potential modelled benefits from the Advanced WINEP have been incorporated in our assessment of an appropriate PCL to ensure our proposed PCL is sufficiently stretching. However, owing to the flexibility required in the Advanced WINEP programme, it was not deemed appropriate to define fixed sewer flooding benefits in CWW15 at this stage.

1.8 External Sewer Flooding

Historical performance

2011/12 to 2015/16

- Consistent with Ofwat's historical performance trends v2 dataset, we report performance for the period 2011/12 to 2015/16 as N/A as substantive methodology changes since this period mean that performance is not directly comparable.

2016/17 to 2022/23

Overall outcome performance (OUT1)

- Total performance in OUT5 (and by extension OUT1 via auto population) is reported as per Ofwat's historical performance trends v2 dataset and 2022/23 APR data. UUW has delivered, and are forecasting to deliver significant performance improvements over the course of AMP7.

- **Performance from base/enhancement (OUT2/OUT3)**

- In their 'Information notice 23/07 assessing the influence of enhancement expenditure on historical performance trends for PR24', Ofwat states:

“For internal and external sewer flooding, we intend to include historical enhancement expenditure within the PR24 base cost models. As such, we intend to use historical outturn performance trends to determine performance levels to be delivered from our modelled base expenditure allowances, without adjusting for the impact of enhancement on historical performance”.

- Therefore, as Ofwat's base cost models include an implicit allowance for enhancement expenditure on 'reducing risk of sewer flooding for properties', we have not sought to separate out performance from base vs enhancement for historical internal sewer flooding performance. Our OUT2.5 performance from base forecast therefore states the outturn performance we aim to achieve from our base allowance in its totality, inclusive of enhancement expenditure. As such, the figures reported in OUT2.5 are identical to those figures reported in OUT5.14, and by extension, OUT3 reports the performance from enhancement expenditure as 0.

Overall performance

2023/24 to 2024/25

- Forecasts of total performance for the remainder of the AMP (in OUT1.5 and OUT5.14) are reported as per the best available predictions reported in OUT7.4. Relative to our 2019/20 position, UUW is forecasting to deliver a 14.5% reduction in external sewer flooding incidents per 10,000 sewer connections.

2025/26 to 2029/30

- OUT1.4 and OUT5.14 state our proposed PCL for AMP8. A comprehensive explanation for how we arrived at our proposed PCL is outlined in *UUW30 - Performance Commitments Technical Document*.
- In summary, sensitivity analysis demonstrates that whilst external sewer flooding performance is responsive to exogenous factors, namely urban rainfall and the proportion of combined sewers, it is less so than internal sewer flooding performance. It is for this reason that we consider a common PCL is appropriate for this measure.
- However, we consider that it is very challenging to forecast a robust industry upper quartile owing to the bespoke nature of the performance commitment in AMP7 and the application of outperformance caps and underperformance collars influencing levels of performance. Indeed, a forecast based on a logarithmic projection of historic upper quartile would result in an upward trend in AMP8, a profile that is unacceptable to UUW and customers. We therefore propose setting a common PCL that represents a continually decreasing trajectory to 13.65 external sewer flooding incidents by the end of AMP8, an outturn position that sees us being within the best available estimate of the upper quartile and represents a continuation of the AMP7 performance improvements projected for UUW. UUW's proposed PCL delivers a stretching 12.9% improvement upon our forecast end of AMP7 performance.

2030/31 to 2030-35

- As stated in Ofwat's table guidance, 'it is important that these forecasts relate to the impact of all base expenditure but only for enhancement expenditure investment that commences in, or prior to the 2025 - 30 period'. Therefore, the effect of any enhancement expenditure that commences after 2030/31 is excluded and the forecast reflects only the cumulative impact of enhancement

expenditure within the 2029/30 period. To calculate this, the cumulative benefits from the enhancement expenditure in the 2025/26 to 2029/30 period (i.e. Rainwater Management enhancement case and the Advanced WINEP) were subtracted from OUT2.5.

Performance from base

2023/24 to 2024/25

- We have not sought to split our historical outturn performance into base and expenditure and therefore OUT2.4 is identical to OUT5.14.

2025/26 to 2029/30

- When calculating the performance from base counterfactual in OUT2.5, we assumed 'base' to be inclusive of the implicit enhancement allowance for 'reducing the risk of sewer flooding for properties' (for which we submit an enhancement case), owing to the inclusion of this dependent variable within the scope of Ofwat's proposed base cost models. Any differential between OUT2.5 and OUT1.5 can therefore be attributed to co-benefits from enhancement cases that fall outside of this implicit allowance. Two enhancement cases outside of this allowance will have minor benefits for external sewer flooding performance, namely the Rainwater Management enhancement case and our Advanced WINEP & WINEP submissions:
 - The benefits of the Rainwater Management enhancement case were calculated with reference to our DWMP data tables, from which the need for this enhancement case was identified. The benefits were calculated by taking the difference between the 'performance from base' and 'performance from enhancement' AMP8 forecasts. The immediate performance benefits from this case were limited as the investment is designed to offset future deterioration in flooding performance due to climate change, thereby maintaining a stable baseline. The benefits were profiled to start one year after delivery; and
 - The WINEP benefits were calculated by relating the impermeable area removed for blue-green solutions to the associated baseline external sewer flooding risk remaining using impermeable area curves from the DWMP.

2030/31 to 2030/35

- The DWMP optimiser outputs were used to inform the AMP9 performance from base profile. However, the DWMP profile showed performance deterioration over the course of AMP9 and Ofwat have indicated this is unacceptable:
- “When completing this table we expect companies to stretch themselves on what they can deliver from base, assuming they will receive efficient cost allowances to address deteriorating performance for issues such as the growth in the network. Therefore, we do not expect companies to show performance degradation due to such issues in table OUT2”.
- Therefore, we have instead assumed a continually decreasing trajectory from the end of AMP8 position towards the end of AMP9 position achieved by the DWMP optimiser. This represents a more feasible profile for deliverability, rather than making a step change at the start of the AMP

Performance from enhancement

2023/24 to 2024/25

- We have not sought to split our historical outturn performance into base and expenditure and therefore OUT2.4 is identical to OUT5.14.

2025/26 to 2029/30

- The benefits from these enhancement cases were added to the performance reported in OUT5.14 to create a counterfactual for if that enhancement expenditure had not occurred within OUT2.4. The majority of the performance improvements will be driven by base, inclusive of the 'reducing risk of sewer flooding for properties' implicit enhancement allowance and therefore the performance from enhancement reported in OUT3.4 is limited for this measure.

2030/31 to 2030-35

- The differential between OUT1.4 and OUT2.4 sustains the cumulative impact of enhancement expenditure delivered within the 2029/30 period but the benefits from any new enhancement expenditure were not included as per Ofwat's data table guidance. Thus, performance from enhancement in OUT3.4 remains stable.
- Performance from enhancement is aligned to the minor benefits forecast from the Rainwater Management enhancement case (*UUW65 – Wastewater Quality Additional Requirements Enhancement Claim*) benefits in CWW15 for AMP8. These have been calculated based on the modelled benefit of the solutions identified to manage surface water in areas vulnerable to the impact of climate change.

1.8.1 Performance from enhancement is aligned to the minor benefits forecast from the Rainwater Management enhancement case (*UUW65- Wastewater Quality Additional Requirements Enhancement Claims*) benefits in CWW15 for AMP8. These have been calculated based on the modelled benefit of the solutions identified to manage surface water in areas vulnerable to the impact of climate change.

Underlying calculations for this performance commitment

1.8.2 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.9 Biodiversity**Historical performance**

1.9.1 As the biodiversity PC is new for AMP8 and the Defra metric that is used to assess performance is also relatively new, there are no historic or industry comparative figures available.

Overall performance

1.9.2 In setting the PCL we considered the biodiversity assessment data available through the development of enhancement programmes and used expert ecologists to predict reasonable but stretching profiles for when these benefits would be realised. As part of the process used to demonstrate delivery of these commitments we will complete detailed baseline assessments and post interventions assessments using the Defra metric with assessments completed by suitably trained and experienced assessors, validated by our external biodiversity advisory group.

Performance from base

1.9.3 The proposed biodiversity improvements predicted through our performance commitment levels are projected to be delivered through enhancement activities. There is biodiversity delivered through base expenditure such as the ongoing maintenance and maturation of habitats delivered through schemes such as SCaMP. These benefits won't be captured through this performance commitment however and we don't require the incentivisation of the performance commitment to continue with this activity. As a result of this there is no expected improvements as a result of base expenditure.

Performance from enhancement

1.9.4 All of the proposed biodiversity improvements predicted through our performance commitment levels are projected to be delivered through enhancement activities. These have been identified based on the expected biodiversity improvements that will be delivered through our improvement projects which have been profiled over the expected time it will take for the biodiversity benefits to mature. As some of the biodiversity delivery will take time to mature lot of the benefit that will be delivered will not be realised until beyond AMP8.

1.9.5 The difference between the biodiversity benefit claimed in OUT3 and CW15 (FALSE flag) is a result of the benefit maturation period; some AMP8 investment will mature in terms of benefits in AMP9, along with AMP9 projected investments that mature relatively quickly.

Underlying calculations for this performance commitment

- 1.9.6 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.10 Operational greenhouse gases (Water)

Historical performance

- 1.10.1 This is a new performance commitment (PC) so there was no PCL for PR19. We do have historic performance data for our operational GHG emissions, however the emissions boundary is different to that proposed by Ofwat for this common PC so shouldn't be used as a comparable reference.
- 1.10.2 We have a strong track record of playing our part to mitigate climate change and have reduced our scope 1 and 2 emissions by over 70 per cent since 2005/06, largely through our substantial investment in renewable power generation and green electricity procurement. However, this historical reduction is not reflective of what can be achieved in the future. To reduce the remaining emissions will require extensive innovation, technological enhancements and investments.
- 1.10.3 Provisional findings suggest we may be performing well and reducing emissions during AMP8 across water and wastewater. However, our performance in wastewater alone, against the baseline year, shows an increasing emissions picture.
- 1.10.4 We have an important role in a leading approach to GHG emissions in the sector. Whilst we have made good progress in the past it would be unrealistic to expect that the historic emissions reduction trend, or cost benefit positions, will continue into the future. Keeping emissions as they currently are will become increasingly stretching.
- 1.10.5 Sector performance data which relates specifically to this PC is not available. The data relating to this PC has been requested for the first time this reporting year (2022/23) and therefore direct comparison is not yet available.

Overall performance

- 1.10.6 Our proposal put forward in this PC is that the PCL should be based on the estimated emissions position in each year of the 2025-2030 period as a result of delivering all of the interventions between now and 2030 as agreed in our FD plus our additional stretch, as noted above.
- 1.10.7 This baseline position will include all innovation and growth we expect to deliver by 2030 and has been proposed in draft in the Outcomes commentary and in our PR24 data tables but will need to be reviewed and updated before the start of the 2025 - 2030 period. This PCL and associated 2021/22 baseline has been verified by a suitably qualified third party and will need to be confirmed at FD when final projects and scope of AMP8 has been agreed with Ofwat. This can be verified by a suitably qualified third party.
- 1.10.8 These PCs incentivise us to stretch within planned base and standard enhancement programmes. We have pushed efficiency and innovations to support this goal while recognising that absolute reductions are very challenging given the scale and costs of programmes required in AMP8 across all price controls. We have built in reductions of 9,651 tCO₂e in base and a further 9,873 tCO₂e in our standard enhancement programme. We have also built in an additional stretch across water and wastewater of 4,283 tCO₂e to incentivise ongoing reductions, this is equivalent to 1% of a year's AMP8 emissions.
- 1.10.9 The performance commitment target includes the stretch we are making within our base and standard enhancement programmes. Our forecast for GHG emissions in the last year of AMP7 is 429,685 tCO₂e, reducing to 418,910 tCO₂e at the end of AMP8. Therefore, in the context of growth, our forecast position is a significant stretch given the stretch we have already taken, without any funding specifically focused on emissions reduction.

Performance from base

- 1.10.10 Substantial investment is needed to deliver the transformational change required to achieve our role in national targets for net zero 2050 and the interim carbon budgets, including a 78% reduction by 2035. Forecast upward growth pressures, such as extending our services to a growing population, and treating wastewater to higher standards to meet statutory requirements to continue improving the water environment, as set out by the Environment Act, make it increasingly difficult to deliver a reduction in operational GHG emissions. Operational cost efficiency has been a primary driver to date, but also delivering emissions reductions and resilience benefits. We have invested heavily to expand our own renewable energy generation facilities, primarily to support more efficient and effective sludge management.
- 1.10.11 Reductions since 2018/19 are a result of efficiencies to date and forecast to 2024/25. The forecast from 2024/25 base consumption remains fairly static, with a small increase as a result of population growth.

Performance from enhancement

- 1.10.12 The PC performance is linked to delivery of our AMP7 and AMP8 WINEP projects (*UUW64 – Wastewater Quality Overflows Enhancement Claims*) becoming operational, population growth and our net zero enhancement programme (*UUW67 – Cross Price Control Enhancement Claims*) reductions delivery timeline for projects which impact the PCL.
- 1.10.13 In the future, we're expecting GHG emissions reduction costs to increase along with the continued challenge of substantial growth pressures, which means we need to go further to deliver the required overall reductions. Having already undertaken many of the most commercially attractive options we anticipate not being able to deliver the required reductions in operational GHG emissions without increased expenditure. To address this, we have put forward a circa £196m net zero enhancement programme to deliver circa 210,000 tCO₂e reportable emissions benefit in AMP8, and enabling over 2m tonnes of benefits by 2055. The benefits are aligned to those reported in CW15 for AMP8.
- 1.10.14 OUT3.7 Operational greenhouse gas emissions (water). This is an auto-populated line. This calculation should be $OUT1.7 - OUT2.7 = OUT3.7$, so that reductions in emissions are shown as negative and increases are positive.
- 1.10.15 Note that base takes the position that any enhancements from AMP7 form the baseline for AMP8 (2025/26). For future years the 2025/26 value is used, with population growth applied year on year from this point on. Therefore base does not include the impact of future enhancement expenditure, from AMP8 onwards.
- 1.10.16 Note that enhancements are calculated in each AMP and the impact from that programme is forecast to continue out to 2049/50 (and beyond). This has a compounding effect where, for example, the enhancement at the start of AMP10 (2040/41) is the compounded impact of AMP7, 8, 9.
- 1.10.17 Standard enhancements and selected net zero enhancements reduce emissions growth in base.
- 1.10.18 Note that the figures in OUT3 applies a 0.2% stretch on the raw data provided in the carbon forecast, while the figures in CW15 and CWW15 are the raw outputs from the carbon forecast. Therefore, the figures in the OUT tables will not match (FALSE flag) the component figures in CW15 and CWW15.

Underlying calculations for this performance commitment

- 1.10.19 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

OUT4.24 Operational greenhouse gas emissions (water)

- Reductions since 2018/19 are a result of efficiencies to date and forecast to 2024/25.
- Increases from water WINEP are offset in the forecast by reductions from standard enhancements and net zero enhancements selected (not in the challenge fund).

- The standard enhancements are for leakage, water efficiency enhancement and metering. The net zero enhancements selected (not in the challenge fund) that impact the water price control in AMP8 are Green Fleet (moving to electric vehicles) Property Enhancements moving to heat pumps and Net Zero Catchment Strategy Phase 1. The net zero enhancements selected (not in the challenge fund) that impact the water price control in AMP9 are peatland restoration, and woodland restoration. Work begins for both of these projects in AMP8, with Pending Issuance Units (PIU) noted in CW21 data tables, however they will only show reportable carbon benefits within AMP9.
- All of these result in a general downward trend.
- Note that base takes the position that any enhancements from AMP7 form the baseline for AMP8 (2025/26). For future years the 2025/26 value is used, with population growth applied year on year from this point on. Therefore base does not include the impact of future enhancement expenditure, from AMP8 onwards.
- Note that enhancements are calculated in each AMP and the impact from that programme is forecast to continue out to 2049/50 (and beyond). This has a compounding effect where, for example, the enhancement at the start of AMP10 (2040/41) is the compounded impact of AMP7, 8, 9.

OUT4.27kg CO₂e per distribution input (per year)

- This is an auto-populated line.
- *UUW's* version of Excel does not support the function used in OUT4.26, and OUT4.27 uses this cell, so all values show as #NAME. The solution has been for *UUW* to change the function_xlfn.CONCAT to CONCATENATE to enable the rest of the table to populate.
- This is not a representative method for tCO₂e. *UUW* agrees with Ofwat that although "not a perfect measure" there is value in also reporting the emissions' intensity ratios, namely Water emissions per megalitre of distribution input and Wastewater emissions per megalitre of volume of wastewater received at sewage treatment works. The value being to provide useful insight into company management of their emissions, relative to a baseline and the organisation's own trend over time in a like for like methodology. However it is not suitable for comparison between companies as each are of different size and makeup. *UUW* does not support the use of either intensity ratios or change in intensity ratios from baseline as the performance measure for the performance commitments, as this would compound performance in other business operational activity with that of greenhouse gas management.

OUT4.28 Baseline tonnes CO₂e (2021/22)

- Auto-populated line from OUT4.24.

OUT4.29 Reduction % from 2021/22 baseline (tonnes CO₂e)

- This is an auto-populated line.
- Calculation produced is showing the number as a decimal, whereas units for the cell are shown as a percentage. The format of the cell needs to be changed to Percentage instead of Number if a percentage value is required. This will not impact any calculations though as the percentage and decimal functions calculate out to the same values.
- The calculations used in OUT4.29 and OUT5.31 should be equivalent in calculating a percentage change, however OUT4.29 uses the formula $(x_2 - x_1) / x_1$ whereas OUT5.31 uses the formula $(x_1 - x_2) / x_1$, where x_1 is the value from the baseline year 2021/22, and x_2 is the reporting year being compared to the baseline. The result is that in OUT4.29 a negative value represents a decrease and in OUT5.31 a negative value represents an increase. Based on Ofwat's PR24 guidance, OUT5.31 is correct and OUT4.29's calculation should be changed to $(x_1 - x_2) / x_1$.

OUT4.30 Baseline kg CO₂e per distribution input (2021/22)

- Auto-populated line from OUT4.27.

OUT4.31 Reduction % from 2021/22 baseline (kg CO₂e per distribution input)

- UUW's version of Excel does not support the function used in OUT4.26, and OUT4.31 uses this cell, so all values show as #NAME. The solution has been for UUW to change the function_xlfn.CONCAT to CONCATENATE to enable the rest of the table to populate.
- The calculations used in OUT4.31 and OUT5.33 should be equivalent in calculating a percentage change, however OUT4.31 uses the formula $(x_2-x_1)/x_1$ whereas OUT5.33 uses the formula $(x_1-x_2)/x_1$, where x1 is the value from the baseline year 2021/22, and x2 is the reporting year being compared to the baseline. The result is that in OUT4.31 a negative value represents a decrease and in OUT5.33 a negative value represents an increase. The formula used in one of these line references should be changed for consistency in reporting. Based on Ofwat's PR24 guidance, OUT5.33 is correct and OUT4.31's calculation should be changed to $(x_1-x_2)/x_1$.

1.11 Operational greenhouse gases (Wastewater)**Historical performance**

- 1.11.1 This is a new performance commitment (PC) so there was no PCL for PR19. We do have historic performance data for our operational GHG emissions, however the emissions boundary is different to that proposed by Ofwat for this common PC so shouldn't be used as a comparable reference.
- 1.11.2 We have a strong track record of playing our part to mitigate climate change and have reduced our scope 1 and 2 emissions by over 70 per cent since 2005/06, largely through our substantial investment in renewable power generation and green electricity procurement. However, this historical reduction is not reflective of what can be achieved in the future. To reduce the remaining emissions will require extensive innovation, technological enhancements and investments.
- 1.11.3 Provisional findings suggest we may be performing well and reducing emissions during AMP8 across water and wastewater. However, our performance in wastewater alone, against the baseline year, shows an increasing emissions picture.
- 1.11.4 We have an important role in a leading approach to GHG emissions in the sector. Whilst we have made good progress in the past it would be unrealistic to expect that the historic emissions reduction trend, or cost benefit positions, will continue into the future. Keeping emissions as they currently are will become increasingly stretching.
- 1.11.5 Sector performance data which relates specifically to this PC is not available. The data relating to this PC has been requested for the first time this reporting year (2022/23) and therefore direct comparison is not yet available.

Overall performance

- 1.11.6 Our proposal put forward in this PC is that the PCL should be based on the estimated emissions position in each year of the 2025-2030 period as a result of delivering all of the interventions between now and 2030 as agreed in our FD plus our additional stretch, as noted above.
- 1.11.7 This baseline position will include all innovation and growth we expect to deliver by 2030 and has been proposed in draft in the Outcomes commentary and in our PR24 data tables but will need to be reviewed and updated before the start of the 2025-2030 period. This PCL and associated 2021/22 baseline has been verified by a suitably qualified third party and will need to be confirmed at FD when final projects and scope of AMP8 has been agreed with Ofwat. This can be verified by a suitably qualified third party.
- 1.11.8 These PCs incentivise us to stretch within planned base and standard enhancement programmes. We have pushed efficiency and innovations to support this goal while recognising that absolute reductions are very challenging given the scale and costs of programmes required in AMP8 across all price controls. We have built in reductions of 9,651 tCO₂e in base and a further 9,873 tCO₂e in our standard

enhancement programme. We have also built in an additional stretch across water and wastewater of 4,283 tCO₂e to incentivise ongoing reductions, this is equivalent to 1% of a year's AMP8 emissions.

- 1.11.9 The performance commitment target includes the stretch we are making within our base and standard enhancement programmes. Our forecast for GHG emissions in the last year of AMP7 is 429,685 tCO₂e, reducing to 418,910 tCO₂e at the end of AMP8. Therefore, in the context of growth, our forecast position is a significant stretch given the stretch we have already taken, without any funding specifically focused on emissions reduction.
- 1.11.10 As v17 of the Carbon Accounting Workbook (CAW) is used for this PC, the reporting of process emissions will remain the same (linked to population equivalent), which makes our PCL and any subsequent reductions, more stretching as process emissions will not be within management control and make up a large proportion of our footprint.

Performance from base

- 1.11.11 Substantial investment is needed to deliver the transformational change required to achieve our role in national targets for net zero 2050 and the interim carbon budgets, including a 78% reduction by 2035. Forecast upward growth pressures, such as extending our services to a growing population, and treating wastewater to higher standards to meet statutory requirements to continue improving the water environment, as set out by the Environment Act, make it increasingly difficult to deliver a reduction in operational GHG emissions. Operational cost efficiency has been a primary driver to date, but also delivering emissions reductions and resilience benefits. We have invested heavily to expand our own renewable energy generation facilities, primarily to support more efficient and effective sludge management.
- 1.11.12 An increase in consumption of electricity and chemicals as a result of AMP7 WINEP projects yet to come live (as of 2023) result in an increase in base consumption from 2023/24 onwards. The purpose of these projects is to meet stricter environmental permits and supply the growing population in the region.
- 1.11.13 A reduction is seen from 2027/28 to 2029/30 as a result of the cost adjustment claim for covering anaerobic digestion tanks as part of compliance with the Industrial Emissions Directive (IED). Covered tanks will include some form of abatement/treatment of gases, and can therefore be classed as closed in-line with CAW v17, resulting in lower emissions.
- 1.11.14 There is also a small increase forecast forwards as a result of population growth.

Performance from enhancement

- 1.11.15 The PC performance is linked to delivery of our AMP7 and AMP8 WINEP projects (*UUW64 – Wastewater Quality Overflows Enhancement Claims*) becoming operational, population growth and our net zero enhancement programme (*UUW67 - Cross Price Control Enhancement Claims*) reductions delivery timeline for projects which impact the PCL.
- 1.11.16 In the future, we're expecting GHG emissions reduction costs to increase along with the continued challenge of substantial growth pressures, which means we need to go further to deliver the required overall reductions. Having already undertaken many of the most commercially attractive options we anticipate not being able to deliver the required reductions in operational GHG emissions without increased expenditure. To address this, we have put forward a circa £196m net zero enhancement programme to deliver circa 210,000 tCO₂e reportable emissions benefit in AMP8, and enabling over 2m tonnes of benefits by 2055. The benefits are aligned to those reported in CW15 for AMP8.
- 1.11.17 OUT3.8 - Calculated cell; this calculation should be OUT1.8 - OUT2.8 = OUT3.8, so that reductions in emissions are shown as negative and increases are positive.
- 1.11.18 Note that base takes the position that any enhancements from AMP7 form the baseline for AMP8 (2025/26). For future years the 2025/26 value is used, with population growth applied year on year from this point on. Therefore base does not include the impact of future enhancement expenditure, from AMP8 onwards.

- 1.11.19 Note that enhancements are calculated in each AMP and the impact from that programme is forecast to continue out to 2049/50 (and beyond). This has a compounding effect where, for example, the enhancement at the start of AMP10 (2040/41) is the compounded impact of AMP7, 8, 9.
- 1.11.20 Net zero enhancements reduce emissions growth in base, until 2029/30 where wastewater WINEP causes growth beyond base growth.
- 1.11.21 Note that the figures in OUT3 applies a 0.2% stretch on the raw data provided in the carbon forecast, while the figures in CW15 and CWW15 are the raw outputs from the carbon forecast. Therefore, the figures in the OUT tables will not match (FALSE flag) the component figures in CW15 and CWW15.

Underlying calculations for this performance commitment

- 1.11.22 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

Operational greenhouse gas emissions (wastewater)

- 1.11.23 A general increasing trend can be seen for wastewater price control from 2018/29 to 2034/35, built up of the following elements.
- 1.11.24 An increase in consumption of electricity and chemicals as a result of AMP7 WINEP projects yet to come live (as of 2023) result in an increase base consumption from 2023/24 onwards. The purpose of these projects is to meet stricter environmental permits and supply the growing population in the region.
- 1.11.25 An increase is seen across AMP8 from wastewater WINEP, with full impact by 2032/33.
- 1.11.26 There is also a small increase forecast forwards as a result of population growth.
- 1.11.27 A reduction is seen from 2027/28 to 2029/30 as a result of the cost adjustment claim for covering anaerobic digestion tanks as part of compliance with the Industrial Emissions Directive (IED). Covered tanks will include some form of abatement/treatment of gases, and can therefore be classed as closed in-line with CAW v17, resulting in lower emissions.
- 1.11.28 A reduction is seen from the net zero enhancements selected (not in the challenge fund) that impact the wastewater price control. These are Green Fleet (moving to electric vehicles for the majority of the fleet and Bioresources HGV fleet using biomethane as a fuel), Property Enhancements moving to heat pumps, Net Zero Catchment Strategy Phase 1, and fuel switching to use biogas in boilers where fossil fuel was previously used. These all start in AMP8, with full benefit of seen in 2030/31.
- 1.11.29 Note that base takes the position that any enhancements from AMP7 form the baseline for AMP8 (2025/26). For future years the 2025/26 value is used, with population growth applied year on year from this point on. Therefore base does not include the impact of future enhancement expenditure, from AMP8 onwards.
- 1.11.30 Note that enhancements are calculated in each AMP and the impact from that programme is forecast to continue out to 2049/50 (and beyond). This has a compounding effect where, for example, the enhancement at the start of AMP10 (2040/41) is the compounded impact of AMP7, 8, 9.

Kg CO₂e per volume of wastewater treated

- This is an auto-populated line.
- *UUW's* version of Excel does not support the function used in this cell, so all values show as #NAME. The solution has been for *UUW* to change the function_xlfn.CONCAT to CONCATENATE to enable the rest of the table to populate.
- This is not a representative method for tCO₂e. *UUW* agrees with Ofwat that although "not a perfect measure" there is value in also reporting the emissions' intensity ratios, namely Water emissions per megalitre of distribution input and Wastewater emissions per megalitre of volume of wastewater received at sewage treatment works. The value being to provide useful insight into company management of their emissions, relative to a baseline and the organisation's own trend over time in a like for like methodology. However it is not suitable for comparison between companies as each

are of different size and makeup. *UUW* do not support the use of either intensity ratios or change in intensity ratios from baseline as the performance measure for the performance commitments, as this would compound performance in other business operational activity with that of greenhouse gas management.

Baseline tonnes CO₂e (2021/22)

- This is an auto-populated line from OUT5.27.

Reduction % from 2021/22 baseline (tonnes CO₂e)

- This is an auto-populated line.
- Calculation produced is showing the number as a decimal, whereas units for the cell are shown as a percentage. The format of the cell needs to be changed to Percentage instead of Number if a percentage value is required. This will not impact any calculations though as the percentage and decimal functions calculate out to the same values.
- The calculations used in OUT4.29 and OUT5.31 should be equivalent in calculating a percentage change, however OUT4.29 uses the formula $(x_2 - x_1) / x_1$ whereas OUT5.31 uses the formula $(x_1 - x_2) / x_1$, where x_1 is the value from the baseline year 2021/22, and x_2 is the reporting year being compared to the baseline. The result is that in OUT4.29 a negative value represents a decrease and in OUT5.31 a negative value represents an increase. Based on Ofwat's PR24 guidance, OUT5.31 is correct and OUT4.29's calculation should be changed to $(x_1 - x_2) / x_1$.

Baseline kg CO₂ per volume of wastewater treated (2021/22)

- Auto-populated line from OUT5.29.

Reduction % from 2021/22 baseline (kg CO₂e per volume of wastewater treated)

- The calculations used in OUT4.31 and OUT5.33 should be equivalent in calculating a percentage change, however OUT4.31 uses the formula $(x_2 - x_1) / x_1$ whereas OUT5.33 uses the formula $(x_1 - x_2) / x_1$, where x_1 is the value from the baseline year 2021/22, and x_2 is the reporting year being compared to the baseline. The result is that in OUT4.31 a negative value represents a decrease and in OUT5.33 a negative value represents an increase. The formula used in one of these line references should be changed for consistency in reporting. Based on Ofwat's PR24 guidance, OUT5.33 is correct and OUT4.31's calculation should be changed to $(x_1 - x_2) / x_1$.

1.12 Leakage

Historical performance

1.12.1 We have met our leakage targets in the first three years of AMP7 and we continue in our efforts to reduce leakage levels. To achieve this performance, a number of key activities/interventions have been implemented:

- Increased advertisement of our efforts on leakage and online channels for customers to use to report leaks (e.g. using tools, such as our App);
- Used our fleet of around 70,000 acoustic sensors to identify and pinpoint leaks more efficiently;
- Managed network pressures using our ~4000 pressure management valves (PMVs), ~1000 of which can now be controlled remotely;
- Increased resources for detecting and repairing leaks, as well as increasing our logger teams (installing an increased number of 'lift and shift' loggers in our network to detect leaks that wouldn't be found using traditional manual techniques);
- Worked with our partners and supply chain to speed up leak repairs; and
- Used our partner and United Utilities vehicles with digital messaging capability to run specific messaging across the region, alongside existing partner and United Utilities livery which now carries all year round leakage related messaging.

- 1.12.2 These enhancement type activities have been delivered from *UUWs* base allowance in AMP7 as shown in CW3. In-line with Ofwat guidance provided for OUT2/3, we have identified performance driven by enhancement type activities as “performance from enhancement”.
- 1.12.3 Certain weather patterns (dry weather and freeze-thaw events) can have a substantial impact on leakage levels. Severe freeze-thaw events cause increases in customer side and distribution side leakage levels. Customer side leakage can be identified where leakage levels in an area decrease with no company action – this is particularly prominent in freeze-thaw events. Customer action can have a significant impact on leakage and we actively engage with customers through campaigns on freeze-thaw preparedness (promoting pipe lagging and tap covers), as a critical part of tackling leakage. We saw in the freeze-thaw event that severely impacted the North West in December 2022 that customer action to address leakage on their own pipes made a significant impact on leakage performance over this period, negating the identification or need for mains repairs on our own assets to combat the spike in leakage that we saw during this event. This effect is one of the key drivers in pursuing customer education campaigns about the need for customers to lag their pipes and use garden tap covers to prevent freeze-thaw issues on their own pipes.

Overall performance

- 1.12.4 Several sources of information were used to determine the leakage PCL:
- Our Water Resources Management Plan 2024 (WRMP24) has assessed the supply demand requirements to ensure water resources resilience, as well as meeting the long-term and interim leakage targets in the Government’s Environmental Improvement Plan 2023;
 - We have used the data on historical performance trends for PR24 data published by Ofwat to forecast upper quartile performance; and
 - We have used the Annual Performance Report (APR) Datashare 2023 to update our forecast of upper quartile performance using the reported data for 2022/23.
- 1.12.5 Percentage reduction in three year average leakage from 2019/20 from table OUT4 line OUT4.33

Performance from base

- 1.12.6 The base modelled allowance will maintain leakage performance, in so far as it will offset the natural rate of rise.
- 1.12.7 Building on the additional network sensors we installed in our water network in AMP6 and AMP7, and incorporating the learnings from our wastewater dynamic network management (DNM) deployment, water DNM will be transformative to the way we operate and manage our water network. Predictive analytics applied to the vast amount of data we have on our water network will support improved leakage detection targeting and a resulting efficiency.

Performance from enhancement

- 1.12.8 Our proposed enhancement case for leakage will allow us to reduce levels beyond maintain existing performance, through targeted mains renewal and network optimisation.
- 1.12.9 Delivered in a targeted way, using the insights we’ve gained from the additional network sensors we installed in AMP6 and AMP7, mains renewal/replacement is critical in enabling us to reduce leakage in a way that can be sustained over the longer term. In the short term view, this could be seen as a more expensive option for leakage reduction, but it is one of the only options that will allow us to deliver the ambitious leakage reductions we are planning.
- 1.12.10 For a number of performance commitments, Ofwat guidance required historical performance from enhancement to be quantified. As stated previously, activities deemed as enhancements have been profiled in the OUT tables for leakage. As the performance from enhancement for AMP8 in OUT3 is the cumulative benefit of enhancement type activities in AMP7 and 8, there is a difference (FALSE flag) in the absolute performance from enhancement calculated in CW15 which focuses on the AMP8 Leakage Enhancement Case (*UUW61- Water Supply Demand Enhancement Claims*) only.

Underlying calculations for this performance commitment

- 1.12.11 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.13 Per Capita Consumption (PCC)

Historical performance

- 1.13.1 The PR19 PCL was not informed by the WRMP19 projections for household consumption, but was instead proposed by Ofwat, and accepted by United Utilities as part of the PR19 process.
- 1.13.2 We have not met our PCC targets in the first three years of AMP7 due to increased household demand as a result of Covid19 related impacts. The ongoing changes in demand patterns, and impact on working locations has introduced substantial uncertainty to future demands. We nevertheless have risen to the challenge of this impact on consumption, with substantial investment in individualised customer engagement campaigns, roll out of water saving devices and an increased focus on identifying and resolving customer side leakage. As a result we are on track to achieve the AMP7 closing target position by 2024/25. We anticipate that the three year average value will remain above target in 2024/25 as higher usage in 2022/23 and 2023/24 impacts final year values.
- 1.13.3 *UUW* is performing close to industry upper quartile on a three year rolling average basis, with annual performance in 2022/23 better than upper quartile positions following better than average recovery from Covid19 impacts.

Overall performance

- 1.13.4 *UUW* proposes a PCL for the business plan period 2025-2030 in-line with the Revised Draft WRMP24 with a glide path to long term demand reduction targets.

Performance from base

- 1.13.5 For AMP8 and beyond any performance benefit received from forecast enhancement expenditure is excluded. Benefit from enhancement expenditure aligns to the benefits of options selected in the WRMP24.
- 1.13.6 Performance improvements will also be delivered through the actions of developers as water efficiency standards for new build homes become more stringent.

Performance from enhancement

- 1.13.7 Further performance improvements beyond those delivered through base will be delivered through our proposed Smart Metering and Water Efficiency enhancement cases (*UUW61 – Water Supply Demand Enhancement Claims*). For the performance benefits from these enhancement cases, please refer to tables CW15 for AMP8 benefits.

Underlying calculations for this performance commitment

- 1.13.8 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.14 Business Demand

Historical performance

- 1.14.1 Historically business demand has been stable with a temporary reduction due to the impact of Covid19. Following non-household retail market separation *UUW* stopped investment in business demand reduction activity, in-line with market guidelines in place at the time. Following updates and clarifications to non-household retail market codes *UUW* has begun limited engagements with non-household customers and retailers to develop demand reduction propositions from 2024/25.

- 1.14.2 There is a wide range (MI/day) of industry performance, depending on the number and type of businesses in the individual areas so it is not possible to compare percentage reductions or provide a normalised view of across water companies.

Overall performance

- 1.14.3 The PCL is linked to our WRMP projections for demand reduction with dependencies on Leakage and PCC as part of the water balance calculation.

- 1.14.4 Total business consumption in megalitres per day (MI/d)

2017/18 to 2021/22

- 1.14.5 Historical data from 2017/18 to 2021/22 is based on the annual returns made through the Regulatory Reporting process.

- 1.14.6 The historical data from 2017/18 to 2021/22 from these annual returns is available on the Ofwat website¹.

2022/23 to 2029/30 (automatically populated from table CW5 lines CW5.33 and CW5.34)

- 1.14.7 Historical data from 2022/23 is based on the annual returns made through the Regulatory Reporting process. The data for 2022/23 is from the “APR table 2023”².

- 1.14.8 Forecast data for 2023/24 to 2029/30 aligns to our Water Resources Management Plan 2024 (WRMP24) forecast of total business consumption, including the benefits of enhancement expenditure.

- 1.14.9 The primary model used to estimate the costs and benefits of options to reduce demand for water is from the WRMP24. The data for table OUT4 is from the “PR24_OUT4_Rounded” sheet/tab and the data for CW5 is from the “PR24_CW5_Rounded”

2030/31 to 2034/35

- 1.14.10 Forecast data for 2030/31 to 2034/35 aligns to our Water Resources Management Plan 2024 (WRMP24) forecast of total business consumption, including the benefits of enhancement expenditure.

- 1.14.11 The primary model used to estimate the costs and benefits of options to reduce demand for water is from the WRMP24. The data for table OUT4 is from the “PR24_OUT4_Rounded” sheet/tab and the data for CW5 is from the “PR24_CW5_Rounded”

Performance from base

- 1.14.12 Outcome performance from base expenditure (OUT2) for business demand is the reduction in business demand that is not specifically driven by enhancement expenditure

- 1.14.13 However, any performance improvements are not necessarily funded from base expenditure – the figures in OUT2 constitute the performance improvement in business demand over AMP7, combined with the modelled forecast of business demand with no company intervention (aligned to our WRMP24) and this also captures some of the “natural decline”

Performance from enhancement

- 1.14.14 Outcome performance from base expenditure (OUT2) for PCC is the reduction in PCC that is not specifically driven by enhancement expenditure

- 1.14.15 However, any performance improvements are not necessarily funded from base expenditure – the figures in OUT2 constitute the performance improvement in PCC over AMP7, combined with the modelled forecast of PCC with no company intervention (aligned to our WRMP24) and this also captures some of the “natural decline”

¹ <https://www.ofwat.gov.uk/regulated-companies/price-review/2024-price-review/pr24-cost-assessment-datasets/>

² <https://www.unitedutilities.com/corporate/about-us/performance/annual-performance-report/>

Underlying calculations for this performance commitment

- 1.14.16 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.15 Total Pollution Incidents

Historical performance

- 1.15.1 Historic data 2012-2023 – APR data share used to populate the number of incidents and the sewer length used for normalisation. This uses the 2017/18 sewer length of 77,339 (as specified in EPA v9) to normalise historic data. This is not the same sewer length that would have been used within the EPA assessment at the time but the performance commitment did not historically use the same methodology and so this is down to interpretation.
- 1.15.2 Results are variable year on year due to external influences for all WaSCs. This is evident in the historic data collated and for *UUW*. *UUW* is currently frontier performance due to a number of interventions
- 1.15.3 We put a lot of hard work into improving our performance on pollution, as we know it is a priority for customers and stakeholders. We are the leading company in the water industry with the fewest pollution events as well as high levels of self-reporting. Reductions in numbers of pollution have been across all types of pollution including ‘serious pollutions’. We have a robust pollution reduction plan ([unitedutilities.com/corporate/responsibility/environment/Reducing pollution/](https://unitedutilities.com/corporate/responsibility/environment/Reducing%20pollution/)) which details our approach to driving down pollution incidents including our investment in Dynamic Network Monitoring (DNM) telemetry using real time information from the network to identify potential issues before they cause pollution. As well as DNM we ensure effective maintenance of assets, alarm management, responding quickly when we are aware of an incident to protect the environment and having a robust reporting procedure to ensure we understand the root cause of pollution when it does happen, so steps can be put in place to prevent a reoccurrence.

Recent industry performance has exceeded PR19 App1 values (forecast performance), but is variable and is expected to align with predictions by AMP8.

Overall performance

- 1.15.4 All pollution performance is achieved from base expenditure, therefore outcome performance from base expenditure is the same as performance.

Performance from base

- 1.15.5 Future forecast 2023/24 – forecast total pollution incident uses the 2017/18 sewer length of 77,339 (as specified in EPA v9) to normalise data. End of AMP forecast aligns to OUT8.

- 1.15.6 [✂

]

- 1.15.7 Through Dynamic Network Management of our sewer system we have achieved a significant reduction in events in AMP7, our baseline programme will put in place a programme to maintain this performance and go beyond what we have achieved though DNM as we continue into AMP8.
- 1.15.8 Our pollution incident reduction plan sets out our ambition and plan for reduction in pollution events through reduction the impact of our activity on the receiving environment.
- 1.15.9 We have assumed that our enhancement programme will not impact the number of pollution events. Hydraulic capacity accounts for a small proportion of our pollution incidents and as such, whilst we have a significant programme to reduce storm overflow discharges, we do not anticipate that this will result in an improvement in performance.

- 1.15.10 Future forecast 2025-2035 – forecast total pollution incident uses the 2017/18 sewer length to normalise data in year 1 of AMP8 and the 2022/23 sewer length to normalise date in years 2, 3, 4 and 5. Number of incidents aligned to agreed long term target.

Performance from enhancement

- 1.15.11 Performance is from base only.

Underlying calculations for this performance commitment

- 1.15.12 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.16 Serious Pollution Incidents

Historical performance

- 1.16.1 *UUW* performance has improved significantly for serious pollution incidents in-line with the industry, achieving zero for 2019, 2020 and 2022. Pollution incidents have reduced as a result of operational improvements, enhancing our review process, investing in our people, assets and systems, to create a smarter network. Through enhanced monitoring and improved operational responses, smart networks can identify changes to normal operation which can be proactively investigated before an incident occurs. This is helping *UUW* to reduce number of pollution events and deliver on our commitments to customers and regulators.

Overall performance

- 1.16.2 All pollution performance is achieved from base expenditure, therefore outcome performance from base expenditure is the same as performance.

Performance from base

- 1.16.3 [✂]

]³.

- 1.16.4 Future forecast 2025-2035 – zero serious pollution events

Performance from enhancement

- 1.16.5 Performance is from base only.

Underlying calculations for this performance commitment

- 1.16.6 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.17 Discharge Permit Compliance

Historical performance

- 1.17.1 The PR19 PCL was 100 per cent, with a deadband set at 99.0 per cent. EPA performance target is 100 per cent; the threshold for 'green' in the discharge permit compliance (numeric) metric is 99.0 per cent.
- 1.17.2 Historic Performance is variable, but has been generally improving since 2015, with 2020 resulting in our best performance of 99.75 per cent and one failing treatment works. The number of numeric permit conditions has increased each year throughout AMP7, with around 1 per cent of the total being non-compliant. Permit limits continue to tighten, with many of the new limits at the boundaries of technical feasibility, phosphorus limits of 0.25 mg/l for example. We have been able to achieve these new limits by innovations in treatment and improving operating procedures. Section 1.2.5 goes into more detail

³ <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/20171129-Incidents-and-their-classification-the-Common-Incident-Classification-Scheme-CICS-23.09.16.pdf>

about some of the activities undertaken in AMP7 to drive improvements in performance for this measure.

- 1.17.3 *UUW* achieved 4 star EPA rating for five of the eight years since 2015, with the remaining years achieving 3 star status. We dropped to a 3 star rating in 2022 as a result of not achieving the newly categorised core metric of 99.0 per cent for discharge permit compliance, despite having a green rating for all other measures. This dip in performance is disappointing as we were proud of our leading company status in the industry for EPA 4 star rating.
- 1.17.4 Plans are in place to recover this position for the rest of the AMP and beyond, with ‘at risk’ works subject to intensive care plans, and we are forecasting an improved performance of 99.0 per cent for this measure for the remaining two years of AMP7. This is part of our focus to regain our 4 star EPA status and our drive forward for improved compliance. [✂]

]. *UUW* has the highest percentage of combined public sewers in the industry at 54 percent which presents a challenge in maintaining performance after particularly heavy rainfall events.

- 1.17.5 This deterioration in performance does highlight how difficult it is to maintain 100 per cent compliance at all times, and why a deadband would be appropriate for this performance measure to mitigate against one off operational incidents as well as aligning to the EPA.
- 1.17.6 Industry range of performance is variable. No one company has consistently maintained a frontier position, although the general trend is an improvement in performance from 2016 to 2022, with the gap between companies closing compared to performance at the start of AMP6.

Overall performance

- 1.17.7 We believe base expenditure will allow us to achieve the performance as shown in supplementary document *UUW30 - Performance Commitments Technical Document* but enhancement expenditure from *UUW65 - Wastewater Quality Additional Requirements Enhancement Claims* is also required in order to achieve this PCL 100% target.

Performance from base

- 1.17.8 100 per cent is an extremely stretching target, with the increased number of more stringent permit conditions we will have to comply with in AMP8. The number of sites with a phosphorus (P) permit limit is expected to increase from 48 in 2020 to 167 by 2030 due to additional environmental improvements. Sites with new phosphorus limits will also receive additional permit limits for iron or aluminium where chemical dosing is used as the treatment solution, thereby increasing the number of conditions to comply with. By the end of AMP8 we anticipate we will have 27 per cent more numeric permit conditions to comply with.
- 1.17.9 External factors such as climate change are increasing the risk of being able to comply with permit conditions and whilst we believe water companies are better able to mitigate against this than customers, operating our treatment works in extreme weathers increases risk. Unusual weather exemptions apply to cold weather only, and in 2022 we experienced issues caused by extreme hot weather that we had never previously seen. We continue to learn from these experiences and put mitigation in place where possible but there may be future risks we haven’t yet anticipated.
- 1.17.10 The spill programme to address storm overflow discharges is likely to result in our treatment works receiving at times of heavy rainfall, more dilute effluent and at higher flow rates for longer duration. The ability to adapt our treatment processes to deal with extremes of climate and the resulting changes in sewage composition is challenging, and will become more so as permits limits become lower.

- 1.17.11 We are predicting a jump in the number of wastewater sites with numeric permits from year 4 of AMP8 based on the assumption our septic tank replacement programme is delivered as per current WINEP timeline, that numeric permits are applicable for each septic tank and that the EA issue permits in the year of delivery. It is expected that some of the WINEP delivery programme dates are likely to change, potentially resulting in a change in the number of permits in a given year. We are expecting an increase of 34 in the number of numeric wastewater discharge permits from AMP7 to the end of AMP8, profile as per data table.
- 1.17.12 The overall permit compliance position shows our actual performance taken from historic Ofwat performance data sets and from 2022/23 onwards reflects the PCL target of 100 percent as determined by Ofwat.
- 1.17.13 Percentage discharge compliance is reported to 1 decimal place from AMP8 in-line with Ofwat's change in reporting requirements. Previously this was reported to 2 decimal places, so historic performance and performance for the remainder of AMP7 reflects this.

Performance from enhancement

- 1.17.14 Performance is from base, supported by the PR24_Enhancement Ww Supply Demand enhancement case (*UUW65 – Wastewater Quality Additional Requirements Enhancement Claims*). The differences between the profile of enhancement benefits forecast for AMP9 in OUT3 and CWW15 (FALSE flag) are associated with future Supply Demand enhancement programmes.

Underlying calculations for this performance commitment

- 1.17.15 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.18 Bathing Water Quality

Historical performance

- 1.18.1 Since 2012 we have invested £610m in assets that impact bathing waters plus another £597m forecast from 2023 to 2030 this means a predicted total investment of £1,207m. As a result of the investment in AMP5 the North West saw a significant improvement in bathing water performance from 24.3% in 2012 to 62.0% in 2016, since then performance has remained stable. All historic funding has been to achieve DEFRA classification of Sufficient, however in 2022 72% of the North West bathing waters achieved a Good or Excellent DEFRA classification.

Overall performance

- 1.18.2 The 1.2% improvement in the bathing water quality PC score from 2022/23 performance is based on an improvement of one bathing water by one classification. This is an ambitious target as although the WINEP includes schemes to improve discharges to bathing waters, modelling has shown that this will not result in a change of classification to the bathing waters. Therefore, by targeting an improvement in bathing water quality under this measure we are going beyond our committed enhancement programme. This PCL will build on the latest bathing water results at the time of FD (Bathing Season 2024), therefore an improvement of one classification at one bathing water should be included in the PCL for AMP8.

Performance from base

- 1.18.3 The forecast investment in AMP8 for projects with a bathing water driver is £270 million however our coastal modelling shows that this will maintain performance or provide an 'in class' improvement. We do not anticipate that this investment will improve any classifications on its own. We are therefore committing to an ambitious target of delivering a 1.2% improvement in the bathing water quality PC score with significantly reduced investment compared to the 2016-2022 result. This improvement will be wholly funded from base.
- 1.18.4 Our plan for achieving this improvement in performance will focus on opportunities to work in partnership such as with the established Turning Tides partnership as well as the newly formed Fylde

Hub. We will also ensure our continued cyclical maintenance of all assets which have the potential to impact a bathing water.

- 1.18.5 There are no enhancement schemes that will deliver a bathing water class change however there will be some in class benefit as a result of the WINEP investment. It is not possible to quantify the impact on bathing water quality as these projects have been designed to meet a spill frequency driver only, none of the projects in WINEP have been identified from the AMP7 bathing water investigation.
- 1.18.6 As custodians of the environment in the North West, *UUW* takes its responsibility seriously to protect and enhance our environment including designated bathing waters. In 2012 *UUW* became a founding member of Turning Tides partnership, which was set up to tackle poor bathing water performance. This partnership continues to deliver proactive media campaigns such as ‘Love my Beach’ and brings together local stakeholders including councils and the Environment Agency with the shared goal to provide ‘Bathing waters we can be proud of, that are valued by communities and that support a vibrant economy’⁴.
- 1.18.7 In addition to our work in partnership we also focus on our own operation. Prior to every bathing season we carry out specific pre-season checks on all treatment and sewerage assets which could have an impact on the receiving bathing water should an issue occur. This is in addition to our regular cyclical maintenance, which ensures we have these assets in the best possible condition ahead of the bathing season. Operational teams are also briefed at the start of every season to highlight the specific risk around bathing waters and to ensure they are clear on the importance of raising and escalating risks when they occur.
- 1.18.8 In AMP7 *UUW* has delivered a near real time reporting system for all storm overflows, this builds on the existing report that focussed on designated coastal bathing waters. This platform will provide information on recent storm discharges to enable visitors of bathing waters and other recreation sites to make informed decisions about their use. This data will be available to download to provide increased data transparency and support others who wish to access this data such as media outlets, universities and campaign groups.
- 1.18.9 Continued investment through our base programme will contribute towards stable bathing water performance however *UUW* cannot do this alone. The AMP7 bathing water investigation identified the highest contributing sources for each bathing water assessed, this has been summarised in (*UUW30 – Performance commitments technical document*) for each bathing water. Where *UUW* assets were a key contributor an improvement solution was costed and benefits reviewed in-line with the Bathing water directive, no schemes were identified for implementation in AMP8.

Performance from enhancement

- 1.18.10 Performance is from base only.

Underlying calculations for this performance commitment

- 1.18.11 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.
- 1.18.12 Note: the Bathing Waters performance commitment should be shown to one decimal place in OUT1, however due to the formulas provided, it is showing to two decimal places.

1.19 River Water Quality (Phosphorus)

Historical performance

- 1.19.1 This is a new measure for PR24.

⁴ <https://www.blackpool.gov.uk/Your-Council/Creating-a-better-Blackpool/Regeneration/Coastal-and-water-improvements/Turning-Tides.aspx>

1.19.2 There is no industry data share in relation to this performance commitment.

Overall performance

1.19.3 The PCL target for river water quality P includes two elements, a stretch on the existing phosphorus permit limits at wastewater treatment works plus phosphorus removed from catchment interventions.

Wastewater treatment works performance

1.19.4 Historic wastewater treatment works performance makes up the main proportion of this performance commitment level. Data analysis of historic performance against permit limit gives an average performance of 37.52 % beyond the permit limit based on our last 5 years data. This has been calculated based on all permits with phosphorus limits of 0.5mg/l and above. We have not included analysis of data from permits below 0.5mg/l as there were too few data points for this to be representative of future performance.

1.19.5 When calculating phosphorus load we have used the same flow data as that used to calculate the 2020 baseline. We note the comments in the errata log, published by Ofwat following publication of version 6 of the data tables, regarding future flow forecasts, but have decided to use the flow figures from 2020 despite it being a wetter than average year. This does result in a higher PCL and thus a more stretching target for ourselves than if we use flow data from an average rainfall year.

1.19.6 We have also included an additional outperformance beyond the 37.52 per cent reduction of an additional 0.5 per cent, a stretch on performance for all wastewater treatment works. This additional 0.5 percent equates to removing an additional 43,500 kg of phosphorus from the environment over the AMP. This, in addition to the current outperformance of permit for sites with current phosphorus permits is a stretching target providing significant environmental benefit over and above that we are required to deliver.

Catchment interventions

1.19.7 The second element of this performance commitment relates to partnership delivery of phosphorus reduction schemes. Within AMP8 *UUW* currently proposes to deliver nine schemes using a catchment intervention solution which will be delivered in partnership with third parties. These schemes will be delivered in-line with the catchment nutrient balancing (CaBA) approach employed on *UUW*'s successful River Petteiril catchment partnership scheme. This is an example published by *UUW* and shared with the rest of the industry.

1.19.8 We are currently developing our delivery plans for AMP8 working with stakeholders within the identified catchments. Based on our experience of delivering this type of scheme, such as that in the River Petteiril catchment, we have profiled these within our PCL to be delivered towards the end of the AMP.

Sustainable long term solutions

1.19.9 *UUW* recognises the need for sustainable long term solutions to phosphorus removal in response to the challenges of delivering long term operational resilience and responding and adapting to climate change. Although our current plan for the delivery of AMP8 WINEP includes chemical phosphorus removal for the majority of sites, we are focusing on biological phosphorus removal where there are additional drivers at site that make the significant capital expenditure to allow biological phosphorus removal cost beneficial. We recognise that shortages of chemicals used to remove phosphorus via traditional chemical dosing solutions, and the impact on carbon are driving a focus towards more innovative solutions such as those being trialled as a result of funding secured through the Ofwat Innovation fund. In the project we are leading on 'Alternative approaches to phosphorus removal on rural wastewater treatment works'⁵ the project is trialling three alternative solutions to chemical phosphorus removal in order to gain a comprehensive life cycle analysis of each option. The intention is

⁵Ofwat (2023) Alternative approaches to phosphorus removal on rural wastewater treatment works, available [here](#)

then to incorporate these within AMP8 delivery plans where appropriate to meet new or reduced phosphorus permits.

Performance from base

- 1.19.10 As per guidance published by Ofwat on 2 August, PR24 Business plan data table queries and responses, this information is not required in the data tables, although most expenditure is related to WINEP enhancement expenditure.

Performance from enhancement

- 1.19.11 As above, per guidance published by Ofwat on 2 August, PR24 Business plan data table queries and responses, this information is not required in the data tables, although most expenditure is related to WINEP enhancement expenditure.

Underlying calculations for this performance commitment

- 1.19.12 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.20 Storm overflows

Historical performance

- 1.20.1 There was no equivalent performance commitment in AMP7, however *UUW* has committed to a Better River Better North West plan in AMP7 which will deliver a one third spill reduction from 2020 baseline.
- 1.20.2 Full measured historic performance is not available as EDM monitors are still being delivered. Model data is available and has been used to develop the PCL. *UUW* have put in place challenging targets in AMP7 and AMP8 to provide short-term and sustainable long-term solutions for spill frequency reduction. This ambitious target goes above and beyond our committed delivery programme to deliver spill reduction as soon as possible.
- 1.20.3 AMP7 WINEP enhancement is not captured within the table, following confirmation from Ofwat that they would not use past data to inform future performance. Enhancement seen in 2024/25 is reflective of the AMP8 Accelerated programme.

Overall performance

- 1.20.4 The PCL has been developed to meet an average of 20 spills per annum by the end of AMP8, this is a significant reduction from the 2020 baseline of 59 average spills and demonstrates our commitment to reduce storm discharges.
- 1.20.5 This line is impacted by the introduction of operability to the calculation. This is a new requirement for AMP8 and therefore not reported in AMP7. The requirement for all overflows to have event monitoring is not until December 2023. Ahead of that time those without EDM have 0 operability and therefore assigned 100 spills. This is not a reflection of actual performance seen in submitted EDM data returns

Performance from base

- 1.20.6 Storm overflow performance is impacted by rainfall, topography, asset health etc. which makes it difficult to attribute benefit between base and enhancement spend accurately. In addition, the roll out of EDM monitors on storm overflows was not completed until the end of 2022 making 2023 the first full year where all storm overflows are monitored. In information notice 'IN 23/07 Assessing the influence of enhancement expenditure on historic performance trends for PR24'. Ofwat stated that "No adjustment relating to enhancement expenditure will be made to historical performance data" and therefore all historic performance has been attributed to base expenditure and no AMP7 enhancement expenditure has been considered within the population of this table.
- 1.20.7 From 2025 (2025/26) base expenditure will maintain the current position and prevent deterioration of spill performance through small incremental improvements but will not deliver a step change in performance.

Performance from enhancement

- 1.20.8 The roll out of EDM monitors on storm overflows was not completed until the end of 2022 making 2023 the first full year where all storm overflows are monitored. In information notice 'IN 23/07 Assessing the influence of enhancement expenditure on historic performance trends for PR24'. Ofwat stated that "No adjustment relating to enhancement expenditure will be made to historical performance data" and therefore historic enhancement or future AMP7 enhancement expenditure has been captured within this table.
- 1.20.9 Enhancement expenditure from AMP8 and AMP9 has been considered. In April Ofwat agreed to accelerate some of the AMP8 WINEP programme for storm overflow spill reduction into AMP7, as a result 5 schemes will complete in AMP7 delivering a spill reduction benefit, this benefit has been captured within this table. Spill reduction in AMP8 reflects the benefits from our AMP8 WINEP programme (*UUW64 – Wastewater Quality Overflows Enhancement Claims*) but delivery has been accelerated to reflect our commitment to reduce spills in the North West and deliver environmental enhancements as soon as we can. Spill reduction in AMP9 reflects the benefits from our proposed AMP9 programme as detailed within our storm overflows reduction plan, the spill reduction benefits have been evenly spread over the AMP however the true profile will be developed as part of the AMP9 business plan.
- 1.20.10 There is a difference (FALSE flag) between the benefit assessment outputs for the Storm Overflows enhancement case in CWW15 and the assumed benefits from the enhancement expenditure in OUT3. UUW has reflected the additional/immediate environmental benefit from short-term mitigation measures within the AMP8 performance commitment level, providing a more stretching PCL than would otherwise be possible through the enhancement programme alone (please refer to supplementary document *UUW30 - Performance Commitments Technical Document* for further information).

Underlying calculations for this performance commitment

- 1.20.11 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.21 Unplanned outage

Historical performance

- 1.21.1 Historic performance has exceeded targets set for AMP7. This is due to concerted effort within UUW to closely manage outages relating to asset failure, and enabling the prompt reinstatement, repair and recommissioning of assets in the event that they do fail.
- 1.21.2 The broader AMP8 definition has proven to be more challenging. This new definition removes previously allowed outage exclusions. These exclusions have historically allowed removal of any disruptions to peak week production capacity as a result of factors outside of the control of UUW, or which detract from the PC focus on Asset Health. We therefore recommend that these exclusions remain for AMP8.

Overall performance

- 1.21.3 PCL was set using forecast performance data, based on industry shared performance data.

Performance from base

- 1.21.4 We expect that no benefit will be delivered for this PC as a result of enhancement projects. This position is based on the assumption that outages as a result of raw water quality will not be included within the AMP8 PC definition. If we are required to include outages as a result of raw water quality, within the Unplanned Outage performance metric, there will be a slight benefit as a result of the GAC installation at 5 WTWs as per the proposed Raw Water Quality Enhancement programme.
- 1.21.5 The opportunities for transformational performance improvement are limited, but include significant capital investment in new assets, or under the proposed AMP8 definition, long term investment in catchment management.

Performance from enhancement

1.21.6 Performance is from base only.

Underlying calculations for this performance commitment

1.21.7 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.22 Mains repairs

Historical performance

1.22.1 We have met our targets in the first three years of AMP7 and we continue to manage water network asset health.

Overall performance

1.22.2 The key proposals for AMP8 that support transformational performance improvements are:

Dynamic Network Management (DNM) and smart metering

1.22.3 Building on the additional network sensors we installed in our water network in AMP6 and AMP7, and incorporating the learnings from our wastewater dynamic network management (DNM) deployment, water DNM will be transformative to the way we operate and manage our water network. Predictive analytics applied to the vast amount of data we have on our water network will support improved leakage detection targeting and improved asset understanding. This will support proactive interventions (e.g. network and pressure optimisation) and should, over time, support a reduction in mains repairs.

Mains renewal/replacement

1.22.4 Delivered in a targeted way, using the insights we've gained from the additional network sensors we installed in AMP6 and AMP7, mains renewal/replacement is critical in enabling us to reduce leakage without the needs for a substantial increase in mains repairs.

Performance from base

1.22.5 *UUW* forecasts that, with efficient and targeted mains renewal/replacement programme, we will be able to deliver our PCL entirely from base expenditure. This will, however, be stretching to achieve while reducing leakage and will require continued underlying transformation of our operating model.

Performance from enhancement

1.22.6 Performance is from base only.

Underlying calculations for this performance

1.22.7 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

1.23 Sewer collapses

Historical performance

2011/12 to 2016/17

- Note: consistent with Ofwat's historical performance trends v2 dataset, we leave performance for the period 2011/12 to 2016/17 blank as substantive methodology changes since this period mean that performance is not directly comparable.

2017/18 to 2022/23

- Total performance in OUT5 (and by extension OUT1 via auto population) is reported as per Ofwat's historical performance trends v2 dataset and 2022/23 APR data. *UUW* has delivered, and are forecasting to deliver significant performance improvements over the course of AMP7.

2023/24 to 2024/25

- Forecasts of total performance for the remainder of the AMP are reported as per the best available predictions reported in OUT8.4. Relative to our 2022/21 position, *UUW* is forecasting to deliver a 10.5% reduction in sewer collapses per 1000 km of sewer.

Overall performance**2025/26 to 2029/30**

- OUT1.20 and OUT5.79 state our proposed PCL for AMP8. A comprehensive explanation for how we arrived at our proposed PCL is outlined in *UUW30 - Performance Commitments Technical Document*.
- In summary, our proposed PCL builds upon the advances we have made in proactive collapse detection and prevention. Indeed, the position from which we launch into AMP8 has been enabled by the implementation of our highly successful dynamic network management (DNM) initiative, an initiative that has involved the deployment of an extensive network of sensors to 'learn' normal flow signatures and detect deviations from the baseline to proactively alert us to deterioration in the network. As such, achieving a further 5% performance improvement is stretching.

2030/31 to 2030/35

- Our profile for sewer collapses represents a linear trajectory from our end of AMP8 (i.e. 2029/30) PCL position to the DWMP optimiser 2050 position of 11.32 incidents per 1000 km of sewer (note: this 2049/50 position is slightly different from that reported in the DWMP data tables published in May 2023 as within the published tables all figures were normalised by our 2022/23 sewer length whereas we have since re-normalised by forecast sewer length).
- The DWMP optimiser profile showed improvement in sewer collapse performance followed by deterioration. We instead believe that a linear trajectory towards the DWMP 2049/50 position is more realistic delivery profile and have therefore smoothed the profile.

Performance from base

- 1.23.1 We adopted the assumption that historically, and going forward, 100% of *UUW*'s collapse performance has been driven by base expenditure. Therefore, OUT2.20 and OUT5.79/OUT1.20 will be identical across the measure and, by extension, OUT3.20, performance from enhancement, is 0 for all years.

Performance from enhancement

- 1.23.2 Performance is from base only.

Underlying calculations for this performance commitment

- 1.23.3 For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

2. Additional Information - Proposed caps and collars

2.1 Caps and collars

2.1.1 We propose caps and collars for all bespoke PCs, in-line with Ofwat's final methodology. We also propose caps and collars for those common PCs as required in Ofwat's final methodology. The annual values for all caps and collars and the basis on which they have been set are detailed in *UUW30 - Performance commitments technical document*.

2.1.2 We make additional proposals for collars on the following common PCs:

Water supply interruptions

2.1.3 We propose a collar for this measure to account for extreme events, such as regional freeze-thaw impact. This is in-line with Ofwat's guidance that it considered a collar to account for extreme events was appropriate

Internal sewer flooding

2.1.4 We have also proposed a collar to reflect extreme events that might cause sewer flooding. An example of such an extreme event was a storm in the Manchester and Stockport region over a two day period in September 2016 alone which resulted in 933 hydraulic and severe weather incidents. Based on a percentage of RoRE, whilst set at a very unlikely level, we consider that the collar would represent an extreme event outside of management control. Whilst we recognise Ofwat's view that companies are best placed and therefore should be incentivised to mitigate the impact of exogenous events on customers, there is also strong evidence that weatherproofing the network to take account of all possible events would be cost prohibitive. Therefore, consistent with the approach Ofwat has set out on water supply interruptions, we consider a similar collar should apply to internal sewer flooding. Otherwise, dealing with storms with such exceptional return periods would have an unacceptable impact on customer bills and, whilst *UUW* is proposing significant investment to increase resilience against severe weather, reasonable protection should be in place to mitigate exposure to low probability high consequence exceptional events.

Business demand

2.1.5 Changes in the volume of water used by a small number of very large users has the potential to materially alter performance against this PC in a way which is wholly outside of company control. Should these high impact situations not be excluded from the measurement of the PC then we propose that the penalty collar should be set at a rate to account for such situations.

3. OUT6 commentary – summary information on outcome delivery incentive payments

3.1 Outcome delivery incentives

3.1.1 As per the regulatory requirements we have provided PR24 ODI models for years 2023/24 and 2024/25. The reference numbers for these spreadsheets are:

- *UUW115 PR24 ODI Model 2023-24*; and
- *UUW116 PR24 ODI Model 2024-25*.

4. OUT7 commentary - outcome performance ODI's (financial)

4.1 Common Performance Commitments

- 4.1.1 We have chosen to include Ofwat's June 2023 indicative ODI rates in our business plan. As this is a requirement for company business plans, this does not imply that we endorse these values as being consistent with the value that customers in the North West place on these services, nor should it imply that we endorse the process or approach that Ofwat has taken to arrive at these values.
- 4.1.2 We have also provided suggested ODI rates for the three common PCs which Ofwat has not provided indicative ODI rates for: Operational Greenhouse Gases (Water and Wastewater) and Biodiversity. These rates are required in order to calculate the full picture for ODI risk and return for data table RR30. The three ODI rates we have used for these PCs are based on credible external valuations, following the approach which Ofwat has indicated it will use. These are based on external market values in order to align the financial incentives of these new mechanisms with those markets.
- 4.1.3 We use the benefit sharing factor of 70% proposed by Ofwat in the final methodology. We noted in our response to the PR24 draft methodology that this benefit sharing factor should be aligned to the totex sharing factors and if they change, then this benefit sharing factor should also change accordingly.

4.2 Bespoke Performance Commitments

- 4.2.1 Each of our proposed bespoke PCs has an associated financial ODI. We have produced overall valuations by applying a robust triangulation framework to triangulate various sources of research and insight. Further detail on our triangulation framework, how we have applied it to value ODI rates associated with PR24 bespoke PCs and the external assurance on this process is set out in our supplementary document: *UUW31 – Customer research triangulation*.
- 4.2.2 Please see Section 7 for greater detail on UUW's proposed bespoke performance commitments.

5. OUT8 commentary - PR19 outcome performance summary

5.1 Outcome performance summary

- 5.1.1 In AMP7 we have 46 performance commitments (PCs). Details of the performance levels and the associated Outcome Delivery Incentives (ODIs) for each of these PCs can be found in section 1.1 of the main Annual Performance Report (APR) document. This include specific detail on annual performance for the first three years of AMP7 (2020/21 to 2022/23).
- 5.1.2 Our 2022/23 APR document can be found on our website⁶.
- 5.1.3 Based off this historic performance, our upcoming regulatory commitments and strategic initiatives, and our planned investment programme, we have produced robust forecast profiles for the remaining two years of AMP7 for inclusion in table OUT8.

⁶ unitedutilities.com/globalassets/documents/pdf/united-utilities-annual-performance-report-2022-23

6. OUT9 commentary – Biodiversity – habitat information

6.1 Summary

6.1.1 This is a new set of information designed to describe the types of land and management constraints with company owned land. However, due to the legacy of Agricultural Holding Act tenancies, Common Land and statutory designations etc., we are aware that there is the potential for a single piece of land to fall into a number of categories simultaneously. For example, an area of land owned by the company could be a protected site with wildlife rich habitat, under a tenancy agreement and subject to shooting rights. In-line with the table guidance we have deducted each line from the total and note that the figures reported do not reflect the total area for each category but simply the remaining area when all other factors are removed.

6.1.2 The calculations described in the methodology clearly set out where this is likely to be the case.

6.2 Categorisation of company land expected at 31 March 2025

OUT9.1 Company owned land

6.2.1 This area is taken from the Land Registry corporate dataset on ArcGIS as of Jan 2023.

OUT9.2 Company land that is a protected site

6.2.2 Takes this data from the dataset on data.gov.uk and includes land designated as SSSI, SAC, and SPA & Ramsar.

OUT9.3 Land considered to have 'Wildlife rich' habitats or 'Areas of strategic significance'

6.2.3 The company does not currently hold data on land that specifically falls into this category however we believe that any land that would be captured in this category would be captured in other lines in this reporting, specifically OUT9.2. As a result of this a figure of zero has been reported to ensure that there is no double counting. We are confident that the habitat area will be picked up in the other lines.

OUT9.4 Company land associated or expected to be associated with obligations, including planning processes, in 2025-30

6.2.4 This is the footprint of the 'preferred solutions' for PR24 (excluding catchment projects as these are located on statutorily designated sites already included in-line OUT9.2).

OUT9.5 Company land expected to be used for solar arrays in 2025-30

6.2.5 The company does not currently hold specific information on this. We have assessed this however and believe that any land likely to be included in this line would already be included in the lines below and therefore a figure of zero has been entered to remove any potential for double counting.

OUT9.6 Company land with long term tenancies (>=5 years)

6.2.6 The figure quoted in the data table included long term tenancies that are not on statutory designated sites (quoted in OUT9.2).

OUT9.7 Company land with short term tenancies (<5 years)

6.2.7 The figure quoted is the total area of land under a short term tenancies which have been defined as grazing/mowing licences. The figure quoted excludes land covered in OUT9.2 and 9.6.

OUT9.8 Company land subject to shooting rights

6.2.8 The figure quoted is the land subject to sporting licences excluding land covered in OUT9.2, 9.6 and 9.7.

OUT9.9 Company land subject to other rights

6.2.9 We have use the common land dataset on ArcGIS to generate this figure as this land has significant constraints on how it can be used and managed. The figure quoted excludes land covered in OUT9.2, 9.6, 9.7 and 9.8.

OUT9.10 Company land that is standing water

6.2.10 This figure has been calculated using the CEH land cover map (lakes and ponds).

OUT9.11 Company land that is running water

6.2.11 This figure has been calculated using the CEH land cover map (rivers, streams and canals).

OUT9.12 Company land that is sealed surfaces

6.2.12 This figure calculates all *UUW* land that is sealed surface excluding land covered in OUT9.2, 9.6, 9.7, 9.8 and 9.9.

OUT9.13 Company land that has tree canopy and woodland cover

6.2.13 Based on the information currently available in our GIS system all land that would be included on this line is already reported in the rows above. As a result this line has been reported as zero but the actual woodland and tree canopy cover would be far higher.

OUT9.14 Company land that has estuaries and coastal water habitats.

6.2.14 This figure has been calculated using the CEH land cover map (coastal margins)

OUT9.15 Company land that has open habitats

6.2.15 As this relates to habitat types not covered by the above designations this figure has been calculated by deducting all the above lines (9.2-14) from 9.1.

6.3 Further splits of company land expected at 31 March 2025**OUT9.16 Land being managed as part of biodiversity plans – Good status**

6.3.1 There is no reference to biodiversity status being assessed with the terminology ‘good – moderate-poor’ in any Natural England guidance. Therefore, we have made an assumption and used widely recognised condition status for protected sites as a proxy. This data comes from Natural England’s online Designated Sites Portal⁷. We have assumed that favourable condition is a proxy for good status. All designated sites require a management plan and therefore we have assumed that this is a proxy for a biodiversity plan.

OUT9.17 Land being managed as part of biodiversity plans – Moderate status

6.3.2 There is no reference to biodiversity status being assessed with the terminology ‘good – moderate-poor’ in any Natural England guidance. Therefore, we have made an assumption and used widely recognised condition status for protected sites as a proxy. This data comes from Natural England’s online Designated Sites Portal⁴. We have assumed that unfavourable recovering condition is a proxy for moderate status. All designated sites require a management plan and therefore we have assumed that this is a proxy for a biodiversity plan.

OUT9.18 Land being managed as part of biodiversity plans – Poor status

6.3.3 There is no reference to biodiversity status being assessed with the terminology ‘good – moderate-poor’ in any Natural England guidance. Therefore, we have made an assumption and used widely recognised condition status for protected sites as a proxy. This data comes from Natural England’s online Designated Sites Portal⁴. We have assumed that unfavourable condition is a proxy for poor status. All designated sites require a management plan and therefore we have assumed that this is a proxy for a biodiversity plan.

⁷ <https://designatedsites.naturalengland.org.uk/>

7. OUT10 and associated bespoke performance commitment tables

7.1 Summary of our bespoke performance commitments

General

- 7.1.1 *UUW*, in submission *UUW_BPC_001* April 2023, did not gain support for our proposed Bespoke Performance Commitments (BPC). The PR24 data tables have been designed with lines specifically allocated for Ofwat approved BPCs. *UUW*, in response to data table query ID-544, are therefore submitting a full set of data tables which have been amended for our proposed BPCs. The reference for this set of data tables is (*UUW102- Business Plan Bespoke Data Tables*).
- 7.1.2 The commentary below, therefore, supports *UUW102- Business Plan Bespoke Data Tables* and refers to all tables where the BPCs are referenced, specifically tables:
- OUT10 - Underlying calculations for bespoke performance commitments;
 - OUT1 - Overall outcome performance - Performance commitments;
 - OUT2 - Outcome performance from base expenditure - Performance commitments;
 - OUT3 - Outcome performance from enhancement expenditure - Performance commitments;
 - OUT7 - Outcome performance - ODIs (financial);
 - LS1 - Forecast outcomes; and
 - LS2 - Forecast outcomes from base expenditure.
- 7.1.3 The commentary with Section 7 therefore only applies to *UUW102- Business Plan Bespoke Data Tables* and not the core set of PR24 data tables, reference *UUW93- Business Plan Data Tables*.

Embodied greenhouse gas emissions

Historical performance

- This is a new bespoke measure therefore no historical performance has been reported.

Overall performance

- Overall outcome performance for this performance commitment (PC) will be delivered from projects included within our Water Industry National Environment Programme (WINEP) standard enhancement programme.
- OUT1.28 is auto populated from OUT_UU10.8. The performance commitment level (PCL) will be to meet our planned PC programme baseline (set at PR24 final determination). To reflect this, line reference OUT1.28 will state 0% at final determination. As we upload embodied emissions data into OUT_UU10.5 at the end of each financial year for our built solutions, OUT1.28 will auto-calculate to reflect the updated, actual PCL.
- For financial years outside of AMP8, this line reference has not been populated (left blank) as this performance commitment relates to projects from the AMP8 programme only.

Performance from base

- Performance is from enhancement only.

Performance from enhancement

- OUT3.28 for the AMP8 period is auto populated from OUT1, as this PC measures performance from our WINEP standard enhancement programme and not from base expenditure (OUT2). For financial years outside of AMP8, this line reference has been left blank as this performance commitment relates to projects in the AMP8 programme only.

- The figures in OUT3 applies a 0.2% stretch on the raw data provided in the carbon forecast, while the figures in CW15 and CWW15 are the raw outputs from the carbon forecast. Therefore, the figures in the OUT tables will not match the component figures in CW15 and CWW15.

Underlying calculations for this performance commitment

- For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

Wonderful Windermere

Historical performance

- *UUW* has invested within the Windermere catchment to reduce phosphorus and, as a result, has met the long-term target for phosphorus as set out by the Environment Agency. This performance commitment goes beyond this to target improvements at Windermere.

Overall performance

- The Environment Agency's SIMCAT-SAGIG inputs will be used in the development of a phosphorus baseline which will be used in target setting.
- The performance commitment level will take into account key deliverables such as monitoring in which the data will be used to target interventions and measure long-term benefits to the lake which can be compared to the model.

Performance from base

- This performance commitment will measure phosphorus reduction into Windermere. Phosphorus reduction will be calculated using a verified model or theoretical reduction to also include interventions not identified within the model such as monitoring and engagement.
- Direct interventions (e.g. land management, septic tank improvements) and indirect interventions (e.g. monitoring). Indirect interventions will be delivered early in the AMP. Direct interventions will be delivered towards the back of the AMP due to lead times required to establish partnerships.
- A third party report commissioned for the Lake District National Park has been used as a source of data to estimate the kg of phosphorous removed for intervention types. This data has been used to calculate our proposed performance commitment.
- Our long term target is to remove at least 77.4 kg of phosphorus equivalents per year within the Windermere catchment, and this approach could be expanded to water bodies beyond Windermere to deliver the widest possible benefits from this innovative PC.

Performance from enhancement

- This is not applicable for this performance commitment.

Underlying calculations for this performance commitment

- For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

Improving water bill affordability for socially important non-household community groups

Historical performance

- This is a new bespoke PC for PR24.

Overall performance

- Detailed definition of performance measure
 - Within each reporting year, performance is calculated as: Total performance = Number of qualifying water efficiency visits + Number of onsite leak repairs.
- A qualifying water efficiency visit is defined as consisting of:

- A water efficiency visit (including water efficiency advice) – Including but not limited to a qualified plumber visiting the property, reviewing water using fixtures and fittings, providing advice on appropriate water saving interventions, testing for potential leaks and attempting to locate and fix any onsite leakage.
- Fitting of free water efficient devices and flow regulators (if appropriate).
- Only properties that have a smart meter installed (or are assessed as being economically unsuitable for a smart meter installation) and are offered a full set of free water efficient devices will qualify as having had a completed water efficiency visit.
- Only those that currently qualify for the *UUW* concessionary schemes applicable to community groups or eligible schools will count towards reported performance. This would cover the following types of premises:
- An educational establishment which:
 - Is used exclusively or nearly exclusively for delivering education and tuition of students for any or all of Key Stages 1 – 5 or equivalent;
 - Has a playground facility attached;
 - Places of worship;
 - Scout and guides halls;
 - Sea cadets units;
 - Community amateur sports clubs;
 - Village hall or community centres;
 - Cemeteries; and
 - Local authority parks.

Additional detail on measurement units

- Incentive payments would only be attracted if the supported customer is already in receipt of an existing schools or community concessionary scheme. Customers removed from the concessionary scheme after water efficiency interventions take place, but before the intervention is reported as part of year end performance assessment will not qualify for an incentive payment. Any new groups added to the *UUW* concessionary scheme would become eligible for this scheme also (although none are currently planned).

Performance from base

- As there is no ongoing base expenditure for business demand reduction activity expected performance change is forecast based on underlying changes in business usage absent from any *UUW* expenditure.

Performance from enhancement

- As there is no ongoing or AMP8 enhancement expenditure for business demand reduction activity expected performance change is forecast based on underlying changes in business usage absent from any *UUW* expenditure.

Underlying calculations for this performance commitment

- For more detail on the underlying calculations for this performance commitment, please refer to supplementary document *UUW30 - Performance Commitments Technical Document*.

7.2 OUT10 – Underlying calculations for bespoke performance commitments

Embodied greenhouse gas emissions

OUT_UU10.1 Programme baseline, Tonnes CO₂e

- The baseline for this bespoke performance commitment consists of some of our most intensive wastewater treatment, non-infrastructure projects within the Water Industry National Environment Programme (WINEP). The proposed programme reflects £693m of our total proposed WINEP programme and approximately 184k tCO₂e in embodied emissions (40% of our total wastewater, WINEP embodied emissions – excluding storm overflow projects). This programme is representative of key environmental drivers and outcomes for AMP8 such as Water Framework Directive to prevent deterioration to surface waters and Environment Act to reduce phosphorus loading from treated wastewater.
- The projects included in the PC baseline are listed in *Appendix B - UUW30 - Performance commitments technical document*. This list may be subject to change and will be finalised at final determination when final projects are confirmed by our regulators.
- When creating the PC baseline, projects are only included if they do not meet the following criteria: :
 - Have bathing water or shellfish water improvements as their primary driver; or our part of our storm overflow improvement programme:
 - Have a preferred solution that is centred on investigation or monitoring, as part of the PR24 submission;
 - Involve improvements to septic tank discharges to surface waters;
 - Are expected to be delivered via the Direct Procurement for Customers (DPC) model;
 - Solutions where the estimated embodied GHG emissions of the preferred solution is <400 tCO₂e;
 - Projects where the project in use date is later than the 31 March 2030;
 - Have a proposed blue/green preferred solution as part of the PR24 submission; and
 - Projects where we are currently discussing the regulatory date due to deliverability concerns.
- All projects included in the baseline programme have a PIU date that is within AMP8, i.e. occurring on 31 March 2030 or before. It has been assumed that projects included within the baseline will not have a change of PIU to outside of AMP8.
- We have selected PIU as the most suitable project gateway where embodied GHG emissions will be measured (within AMP8) for the built solution and to inform the PCL. Contract Completion, which proceeds PIU, has been discounted as this gateway falls out of AMP8 for several projects included within the baseline and therefore does not meet the requirements for performance commitment reporting.
- OUT_UU10.1 represents the forecast total embodied GHG emissions for projects (from the baseline programme) that will achieve the PIU gateway within that specific financial year. As an example, there are 5 projects from the baseline programme that are forecast to achieve PIU within 2026/27. The total embodied GHG emissions for these 5 projects sums to 9,370 tCO₂e.
- There are no projects that are forecast to achieve the PIU gateway in 2025/26, therefore the total embodied GHG emissions for this year is 0 tCO₂e.
- Scope 3 GHG emissions included in the PC include; purchased goods and services, capital goods, fuel and energy related activities, transport and distribution (upstream) and waste generated in operations.

- For all projects included in the baseline, embodied GHG emissions have been estimated using our carbon assessment framework which has been applied across PR24. The carbon assessment framework uses the following methodologies to estimate embodied GHG emissions:
 - **Carbon Models**
 - Our approach, where sufficient project detail has been available, uses asset (i.e. pumps, valves, tanks) and process (i.e. activated sludge process) level carbon models, developed and assured by an independent third party. These carbon models align to BS EN 17472:2022 A1-A5 modules; and
 - This approach was used on the majority of projects in the baseline programme, however, due to the size and challenging time frame associated with the price review, other tools based on extrapolation were utilised – further detail on these methodologies can be found below.
 - **Drainage and Wastewater Management Plan Tool**
 - For a number of projects it was necessary to use a Drainage and Wastewater Management Plan (DWMP) tool which was developed and assured by an independent third party. It is based on embodied GHG emissions against population equivalent for a wide range of treatment processes and allows quick extrapolation to be undertaken for low complexity or repeatable projects.
 - **Extrapolation**
 - On a very small number of projects, it was necessary to use a methodology developed by UUW (in conjunction with an independent third party) to extrapolate embodied GHG emissions from capex of similar projects in scope. Where this was undertaken, embodied GHG emissions was extrapolated using trend lines from the ‘Carbon Models’ methodology and therefore align to the same BS EN 17472:2022 A1-A5 modules and emissions factors.
- The following data sources have been used for each methodology type:
 - Inventory of Carbon and Energy (ICE Database) 3rd Edition;
 - Civil Engineering Standard Method of Measurement, 4th Edition (CESMM4); and
 - UK Government Emissions Factors – Version 2021.
- In addition, the ‘Carbon Models’ methodology used emissions factors sourced from the UK CARES rebar environment production declaration (EPC).
- Following final determination, when we confirm our final baseline to align to agreed projects in the plan, we will endeavour to have all projects included in the PC baseline re-baselined using the ‘Carbon Models’ methodology detailed to ensure consistency, accuracy and standardisation across all projects. All projects in the baseline will align to BS EN 17472:2022 A1-A5 modules and use the same emissions factor data sources as listed above.
- It has been assumed that tCO₂e will be estimated to zero decimal places to reflect the level of accuracy that is achievable with embodied GHG emissions forecasting.

OUT_UU10.2 Programme baseline, cumulative, Tonnes CO₂e

- OUT_UU10.2 represents the cumulative forecast total embodied GHG emissions for projects (from the baseline programme) that will achieve the PIU gateway up to that specific financial year. As an example, the embodied GHG emissions for 2027/2028 in line reference OUT_UU10.2 will be the cumulative sum of:
 - Programme baseline, Tonnes CO₂e within 2027/2028;
 - Programme baseline, Tonnes CO₂e within 2026/2027; and

- Programme baseline, Tonnes CO_{2e} within 2025/2026.
- It has been assumed that tCO_{2e} will be estimated to zero decimal places to reflect the level of accuracy that is achievable with embodied GHG emissions forecasting.

OUT_UU10.3 Built solutions at project-in-use gateway (AMP8), Tonnes CO_{2e}

- OUT_UU10.3 represents the total embodied GHG emissions for our built projects (included within the baseline) that have achieved the Project-In-Use (PIU) gateway within that financial year.
- The line reference has been pre-populated to reflect a 0% PCL (i.e. using the forecast data from the baseline programme – OUT_UU10.1), however it will updated at the end of each financial year (within AMP8) to reflect the embodied GHG emissions associated with our built solutions at PIU (for projects included within the baseline).
- Embodied GHG emissions for our built solutions will be estimated based on ‘bottom up’ quantities of materials used, construction activities undertaken etc., using the same Scope 3 boundaries, BS EN 17472:2022 A1-A5 modules and emissions factors as the final determination baseline. This methodology broadly aligns with ‘Level 1 and 2 assessment using embodied GHG emissions factors for materials and work items’ as per UKWIR Framework for Accounting for Embodied Carbon 2012. Emissions factors and data sources will be fixed throughout the AMP to ensure consistent and comparable reporting.
- It has been assumed that tCO_{2e} will be estimated to zero decimal places to reflect the level of accuracy that is achievable with embodied GHG emissions forecasting.

OUT_UU10.4 Built solutions at project-in-use gateway (AMP8), cumulative programme, Tonnes CO_{2e}

- OUT_UU10.4 represents the cumulative total embodied GHG emissions for our built solutions that have achieved the PIU gateway up to that specific financial year. This line reference will be populated at the end of each financial year within AMP8.
- As an example, the embodied GHG emissions for financial year 2027/28 in line reference OUT_UU10.6 will be the sum of:
 - Built solutions at project-in-use gateway (AMP8), Tonnes CO_{2e} within 2027/28;
 - Built solutions at project-in-use gateway (AMP8), Tonnes CO_{2e} within 2026/27; and
 - Built solutions at project-in-use gateway (AMP8), Tonnes CO_{2e} within 2025/26.
- It has been assumed that t CO_{2e} will be estimated to zero decimal places to reflect the level of accuracy that is achievable with embodied GHG emissions forecasting.

OUT_UU10.5 Reduction in tonnes CO_{2e} from baseline

- OUT_UU10.5 is an automatic calculation which represents the cumulative reduction in tonnes of CO_{2e} between the actual built solution i.e. the PC programme at PIU (OUT_UU10.4) and the baseline (OUT_UU10.3). The following formula is used to calculate this differential:

$$\begin{aligned}
 & \text{(Programme baseline, cumulative, tCO}_2\text{e)} \\
 & - \text{(Built solutions at project in use gateway (AMP8), cumulative programme, tCO}_2\text{e)}
 \end{aligned}$$

Or:

$$OUT_UU10.2 - OUT_UU10.4$$

- A negative number in OUT_UU10.5 represents a net reduction in tonnes of CO_{2e} compared to the cumulative baseline, whilst a positive number in OUT_UU10.5 represents a net increase in tonnes of CO_{2e} compared to the cumulative baseline.
- It has been assumed that tCO_{2e} will be estimated to zero decimal places to reflect the level of accuracy that is achievable with embodied GHG emissions forecasting.

OUT_UU10.6 PCL – Percentage reduction from baseline

- OUT_UU10.6 is an automatic calculation which represents the performance commitment level.
- It calculates the percentage reduction in tonnes of tCO₂e from the PC cumulative baseline, the formula shown below is used. Please note that if the cell is not formatted to 'Percentage', the below calculation will need to be multiplied by 100 to convert to a percentage value. The OUT table provided within the price review submission will be pre-formatted to 'percentage'.

$$\frac{\text{Reduction in tonnes CO}_2\text{e from baseline}}{\text{baseline, cumulative, tonnes CO}_2\text{e}} * 100$$

Or:

$$\frac{OUT_UU10.5}{OUT_UU10.2} * 100$$

- Please note an 'IFERROR' function has been included in this cell to prevent a '#DIV/0! Error' where a number may be divided by zero. This is the case in the financial year 2025/26 where there are no projects expected to achieve the PIU gateway, therefore the OUT_UU10.4 value is 0 as the forecast tCO₂e is 0.
- A positive number in OUT_UU10.6 represents a net reduction in tonnes of CO₂e compared to the cumulative baseline, whilst a negative number in OUT_UU10.5 represents a net increase in tCO₂e compared to the cumulative baseline.

Wonderful Windermere**OUT_UU10.7 Kgs of phosphorus equivalents removed from Windermere catchment (cumulative)**

- OUT_UU10.7 represents the modelled phosphorus reduction target to be delivered from interventions across AMP8. The measure will be in modelled kg reduction from specific interventions across the catchment.
- The intention of this PC is to support to deliver nutrient reductions across the Windermere catchment, working with third parties to reduce nutrients from multiple sources. The target has been set using a number of sources including: the Farmscoper tool to model potential phosphorus savings from catchment and farm based interventions; reports to model phosphorous savings from septic tanks improvements; and theoretical phosphorus savings for indirect interventions including enhanced catchment monitoring.
- We have applied estimates regarding possible interventions that could be delivered in AMP8. As this is a bespoke PC there is no historic performance data to draw from, however we have assessed possible delivery opportunities to inform projections. UUW has a long history of delivering catchment based interventions in partnership. The opportunity in Windermere through this PC is an expansion of this approach.

OUT_UU10.8 Total Kgs of phosphorus equivalents removed from Windermere catchment (cumulative)

- This is an auto-populated line.

Improving water bill affordability for socially important non-household community groups**OUT_UU10.9 Water efficiency interventions made per annum**

- OUT_UU10.9 represents the proposed number of water efficiency interventions to be made in AMP8. The purpose of this bespoke PC is to incentivise UUW to target water efficiency and other customer facing interventions at socially important non-household community groups, beyond levels already enabled through any 2025 - 2030 enhancement allowance for non-household water efficiency visits.
- The target number of interventions is based on a central estimate of activity levels achievable from the water efficiency enhancement claim. The numbers in this line have been derived from 9 different scenarios of varying water efficiency intervention take up rates between different non-

household community groups. The scenarios have been developed based on insight from similar activities undertaken by Groundwork in partnership with *UUW*, operational data from similar activities by another water company, and data from another water company which identified water efficiency savings by business type.

- As this is a bespoke PC no further projections have been made beyond AMP8, as the continuation of the bespoke PC beyond 2030 will be dependent on demonstration of effectiveness of interventions in AMP8.

OUT_UU10.10 Total water efficiency interventions made per annum

- This is an auto-populated line.

7.3 OUT1 – Overall outcome performance - Performance commitments

Embodied greenhouse gas emissions

OUT1.27 Embodied greenhouse gas emissions

- Overall outcome performance for this performance commitment (PC) will be delivered from projects included within our WINEP standard enhancement programme. The projects included within the baseline are shown in Appendix A.
- This line reference is auto populated from OUT_UU10.6. The performance commitment level (PCL) will be to meet our planned PC programme baseline (set at PR24 final determination). To reflect this, line reference OUT1.27 states 0%.
- For financial years outside of AMP8, this line reference has not been populated (left blank) as this performance commitment relates to projects from the AMP8 programme only.

Wonderful Windermere

OUT1.28 Wonderful Windermere

- This line is auto-populated from OUT_UU10.8.
- Overall outcome performance is based on modelled phosphorus reduction from interventions including indirect interventions (such as catchment monitoring) and direct interventions such as catchment based projects and septic tank improvements. Modelling has been developed from a range of appropriate sources.
- Our longer term target is to remove at least 77.4kg of phosphorus equivalents per year within the Windermere catchment, although as this is a bespoke PC, the continuation of the bespoke PC beyond 2030 will be dependent on demonstration of effectiveness in AMP8.
- For financial years before AMP8 this line reference has reported zero. This is a new PC with no historic data to report on.

Improving water bill affordability for socially important non-household community groups

OUT1.29 Improving water bill affordability for socially important non-household community groups

- This line is auto-populated from OUT_UU10.10.
- OUT_UU10.10 represents the proposed number of water efficiency interventions to be made in AMP8. The purpose of this bespoke PC is to incentivise *UUW* to target water efficiency and other customer facing interventions at socially important non-household community groups, beyond levels already enabled through any 2025 - 2030 enhancement allowance for non-household water efficiency visits.
- The target number of interventions is based on a central estimate of activity levels achievable from the water efficiency enhancement claim. The numbers in this line have been derived from 9 different scenarios of varying water efficiency intervention take up rates between different non-household community groups. The scenarios have been developed based on insight from similar

activities undertaken by Groundwork in partnership with *UUW*, operational data from similar activities by another water company, and data from another water company which identified water efficiency savings by business type.

- As this is a bespoke PC no further projections have been made beyond AMP8, as the continuation of the bespoke PC beyond 2030 will be dependent on demonstration of effectiveness of interventions in AMP8.
- For financial years before AMP8 this line reference has reported zero. Following non-household retail market separation *UUW* stopped investment in business demand reduction activity, in line with market guidelines in place at the time. As a result no base expenditure on business demand activity took place during years included within base expenditure models.

7.4 OUT2 - Outcome performance from base expenditure - Performance commitments

Embodied greenhouse gas emissions

OUT2.27 Embodied greenhouse gas emissions

- This line reference for the AMP8 period is auto populated from OUT1.27 and OUT2.27
- This PC measures performance from our WINEP standard enhancement programme and not from base expenditure (OUT3).

Wonderful Windermere

OUT2.28 Wonderful Windermere

- This line is auto-populated from OUT1.28 and OUT2.28
- This PC is aiming to reduce phosphorus inputs from a range of catchment sources include from catchment run off, septic tanks and wastewater treatment facilities. OUT2.28 reflects targets to meet phosphorus reduction, measured in kg.
- It has been projected that if all baseline interventions are delivered, these will remain in situ beyond the AMP, delivering sustained phosphorus reduction benefits. Therefore the baseline target of 77.4kg has been cumulatively profiled beyond AMP8.
- This line reference reflects 100% of performance commitment levels, as the PC is being funded from base expenditure. *UUW* will be seeking to make efficiencies within the business in order to fund interventions up to the baseline target.
- Baseline funding will be used to deliver a range of direct and indirect interventions including, for example, enhanced monitoring across the catchment, land based interventions to reduce catchment runoff and septic tank improvements.

Improving water bill affordability for socially important non-household community groups

OUT2.29 Improving water bill affordability for socially important non-household community groups

- This line is auto-populated from OUT1.28 and OUT2.29.

7.5 OUT3 – Outcome performance from enhancement expenditure - Performance commitments

General

- 7.5.1 Benefit valuations for bespoke PCs are not included in table CW15. Presentation of *UUW*'s assessment of the marginal benefits associated with proposed bespoke PCs can be found in *UUW30 – Performance Commitment Technical Documents* Section 6 and *UUW31 – Customer Research Triangulation* Section 3.

Embodied greenhouse gas emissions

OUT3.27 Embodied greenhouse gas emissions

- This line reference for the AMP8 period is auto populated from OUT1.27
- This PC measures performance from our WINEP standard enhancement programme and not from base expenditure (OUT2). For financial years outside of AMP8, this line reference has been left blank as this performance commitment relates to projects in the AMP8 programme only.

Wonderful Windermere

OUT3.28 Wonderful Windermere

- This line is auto populated from OUT1.28
- Reporting as zero throughout the period as the PC will be funded from base, not enhancement expenditure.

Improving water bill affordability for socially important non-household community groups

OUT3.29 Improving water bill affordability for socially important non-household community groups

- This line is auto-populated from OUT1.29
- For OUT3.29 we note a false flag in columns AL-AP as there does not appear to be an option to include a matching line for this bespoke PC in CW15.

7.6 OUT7 – Outcome performance – ODIs (financial)

Embodied greenhouse gas emissions

OUT7.27

- Projects included in the PC baseline are from our AMP8 wastewater non-infrastructure programme – see Appendix A for a list of these projects. This baseline will be finalised at final determination. The price control therefore reflects these type of projects with a 100% Wastewater network plus allocation.
- The benefits sharing factor (70%) is in line with regulatory guidance for performance commitments and anticipate further calibration from Ofwat during the determination phase of the price review.
- For the common PC for operational GHG emissions, it was stated in final methodology that Ofwat will take an alternative incentive approach for this GHG emissions performance commitment using credible external valuations (Green Book etc.) as collaborative research is unlikely to give meaningful customer valuations. This PC has not been included in the outcomes working group so we expect the incentive approach to also be provided after submission.
- To resolve this, we provide our proposal for the basis on which the GHG emissions ODI rates should be set for the common PC. We understand that the incentive rates for our common and bespoke GHG PCs should be consistent. We therefore propose to replicate the common PCs marginal benefit and incentive rate for this bespoke PC. Our proposal is that this relates to the low value (sensitivity) from 2025 (£130/tCO₂e).
- **Marginal Benefits**
 - This has been calculated by dividing the proposed incentive rate (£130/ tCO₂e) by the benefit sharing factor (70%). The proposed incentive rate, £130/ tCO₂e, is therefore 70% of the calculated marginal benefit rate (£185.7/ tCO₂e). Please note the values within this line reference have been divided accordingly to covert to £millions.
- **Standard Outperformance Rate (£m)**
 - This is an auto-calculation.
- **Standard Underperformance Rate (£m)**

- This has been left blank as it not applicable (PC is proposed as reward only).
- **General**
 - We have proposed that this measure is outperformance only (collar of 0%) to recognise the on-going development of reporting, measurement and supply chain maturity across the sector for embodied emissions, and to recognise the high level design undertaken for price review submission.
 - The PCL will be to deliver the embodied GHG emissions, measured in tCO₂e, associated with our planned PC programme (set at PR24 final determination). We believe this is a highly stretching target because we have already reduced emissions significantly through optioneering and design of our AMP8 programmes, already avoiding circa 398k tCO₂e across WINEP.
 - As part of this PC, we propose to report our cumulative emissions and progress annually, as part of our Annual Performance Report (APR), throughout the 2025-30 period, for monitoring and learning purposes. Our financially incentivised PCL will represent the total cumulative position at the end of year 5 (2029/30) only, for schemes included in the PC baseline at the project in use (PIU) gateway.

Wonderful Windermere

OUT7.28 Wonderful Windermere

- This bespoke PC has been allocated 100% to wastewater network plus.
- Ofwat's indicative view for the benefit sharing factor (70%) has been adopted.
- Marginal benefits of £13,615 per kg phosphorus removed has been calculated by following the *UUW* triangulation methodology for assessing the marginal benefit of bespoke PCs as set out in document *UUW31 - Customer Research Triangulation*. Please note, the values within this line reference have been divided accordingly to convert to £millions.
- Our triangulation framework was the basis of the methodology for triangulating evidence to produce a robust and fair financial incentive rate. The following sections explain how the framework was applied to develop a financial incentive rate for this bespoke performance commitment.
- Ten pieces of potentially relevant evidence were identified (see Table 2 in document *UUW31 - Customer Research Triangulation*). Eight of the ten pieces of evidence passed the threshold for inclusion, of which six pieces were quantitative, and two were qualitative. The two pieces of excluded evidence were older studies, or modelled based on older data. Three pieces of evidence were specifically focused on the Windermere catchment.
- The calculation of benefit of the performance commitment used a mixture of value and cost estimates, and the marginal benefit was determined by taking a weighted average of the six potential valuations produced through mapping. The weighting of each valuation was determined by the scoring of the evidence for robustness and relevance, with more robust and relevant sources weighted more heavily.
- The calculated marginal benefit rate for Wonderful Windermere was £13,615 per kg phosphorus removed. A benefit sharing factor was applied, with a 70% share, producing a final proposed financial incentive rate of £9,531 per kg phosphorus.

Improving water bill affordability for socially important non-household community groups

OUT7.29 Improving water bill affordability for socially important non-household community groups

- This bespoke PC has been allocated 100% to Water network plus.
- Ofwat's indicative view for the benefit sharing factor (70%) has been adopted.
- Marginal Benefits of £1,914.84 per audit has been calculated by following the *UUW* triangulation methodology for assessing the marginal benefit of bespoke PCs as set out in document *UUW31 -*

Customer Research Triangulation. Please note, the values within this line reference have been divided accordingly to convert to £millions.

- Our triangulation framework was the basis of the methodology for triangulating evidence to produce a robust and fair financial incentive rate. The following sections explain how the framework was applied to develop a financial incentive rate for this bespoke performance commitment.
- Eight pieces of potentially relevant evidence were identified (see Table 10 in document *UUW31-Customer Research Triangulation*). Three pieces of evidence included: data from similar activities as included in this PC definition undertaken by Groundwork in partnership with *UUW*, operational data from similar activities by another water company, and data from another water company which identified water efficiency savings by business type.
- The basis for the calculation of benefit of the performance commitment is the money that non-household customers could save on their water bill due to water efficiency measures.
- The value of an audit to the customer in year one, less any duplicate incentives, is £1,915 per audit. A benefit sharing factor was applied, with a 70% share, producing a final proposed ODI rate of £1,340.
- **Standard Outperformance Rate (£m) and Standard Underperformance Rate (£m)**
 - This data is an auto-calculation.
- **General**
 - In-line with Ofwat guidance, and in the absence of compelling evidence for an alternative approach, we have defaulted to outperformance and underperformance payments, with in period payments.
 - For this measure upward performance is positive.

7.7 LS1 – Forecast outcomes

Embodied greenhouse gas emissions

LS1.27 5.2 Embodied greenhouse gas emissions

- Data for AMP8 is auto-populated from OUT1.27. Data from 2030 - 2050 is zero for the overall outcome performance.
- This PC represents select projects from our wastewater, non-infrastructure programme for AMP8 only. This programme is only applicable to AMP8 and we do not have forecast embodied GHG emissions data for similar project types for AMP9 onwards. For this PC, we expect the learning from this PC will be used to inform the sector approach for PR29 and AMP9. We therefore have not set a performance forecast associated with this PC for 2030/31 onwards.

Wonderful Windermere

LS1.28 Wonderful Windermere

- Data for AMP8 is auto-populated from OUT1.28.
- The bespoke PC represents the modelled phosphorus reduction benefits delivered from direct interventions including on septic tanks and catchment land, as well as indirect interventions including enhanced catchment monitoring.
- The purpose of this bespoke PC is to support delivery of direct and indirect interventions to reduce phosphorus entering into Windermere, included for example catchment based interventions, improvements to septic tanks and enhanced monitoring.
- It has been projected that if all baseline interventions are delivered, these will remain in situ beyond the AMP, delivering sustained phosphorus reduction benefits. Therefore the baseline target of 77.4kg has been cumulatively profiled beyond AMP8.

Improving water bill affordability for socially important non-household community groups

LS1.29 Improving water bill affordability for socially important non-household community groups

- Data for AMP8 is auto-populated from OUT1.29 overall outcome performance.
- The bespoke PC represents the proposed number of water efficiency interventions to be made in AMP8 at socially important non-household community groups.
- The target number of interventions is based on a central estimate of activity levels achievable from the water efficiency enhancement claim. The numbers in this line have been derived from 9 different scenarios of varying water efficiency intervention take up rates between different non-household community groups. The scenarios have been developed based on insight from similar activities undertaken by Groundwork in partnership with *UUW*, operational data from similar activities by another water company, and data from another water company which identified water efficiency savings by business type.
- As this is a bespoke PC no further projections have been made beyond AMP8, as the continuation of the bespoke PC beyond 2030 will be dependent on demonstration of effectiveness of interventions in AMP8.

7.8 LS2 – Forecast outcomes from base expenditure

Embodied greenhouse gas emissions

LS2.27 Embodied greenhouse gas emissions

- Data for AMP8 is automatically populated from OUT2.27 – outcome performance from base expenditure.
- This line reference has not been populated and left as blank as the bespoke PC measures performance from our WINEP programme and not base expenditure or programme.

Wonderful Windermere

LS2.28 Wonderful Windermere

- Data for AMP8 is auto populated from OUT2.28 outcome performance from base expenditure
- This line reference reflects 100% of performance commitment levels, as the PC is being funded from base expenditure.
- The purpose of this bespoke PC is to support delivery of direct and indirect interventions to reduce phosphorus entering into Windermere, included for example catchment based interventions, improvements to septic tanks and enhanced monitoring.
- It has been projected that if all baseline interventions are delivered, these will remain in situ beyond the AMP, delivering sustained phosphorus reduction benefits. Therefore the baseline target of 77.4kg has been cumulatively profiled beyond AMP8.

Improving water bill affordability for socially important non-household community groups

LS2.29 Improving water bill affordability for socially important non-household community groups

- Data for AMP8 is auto populated from OUT2.29 outcome performance from base expenditure.
- This line reference has been reported as zero as the bespoke PC interventions will not be funded through base expenditure and will be funded entirely from the water efficiency enhancement claim.

Appendix A Compliance with reporting requirements

A.1 General

A.1.1 *UUW* has endeavoured to fully comply with all of the reporting requirements. In a small number of instances where this is not the case, we have fully explained this within the table commentaries with appropriate justification.

A.2 Ofwat query response ID-533

A.2.1 *UUW*, in response to query ID-533, has not trimmed our data to match Ofwat's defined number of decimal place requirements. For display purposes data will, however, always conform to the formatting rules as set within the Ofwat PR24 tables. We believe this to be fully aligned to the table requirements.

United Utilities Water Limited
Haweswater House
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP
unitedutilities.com



Water for the North West