UUWR_93

Draft Determination Response Tables Commentary

August 2024

Data Table Commentaries

This document provides a commentary and supporting information for the data tables submitted in response to OFWAT's draft determination

United Utilities

Water for the North West

Executive Summary

This commentary document should be read in conjunction with the commentaries previously submitted with our business plan submission in October 2023. These can be found on our website, and provide details of the approaches taken to fill out the data tables. This document does not reproduce the content of the previous commentaries, instead highlighting where there have been changes to our data. There are a number of reasons that data may have changed, for example:

- A reassessment of our position in light of new data, for instance updates to historical data following submission of the Annual Performance Report for 2023/24 to Ofwat.
- Responding to queries Ofwat sent to us after our October 2023 submission.
- A change in our position due to accepting Ofwat's draft determination.
- A change in our position as we are proposing a compromise position with Ofwat.

This document explains why data have changed and signposts any other relevant documents.

Ofwat provided a list of the data tables that we were required to resubmit in our draft determination response in its summary of business plan table to be submitted. Where we were not required to resubmit a table we have generally not updated the data. Data in these tables should therefore be treated with caution. Within this document it has been noted where resubmission was not required.

Where the data tables contain forecasts of AMP9 data these have generally not been updated since our submission to Ofwat on 25 January 2024. As there was limited time available between us receiving the draft determination on 11 July 2024 and submitting our response on 28 August 2024 we have focussed our efforts on AMP8. There are exceptions to this, which are noted in the commentary.

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1. Summary of assurance approach

1.1 Assurance

United Utilities Water has sought to complete data tables and table commentaries in line with the final assurance plan published on our website.

The limited timeframe for responding to the draft determination meant that while the framework could not be applied in full to every aspect of the representations, we sought to utilise it as guidance to prioritise the assurance undertaken for our submission. Within this constraint, we are confident that our submission is of high quality and we have sought to apply a three lines of assurance review and governance approach to the production of data tables.

Data has been subject to data owner, responsible, accountable, and executive manager sign-off. In addition to this independent audit/peer review of supporting information and audit trails has also taken place for new and substantially updated tables.

The table production process was reviewed by United Utilities Corporate Audit. The audit covered the following areas, with no issues being noted:

- Sample testing of data within the resubmitted data tables back to source / supporting records.

The assurance of the data tables was undertaken by PwC. As part of this review PwC reviewed tables that had been risk assessed to be of high or critical risk.

- Review processes through walkthroughs to understand and assess the processes undertaken for producing the data is populated in the data tables;
- Review the methodology statement produced alongside relevant process documentation and commentary provided to support the 'in scope' data points;
- Check for any obvious errors and inconsistent formulae within the tables listed above and the associated working papers where agreed, using spreadsheet analysis tools where practicable;
- Compare the in-scope data tables and associated Ofwat-issued models where identified, to the latest versions published by Ofwat, using spreadsheet analysis tools where practicable;
- Check that the units and decimal places applied in the in-scope data tables are consistent with Ofwat guidance;
- Identify and query any blank or nil entries within the in-scope data tables within scope;
- Perform sample testing to confirm the population of the in-scope data tables has been performed in line with the process defined. The nature and extent of testing will vary depending on the data table and data lines involved; and
- Understand and review the sign off process to confirm that it has been conducted and approved by the authorised staff member, as defined by United Utilities, prior to the PR24 submission.

Based on the agreed scope of work undertaken, PwC did not identify any significant reasons that would prevent submission of these tables to the UUW Board for approval.

The results and findings from the review and assurance processes were presented to and discussed with the UUW Board, as part of its review and approval of response to the draft determination on 20 August 2024.

Data tables which are consistent with APR tables, have been update to reflect our 2023/24 APR. Data for 2020-2024 is based on actual performance and 2024/25 is forecast performance. For further details of the assurance of this submission including data tables please see appendix one of the 2023/24 APR which can be found on our website.

2. Outcomes

2.1 Approach to OUT data table completion

We have updated years 2023/24 to 2024/25 to reflect APR24. We have updated 2025/26 to 2029/30 to reflect our draft determination responses on Outcomes. We have not populated bespoke PC lines in the OUT data tables, this is in line with Ofwat's DD data table guidance. We have not updated AMP9 values – they remain at the values submitted in January 2024 as our possible future variant plan. The bespoke PC OUT information is included in ADD22 data tables for this draft determination response; please refer to that section for commentary. We have not populated ADD23; this is in line with Ofwat's email to companies dated 1 August 2024.

2.2 OUT1 to OUT5 combined commentary – Performance commitments

2.2.1 Water supply interruptions

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM_Water-supply-interruptions***.**

2.2.2 Compliance Risk Index (CRI)

We consider Ofwat's DD PCL to be an additional stretch in performance on top of our already ambitious PCL proposed in our PR24 business plan. In our business plan submission we proposed a PCL deadband set at 1.75 CRI points for 2025/6-29/30. Ofwat has proposed a company specific deadband for this PCL in the period 2025/26-2026/27, which will gradually decrease across the period. The Ofwat proposed deadband begins at 1.83 index points in 2025/26, and decreases every year until reaching 1.00 index points in 2029/30. From 2027/28 to 2029/30 there is a common deadband level. Current industry performance indicates that achieving a CRI score of 1.00 index points or less will be very challenging. However, we remain committed to providing our customers with excellent water quality, and therefore we do not propose an alternative value to Ofwat's DD PCL or deadband for this PC.

2.2.3 Customer contacts about water quality

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM_Customer-contacts-about-water-quality***.**

In reference to Ofwat's email "PR24 draft determinations and representations - updates and additional publications" received on 8 August 2024, and as stated in our response to PR24 query OFW-OBQ-UUW-157, we confirm that our reporting of customer contacts about water quality is consistent with the latest reporting requirements from the Drinking Water Inspectorate (DWI), specifically 'The Information Letter 01/2024 (Revised)'.

Our projected performance for 2024/25 is also based upon latest reporting requirements. Therefore, we have no concerns with Ofwat's intention to set performance commitment levels (PCLs) for the 2025-30 period using a 2024-25 baseline.

2.2.4 Internal Sewer Flooding

We propose that Ofwat resets the PCL, collar and ODI rates to our PR24 business plan proposal. We have therefore populated the relevant OUT business plan data tables with our PR24 business plan proposals.

We provide compelling evidence in UUWR_12 as to why we consider our PCL, collar and ODI rate to be the most appropriate.

2.2.5 External Sewer Flooding

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level in OUT1 as

stated in Ofwat's draft determination document *PR24-DD-PCM_External- Sewer-Flooding*, line NWTC_OUT5_02_PR24_OFWAT.

In this instance, Ofwat's DD PCL is different to our PR24 business plan data tables and we have therefore had to create inputs for the underlying calculations for each PCL. We have done this by using Ofwat's normalised PCL (per 10,000 sewer connections) and our forecast number of sewer connections to calculate the equivalent number of absolute (i.e. unnormalised) incidents.

The OUT2 and OUT3 data tables require outcome performance to be split between base and enhancement expenditure. Where we have used the DD PCL in this response, we have populated these base and enhancement performance tables by retaining the assumption that 'base' is inclusive of the implicit enhancement allowance for 'reducing the risk of sewer flooding for properties', as this has been allocated to companies via Ofwat's base cost models for wastewater network plus. As such, we have assumed the majority of the performance improvement necessitated by the PCL is delivered via base (inclusive of the implicit allowance). The minor additional benefits from enhancement outside of this allowance reported in OUT3 come from the co-benefits from the WINEP and Advanced WINEP as well as any benefits from the resilience enhancement case beyond maintaining a stable baseline against deterioration due to climate change. These benefits are as per our business plan submission.

The OUT5 PCL calculation lines also require further information not included in Ofwat's DD. For this PC, we have populated the OUT5 lines by using our forecasted number of sewer connections to derive the absolute (i.e. unnormalised) level of incidents implied by this PCL. We apportioned the total incidents between 'customer proactively reported' and 'company reactively identified' by utilising historical data and activities to predict the split that would be expected for a given level of total incidents.

2.2.6 Biodiversity

We have reviewed the methodology used by Ofwat to arrive at the consistent company PCL for biodiversity in the draft determination. We accept the approach taken to use median values of company proposals to set a PCL. However, in calculating this value Ofwat originally made an error in the 12 July 2024 draft determination in cumulating data which has already been reported in a cumulative form. As a result, proposed delivery was double counted in the assessment of company median proposals. Ofwat updated the draft determination PCLs and emailed them to companies on 2 August 2024. We have therefore used this latest DD PCL in the completion of the OUT data tables.

As a result of this we have proposed a PCL of 0.73 biodiversity unit per 100km^2 for 2029-30, which matches the PCL in Ofwat's document *PR24-DD-PCM_Biodiversity-V1.1*.

2.2.7 Operational greenhouse gases (Water)

We propose that Ofwat update the 2024/25 baseline figure in line with our latest forecast for this PC. Our latest forecast is larger than our January 2024 PR24 submission due to the growth in FY24 figures, and future forecasts including FY24 actual reported data. This updated forecast has been input into the OUT data tables.

We have seen a large growth in our chemical values due to changes in business processes to meet regulatory requirements, creating a significantly more comprehensive data set. We propose that the emission factors used to calculate chemicals are updated to align with the Water Industry Chemicals and GHG Task and Finish Group output. This is composed of the most up to date emission factors for chemicals and therefore would demonstrate a more representative figure for our total GHG emissions. To account for all new projects, where the project breakdown is not yet complete, estimates (using known projects) have been used. The inclusion of these projects has caused a small growth which could not have been predicted at our January 2024 PR24 submission, only accounting for less than 0.01% of our total emissions.

2.2.8 Operational greenhouse gases (Wastewater)

We propose that Ofwat resets the PCL to use 2024/25 as the baseline year, as included in our PR24 business plan proposal. We have therefore populated the relevant OUT business plan data tables in line with this, and in line with our latest forecast which is larger than our January 2024 PR24 submission.

The reason we propose that Ofwat resets the PCL is due to the growth taking place at the end of AMP7, which was included in our PR24 business plan proposal.

Our latest forecast is larger than our January 2024 PR24 submission due to the growth in FY24 figures, and future forecasts including FY24 actual reported data. This updated forecast has been input into the OUT data tables.

We have seen a large growth in our chemical values due to changes in business processes to meet regulatory requirements, creating a significantly more comprehensive data set. To account for all new projects, where the project breakdown is not yet complete, estimates (using known projects) have been used. The inclusion of these projects has caused a small growth which could not have been predicted at our January 2024 PR24 submission, only accounting for less than 0.01% of our total emissions. For both of these reasons, we are proposing that a 2024/25 baseline should be used to create a more accurate representation of our position. We provide more compelling evidence in *UUWR_53 – Operational water and wastewater GHG* as to why we consider our PCL to be the most appropriate. We also propose that the emission factors used to calculate chemicals are updated to align with the Water Industry Chemicals and GHG Task and Finish Group output. This is composed of the most up to date emission factors for chemicals and therefore would demonstrate a more representative figure for our total GHG emissions.

2.2.9 Leakage

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM-Leakage-1*.

As at 2023-24 reporting, we were compliant with the PR19 leakage reporting definition (March 2018) in all but one component/element (component/element 2a related to "Availability") – we will be fully compliant by 2024-25 reporting. We have reviewed our compliance to the PR24 leakage reporting definition and we are compliant with the new components/elements and updated components/elements. For reporting leakage upstream of DMAs (sometimes known as "upstream leakage"), UUW moved from using a Bursts and Background Estimates (BABE) approach to using a flow balance approach (sometimes known as "tile analysis" or "tile balances") in 2015-16. Our flow balance approach uses metered data to measure the flows going into distribution from water treatment works and the flows out of the trunk main system into district metered areas (DMAs) or to bulk supplies (e.g. bulk exports). We update our flow balances weekly, with support from industry experts.

It's worth noting that the three-year average performance commitment levels form the basis of the data provided in the data tables. We have back-calculated the annual figures. Therefore, the annual figures are a function of this calculation and do not necessarily represent our performance projection.

2.2.10 Per Capita Consumption (PCC)

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM-Per-capita-consumption-1*.

It's worth noting that the three-year average performance commitment levels form the basis of the data provided in the data tables. We have back-calculated the annual figures. Therefore, the annual figures are a function of this calculation and do not necessarily represent our performance projection.

The approach to rounding applied in data table auto calculations may result in trivial variances in reported values across data tables; however all values are correct when rounded to 1 decimal place, in line with prescribed performance commitment PCLs.

2.2.11 Business Demand

We propose that Ofwat resets the PCL to our PR24 business plan proposal. We have therefore populated the relevant OUT business plan data tables with our PR24 business plan proposals.

We provide compelling evidence in *UUWR_64 - Business demand* as to why we consider our PCL to be the most appropriate. Ofwat should update rWRMP input values into the PCL model *PR24-DD-PCM-Business-demand-1.xlsx*

to adjust for UUW's allocation of void non-household consumption to 'water unbilled' in the WRMPs, but to NHH demand in PR24 tables. As a result of this input update UUW's proposed demand reduction target for 2029/30 will pass all intervention tests.

It's worth noting that the three-year average performance commitment levels form the basis of the data provided in the data tables. We have back-calculated the annual figures. Therefore, the annual figures are a function of this calculation and do not necessarily represent our performance projection.

The approach to rounding applied in data table auto calculations may result in trivial variances in reported values across data tables; however all values are correct when rounded to 1 decimal place, in line with prescribed performance commitment PCLs.

2.2.12 Total Pollution Incidents

We do not propose an alternative approach or value to Ofwat's DD PCL for this PC. Ofwat's approach sets a common PCL set against the WISER pollution reduction requirement from a starting point of AMP7 upper quartile performance. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM_Total-pollution-incidents*.

We have updated OUT5 with the 2017/18 sewer length as used in Ofwat's base cost model. The updated OUT5 pollution incident figures – category 3 (wastewater) – from 2025/26 onwards are stated to two decimal places to ensure alignment with the common PCL based on the sewer length used in the calculation, however it is not possible to have a fraction of a pollution incident. The number of cat 4 incidents has been updated in OUT5 based on 2023/24 Cat 4 incidents.

The incentive rate and outperformance enhanced threshold has been updated in OUT7. This updated outperformance enhanced threshold is an extrapolation based on the historic frontier.

2.2.13 Serious Pollution Incidents

We do not propose an alternative approach to Ofwat's DD PCL for this PC. It aligns with the PCL set out in our PR24 business plan.

2.2.14 Discharge Permit Compliance

We do not propose an alternative value to Ofwat's DD PCL of 100 per cent for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document, *PR24-draft-determinations-Delivering-outcomes-for-customers-and-the-environment*, section 8.6 Discharge permit compliance p 63-65; *PR24 draft determinations: Key Dataset 1: Outcomes data*.

We have amended the number of predicted permit numbers to reflect the updated WINEP, where we expect descriptive permits to change to numeric in line with the year we expect the permits to be issued, and a review of water treatment works permits. This does not alter the PCL for this PC which is set at 100 per cent.

We do however disagree with Ofwat's proposal to remove the deadband for this PC in AMP8. We provide compelling evidence in *UUWR_54 - Discharge permit compliance* as to why we consider a deadband to be appropriate for this PC.

2.2.15 Bathing Water Quality

We propose that Ofwat should consider our updated proposal for the PCL which we include in the relevant data table lines for this PC. We provide compelling evidence in *UUWR_55_Bathing Water Quality* as to why we consider our PCL to be the most appropriate.

We have included Derwent Water and West Kirby bathing waters in the calculation of the PCL in OUT5. However, as stated in *UUWR_55_Bathing Water Quality*, we request that these bathing waters are removed from the performance commitment because UUW's assets do not impact these bathing waters.

For the five newly designated bathing waters we have entered the classification based on the samples taken as of August 2024. We advise that Ofwat should update the forecast classification at the end of the season, 30 September 2024, for inclusion in the calculation of final determination PCLs.

As requested in the email from Ofwat, received 8 August 2024, we have provided bathing water classification forecasts using Ofwat's Backcast-WINEP sheet. This clearly identifies any changes from Ofwat's proposed forecasts alongside the evidence to support the changes. This can be found in document: *UUWR_109 – Backcast - WINEP*.

2.2.16 River Water Quality (Phosphorus)

We do not propose an alternative approach to Ofwat's DD PCL for this PC, however we are disappointed to note this performance commitment is now reputational only with no financial ODI attached. The decision to change the RWQ performance commitment to reputational only is contradictory to the PR24 final methodology, where Ofwat states the intention to focus on financial incentives. "Including reputational performance commitments creates additional complexity during the price review process and our wider tools outside of the price review may be more appropriate. These tools are more suitable for areas where significant additional funding is not required and where performance is very difficult to specify in advance for a five-year period through a fixed measure" (Creating tomorrow, together: Our final methodology for PR24 Appendix 7 – Performance commitments, section 2.2.4, p8). As Ofwat acknowledges, the Phosphorus removal programme does require significant funding and performance targets through the WINEP are specific and fixed.

Delivering the Phosphorus removal programme is a major part of the WINEP and we believe monitoring performance via a performance commitment is more of an incentive for companies to outperform than a PCD which has a fixed output, providing no incentive for outperformance and minimal incentive to early deliver through time incentives. Subsequent environment benefit will likely be less.

The updated data tables for RWQ show a changed PCL from that in our original submission. The approach taken at October submission to develop our PCL for RWQ was as follows:

- Average outperformance of current phosphorus permits – 2017-2022 – is 37.53% and we built this into the PCL
- This level of outperformance was also applied to sites that will receive a P permit of 0.5 mg/l and above in AMP8 and built into the PCL
- A further stretch of an additional 10% outperformance was applied to all existing and new sites with P permits greater than or equal to 0.5mg/l, to be achieved by operational interventions.
- Exclusions are sites which will receive a new permit of less than 0.5 mg/l, as we had a very small data set on which to assess performance and Davyhulme as the P removal solution is a new technology for UUW, and we have no data to assess outperformance potential against.

These same principles were applied when reassessing the PCL for DD submission, but the percentage reduction and therefore the PCL, has been altered due to a reinterpretation of the methodology since the October 2023 business plan submission. The baseline has now been updated to align with the approach taken by other WaSCs to include all "relevant discharges" rather than only including those with an existing or future phosphorus permit. On this basis we have included all treatment works that discharge to freshwaters in the baseline. This has resulted in the PCL measure of percentage reduction changing from October submission. This change can be seen in Table 1.

This has resulted in a change in 2020 baseline load of P discharged from 2,227,237.82 kg to 2,508,968.11 kg. As the baseline is higher, this has served to make the corresponding percentage reduction lower than previously calculated.

Table 1: Changes in PCL October 2023 submission to DD representation

Reduction in phosphorus as a percentage of load discharged from treatment works in 2020 (OUT5.71)	2025-26	2026-27	2027-28	2028-29	2029-30
Oct 23 PR24 submission	15.01%	15.33%	21.25%	21.25%	34.60%
Aug 24 DD response	14.23%	14.51%	19.28%	19.28%	31.12%

WINEP Update

In addition, data table OUT5.63-5.71 was updated to reflect changes to the P removal programme in the updated WINEP issued in July 2024, which were not included in Ofwat's PR24 draft determination. This update contained nine additional schemes in the Windermere catchment. These are summarised in Table 2, for more detailed information please see UUWR_78, Windermere WINEP Catchment Strategy, Appendix C .

Table 2: Phosphorus schemes added to the WINEP

Scheme	WINEP ID	P Permit (mg/l)	Delivery Date
Ambleside	08UU102482	0.25	31/3/30
Far Sawrey	08UU102485	0.5	31/3/30
Ferryhouse	08UU102489	0.5	31/3/30
Grasmere	08UU102480	0.25	31/3/30
Hawkshead	08UU102487	0.25	31/3/30
Langdale	08UU102483	0.25	31/3/30
Near Sawrey	08UU102486	0.5	31/3/30
Outgate	08UU102484	0.5	31/3/30
Troutbeck	08UU102488	0.5	31/3/30

The revised PCL has been updated to reflect both changes described above, as shown in the RWQ OUT table lines; OUT1.16, OUT5.63 - 71.

We have updated the tables but have made changes to align with the performance commitment methodology and to reflect the changes made to the phosphorus removal final effluent schemes in the July 2024 version of the WINEP.

2.2.17 Storm overflows

We do not propose an alternative approach to Ofwat's DD for the total number of monitored spills as set out by Ofwat in the PR24 performance commitment model for storm overflows, however we have updated the number of storm overflows to reflect the latest best view of this data. By changing the number of storm overflows from 2280 to 2267 in OUT5.73 this has impacted on the PCL calculation. The OUT1.17 therefore includes the updated PCL, reflective of the revised number of storm overflows in OUT5.73.

The performance recorded in OUT2 is a function of the PCL in OUT1 and benefits recorded within ADD20 cost drivers 42 to 46.

For further details on our storm overflows representation, and in particular the PCL, please see UUWR_10 section 8.

Performance improvements for this measure are reliant on successful delivery of our storm overflow enhancement programme and adequate funding allowances.

2.2.18 Unplanned outage

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level as stated in Ofwat's draft determination document *PR24-DD-PCM_Unplanned Outage*.

We accept Ofwat's assertation that a more stretching target for reducing unplanned outages is appropriate. Additionally, we support the decision to re-baseline performance following the broadening in ODI definition, as this represents a material change in measure definition.

We endorse Ofwat's approach to broader industry wide target setting, aligning performance to forecast industry median of 2.14% by 2029-30. We believe the proposed approach of either setting PCLs as a linear profile or uplifting proposed targets to median position is a fair approach to equalise performance levels between companies by the end of AMP8.

2.2.19 Mains repairs

We do not propose an alternative value to Ofwat's DD PCL for this PC. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM_Repairs-to-burst-mains***.** The mains repairs figures in OUT4 from 2025-26 onwards are stated to zero decimal places, as it is not possible to have a fraction of a mains repair.

At draft determination, Ofwat has renamed this performance commitment to 'Repairs to burst mains'. For the purposes of this response, we have maintained the previous name of 'Mains repairs' which is also in line with v7 of the PR24 business plan data tables.

2.2.20 Sewer collapses

We do not propose an alternative value to Ofwat's DD PCL for this PC. It aligns with the PCL submitted in our PR24 business plan. We have therefore populated the relevant OUT business plan data tables with the appropriate inputs in order to replicate the performance level on OUT1 as stated in Ofwat's draft determination document *PR24-DD-PCM_Sewer-collapses*, line *NWTC_OUT5_11_PR24_OFWAT*.

The OUT2 and OUT3 data tables require outcome performance to be split between base and enhancement expenditure. For this performance commitment, the PCL is forecast to be delivered entirely from base expenditure and therefore OUT2 and OUT5 are the same, and no performance from enhancement expenditure is stated in OUT3.

The OUT5 PCL calculation lines also require further information not included in Ofwat's DD. For this PC, we have populated the OUT5 lines by utilising the forecast for sewer length to calculate the absolute (i.e. unnormalised) number of sewer collapses Ofwat's PCL corresponds to. It should, however, be noted that for 2026-27 and 2027-28, using our forecast sewer length, it was not possible to calculate a corresponding whole number of sewer collapses. We therefore rounded line OUT5. to the nearest whole number, causing a 0.01 discrepancy between Ofwat's PCL and our reported sewer collapses per 1000 km of sewer in OUT5 (and by extension, OUT1).

2.3 Additional information - caps, collars and deadbands

2.3.1 Summary

Underperformance collars, enhanced outperformance caps, and underperformance deadbands are not included in the OUT or ADD22 data tables. The table below shows the values which we include in our response to the DD. We have expressed caps and collars in terms of performance, common with Ofwat's expression of PCLs. We have also included standard outperformance caps (i.e. enhanced outperformance thresholds) in Table 3 below for completeness although they are also stated on OUT7.

Table 3: Underperformance collars, enhanced outperformance thresholds and caps, and underperformance deadbands

Measure	Unit of measurement	Underperformance Collar					Enhanced Outperformance Threshold					Outperformance Cap					Underperformance Deadband				
		2025-26	2026-27	2027-28	2028-29	2029-30	2025-26	2026-27	2027-28	2028-29	2029-30	2025-26	2026-27	2027-28	2028-29	2029-30	2025-26	2026-27	2027-28	2028-29	2029-30
Water supply interruptions	Hh:mm:ss	00:19:08	00:19:08	00:19:08	00:19:08	00:19:08	00:02:36	00:02:36	00:02:36	00:02:36	00:02:36										
Compliance Risk Index (CRI)	CRI Score																1.83	1.67	1.50	1.25	1.00
Customer contacts about water quality																					
Internal sewer flooding	Per 10k connections	3.35	3.26	3.17	3.08	2.99	1.92	1.84	1.75	1.66	1.57										
External sewer flooding	Per 10k connections						15.58	14.78	13.97	13.17	12.37										
Biodiversity	£m	-1.00	-1.00	-1.65	-7.00	-6.00	1.00	1.00	1.65	7.00	6.00	1.00	1.00	1.65	7.00	6.00					
Operational greenhouse gases (Water)	tCO2e	55,718	55,718	55,718	55,718	55,718						55,718	55,718	55,718	55,718	55,718					
Operational greenhouse gases (Wastewater)	tCO2e	119,441	119,441	119,441	119,441	119,441						119,441	119,441	119,441	119,441	119,441					
Leakage	Ml/day, 3 yr ave. % reduction from 19/20						374.3	361.5	343.4	326.4	310.3										
Per Capita Consumption (PCC)																					

Measure	Unit of measurement	Underperformance Collar					Enhanced Outperformance Threshold					Outperformance Cap					Underperformance Deadband				
		2025-26	2026-27	2027-28	2028-29	2029-30	2025-26	2026-27	2027-28	2028-29	2029-30	2025-26	2026-27	2027-28	2028-29	2029-30	2025-26	2026-27	2027-28	2028-29	2029-30
Business Demand	Ml/day 3 yr Ave.	401.3	397.2	391.2	385.2	379.2	318.7	314.6	308.6	302.6	296.6	318.7	314.6	308.6	302.6	296.6					
Total Pollution Incidents	Per 10k sewer length						13.82	13.40	12.98	12.56	12.13										
Serious pollution incidents	Incidents																				
Discharge permit compliance	% TW																99.0%	99.0%	99.0%	99.0%	99.0%
Bathing Water Quality	% score	43.0	43.0	43.0	43.0	44.0						66.4	66.4	66.4	66.4	67.4					
River water quality (Phosphorus)	% P reduction																				
Storm overflows	Annual average no. spills	34.26	33.14	31.31	28.96	24.32						18.45	17.85	16.86	15.59	13.09					
ins Repairs	Per 1,000km main	143.6	141.6	139.6	137.6	135.4	79.0	77.0	75.0	73.0	70.8	79.0	77.0	75.0	73.0	70.8					
Unplanned outage	% Peak week prod. Cap.	4.99	4.52	4.05	3.58	3.10						3.07	2.60	2.13	1.66	1.18					
Sewer collapses	Per 1,000 sewer length	16.35	16.22	16.09	15.96	15.83						9.52	9.39	9.26	9.13	9.00					
Embodied Greenhouse Gas Emissions	TCO2e reduction	N/A	N/A	N/A	N/A	122,038	N/A	N/A	N/A	N/A	238,8882	N/A	N/A	N/A	N/A	238,8882					0%
Wonderful Windermere	kg	0	0	0	0	0						1630.50	1659.00	1659.00	1678.70	1698.40					

2.3.2 Caps and collars

Ofwat detailed its proposed caps and collars in *Key-Dataset-1*, expressed as a percentage of RoRE. We do not consider that it is appropriate to frame caps and collars based on a company's historical investment decisions, i.e. based on regulated equity. This could lead to the perverse situation whereby Ofwat has set a PCL at a common performance level but companies are exposed to different levels of risk protection – set by caps/collars based on regulated equity and financial risk exposure.

In our PR24 business plan submission and Ofwat's previous Outcomes final determinations at PR19 and PR14, such risk protections were expressed in terms of performance. We submitted our PR24 business plan proposed caps and collars expressed in performance levels and where we propose alternative caps/collars to Ofwat's DD, we do so expressed as performance levels.

We have considered the effect of Ofwat's proposed caps and collars on the ODI RoRE risk profile from the potential performance range. We consider that UUW is exposed to an unacceptable level of ODI risk on a number of performance commitments, given the likely performance range, the ODI rate included in Ofwat's DD, the ODI design of caps, collars and deadbands, and the PC definition. We therefore propose more effective caps and collars on the following performance commitments. For more information on UUW's representations on this see *UUWR_50 - Outcomes*, section *Risk protections*.

We have therefore proposed a revision to the caps and collars on the following PCs:

Total pollution incidents
Ofwat does not propose a penalty collar on the basis that this is a well-established performance commitment. However, as explained in *UUWR_56 - Total pollution incidents*, given the substantial potential scope and definitional changes that are likely to serve to increase the number of incidents counted by the metric, the measure will evolve into something much less well established during AMP8. Given this, setting a penalty collar may well be an appropriate means of managing the risk of an unbalanced incentive. We do not however propose a quantification of the collar in this draft determination response.

Internal sewer flooding
Consistent with the approach Ofwat set out in the final methodology on water supply interruptions, we consider a similar extreme weather collar should apply to internal sewer flooding. Critically, to prevent the outcomes package being significantly negatively skewed by exceptional weather events, Ofwat should re-instate a collar on this measure. We propose that this should be in line with our PR24 business plan proposal, at a performance level equivalent to 0.5% of Ww RoRE. Companies cannot reasonably be expected to 'weatherproof' the network against such events without very material additional investment that would likely have an unacceptable impact on customer bills. Over the last 10 years, the worst 1% of days accounted for 29% of UUW's total internal sewer flooding incidents, illustrating the disproportionate impact that low frequency, high magnitude events can have on this performance commitment.

For more information on UUW's representations on this see *UUWR_12 – Internal sewer flooding*.

Storm overflows

We propose a cap and collar for this new PC based on compelling evidence set at the +/- 30% performance level, in line with our PR24 business plan submission. We consider that we have taken a carefully considered ad methodical approach to calculating an appropriate cap/collar to what is an area of performance where extreme weather can have a significant external impact on company performance. In this response, we provide further compelling evidence to support the level at which we propose this cap and collar, in addition to what we have already provided in our PR24 business plan submission and query responses (such as query 147 part 2). We are not persuaded that Ofwat's approach to setting the cap/collar for this significant performance area has taken as methodical approach as we have. As further spill data becomes available, we envisage that this cap/collar placement could be adjusted for AMP9. For PR24 though, we consider that our approach and proposed cap/collar is most appropriate.

For more information on UUW's representations on this see *UUWR_10 - Overflows*.

Biodiversity

We proposed a cap and collar for this new PC based on setting financial limits to the penalty or reward companies could achieve in line with those set for the Enhancing Natural Capital for customers PC from AMP7. This was based on seeking to limit the potential exposure to excessive risk or reward on a new PC and therefore aligning our approach to the reward and penally possible for what was new PC with a similar focus in AMP7.

We consider that the widening of the cap and collar on the biodiversity PC to 0.5% RoRE exposes companies to excessive performance risk. This is as a result of the potential for natural events to cause significant biodiversity loss. Whilst we would endeavour to recover this loss in the long term the nature of biodiversity is that this would take longer than the four-year reporting cycle of the PC. This could result in significant negative impacts on biodiversity being reported in the short term and therefore expose the company to a significant risk which it has limited ability to control.

As an example of this in 2021 Storm Arwen caused significant damage to UU's land in Cumbria which will take time to recover. Had this site been included in the PC the biodiversity would have reduced significantly from the baseline and potentially result in a large penalty if the collar remained set at 0.5% RoRE.

For more information on UUW's representations on this see *UUWR_62 - Biodiversity*.

Bespoke Performance commitments: Wonderful Windermere and Embodied Greenhouse Gas Emissions

We propose a cap and collar for the two bespoke PCs included in this draft determination response. For further details on these and the levels at which we propose these risk protections, please see *UUWR_65 – Wonderful Windermere* and *UUWR_67 – Embodied Greenhouse Gases*.

2.3.3 Deadbands

We propose a deadband for the Discharge Permit Compliance PC. The basis for this proposal is explained in *UUWR_54 - Discharge permit compliance*.

2.4 OUT6 commentary – summary information on outcome delivery incentive payments

The 2023/24 data included in OUT6 aligns to table 3H within the *PR19IPD01_ODI-performance-model v1.11_Final_May2024* model, as submitted to Ofwat as part of the APR in July 2024.

A copy of this model can be found on our website.

The 2024/25 data included in OUT6 aligns to table 3H within the *PR24-DD-ODI-performance-model-2024_25-United Utilities-August 2024* model, as submitted to Ofwat as part of the Draft Determination representation response from United Utilities in August 2024.

Please note that, in this model, all financial values match with predicted forecast positions submitted in the 3 series tables in the 2024 APR. The only exception to this is Per Capita Consumption (PCC). For PCC we have utilised the updated guidance from Ofwat in the 'inpOverride' and 'Override_Additional info' tabs, as added to the model at the PR24 Draft Determination. As a consequence of the updated draft determination guidance, the adjusted PCC performance has generated a zero (£0.000 million) financial position for 2020/21 to 2023/24. Likewise, our forecast PCC performance would also generate an adjusted financial position of £0.000m in 2024/25.

As outlined on page 94 of the 2024 APR, we have undertaken a historical restatement of some of our Wastewater network metrics. This issue affected years 2020/21, 2021/22 and 2022/23. As such, an additional -£3.15 million is also being reconciled through the 2024/25 ODI model.

2.5 OUT7 commentary - outcome performance ODIs (financial)

Line OUT7.14 - We have updated the Discharge Permit Compliance Price control allocation to reflect the ratio of water numeric permits to wastewater numeric permits which aligns with figures used in the last reported Environmental Performance Assessment.

We have populated the following lines in OUT7 with the ODI rates as stated in Ofwat's draft determination document *"Key-dataset-1"*:

- OUT7.1
- OUT7.2
- OUT7.5
- OUT7.6
- OUT7.7
- OUT7.8
- OUT7.9
- OUT7.10
- OUT7.11
- OUT7.12
- OUT7.13
- OUT7.14
- OUT7.15
- OUT7.16
- OUT7.17
- OUT7.18
- OUT7.19
- OUT7.20.

We propose alternative ODI rates from those stated in Ofwat's draft determination document for the following lines in OUT7:

- OUT7.3
- OUT7.4.

We provide compelling evidence for these alternative ODI rates in *UUWR_58 – Customer contacts* and *UUWR_12– Internal sewer flooding*:

- OUT7.3 Customer contacts about water quality - We provide compelling evidence in *UUWR_58 – Customer contacts about water quality* as to why we consider the proposed increase in the penalty rate to be excessively punitive. We consider that the ODI rate of £19.06 million, consistent with the final methodology proposed by Ofwat and our PR24 business plan submission, remains appropriate.
- OUT7.4 Internal sewer flooding - We provide compelling evidence in *UUWR_12– Internal sewer flooding* as to why we consider the proposed increase in the penalty rate to be excessively punitive. We consider that the ODI rate of £15.09 million, consistent with the final methodology proposed by Ofwat and our PR24 business plan submission, remains appropriate.

The benefit sharing factors should be aligned to the totex sharing factors. If they change, then the benefit sharing factors should also change accordingly.

Biodiversity

Line OUT7.6 - We are pleased to see the approach taken by Ofwat to set the ODI rate is in line with expected trading values as published by Defra and in line with the approach proposed by UUW in our PR24 business plan. We note that Ofwat has chosen to use the lower end of the proposed range which results in a lower ODI level

than proposed by UUW but do not propose an alternative ODI rate to that published by Ofwat in the draft determination.

2.6 OUT8 commentary - PR19 outcome performance summary

In AMP7 we have 47 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 includes specific detail on annual performance for the first four years of AMP7 (2020/21 to 2023/24).

Our 2023/24 APR document can be found on our website.

From this historic performance, our upcoming regulatory commitments and strategic initiatives, and our planned investment programme, we have produced robust forecast profiles for the remaining year of AMP7 (2024/25) for inclusion in table OUT8.

2.7 OUT9 commentary – Biodiversity – habitat information

2.7.1 Summary

We have refreshed OUT9 since our original PR24 business plan submission, using the latest available data where available.

The information in OUT9 is 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 Ofwat's data 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.

The calculations described in section 6.7.2 below clearly set out where this is likely to be the case.

2.7.2 Categorisation of company land expected at 31 March 2025

OUT9.1 Company owned land
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
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'
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 data table lines.

OUT9.4 Company land associated or expected to be associated with obligations, including planning processes, in 2025-30
This is the footprint of the 'preferred solutions' for PR24 (excluding catchment projects as these are located on statutorily designated sites already included in data table line OUT9.2).

OUT9.5 Company land expected to be used for solar arrays in 2025-30
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)
The figure quoted in the data table includes long term tenancies that are not on statutory designated sites (quoted in OUT9.2).

OUT9.7 Company land with short term tenancies (<5 years)
The figure quoted is the total area of land under 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
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
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
This figure has been calculated using the CEH land cover map (lakes and ponds).

OUT9.11 Company land that is running water
This figure has been calculated using the CEH land cover map (rivers, streams and canals).

OUT9.12 Company land that is sealed surfaces
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
Based on the information currently available in our GIS system all land that would be included on this line is already reported in the data table lines above. As a result this line has been reported as zero, to avoid double counting, but the actual woodland and tree canopy cover would be far higher.

OUT9.14 Company land that has estuaries and water habitats.
This figure has been calculated using the CEH land cover map (coastal margins)

OUT9.15 Company land that has open habitats
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.

2.7.3 Further splits of company land expected at 31 March 2025

OUT9.16 Land being managed as part of biodiversity plans – Good status
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 Portal'. 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
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 Portal’. 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
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 Portal’. 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.

2.8 OUT10

Not required for UUW. This data is now captured in table ADD22 – see Section 14.22.

3. Risk & return

Risk & return summary

We have provided updated tables to enable Ofwat to populate its financial model, alongside a populated version of the model (*UUWR_96 - Financial model*) for our response. We have not updated any tables or information related to the actual company, unless this is required to facilitate inputting into the model, for example RR29.

For tables RR1, RR2, RR4, RR5, RR7, RR8 and RR9 we have intentionally not updated any AMP9 values from those presented in our original business plan, even where changes in AMP8 would have impacts on AMP9 such as the changes to carry over projects.

3.1 RR1 - Revenue cost recovery inputs

RR1.1 – RR1.18 We have updated the cost of debt and cost of equity inputs to align to Ofwat's draft determination view of the WACC.

Our methodology for populating all lines in RR1 remains unchanged from our October submission. All changes to values reflect the revised natural rates for our proposed totex programmes and where opening balances have been updated to reflect the current expectations of the respective opening balances for the actual company.

RR1.19 – RR1.66 PAYG and RCV run off percentages have been updated to reflect the respective natural rates for our proposed totex programmes and updated AMP7 closing position (for RCV run off).

RR.37 – RR1.66 We have retained the natural RCV run off rates for each price control rather than capping bioresources and reallocating it to wastewater network plus. Although we accept Ofwat's approach for the draft determination we have not capped rates in our representation for simplicity as we note the pro forma question relating to separate adjustments to run off rates to account for different cost allowances and therefore rather than making a reallocation now to rates. Therefore, we expect it would be more straightforward for Ofwat to simply make any capping and reallocations with an unadjusted starting position rather than a position that we have already capped. As with Ofwat's adjustment for the draft determination, capping (or not) will have no impact on the resulting customer bills and/or financeability of the company.

3.2 RR2 - Totex inputs to cross reference with CA

AMP8 Expenditure inputs have been updated in line with our proposed totex programmes.

Our final assurance of data tables has highlighted some minor inconsistencies between the gross expenditure and grants and contributions between RR2 and DS1E, CW1and CWW1 that in the short amount of time available, we have been unable to rectify. We can confirm that the costs and income presented in DS1E, CW1and CWW1 are correct and should be used for cost assessment/financial modelling. The variances are not expected to cause any material discrepancies in the results of the financial model provided.

RR2.13 – RR2.18 Our approach to calculating equity issuance requirements and allowances has been updated to align to Ofwat's approach for the draft determination, whereby allowances are derived based on the equity injections required for the notional company to remain below 57.5% gearing in each year. The allowance has therefore been calculated as 2% of the 'Ordinary shares issued' stated within RR4.65-RR4.70, but in real terms.

In section 4 of UWWR_70, we set out that we have followed Ofwat’s draft determination approach and included 2% equity issuance costs in relation to any equity issued by the notional company, this has been done for consistency and comparability purposes and we continue to advocate that 5% should be allowed for equity issuance costs. Table 4 and Table 5 set out the different amounts of equity issuance allowance for the two respective rates in the tables and our proposals.

Table 4: 2% equity issuance allowance included within business plan tables for consistency

	2025-26	2026-27	2027-28	2028-29	2029-30	AMP8
Equity issuance costs - real (WR)	-	0.229	0.457	0.255	-	0.940
Equity issuance costs - real (WN)	-	1.193	2.321	1.254	-	4.768
Equity issuance costs - real (WWN)	-	2.791	5.884	3.463	-	12.138
Equity issuance costs - real (BR)	-	0.156	0.328	0.189	-	0.673
Total	**-**	**4.369**	**8.989**	**5.162**	**-**	**18.519**

Table 5: 5% equity issuance allowance proposed to be used for final determinations

	2025-26	2026-27	2027-28	2028-29	2029-30	AMP8
Equity issuance costs - real (WR)	-	0.652	1.329	0.758	-	2.739
Equity issuance costs - real (WN)	-	3.391	6.756	3.734	-	13.882
Equity issuance costs - real (WWN)	-	7.937	17.127	10.313	-	35.377
Equity issuance costs - real (BR)	-	0.442	0.954	0.564	-	1.960
Total	**-**	**12.422**	**26.166**	**15.369**	**-**	**53.958**

3.3 RR3 - RCV opening balances

The RCV opening balances have been updated to reflect the most recent PR19 reconciliation adjustments to the RCV included within the RCV feeder model and summarised in PD11.

We accept Ofwat's proposal to take the QAA reward of 5bps on the RCV rather than through revenues in AMP8, however for simplicity we have modelled an additional £16m rather than recalculating the 5bps on our revised regulatory equity. We have added the reward to the Water Network+ RCV, using the ' Other RCV adjustments' input within the RCV feeder model for simplicity. We expect that Ofwat will update the calculated value for its final determination regulated equity.

3.4 RR4 - Financing financial model inputs

Our methodology for populating all lines in RR4 remains unchanged from our October submission. All changes to values reflect the revised natural rates for our proposed totex programmes and where opening balances have been updated to reflect the current expectations of the respective opening balances for the actual company.

RR4.9 – RR4.26 have been updated to reflect the current expectations of the respective opening balances for the actual company.

RR4.27 – RR4.44 & RR4.51 – RR4.56 have been updated to reflect the changes to the allowed cost of debt in RR1. Our approach to deriving the index linked debt rates continues to follow the same approach as in our submission whereby the nominal rate is deflated using 2.0% and 2.9% inflation rates for CPIH and RPI respectively.

RR4.78 – RR4.79 Updated dividend assumptions in line with Ofwat draft determination approach. We retain the same assumption for dividend payments of the cost of equity less 1%.

3.5 RR5 - Tax opening balances

Our approach to populating all lines in RR5 remains unchanged from our October submission. All changes to values reflect the natural rates for our proposed totex programmes and opening balances have been updated to reflect the current expectations for the respective opening balances for the actual company.

RR5.7 – RR5.18 & RR5.26 – RR5.43 have been updated to reflect the current expectations for the respective opening balances for the actual company.

RR5.104 – RR5.109 We note Ofwat's adjustment in the draft determination but have not included any losses surrendered to Group within the input as the current value of any tax allowance in revenues (£0.147m) is insufficient to fully offset the losses adjustment (£2.92m) and so for simplicity have left this adjustment out. We accept that Ofwat will adjust this in the final determination, especially if the revenue allowance for tax increases.

3.6 RR6 - Post financeability adjustments inputs

RR6.13-RR6.18 We accept Ofwat's proposal to take the QAA reward of 5bps on the RCV rather than through revenues in AMP8 and therefore leave these cells blank.

RR6.1-RR.24 To ensure that the mapping tool works correctly we have included both the innovation and water efficiency fund allowances in line with Ofwat's assessment for the draft determination. We expect that Ofwat will update these numbers if required and it can input the numbers separately within the financial model if it desires.

We note Ofwat's change in the revenue feeder model to adjust for tax in retail reconciliation and agree with this revised approach as it ensures that tax is correctly reflected in the resulting revenue adjustments.

3.7 RR7 - Residential retail

Our approach to populating all lines in RR7 remains unchanged from our October submission. Expenditure inputs have been updated in line with our proposed totex programmes.

RR7.37 We have updated the retail margin to 1.20% in line with Ofwat's draft determination assumption for the WACC.

RR7.38-RR7.49 Inputs have been updated to reflect latest charging allocation assumptions.

RR7.56 has been updated to reflect the changes to the allowed cost of debt (nominal).

3.8 RR8 - Business retail

RR8.22-RR8.33 Inputs have been updated to reflect latest charging allocation assumptions.

3.9 RR9 - Miscellaneous inputs

Unless stated, our approach to populating all lines in RR9 remains unchanged from our October submission. Opening balances have been updated in line with our proposed totex programmes.

RR9.7-RR9.12 We have not sought to undertake any reprofiling of revenues within the financial model, please see our response to pro-forma question (UUWR_71, section 1.11) for further details of the reasoning for this is not required in order to maintain smooth bills.

RR9.13-RR9.18 Updated to reflect to reflect the draft determination view of the WACC.

RR9.220-RR9.225 We agree with Ofwat's approach for the draft determination and do not enter any negatives.

3.10 RR10 – RR13

Notional company output from *UUWR_96 Financial model*.

3.11 RR14 - Bill profile for 2025-30 before inflation

Notional company output from *UUWR_96 - Financial model*.

In line with Ofwat's prescribed approach to populating the cost data tables (query response #108), the full expenditure requirements for the proposed large scheme gated mechanism projects are included within the forecast expenditure for AMP8. Therefore, the household bill presented includes the full impact of our proposals even though under its draft determination approach, Ofwat will not make an ex-ante allowance for these in its final determination. Additionally, our proposed £250m top-down efficiency adjustment relating to storm overflows that has been included within the least cost plan (CWW14) has not been included within the core plan or resulting bills. We expect that the bill impact of these two exclusions would reduce the 2029-30 bill by roughly £4/customer below the amount presented in RR14.

3.12 RR15 - Retail margins 2025-30 (nominal price base)

Notional company output from *UUWR_96 - Financial model*.

3.13 RR16 - Financial ratios

RR16.1-RR16.23 & RR16.47-RR16.53 Notional company output from *UUWR_96 - Financial model*.

RR16.24-RR16.46 & RR16.56-RR16.80 Actual company financial ratios and outputs are not required and have not been updated.

3.14 RR17 to RR28

Resubmission of these tables has not been requested by Ofwat and they therefore match our submission on 25 January 2024.

3.15 RR29 - Asset lives

Whilst not explicitly required, we have populated this table to ensure that RR9.239-RR9.243 pull through the correct information in AMP8, for use in the financial model. Our methodology for populating all lines in RR29 remains unchanged from our October submission. All changes to values reflect the revised natural rates for our proposed totex programmes and where opening balances have been updated to reflect the current expectations of the respective opening balances for the actual company consistent with the approach taken to updating the RCV run-off rates in RR1.

3.16 RR30 - RORE Analysis

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024. Please see Section 14.18 for commentary on RoRE for the business plan representations.

4. Costs (wholesale) – water

All tables have been updated to reflect 2023-2024 actuals as reported in the APR, and expenditure for 2024-2025 have also been amended to reflect latest company forecasts.

4.1 CW1 - Totex analysis - water resources and water network+ (post frontier shift and real price effects)

This table has been updated to reflect the changes to CW1a post frontier shift and real price effects.

4.2 CW1a - Totex analysis - water resources and water network+

This table has been updated to reflect the changes listed in CW2 and CW3.

4.3 CW2 - Base expenditure analysis - water resources and water network+

The following lines have been updated for 2025-2030 expenditure to reflect representations on base allowance:

- CW2.4 - £121.3m reduction to reservoir cost adjustment claim – *UWWR_14 – Reservoir.*
- CW2.6 - £2.0m increase due to revised equity issuance cost calculation, see RR2 commentary (Section 3.2).
- CW2.7 - £42m increase to business rates – *UUWR_26 – Business rates*.
- CW2.12 - £2.1m reduction to reflect the DD allowance.
- CW2.16 - £194.5m increase to capital maintenance to reflect alignment to Ofwat's DD modelled base allowance

4.4 CW3 - Enhancement expenditure - water resources and water network+

The following lines have been updated for 2025-2030 expenditure to reflect representations on enhancement allowances (all variances are to the January business plan):

- CW3.7-9 - £18.1m additional WINEP requirements - *UUWR_80_Water WINEP*.
- CW3.16-18 - £4.1m reallocation of implementation costs from CW3.34-36.
- CW3.19-21 - £5.0m additional WINEP requirements - *UUWR_80_Water WINEP*.
- CW3.31-33 - £0.051m additional WINEP requirements - *UUWR_80_Water WINEP*.
- CW3.53-55- £42.7m reduction due to revised Water Trading programme - *UUWR_40 -Water trading*.
- CW3.97-99 -£49.1m additional PFAS requirements - *UUWR_76 - PFAS - Enhancement case*.
- CW3.118-120 - £9.3m overall increase reflecting reductions on Coastal and River erosion and Power resilience enhancement cases, offset by inclusion of climate change uplift - *UUWR_39_Resilience uplift*.
- CW3.121-126 - £25.4m reduction to SEMD and NIS-D enhancement claims.
- CW3.127-129 - £30.6m reduction to Net Zero enhancement claim - *UUWR_30 - Carbon net zero enhancements*.
- CW3.138-139 - £114.8m increase relating to a new PRA reservoir safety claim - *UUWR_14 – Reservoir*.

4.5 CW4 - Raw water transport, raw water storage and water treatment data

Lines CW4.1-43, CW4.48-50 have been updated with the most recent actual values taken from the FY24 APR.

Line CW4.47 “Number of treatment works requiring remedial action because of raw water deterioration” has been updated from 5 in 2030 (at business plan submission), to a new value of 7 at 2030. The additional 2 WTW included in this line are the subject of a new enhancement business case for PFAS treatment. This requirement only came to light as the result of DWI instruction post business plan submission, and therefore the new enhancement business case for these 2 WTW will be submitted as part of our DD representation.

4.6 CW4a - Transition and accelerated programme - Raw water transport, raw water storage and water treatment data

Table CW4a relates to transitional investment related to raw water transport, storage and treatment. There is no planned transitional investment for this area of activity. This table is left intentionally blank in line with our previous methodology.

4.7 CW5 - Treated water distribution - assets and operations

Line CW5.4 has been updated to reflect changes following the addition of 2023-24 data from the APR.

Lines CW5.8-15 have been updated to reflect changes following the addition of 2023-24 data from the APR.

Line CW5.23 has been updated to reflect changes following the addition of 2023-24 data from the APR.

Line CW5.31-34 have been updated to reflect changes following the addition of 2023-24 data from the APR. The performance projections for 2024-25 and AMP8 are based on our per capita consumption (PCC) and business demand performance commitment levels.

Line CW5.35 has been updated to reflect changes following the addition of 2023-24 data from the APR. The performance projections for 2024-25 and AMP8 are based on our leakage performance commitment levels.

Line CW5.36 has been updated to reflect changes following the addition of 2023-24 data from the APR.

Line CW5.37 has been updated to reflect changes following the addition of 2023-24 data from the APR.

Lines CW5.38-39 have been updated to reflect changes following the addition of 2023-24 data from the APR. The performance projections for 2024-25 and AMP8 are based on our leakage performance commitment levels.

Line CW5.58-67 have been updated to reflect changes following the addition of 2023-24 data from the APR.

4.8 CW6 - Water network+ - Mains, communication pipes and other data

Lines CW6.1-3 have been updated to reflect changes following the addition of 2023-24 data from the APR.

Line CW6.4 The length of new mains laid have been amended to reflect the latest project scopes and designs relating to network reinforcement activity due to take place between 2024-25 and 2029-30.

Lines CW6.5-17 have been updated to reflect changes following the addition of 2023-24 data from the APR.

Line CW6.18 has been updated to reflect changes following the addition of 2023-24 data from the APR and the latest FY25 LBE.

Lines CW6.19-20 have been updated to reflect changes following the addition of 2023-24 data from the APR.

Lines CW6.21-27 have been updated to reflect the guidance provided by queries OFW-OBQ-UUW-017 and OFW-IBQ-UW-013, relating to the Lead Service Pipe Replacement Enhancement Case.

Line CW6.28 has been updated to reflect changes following the addition of 2023-24 data.

Lines CW6.29 (CRI) and CW6.30 (ERI) have been updated with actual out-turn figures from the APR, which were only available as forecast values at business plan submission, but which have since been confirmed by the DWI.

4.9 CW6a - Transition and accelerated programme - Water network+ - Mains, communication pipes and other data

Table CW6a relates to transitional investment related to water network mains, communication pipes and other data. There is no planned transitional investment for this area of activity. This table is left intentionally blank in line with our previous methodology.

4.10 CW7 - Demand management - Metering activities

The numbers for 2023-24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022-23 price base where applicable.

Based on the actuals recorded in 2023-24, we have reprofiled the expenditure and associated meter volumes so that the overall AMP7 position remains the same as proposed in our initial PR24 submission. Due to a revised forecast of new optant meter volumes there is a minor contradiction with selective meter volumes and associated expenditure.

For AMP8, we aren't proposing any changes to table inputs compared to what was submitted as part of our PR24 submission.

4.11 CW7a - Transition and accelerated programme - Demand management - Metering activities

Not applicable for UUW, due to no transitional investment or accelerated programme expenditure that meets the line definitions.

4.12 CW8 - WRMP schemes (excluding leakage and metering activities)

We have removed the contingent funding associated with delivery of new source options for water trading in AMP8 whilst ongoing feasibility work is completed through the RAPID gated process to identify viable option(s) for delivery. We have assumed a DPC delivery route, however we request that Ofwat / RAPID outline a regulatory mechanism which would enable contingent funding to be requested during AMP8 if the preferred options(s) are not assessed as suitable for DPC.

4.13 CW9 - Enhancement expenditure (cumulative) - water resources and water network+

This table has been updated to reflect the cumulative expenditure of the revised enhancement programme as detailed in CW3.

4.14 CW10 - Wholesale water local authority rates

The methodology that we have used in preparing this table has not changed from the original plan and the previous commentary remains valid.

As the vast majority of the water business rates valuations (rateable values) and associated liabilities are driven by the pre-tax return the water business expects to generate over AMP 8. We have updated these values to reflect the latest view of the expected AMP 8 return. In doing so we have referenced items such as revenue allowances, PAYG, RCV run off and RCV as set out in our updated plan.

The other reasons for the changes in the values is we have updated the table to reflect the inclusion of the APR data for 2023-24 as well as adjusting the values to reflect changes in inflation assumptions.

The values we have presented in the table are different to what was set out in the draft determination. In the draft determination Ofwat has based the allowance on the FY24 position and has not factored the increases in business rates on the back of the enhanced pre-tax return in AMP 8. Further details of this are set out in our business rates draft determination representation – *UUWR_26 – Business rates*.

4.15 CW11 - Third party costs by business unit for the wholesale water service

The numbers for 2023-24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022-23 price base. AMP8 expenditure aligns with the numbers submitted in our January business plan.

Non-diversion activities
Forecasts for FY25 have been updated to reflect the latest view of expenditure associated with continuing 3rd party activities. We have also amended historic expenditure classification to reflect query responses.

Diversion specific
For FY25 and AMP8, diversions expenditure aligns with the numbers submitted in our January business plan.

4.16 CW12 - Transitional expenditure - water resources and water network+

Overall Transitional Expenditure claim is unchanged from the January business plan, the table has been updated for 2023-24 actual expenditure. Variances are considered to be due to timing and an appropriate adjustment has been made to the 2024-25 forecast.

This table also reflects the reallocation of WFD implementation costs as referenced in CW3.

4.17 CW13 - Best value analysis; enhancement expenditure - water resources and water network+

This table has been updated to reflect the changes listed in CW3. The present value calculations in CW13 use consistent assumptions to those used in our original business plan submission.

4.18 CW14 - Best value analysis of alternative option; enhancement expenditure - water resources and water network+

This table has been updated to reflect the changes listed in CW3. The alternative options remain unchanged from the January business plan. The present value calculations in CW14 use consistent assumptions to those used in our original business plan submission.

4.19 CW15 - Best value analysis; benefits - water resources and water network+

This table has been updated following the changes to the totex program, but it continues to follow the same methodology as originally submitted. Points to note include:

- We note some discrepancies between data from CW15 and OUT3 which is resulting in returning a "FALSE". This is due to top-down changes made to PCLs throughout the draft determination process which don't reflect in the detailed bottom up build of projects.

4.20 CW16 - Best value analysis of alternative option (benefits) - water resources and water network+

This table has been updated following the changes to the totex program, but it continues to follow the same methodology as originally submitted.

4.21 CW17 - Accelerated programme expenditure - water resources and water network+

There is no water accelerated programme.

4.22 CW18 - Cost adjustment claims - base expenditure: water resources and water network+

As part of our PR24 submission we submitted a cost adjustment claim (CAC) relating to reservoir maintenance. Our CAC was made up of 3 separate parts. Part 1 related to the relative historic base cost differences of maintaining and operating reservoir and borehole sources. Part 2 related to the rise in statutory ITIOS actions following the 2020 Balmforth Report. Part 3 related to the increase in costs due to a change in the EA flood risk maps.

At DD, Ofwat assessed Part 1 separately and rejected this part of the claim due to it not meeting the materiality threshold. Accordingly, we have withdrawn Part 1 of our CAC, and the associated costs and implicit allowance have been removed from table CW2.

Ofwat has also rejected Part 2 of the CAC. We contest this decision and the costs associated with Part 2 of the claim remain included in table CW2, as we consider this to be a base activity. The claim value of Part 2 remains the same as at our original submission.

Part 3 of the claim has now been reclassified as an enhancement activity. We have therefore reallocated costs associated with Part 3 from CW18 to CW3.138-139

We provide more details on the above in our Reservoirs representation document (*UUWR_14 - Reservoir*)

We have not made any changes to the historic totex line (CW18.8).

4.23 CW19 - Demand management - Leakage expenditure and activities

Lines CW19.1-3 & 10 “Leakage expenditure” have been updated to reflect changes following the addition of 2023-24 data from the APR.

Lines CW19.13-16 “Prevent activities and attributes” have been updated to reflect the addition of 2022-23 and 2023-24 data.

Lines CW19.25-29 “DMA characteristics” have been updated to reflect the addition of 2023-24 data.

Lines CW19.40-42 have been updated to reflect changes following the addition of 2023-24 data.

There is no update to lines CW19.49 “Smart networks” and CW19.52 “Active leakage control”.

Lines CW19.55-94 “Repairs” have been updated to reflect the addition of 2022-23 & 2023-24 data.

There is no update to lines CW19.112 “Historical minimum achieved level of leakage” and CW19.113 “Volume of leakage that needs to be saved to maintain current level”.

4.24 CW20 - Water mains - asset condition

This table has been updated to fully align to the previously submitted detailed cohort analysis workbook, issued as part of the query process, your reference OFW-OBQ-UUW-088. Some minor inconsistencies in the underlying

data have been updated, however there is no material new information or change to the information submitted within our business plan. We have therefore amended table CW20 and the associated requested supporting workbooks as per our query response, dated 7 December 2023.

4.25 CW21 - Water - net zero enhancement schemes

The totex in this table reconciles to CW3.127-129 and reflects the revised net zero enhancement claim *UUWR_30 – Carbon net zero enhancements.*

5. Costs (wholesale) - wastewater

5.1 CWW1 - Totex analysis - wastewater network+ and bioresources (post frontier shift and real price effects)

This table has been updated to reflect the changes to CWW1a post frontier shift and real price effects.

5.2 CWW1a - Totex analysis - wastewater network+ and bioresources

This table has been updated to reflect the changes listed in CWW2 and CWW3.

5.3 CWW2 - Base expenditure analysis - wastewater network + and bioresources

The following lines have been updated for 2025-2030 expenditure to reflect representations on base allowance:

- CWW2.6 - £6.9m decrease due to revised equity issuance cost calculation, see RR2 (Section 3.2).
- CWW2.7 - £2.2m reduction to business rates - *UUWR_26 - Business rates*.
- CWW2.9 - £28.2m increase to EA permit charges - *UUWR_20 - Cost and PCDs*.
- CWW2.12 - £0.2m decrease to lane rental in line with the DD.
- CWW2.16 - £130m increase to capital maintenance to reflect alignment to Ofwat's DD modelled base allowance

5.4 CWW3 - Enhancement expenditure - wastewater network+ and bioresources

The lines in Table 6 have been updated for 2025-2030 expenditure to reflect representations on enhancement allowances (all variances are to the January business plan).

Table 6: CWW3 enhancement line changes

CWW3 Line	Description	Item	2023-2025 £m (CWW12 and 17)	2025-2030 £m (CWW3)	Total £m
1-3	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater totex	Reduction in cost to align to DD allowance	-0.2	-0.8	-1.0
4-6	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater totex	Reduction in cost to align to DD allowance	-3.4	-8.6	-12.0
7-9	Continuous river water quality monitoring (WINEP/NEP) wastewater totex	Increase in cost due to new WINEP requirements	0.0	4.4	4.4
10-12	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater totex	Reduction in cost to align to DD allowance	0.0	-11.8	-11.8
13-48	Overflow lines including screens	Increase in cost due to new WINEP requirements	2.8	17.3	20.1
		Reductions included Query 178 response	-4.5	-38.0	-42.5
		Cost reductions to existing requirements	-18.2	-187.8	-206.0
		Reallocations to CWW3.88-90	-0.8	-24.2	-25.0
Overflow subtotal			**-20.7**	**-232.8**	**-253.4**
64-69	Phosphorous Removal	Increase in cost due to new WINEP requirements	0.0	23.6	23.6
		Cost reductions to existing requirements	-0.2	-55.4	-55.6
		Cost reductions to adaptive plan schemes	-6.7	-269.4	-276.1
Phosphorous subtotal			**-6.9**	**-301.2**	**-308.1**
73-75	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater totex	New WINEP requirements	0.0	10.1	10.1
		Cost reductions to adaptive plan schemes	-28.6	-110.3	-138.9
		Reallocation of driver for Wigan*	4.5	149.0	153.5
Sanitary subtotal			**-24.1**	**48.8**	**24.7**
79-81	Catchment management - nutrient balancing; (WINEP/NEP) wastewater totex	Alignment to DD	-0.1	-1.4	-1.5
88-90	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater totex	Reallocations from CWW3.13-48	0.8	24.2	25.0
		Cost reductions to existing requirements	0.0	-4.1	-4.1
Microbiological subtotal			**0.8**	**20.2**	**20.9**
91-93	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater totex	Cost to align to DD allowance	0.5	14.8	15.3
109-117	Investigations, total; (WINEP/NEP) wastewater totex	Increase in cost due to new WINEP requirements	-0.4	9.1	8.6

CWW3 Line	Description	Item	2023-2025 £m (CWW12 and 17)	2025-2030 £m (CWW3)	Total £m
118-120	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater totex	Reduction in cost to align to DD allowance	0.0	-1.7	-1.7
Wastewater WINEP Subtotal			**-54.4**	**-461.1**	**-515.5**
137-139	Sludge storage - Cake pads / bays /other; (WINEP/NEP) bioresources totex	Cost reductions to existing requirements	0.0	-49.5	-49.5
143-145	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) totex	Cost reductions to existing requirements	0.0	-14.2	-14.2
Bioresources WINEP Subtotal			**0.0**	**-63.8**	**-63.8**
153-155	Growth at sewage treatment works (excluding sludge treatment); enhancement totex	Cost reductions to existing requirements	-0.6	-31.2	-31.8
159-161	First time sewerage; enhancement totex	Alignment to DD	0.0	0.6	0.6
168-170	Resilience; enhancement wastewater totex	Coastal and River Erosion alignment to DD	0.0	-9.4	-9.4
		Power Resilience alignment to DD	0.0	-14.4	-14.4
		Climate Change Uplift - Power, Pollution and Bathing Water	0.0	9.8	9.8
		Climate change uplift - Rainwater	0.0	50.0	50.0
Resilience subtotal			**0.0**	**36.0**	**36.0**
177-179	Greenhouse gas reduction (net zero); enhancement wastewater totex	Revised programme for GHG reduction	0.0	-101.4	-101.4
Total other enhancement wastewater/bioresources expenditure			**-0.6**	**-96.0**	**-96.5**
181-182	Additional line 1; enhancement wastewater/bioresources Totex	Removal of sludge screening	0.0	-54.9	-54.9
		Reallocation of IED to Additional Line 5	0.0	-280.3	-280.3
Additional line 1 subtotal			**0.0**	**-335.2**	**-335.2**
183-184	Additional line 2; enhancement wastewater/bioresources Totex	Removal of Green Recover claim	0.0	-24.1	-24.1
		Addition Green Recovery mechanism	0.0	52.0	52.0
		Addition of AMP7 WINEP mechanism	0.0	31.7	31.7
Additional line 2 subtotal			**0.0**	**59.6**	**59.6**
185-186	Additional line 3; enhancement wastewater/bioresources Totex	Removal of Ww Reservoir claim	0.0	-19.8	-19.8
		Additional WINEP CSO schemes at Windermere	0.0	153.0	153.0
Additional line 3 subtotal			**0.0**	**133.2**	**133.2**
187-188	Additional line 4; enhancement wastewater/bioresources Totex	Removal of Rainwater Management claim	0.0	-135.9	-135.9

CWW3 Line	Description	Item	2023-2025 £m (CWW12 and 17)	2025-2030 £m (CWW3)	Total £m
		Additional WINEP WwTW schemes at Windermere	0.0	33.4	33.4
Additional line 4 subtotal			**0.0**	**-102.4**	**-102.4**
191-192	Additional line 5; enhancement wastewater/bioresources Totex	Reallocation of IED to Additional Line 5	0.0	280.3	280.3
		Cost reduction to IED programme	0.0	-47.4	-47.4
Additional line 5 subtotal			**0.0**	**232.9**	**232.9**
Enhancement Other Subtotal			**0.0**	**-12.0**	**-12.0**
Grand Total			**-55.0**	**-632.9**	**-687.7**

*As noted in our previous correspondence, we have both Phosphorus and Sanitary WINEP drivers for Wigan/Skelmersdale. Our original submission allocated all costs for Wigan/Skelmersdale to P removal due to not having an accurate enhancement driver allocation split at that time. This was due to the removal of the DPC option. In the post-submission period, we have developed a more accurate allocation of this expenditure across Phosphorus and Sanitary lines which has now been reflected in our revised data tables.

5.5 CWW4 - Wastewater network+ - Functional expenditure

This table has been updated in line with changes made to Wastewater Network+ operating expenditure in CWW2, including updates to 2023-24 to match table 7A in the APR.

Further details of changes made to lines CWW4.8-4.13 can be found in Section 5.6 for large sewage treatment works.

CWW5 - Wastewater network+ - Large sewage treatment works

CWW5.1 - RR24 data added. No change to site names.

CWW5.2 - RR24 data added. In FY2029-2030 Eccles, Salford and Wigan had treatment type classification changes to reflect WINEP AMP 8 updates.

CWW5.3 - RR24 data added. Site closures and transfer of flows has resulted in PE change for Winsford as the attributed population and flows are now being received from Marton North.

CWW5.4 - RR24 data added. No change to Suspended solids consent.

CWW5.5 - RR24 data added. Davyhulme BOD limit tightened in FY 2025-26 driven by WINEP AMP 8 update. Macclesfield BOD limit also changed in FY2026-27 to align with the WINEP.

CWW5.6 - RR24 data added. No change to Ammonia consent.

CWW5.7 - RR24 data added. Eccles, Formby, Hazel Grove and St.Helens Phos limit tightened in FY 2029-30 further to WINEP AMP 8 update and alignment.

CWW5.8 - RR24 data added. No change to UV consent.

CWW5.9 - RR24 data added. Marton North closed and a transfer of flows has resulted in a change of flow for Winsford as the attributed population and flows from Marton North are now being received. This has resulted in in a change of load.

CWW5.10 - RR24 data added. Site closures and transfer of flows has resulted in a change for Winsford as the attributed population and flows are now being received from Marton North. To note flow passed to full treatment is a separate methodology to the AMP 8 enhancement solutions.

CWW5.17 – RR24 data added. Marton North closed and a transfer of flows has resulted in a change of flow for Winsford as the attributed population and flows from Marton North are now being received. This has resulted in in a change of load.

5.6 CWW6 - Wastewater network+ - Sewer and volume data

CWW6.1-6.2 - No change has been made to lines CWW6.1-2 regarding first time sewerage forecast that was proposed at draft determination. A further risk remains around a push for additional first time sewerage being delivered in and around Windermere given the latest media attention on environmental impact in the area, a review of the potential locations will be undertaken as part of the Windermere Strategy.

CWW6.3-4 - Updated following the addition of RR24 APR data. AMP8 forecast has been updated in line with the latest data input and data quality checks.

CWW6.5 - RR24 APR data added. No change to forecasted number of sewer blockages.

CWW6.6-6.7 - RR24 APR data added and forecast updated accordingly. Total number of sewer collapses aligns with Ofwat's proposed PCL for UUW at draft determination.

CWW6.8-6.9 - No change from PR24 submission.

CWW6.10 - No change from PR24 submission.

CWW6.11 - Sewer age - Total length of sewer (including rising mains) laid or structurally refurbished post 2001 - The data table has been updated following the addition of RR24 APR data.

CWW6.12 - RR24 data added. No change from PR24 submission.

CWW6.13 - RR24 data added. No change from PR24 submission.

CWW6.14 - RR24 APR data added and FY25 forecast updated to reflect updated delivery plan. No change to AMP8 forecast.

CWW6.15 - RR24 APR data added and FY25 forecast updated to reflect updated delivery plan. No change to AMP8 forecast.

CWW6.16 - Length of foul (only) public sewers - The data table has been updated following the addition of RR24 APR data.

CWW6.17 - Length of surface water (only) public sewers - The data table has been updated following the addition of RR24 APR data.

CWW6.18 - Length of combined public sewers - The data table has been updated following the addition of RR24 APR data.

CWW6.19 - Length of rising mains - The data table has been updated following the addition of RR24 APR data.

CWW6.20 - Length of other wastewater network pipework - The data table has been updated following the addition of RR24 APR data.

CWW6.21 - Total length of "legacy" public sewers – No change in data since submission as this figure is static and set in agreement with Ofwat.

CWW6.22 - Length of formerly private sewers and lateral drains (s105A sewers) - The data table has been updated following the addition of RR24 APR data.

AMP8 forecast has been reviewed in line with the latest data input for CWW6.11, 16, 17, 18, 19, 20, 21, 22; however, there was no significant change to previous average forecast so data for FY25-FY30 remains the same.

5.7 CWW6a - Transition and accelerated programme - Wastewater network+ - Sewer and volume data

Our accelerated/transitional investment has a negligible impact on these lines and therefore the table has been left blank in-line with the data table guidance.

5.8 CWW7a - Wastewater network+ - Sewage treatment works; size and consents

CWW7a.1 - RR24 data added. Buerton South closes in FY2024-25, load associated with no permit decreases. FY2026-27 new permit conditions of BOD, Ammonia and Phosphorus at Brampton Eden, load attributed has moved accordingly. In FY2029-30 due to WINEP AMP 8 update we see load move due to Embleton and Ferry House receiving a new Phosphorus limit, Far Sawrey and Troutbeck have new BOD, Suspended solids, Ammonia and Phosphorus limits. Near Sawrey has tightened Ammonia limit and new Phosphorus limit, Outgate has a tightened Phosphorus limit and two new sites Hilton and Grinsdale enter with no consents.

CWW7a.2 - RR24 data added. Marton North closes in FY2024-25, load associated with no permit decreases. FY2029-2030 Ambleside and Lanebottom has tightened Phosphorus limit, Langdale has a tightened Phosphorus limit and new Ammonia limit and Alpraham has new BOD, Suspended solids, Ammonia and Phosphorus limits due to WINEP AMP 8 update.

CWW7a.3 - RR24 data added. Further to the WINEP AMP 8 update Dalton, Grasmere and Bunbury has tightened Phosphorus limit and Hawkshead has tightened BOD, Suspended solids and Phosphorus limits and a new Ammonia limit.

CWW7a.4 - RR24 data added. In FY2028-29 there is a new UV consent at Settle. The consent limit has been introduced earlier as part of the WINEP Update, a new driver requires earlier delivery. From FY2026-2027 onwards Sedbergh Phos and Partington BOD have had their limits changed to align with the WINEP.

CWW7a.5 - RR24 data added. In FY2028-29 there is a new UV consent at Barnoldswick. The consent limit has been introduced earlier as part of the WINEP Update, a new driver requires earlier delivery. In FY2029-30 Garstang and Penrith have had their Phosphorus limit tightened.

CWW7a.6 - RR24 data added. Davyhulme BOD limit tightened in 2025/26 driven by WINEP AMP 8 update. Eccles, Formby, Hazel Grove and St.Helens had Phosphorus limit tightened in FY 2029-30 further to WINEP AMP 8 update. The associated load moved accordingly.

CWW7a.7 - RR24 data added. The total load received has been updated to reflect the above changes. Please refer to lines CWW7a1-6.

CWW7a.9 - 14 RR24 data added. The STWs in each size band has been updated to reflect the above changes. Please refer to lines CWW7a1-6.

CWW7a.15 - RR24 data added. The total number of works has varied over the AMP because of the closure of Buerton South and Marton North in FY2024-25 and new works Williamsgate coming in in the same year. In FY2029-30 there is an increase in two new works Grinsdale and Hilton as part of the Village Drains scheme from the WINEP AMP 8.

5.9 CWW7b - Wastewater network+ - Sewage treatment works data; UV permits

CWW7b.1 - RR24 data added. No change from PR24 submission.

CWW7b.2 - RR24 data added. No change from PR24 submission.

CWW7b.3 - RR24 data added. No change from PR24 submission.

CWW7b.4 - RR24 data added. In FY2028-29 the weighted average number of days that UV permit applies per year for STWs in size band 4 has decreased for UV permits >30mW/s/cm2 and therefore increased in <=30mW/s/cm2 due to Settle WwTW having its consent limit introduced earlier as part of the WINEP Update, a new driver requires earlier delivery.

CWW7b.5 - RR24 data added. In FY2028-29 the weighted average number of days that UV permit applies per year for STWs in size band 5 has decreased for UV permits >30mW/s/cm2 and therefore increased in <=30mW/s/cm2 due to Barnoldswick WwTW having its consent limit introduced earlier as part of the WINEP Update, a new driver requires earlier delivery.

CWW7b.6 - RR24 data added. No change from PR24 submission.

5.10 CWW7c - Wastewater network+ - Sewage treatment works data; treatment type

CWW7c.1 - RR24 data added. In FY2026-27 Brampton Eden's treatment type has changed from Primary (P) to Secondary Biological (SB). In FY2029-30 Far Sawrey's treatment type changed from SB to Secondary Activated Sludge (SAS) and Ferry House has changed from P to SAS as per WINEP AMP 8 update. As such the load received by STWs in size band 1 load type has shifted accordingly.

CWW7c.2 - RR24 data added.

CWW7c.3 - RR24 data added.

CWW7c.4 - RR24 data added.

CWW7c.5 - RR24 data added.

CWW7c.6 - RR24 data added. In FY2029-2030 Eccles, Salford and Wigan had treatment type classification changes to reflect WINEP AMP 8 updates. The load received by STWs in above size band 5 has moved accordingly.

CWW7c.7 - RR24 data added.

CWW7c.8 - RR24 data added.

CWW7c.9 - RR24 data added. In FY2026-27 Brampton Eden's treatment type has changed from P to SB. In FY2029-30 Far Sawrey's treatment type changed from SB to SAS and Ferry House has changed from P to SAS as per WINEP AMP 8 update. As such the number of STWs attributed to each treatment type in size band 1 has shifted accordingly.

CWW7c.10 - RR24 data added.

CWW7c.11 - RR24 data added.

CWW7c.12 - RR24 data added.

CWW7c.13 - RR24 data added.

CWW7c.14 - RR24 data added. In FY2029-2030 Eccles, Salford and Wigan had treatment type classification changes to reflect WINEP AMP 8 updates. As such the number of STWs attributed to each treatment type in STW above size band 5 has moved accordingly.

CWW7c.15 - RR24 data added.

5.11 CWW8 - Wastewater network+ - Energy consumption and other data

No change to forecast in CWW8.1 regarding total sewerage catchment area.

The number of coastal bathing waters is not something that is decided by UUW, applications are submitted by interested parties to DEFRA. There have been no new coastal bathing waters designated by DEFRA.

The number of inland bathing waters is not something that is decided by UUW, applications are submitted by interested parties to DEFRA. Five new inland bathing waters were designated by DEFRA ahead of the 2024 bathing season. The number of inland bathing waters in the North West increased from 4 to 9.

No change to the AMP7 forecast. The number of event duration monitors has reduced by 1 in AMP8 to reflect an update to the WINEP and removal of one scheme with a U_MON3 driver (08UU100576a).

No change to the forecast for number of flow monitoring at STW.

Lines CWW8.7-8.9 have been updated with the most recent actual values taken from the FY24 APR.

5.12 CWW8a - Transition and accelerated programme - Wastewater network+ - Energy consumption and other data

No change to data reported in this table. Transitional expenditure will not result in delivery of any schemes in FY24 or FY25 for the lines specified within table CWW8a.

5.13 CWW9 - Enhancement expenditure (cumulative) - wastewater network+ and bioresources

This table has been updated to reflect the cumulative expenditure of the revised enhancement programme as detailed in CW3.

5.14 CWW10 - Wholesale wastewater local authority rates

The methodology that we have used in preparing this table has not changed from the originally submitted plan and the previous commentary remains valid.

Where there have been changes in the table values these are the result of a number of factors as listed below:

- FY24 updated to reflect the APR data
- Rateable values and associated liabilities updated to reflect where valuations have been re-assessed following successful challenges of assessments and instances where the Valuation Office Agency (VOA) has actively re-assessed our valuations.
- We have reworked our values to reflect changes in inflation assumptions.
- We have reviewed our assumption as to when we will successfully win our valuation argument with the VOA on Under Working Allowances.
- We have updated the impact of the change in our asset stock to reflect our latest view of the timing and scale of our AMP 8 wastewater enhancement programme.

The values we have presented in the table are different to what was set out in the draft determination. In the draft determination Ofwat has based the allowance on the FY24 position and has not factored the increases in business rates to reflect the impact of the two business rates revaluations as well as changes in the asset stock following the AMP 8 wastewater enhancement programme. Further details of this are set out in our representation *UUWR_26 – Business rates*.

5.15 CWW11 - Third party costs by business unit for the wholesale wastewater service

Diversion specific
The numbers for FY24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022/23 price base.

The AMP8 diversions expenditure aligns with the numbers submitted in our initial PR24 submission.

Non-diversion activities
For FY25 the NRSWA and Non-S185 diversions forecast remains the same as previously submitted. However, following an update to the S185 revenue forecast in DS1e, we have revised the expenditure forecast to ensure that they align.

5.16 CWW12 - Transitional expenditure - wastewater network+ and bioresources

Overall Transitional Expenditure claim is lower than the January business plan by £42.8m, the table has been updated for 2023-24 actual expenditure. Variances are considered to be due to timing and an appropriate adjustment has been made to the 2024-25 forecast.

The lower overall expenditure in this table is as a result of the changes to CWW3 as detailed in the variance table in the CWW3 commentary.

5.17 CWW13 - Best value analysis (enhancement expenditure) - wastewater network+ and bioresources

This table has been updated to reflect the changes listed in CW3. The present value calculations in CWW13 use consistent assumptions to those used in our original business plan submission.

5.18 CWW14 - Best value analysis of alternative option (enhancement expenditure) - wastewater network+ and bioresources

This table has been updated to reflect the changes listed in CWW3. As well as the changes in CWW3, the alternative options now represent a £250m reduction to the overflows programme and the removal of GHG reduction (net zero) expenditure. The £250m overflows reduction is an unidentified efficiency saving and solely appears in CWW14.

The present value calculations in CWW14 use consistent assumptions to those used in our original business plan submission.

5.19 CWW15 - Best value analysis; benefits - wastewater network+ and bioresources

This table has been updated following the changes to the totex program, but it continues to follow the same methodology as originally submitted. Points to note include:

- We note some discrepancies between data from CWW15 and OUT3 which is resulting in returning a "FALSE". This is due to top-down changes made to PCLs throughout the draft determination process which don't reflect in the detailed bottom up build of projects.

5.20 CWW16 - Best value analysis of alternative option; benefits - wastewater network+ and bioresources

This table has been updated following the changes to the totex program, but it continues to follow the same methodology as originally submitted. Points to note include:

- The £250m top-down efficiency adjustment relating to storm overflows has been reflected in the expenditure of least cost options table (CWW14), but has not been reflected in the least cost benefits table (CWW16). The £250m adjustment relates to an as yet unidentified efficiency saving, and as such would not be able to be represented in the benefits tables, which are populated based on a bottom up build at a project level.

5.21 CWW17 - Accelerated programme expenditure - wastewater network+ and bioresources

Overall Accelerated programme expenditure is lower than the January business plan by £16.1m, the table has been updated for 2023-24 actual expenditure. Variances are considered to be due to timing and an appropriate adjustment has been made to the 2024-25 forecast.

The lower overall expenditure in this table is as a result of the changes to CWW3 as detailed in the variance table in the CWW3 commentary.

5.22 CWW18 - Cost adjustment claims - base expenditure: wastewater network+ and bioresources

As part of our PR24 submission we submitted a **conditional** cost adjustment claim (CAC) relating to drainage costs. We do not submit a specific representation for this claim at draft determination and therefore the claim value has been replaced with a null value. We recognise that Ofwat has made some improvements to their base costs models by including an urban rainfall variable, albeit not accounting for the impact of combined sewers. However, a further uplift in base allowances will not allow UUW to attain Ofwat's proposed common PCL for internal sewer flooding. Achieving this would instead necessitate billions of pounds of enhancement investment in rainwater management and combined sewer separation, and therefore we maintain that the most appropriate way to reflect the unequal distribution of exogenous variables amongst companies is for Ofwat to adopt environmentally-adjusted PCLs. It is for this reason that we do not make a specific representation for this cost adjustment claim at draft determination and instead set out our compelling evidence for a company-specific PCL for internal sewer flooding in *UUWR_12 – Internal sewer flooding*.

We have also submitted a CAC relating to P-removal opex. Ofwat has provided a general industry-wide uplift to account for the expected increase in P-removal opex. As a result, we have updated our claim value, so that it aligns with Ofwat's proposed uplift. The implicit allowance value has been removed.

We have not made any changes to the historic totex lines.

5.23 CWW19 - Wastewater network+ - WINEP nutrient removal (phosphorus and total nitrogen) scheme costs and cost drivers

The table has been updated to reflect addition sites and changes to the WINEP. Totex costs have been updated in line with those highlighted in the table in the CWW3 commentary. To confirm costs in CWW19 do not include Bioresources or Business Rates.

Cost driver 1 requests the 'scheme design population equivalent', where the design population equivalent is not available, the DWMP 2050 population equivalent forecast has been used, in some cases this is lower than the current population equivalent. The design population will be updated when we have detailed solutions and the project is in contract, therefore providing greater certainty over the design population equivalent. This will be updated through the APR table 7F.

Nine sites have been identified for catchment based solution, these are identified in cost driver 5 and cost driver 10 as ' 7. combination of chemical and CBN'. The phosphorus reduction requirement, without catchment interventions is identified within the WINEP. To identify the phosphorus requirement with catchment interventions, we have run catchment models to identify the new WwTW permit limits/requirements in order to meet water quality needs. All permit requirements will be agreed in advance with the Environment Agency.

Within cost driver 10, solution type, five sites have been identified as '10. Other'. The indicative solution for these sites is based on an innovative technology that delivers phosphorus removal though electro coagulation, for this reason they have been identified as other within CWW19. Within tables CWW3 and CWW20, these schemes have been allocated to 'chemical treatment' to ensure that the costs and performance benefits are captured as 'other'

solution type is not an option withing these tables. Ashton under Lyne WwTW solution type has been updated from Biological treatment only to chemical treatment.

The phosphorus removal scheme at Davyhulme WwTW (identified as Davyhulme WwTW – 08UU100878a within CWW19), is a multi- AMP project delivering a long-term tightening of the phosphorus permit to the technically achievable limit of 0.25 mg/l in AMP9. The project will deliver an interim tightening of the phosphorus limit to 3 mg/l in AMP8. The data table represents the performance improvement seen in AMP8 only however the totex profile is reflective of the full multi-AMP scheme.

5.24 CWW20 - Wastewater network+ - Sewage treatment works population, capacity and network data

CWW20.4 - Aligned to the phased approach for Davyhulme WwTW as outlined in the WINEP

CWW20.5 Updated to include the PE for Askham in Furness, Southport, Near Sawrey, Wigan and Skelmersdale. These treatment works already operate UV disinfection as tertiary process using Measured Applied Dose (MAD), however the improvement to the treatment process or capacity requires replacement with Validated dose standard treatment.

We include cost for validated dose UV at Croston WwTW within our cost tables, however as this scheme delivers in FY 30/31 there is no associated PE included within this table

CWW20.8 - Updated to reflect the change in output date for Brampton Eden, movement of associated PE from 27/28 to 26/27.

CWW20.11 - Updated to reflect the change in output date for Brampton Eden, movement of one scheme from 27/28 to 26/27.

CWW20.14 – Equivalent grey storage associated with STW schemes. Where a scheme has been identified for an increase in flow to full treatment (FTFT), the storage presented in the table is the equivalent volume required to meet the spill target assuming no FTFT increase. The actual volume of storage required for these schemes, in addition to the FTFT increase, can be found in our response to query OBQ–REP–UU-001. All storage volumes align with storage volumes presented within PRR24 data table ADD20, for further detail please see the ADD20 commentary. Any changes to the WINEP have been reflected within this table.

CWW20.15 – Equivalent green storage associated with STW schemes. Where a site has been identified for a potential green equivalent solution, this has been input into the data tables. All storage volumes align with storage volumes presented within PRR24 data table ADD20, for further detail please see the ADD20 commentary.

CWW20.16/17 – Aligns to the number of schemes requiring grey storage within our plan. Where a scheme is part of a combined solution, in particular where all of the storage is allocated to one line and therefore another line is presented as zero storage in ADD20, we have included all sites within the combined solution within this line. We have assumed that all sites required some form of pumping, either to or from the storm storage.

CWW20.19-22 – aligns to the latest version of the WINEP with the exception of the following sites:

Far Sawrey – U_IMP1 Reg date is 13/05/2030 we include the scheme output in CWW20 for 2030 as the solution is required to be delivered to meet the earlier reg date for the 25YIMP driver of 31/03/2030.

Troutbeck - U_IMP1 Reg date is 13/05/2030 we include the scheme output in CWW20 for 2030 as the solution is required to be delivered to meet the earlier reg date for the 25YIMP driver of 31/03/2030.

Brampton Eden - Revised delivery year to comply with improvement condition in site environmental permit, which has an earlier completion date than listed in the WINEP.

Ashton under Lyne WwTW - In the PR24 submission totex represented was for a chemical P solution, however the site was included as biological P removal, further validation has taken place and this site has been confirmed as a chemical P removal solution, the data table has been updated to reflect this.

Eccles has been added to align with the revised cost split between P, sanitary and chemicals in Yr 5

CWW20.28 - Increase included for the additional P removal schemes. For schemes where the notional solution includes P removal via electrocoagulation, we have not included a chemical storage volume.

CWW20.32-35 - Updated to reflect the WINEP EA categorisation. Does not include the sites where modifications are required for 2 min monitoring. For more detail see Query response OFW-REP-UU-002

CWW20.36 – Equivalent grey storage associated with network schemes. Where a scheme has been identified for an increase in flow to full treatment (FTFT), the storage presented in the table is the equivalent volume required to meet the spill target assuming no FTFT increase. The actual volume of storage required for these schemes, in addition to the FTFT increase, can be found in our response to query OBQ–REP–UU-001. All storage volumes align with storage volumes presented within PR24 data table ADD20, for further detail please see the ADD20 commentary. Any changes to the WINEP have been reflected within this table.

CWW20.37 – Equivalent green storage associated with network schemes. Where a site has been identified for a potential green equivalent solution, this has been input into the data tables. All storage volumes align with storage volumes presented within PRR24 data table ADD20, for further detail please see the ADD20 commentary.

CWW20.38/39 – Aligns to the number of network schemes requiring grey storage within our plan. Where a scheme is part of a combined solution, in particular where all of the storage is allocated to one line and therefore another line is presented as zero storage in ADD20, we have included all sites within the combined solution within this line. We have assumed that all sites required some form of pumping, either to or from the storm storage.

CWW20.40-46 – Aligns to additional information associated within green equivalent storage schemes proposed.

CWW20.47 - As stated in our previous commentary for this line, due to the nature of calculation and the wide confidence grade of the output we are not providing a change to the reported figure.

CWW20.48 – This line identifies the number of storm overflows (STW and network) that have an enhanced screening requirement. In general, schemes will have a EnvAct_IMP5 driver within the WINEP, however some sites have more than three relevant drivers and so the additional drivers are included within water company commentary or in spreadsheets shared with the Environment Agency.

CWW20.61-64 – Updated to reflect new WINEP requirements. Further details provided in UWWR38 - Investigations

CWW20.72 - 9 schemes added to align with WINEP.

CWW20.73 - Bioresources enhancement cases, benefit associated with screening enhancement output in 28/29 removed.

CWW20.75 - WW Reservoir enhancement rejected by Ofwat; benefit associated with enhancement removed.

5.25 CWW20a - Transition and accelerated programme - Wastewater network+ - Sewage treatment works population, capacity and network data

Network / Storm overflow data
Updated to reflect schemes are grey storage and align with ADD20

5.26 CWW21 - Wastewater sewers; asset condition

This table has been updated to fully align to the previously submitted detailed cohort analysis workbook. The underlying data has not been updated as there is no material new information or change to the information since the submission of our business plan. We have therefore updated table CWW21 to be consistent with the supporting workbook, as per our business plan submission.

5.27 CWW22 - Wastewater - net zero enhancement schemes

The totex in this table reconciles to CWW3.180-182 and reflects the revised net zero enhancement claim *UUWR_30 – Carbon net zero enhancements*.

6. Water resources

6.1 RES1 - Water resources asset and volumes data

Table RES1, lines RES1.1 to RES1.16 have been updated in line with FY24 latest values, as reported in the FY24 APR. Forecasts of future asset numbers and volumes have been based on a 3-year-average. We did not use FY24 values as an indicator of future asset numbers, as FY24 was a particularly wet year, when we operationally used fewer assets than usual. The use of FY24 as a baseline would provide an artificially low baseline for asset numbers, whereas the use of a 3-year average gives a more representative value.

In addition, one extra project has been added to RES1.37 (complex WINEP investigations) and line RES1.38 (total number of WINEP investigations), due to the addition of another WINEP investigation (Naden Gauging Weir) post the submission of the business plan.

Lines RES1.20-24 have been updated to reflect changes following the addition of FY24 data.

7. Bioresources

Commentary for changes to our Bioresource data tables between our initial business plan submission and our resubmission post draft determination is provided below, this commentary should be considered in the context of our initial commentary document *UUW86 - PR24 Data Tables Commentary: Bioresources*.

Following our review of Ofwat's draft determinations we have made representations on several areas of enhancement within the Bioresource price control which are summarised in document *UUWR_13 - Bioresources* and our Bioresource data tables submission has been updated to reflect these representations.

Additionally, there are two enhancement cases which Ofwat have not made any allowance for in their draft determinations and for which we have not made any representation. Our data tables have been updated to reflect the removal of these enhancement cases; these are:

- **Standard Enhancement – Improving resilience in biosolids recycling to agriculture**: An enhancement case to increase the resilience of the agricultural outlet for biosolids, by improving product quality through the enhanced removal of non-degradable contaminants (such as microplastics) and thereby support market acceptance of higher quality products; and,
- **Net Zero Enhancement - Stationary fossil fuel reductions:** An enhancement case to reduce fossil fuel use in our treatment operations by replacing with low/zero carbon fuels.

Further detail of the consequence of these changes for each table is provided below.

7.1 BIO1 - Bioresources sludge data

Table BIO1, all lines have been updated for reporting year 2023/24 in line with those reported in Table 8A of the 2023/24 APR.

BIO1.6 – BIO1.8: Sewage Sludge Disposal
Previously the implementation of the enhanced sludge screening (enhancement case; improving resilience in biosolids recycling to agriculture) resulted in a forecast increase in the amount of non-degradable material removed prior to digestion and therefore a reduction in the amount of digestate produced. The removal of this activity results in an increase in the amount of digestate produced.

The disposal of sludge screenings / grit removed is reported in line BIO1.7 – Total sewage sludge disposed by 3rd Party sludge service provider. Disposal of treated sludge is reported in line BIO1.6 – Total sewage sludge disposed by incumbents. Therefore, there has been an increase in line BIO1.6 and a decrease in BIO1.7 resulting from the removal of the enhancement case.

BIO1.16 – BIO1.17: Sludge Disposal 'Work' Done
There is an increase in the amount of 'work' done in sludge disposal due to a larger amount of digestate requiring disposal following the removal of the enhanced sludge screening. This is a result of the forecast distance to landbank for digestate recycling being further than the distance to landfill for the disposal of sludge screenings. The forecast average distance to access suitable landbank increases with increasing amounts of digestate.

7.2 BIO2 - Bioresources operating expenditure analysis

Table BIO2, all lines have been updated for reporting year 2023/24 in line with those reported in Table 8B of the 2023/24 APR.

Total operating expenditure (excluding 3rd party) for sludge treatment, sludge transport and sludge disposal, and the supporting lines, have been updated to reconcile with the updated table CWW1 in our resubmission.

These changes are a consequence of our revised enhancement costs, including IED compliance, as detailed in our representations document *UUWR_13 – Bioresources*, and the removal of the two enhancement cases; enhanced sludge screening (enhancement case; improving resilience in biosolids recycling to agriculture) and Net Zero Enhancement - Stationary fossil fuel reductions.

7.3 BIO3a - Bioresources energy analysis

Table BIO3a, all lines have been updated for reporting year 2023/24 in line with those reported in Table 8C of the 2023/24 APR.

The electricity use associated with the enhanced sludge screening (enhancement case; improving resilience in biosolids recycling to agriculture) has been removed from the electricity lines in table BIO3a.

Also, it was previously assumed as part of the Net Zero Enhancement - Stationary fossil fuel reductions, that biogas was used to displace fossil fuel use in boilers for provision of supplementary heat to Bioresource processes, thereby reducing generation from the combined heat & power (CHP) engines and reducing the amount of stationary fuel purchased. Table BIO3a has been updated to reflect the removal of this enhancement case and the change affects all electricity and heat lines from 2025/26 onwards.

7.4 BIO3b - Bioresources; income, liquors, and metering analysis

Table BIO3b, all lines have been updated for reporting year 2023/24 in line with those reported in Table 8C of the 2023/24 APR.

Line BIO3b.1 - Income claimed from Renewable Energy Certificates (ROCs), has increased following the removal of the Net Zero Enhancement - Stationary fossil fuel reductions. Previously it was assumed as part of the enhancement case that biogas was used to displace fossil fuel use in boilers for provision of supplementary heat to Bioresource processes, thereby reducing generation from the combined heat & power (CHP) engines and resulting in reduced ROC income.

7.5 BIO4 - Bioresources sludge treatment and disposal data

Table BIO4, all lines have been updated for reporting year 2023/24 in line with those reported in Table 8D of the 2023/24 APR.

Table BIO4 has been updated to align with Table BIO1 following the removal of the enhanced sludge screening enhancement case; improving resilience in biosolids recycling to agriculture.

BIO4.1 – BIO4.7: Sludge Treatment Process
The forecast values of BIO4.1: % Sludge untreated include the amount of untreated sludge cake we dispose of to land restoration and the amount of sludge screenings removed within the Bioresources price control and disposed of to landfill. Therefore following the removal of the enhanced sludge screening there has been a reduction in BIO4.1: % Sludge untreated, and an increase in the values reported in BIO4.2: % Sludge treatment process - Raw sludge liming, BIO4.3: % Sludge treatment process – Conventional AD and BIO4.4: %Sludge treatment process – Advanced AD, to account for the non-degradable material proceeding forward to treatment in the sludge.

BIO4.8 – BIO4.13: (Un-incinerated) Sludge disposal and recycling routes
The forecast values of BIO4.8: "% Sludge disposal route – landfill, raw", includes the amount of sludge screenings removed within the Bioresource price control and disposed of to landfill, reported under third-party. Therefore following the removal of the enhanced sludge screening there has been a reduction in BIO4.8: % Sludge disposal route – landfill, raw, and an increase in the values reported in BIO4.10: % Sludge disposal route – land restoration/reclamation, and BIO4.11: % Sludge disposal route – sludge recycled to farmland to account for the non-degradable material proceeding forward to treatment and therefore disposal via these routes.

7.6 BIO5 - Bioresources - additional treatment and storage data

BIO5.1 – BIO5.10 – No change.

BIO5.11 – Additional line 1; Sludge Management/sludge treatment/ Bioresources cost driver: We previously used this additional line to provide the percentage (%) of the total amount of raw sludge produced (tDS) forecast

to undergo new/additional enhanced sludge screening. This line has been removed following the removal of the enhanced sludge screening (enhancement case; improving resilience in biosolids recycling to agriculture).

7.7 BIO6 - Bioresources - NMEAV for capital enhancement schemes

BIO6 has been updated with revised data from CWW3 and inflation assumptions. Forecast capital expenditure for Bioresource WINEP schemes in CWW3 has been updated following our review of Ofwat's draft determinations, further detail can be found in our representation summary document *UUWR_13 - Bioresources*.

Consistent with our October submission, although the data in BIO6 is derived from CWW3 (prepared on a pre-efficiency basis), we have assumed it is more appropriate to input the capital expenditure for BIO6 on a post-efficiency basis to derive the closing NMEAV. Consequently, the capex in BIO6 (post efficiency) does not directly reconcile to the capex in CWW3 (pre-efficiency).

8. Retail

8.1 RET1 - Cost analysis - retail (post frontier shift and real price effects)

Although not required we have chosen to resubmit table RET1 as values have materially moved from our original submission.

Following publication of the Draft Determination we have revised our approach to completing table RET1 to reflect an improved understanding of the interaction between reported costs and inflation. As a result, we have updated efficiency expectations as reported in table SUP11 and consequential cost reductions applied in table RET1. This has resulted in a substantially restated table, with many lines altered from our original business plan submission.

We have also updated reported costs and cost projections to reflect:

- 2023/24 actual costs, including a revised baseline for Doubtful Debt
- Projected Doubtful Debt based on revised average household bill projections for AMP8
- Updated projections for inflation

8.2 RET1a - Cost analysis – retail

Although not required we have chosen to resubmit table RET1a as values have materially moved from our original submission.

Following publication of the Draft Determination we have revised our approach to completing table RET1a to reflect an improved understanding of the interaction between reported costs and inflation. As a result, we have updated efficiency expectations as reported in table SUP11 and consequential our view of pre frontier shift costs reported in table RET1a. This has resulted in a substantially restated table, with many lines altered from our original business plan submission.

We have also updated reported costs and cost projections to reflect:

- 2023/24 actual costs, including a revised baseline for Doubtful Debt
- Projected Doubtful Debt based on revised average household bill projections for AMP8
- Updated projections for inflation

8.3 RET2 - Residential retail

The methodology and commentary for this table remains in line with our previous commentary document *UUW87 – Retail Table Commentary*. The only change made is to actualise FY24, in line with the populated values from APR Table 2F. FY25 forecast remains unchanged from the forecast we submitted previously.

8.4 RET3 - Business retail tariffs (Welsh companies only)

Table not required for UUW

8.5 RET4 - Cost adjustment claims - residential retail

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

9. Developer services

9.1 DS1e - Developer services revenue (English companies)

The numbers for FY24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022/23 price base.

For FY25, the line items which align to the price control revenue within AMP7 have been updated to reflect the latest revenue forecast for 2024/25 in line with the numbers reported in table PD5. The remaining line items forecast remain unchanged for the initial PR24 submission.

In AMP8, the majority of the line items remain unchanged from our initial PR24 submission except for the following:

NRSWA Diversions (DS1e.2 & DS1e.16) - Following the DD response, we have updated the proportion recoverable to 82% to align with the PR24-DD-Developer-services-diversions-and-third-party-services-model.

Infrastructure recharges (DS1e.4 & DS1e.18) - Following the DD response, we have updated the value to take in to account the base efficiency factor of 0.6% water and 6.8% wastewater to align with the PR24-DD-Developer-services-diversions-and-third-party-services-model.

9.2 DS1w - Developer services revenue (Welsh companies)

Table not required for UUW.

9.3 DS2e - Developer services expenditure (excluding diversions) - water (English companies)

The numbers for FY24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022/23 price base.

For FY25 the site-specific forecast remains the same, however based on the actuals recorded in FY24 on Network Reinforcement (DS2e.1) we have reprofiled the expenditure so that overall spend in AMP7 remains the same as proposed in our initial PR24 submission.

In AMP8, all site-specific line items remain unchanged from our initial PR24 submission. Following the DD response, we have updated the Network Reinforcement (DS2e.1) value to take in to account the base efficiency factor of 0.6% to align with the PR24-DD-Developer-services-diversions-and-third-party-services-model.

9.4 DS2w - Developer services expenditure (excluding diversions) - water (Welsh companies)

Table not required for UUW.

9.5 DS3 - Developer services expenditure (excluding diversions) - wastewater (English and Welsh companies)

The numbers for FY24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022/23 price base.

For FY25 the site-specific forecast remains the same, however based on the actuals recorded in FY24 on Network Reinforcement (DS3.1) we have reprofiled the expenditure so that overall spend in AMP7 remains the same as proposed in our initial PR24 submission.

In AMP8, all site-specific line items remain unchanged from our initial PR24 submission. Following the DD response, we have updated the Network Reinforcement (DS3.1) value to take in to account the base efficiency factor of 6.8% to align with the PR24-DD-Developer-services-diversions-and-third-party-services-model.

9.6 DS4 - Developer services - New connections, properties and mains

The approach for the changes to the properties has been to amend actuals for FY24 and adjust any differences into FY25 only, otherwise, forecasts will remain the same.

Principally the forecast has been adjusted based on trends over the last (this) AMP. Our WRMP plan has a much higher forecast Over the next few years with an anticipated downturn towards the end of AMP 8. Whilst we could have forecast lower numbers this would have meant potentially unrealistic housing outputs at the end of AMP8 (to reconcile back to WRMP). Connected property forecasts have been reviewed in line with the latest government housing target proposals. Our PR24 submission forecasts a significant increase in the number of new connected properties in AMP8. We believe that our forecasts align with these government targets for the North West.

9.7 DS5 - Network reinforcement costs

The numbers for FY24 have been updated to align with the actual figures recorded within our APR submission, deflated into 2022/23 price base.

Based on the actual expenditure recorded in FY24 on Network Reinforcement (DS5), we have reprofiled the expenditure in FY25 so that overall spend in AMP7 remains the same as proposed in our initial PR24 submission.

In AMP8, following the DD response, we have updated the Network Reinforcement expenditure to take in to account the base efficiency factor of 0.6% water and 6.8% wastewater to align with the PR24-DD-Developer-services-diversions-and-third-party-services-model.

9.8 DS6 - Network reinforcement drivers - potable mains, sewers, pumping stations and pumping capacity

The approach to DS6 table updates consists of projects and schemes relating to network reinforcement lines within the data table for FY24-FY30. Mains lengths, sewer lengths, pumping stations and associated capacity have been amended to reflect the latest project scopes and designs. There has been no change to the forecast of requisitions, resilience, maintenance or water quality data. The methodology remains in line with our original commentary *UUW88 - Developer services commentary*.

10. Long-term strategies

Resubmission of the LTDS tables (LS1 – LS7) has not been requested by Ofwat and these therefore match our submission on 25 January 2024.

11. Supplementary tables

11.1 SUP1A - Connected properties, customers and population

SUP1A.17 - Resident population. Increase in population because of a new works entering in FY2024-25, and then two further works entering in FY2029-30 as a result of the village drains scheme. This is a small increase in population as these works are sizeband 1 sites. The 3 village drains schemes: Grinsdale, Hilton (new works entering) and Knock, the solution for Knock village drains is to transfer the flows to the existing WwTW at Knock. Therefore, Knock WwTW has had its population increased accordingly.

SUP1A.18 - Non-resident population (wastewater). No change to tourism population.

SUP1A.19, SUP1A.20, SUP1A.21 - Updated with FY2023-24 actual reported values.

11.2 SUP1B - Properties and meters

SUP1B amended in line with DS4 adjustment: The approach for the changes to the properties has been to amend actuals for FY24 and adjust any differences into FY25 only, otherwise, forecasts will remain the same.

Principally the forecast has been adjusted based on trends over the last (this) AMP. Our WRMP plan has a much higher forecast Over the next few years with an anticipated downturn towards the end of AMP 8. Whilst we could have forecast lower numbers this would have meant potentially unrealistic housing outputs at the end of AMP8 (to reconcile back to WRMP). Connected property forecasts have been reviewed in line with the latest government housing target proposals. Our PR24 submission forecasts a significant increase in the number of new connected properties in AMP8. We believe that our forecasts align with these government targets for the North West.

11.3 SUP4 - Green recovery expenditure - water resources and water network+ .

This table has been updated to reflect actual costs for 2023-24 and forecasted costs for 2024-25 as reported in our APR.

11.4 SUP5 - Green recovery expenditure - wastewater network+ and bioresources

This table has been updated to reflect actual costs for 2023-24 and forecasted costs for 2024-2026 as reported in our APR.

11.5 SUP6 - Green recovery data

SUP6.1 - 21
We will not be installing/renewing any meters or replacing any lead pipes under our Green recovery programme. As such, lines SUP6.1 - 21 have been intentionally left blank, as per the Ofwat guidance.

SUP6.22 and SUP6.24
These lines correspond to the volumes associated with the Green recovery schemes at Bury Wastewater Treatment Works (SUP6.22) and Nuttall Road CSO (SUP6.24).

We were originally committed to the delivery of these two schemes by the regulatory dates (31 March 2028 for Bury Storm Tanks and 31 August 2027 for Nuttall Hall Road CSO). Through Green recovery, we now aim to complete both schemes by 2025/26. The forecast storage volume for each scheme is therefore shown in this year.

SUP6.23 and SUP6.25
None of our Green Recovery activity impacts on the performance of these reporting lines, hence they are reported as zero.

11.6 SUP7 - Green recovery; Water common performance commitments

Our submission specifically stated that our Green recovery programme would only potentially impact on three of our bespoke AMP7 Performance Commitments (see table SUP9).

Therefore, there is no Green recovery impact on any of the Water Common PCs. As such, this table has been intentionally left blank, as per the Ofwat guidance.

11.7 SUP8 - Green recovery; Wastewater common performance commitments

Our submission specifically stated that our Green recovery programme would only potentially impact on three of our bespoke Performance Commitments (see table SUP9).

Therefore, there is no Green recovery impact on any of the Wastewater Common PCs. As such, table SUP8 has been intentionally left blank, as per the Ofwat guidance.

11.8 SUP9 - Green recovery; Bespoke performance commitments

There is the potential for some of our 'sustainable drainage and natural flood management' Green recovery activities to provide additional benefit under both our 'hydraulic internal flood risk resilience' and 'hydraulic external flood risk resilience' performance commitments. However, in 2023/24, none of our activities delivered any benefit in this area. We are also forecasting that there will be no additional benefit seen in 2024/25. These two performance commitments will then come to a close at the end of AMP7.

Likewise, there is the potential for some of our 'catchment phosphorus' Green recovery activities to provide additional benefit under our 'enhancing natural capital for customers' performance commitment. Again, none of our activities delivered any benefit in this area in 2023/24, or have any forecast benefit in 2024/25. This performance commitments will then come to a close at the end of AMP7.

11.9 SUP10 - Green recovery data capture reconciliation model input

A detailed overview of our green recovery activity for 2023/24 and future milestones can be found at our website.

The activities and milestones outlined in this document fully align to the position reported in table 10E in the 2024/24 APR.

11.10 SUP11 - Real Price Effects and frontier shift

As discussed in '*UUWR_25_Real Price Effects and frontier shift*', we align our view of Real Price Effects (RPEs) with Ofwat's view at DD. This is reflected within SUP11.

The wholesale frontier shift of 0.55% and residential retail frontier shift of 0.45% have been updated in line with our representations at DD, as set out in '*UUWR_25_Real Price Effects and frontier shift*'.

11.11 SUP12 - Direct procurement for customers (DPC)

The data in this table has not been changed. However, we have noted in *UUWR_40 – Water trading (Strategic Resource Options)* that a number of solutions are currently being considered to support water trading, some of which may meet the criteria for DPC. If the recommended solution is assessed as suitable for DPC this will be addressed through the RAPID gated process in AMP8 (Gate 3, December 2026).

11.12 SUP13 - Havant Thicket

UUW is not required to populate this table and it has therefore been left empty.

11.13 SUP14 - Customer engagement and affordability/acceptability of business plans

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

11.14 SUP15 - Affordability - residential customers

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

12. Summary tables

12.1 SUM1 – SUM3

These tables are auto-populated. Our previous commentary applies.

12.2 SUM4 - Expenditure

This table has been updated to reflect our representation tables. In the Water price controls we have identified metering expenditure within our WRMP, net zero expenditure and lead enhancement expenditure under the discretionary category.

In the Wastewater price controls, net zero expenditure has been categorised as discretionary.

The approach to both price controls is consistent with our January business plan.

13. Past delivery

13.1 PD1 - Inflation indices

We have updated our inflation assumptions using the same methodology as for our business plan submission. We have used these assumptions across our representation to ensure consistency. For the avoidance of doubt, this means that we have not used Ofwat's forecast inflation assumptions from the draft determination.

Unlike most tables, we have updated forecast inflation indices in AMP9 to prevent erroneous year on year percentages being calculated for 2030-31. We note that this will have no impact on any results used in the final determination and that Ofwat will use its own view of forecast inflation.

13.2 PD2 - Non-household water - revenues by tariff type

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

13.3 PD3 - Non-household wastewater - revenues by tariff type

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

13.4 PD4 - Analysis of land sales

There are no material changes from our original submission, data values are consistent with those provided in the PR19 Reconciliation Land Sales return.

13.5 PD5 - Revenue reconciliation – wholesale

The table has been updated to show actual revenues recovered for 2023/24 and to reflect the latest revenue forecast for 2024/25.

Actual revenues for 2022/23 and 2023/24 are consistent with information reported in APR Table 2M, however we have stripped out the value of rechargeable works from the revenues reported in table PD5 and also the RFI mechanism. In line with the Regulatory Accounting Guidelines issued for 2020/21 onwards we have reported rechargeable works income as price control revenue in the APR in line with the RAGs, but as this income was not included in the revenue control set at PR19 we have excluded it from the RFI mechanism for the purpose of setting charges. This approach means that we will be both compliant with the change in regulatory reporting and also able to continue to recover revenue under the revenue control in line with the approach that underpinned the PR19 final determination.

13.6 PD6 - Bulk supply information

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

13.7 PD7 and PD7a - Impact of Green recovery on RCV

Actual totex sourced from APR tables 4S and 4T for 2023-24, and PR24 data tables SUP4 and SUP5 for 2024-25, reported in 2022/23 prices.

We have published a detailed overview of our Green Recovery activity and expenditure for 2023/24 and the future, which satisfies all the requirements as detailed in the Green Recovery final decisions document.

Accelerating partnerships to deliver natural solutions

The accelerating partnerships to deliver natural solutions programme is not currently forecasting to overspend or underspend.

Table 7 shows the variance between the initial planned and current forecast spend profiles principally due to time spent focussed on completing preparatory works to identify an accurate list of viable locations and delays with getting the new, complex commercial agreements in place with partners. We don't anticipate this to have an impact on overall project delivery, and plan to complete the delivery of the programme within the AMP.

Table 7: Spend profile variance

Variance (%) – Accelerating partnerships to deliver natural solutions	2021/22	2022/23	2023/24	2024/25
Planned spend profile	10%	25%	51%	14%
Actual and forecast spend profile	1%	3%	11%	85%
Variance	**-9%**	**-22%**	**-39%**	**71%**

AMP8 WINEP investments at Bury

Programme spend in 2023-24 relates to spend moving from the 'outline design phase', through to undertaking significant enabling works at Nuttall Hall and Bury Wastewater Treatment Works. For both projects, although there remains a potential risk that the final delivery will be delayed beyond the original timescales, the early commencement of work on the schemes means that in both cases we still anticipate delivering them sooner than if they had not been part of the green recovery process.

We aim to deliver the entire scheme within the first year of AMP8. Due to this profile, we have submitted an enhancement case within our PR24 business plan to recover the costs associated with delivering the remainder of the scheme within AMP8.

Table 8 shows the variance between the initial planned and current forecast spend profiles.

Table 8: Spend profile variance

Variance (%) – AMP8 WINEP investments at Bury	2021/22	2022/23	2023/24	2024/25	AMP8
Planned spend profile	7%	8%	36%	50%	-
Actual and forecast spend profile	1%	3%	12%	30%	55%
Variance	**-6%**	**-5%**	**-25%**	**-20%**	**55%**

Tackling storm overflows

We are now forecasting to spend 87% of the SOAF investigations allowance in line with the reduction to required outputs. Following updates to the guidance from the Environment Agency, companies are now required to undertake a 'light touch' cost benefit assessment, therefore removing the need to undertake stage 3b/4 of the SOAF investigation. Table 9 shows how the spend on SOAF investigations is profiled across the years as a percentage of the total Ofwat allowance.

Table 9: SOAF spend profiles

Forecast spend profile (%) – SOAF only	2021/22	2022/23	2023/24	2024/25	AMP7 Total
Ofwat allowance – Green Recovery FD	-	-	51%	49%	100%
Ofwat allowance – reduced scope	-	-	51%	36%	87%
Actual and forecast spend profile	**3%**	**12%**	**37%**	**35%**	**87%**

The forecast spend on integrated catchment models is shown in Table 10.

Table 10: Forecast spend profile

Forecast spend profile (%) – ICM only	2021/22	2022/23	2023/24	2024/25	AMP7 Total
Integrate catchment models – Sankey Brook, Wiza Beck and Upper Derwent	**1%**	**17%**	**18%**	**65%**	**100%**

13.8 PD8 - Totex analysis - wholesale

Actual performance for 2023-24 has been aligned to the 2023-24 APR submission and forecasts for 2024-25 performance have been updated to reflect our latest view.

AMP7 forecast totex is higher than the previous business plan submission due to additional investment to improve environmental performance including storm overflows and pollution, improve water performance including enhanced leakage and demand reduction, to minimise the impact on customers as a result of the weather and operational incidents and the continuation of the high inflation environment impacting our supply chain in particular the construction industry.

13.9 PD9 - Totex performance

Actual performance for 2023-24 has been aligned to the 2023-24 APR submission and forecasts for 2024-25 performance have been updated to be consistent with totex reported in PR24 data table PD8.

Please refer to the commentary on the cost sharing total costs reconciliation within *UUWR_106_PR19 reconciliation submission* for an explanation of totex performance and the resultant customer cost sharing adjustments.

13.10 PD10 - Super-deduction first-year capital allowances

Resubmission of this table has not been requested by Ofwat and this table therefore matches our submission on 25 January 2024.

13.11 PD11 - RCV midnight adjustments

We have updated all PR19 reconciliation models with actual data for FY24 and our current best estimate for FY25.

13.12 PD12 - PR19 reconciliation adjustments summary

We have updated all PR19 reconciliation models with actual data for FY24 and our current best estimate for FY25.

The 2023/24 ODI performance model that we are submitting has already been presented to Ofwat as part of the usual APR submission requirement (July 2024). We note that this version of the year 4 ODI model is not the most up-to-date and therefore does not contain financial updates for Per Capita Consumption (PCC), as per the recent Ofwat guidance. In the model the 'expected' end of period reconciliation totals for this metric are still considered, as per the position we considered accurate on the APR submission date. We expect Ofwat to reflect the correct, up-to-date version of the model in its final determination.

14. Additional tables

14.1 ADD1 - Base expenditure analysis - water resources and water network+ (CW2 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CW2 and applies the frontier shift and real price impacts captured in SUP11.

See CW2 commentary for variance explanations.

14.2 ADD2 - Enhancement expenditure - water resources and water network+ (CW3 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CW3 and applies the frontier shift and real price impacts captured in SUP11.

See CW3 commentary for variance explanations.

14.3 ADD3 - Third party costs by business unit for the wholesale water service (CW11 equivalent; post-frontier shift efficiency and real price effects basis)

The numbers input into the table match those provided in CW11.

Our developer services tables are equivalent on a pre and post frontier shift and real price effects basis. This is because the underlying services are contestable and as such, an ongoing net frontier shift is determined by market forces. Therefore, no further adjustment is necessary.

14.4 ADD4 - Transitional expenditure - water resources and water network+ (CW12 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CW12 and applies the frontier shift and real price impacts captured in SUP11.

See CW12 commentary for variance explanations.

14.5 ADD5 - Accelerated programme expenditure - water resources and water network+ (CW17 equivalent; post-frontier shift efficiency and real price effects basis)

There is no water resources and water network+ accelerated programme expenditure.

14.6 ADD6 - Base expenditure analysis - wastewater network + and bioresources (CWW2 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CWW2 and applies the frontier shift and real price impacts captured in SUP11.

See CWW2 commentary for variance explanations.

14.7 ADD7 - Enhancement expenditure - wastewater network+ and bioresources (CWW3 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CWW3 and applies the frontier shift and real price impacts captured in SUP11.

See CWW3 commentary for variance explanations.

14.8 ADD8 - Third party costs by business unit for the wholesale wastewater service (CWW11 equivalent; post-frontier shift efficiency and real price effects basis)

The numbers input into the table match those provided in CWW11.

Our developer services tables are equivalent on a pre and post frontier shift and real price effects basis. This is because the underlying services are contestable and as such, an ongoing net frontier shift is determined by market forces. Therefore, no further adjustment is necessary.

14.9 ADD9 - Transitional expenditure - wastewater network+ and bioresources (CWW12 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CWW12 and applies the frontier shift and real price impacts captured in SUP11.

See CWW12 commentary for variance explanations.

14.10 ADD10 - Accelerated programme expenditure - wastewater network+ and bioresources (CWW17 equivalent; post-frontier shift efficiency and real price effects basis)

This table reflects the changes made to CWW17 and applies the frontier shift and real price impacts captured in SUP11.

See CWW17 commentary for variance explanations.

14.11 ADD11 - Developer services expenditure (excluding diversions) - water (English companies) (DS2e equivalent; post-frontier shift efficiency and real price effects basis)

The numbers input into the table match those provided in DS2e.

Our developer services tables are equivalent on a pre and post frontier shift and real price effects basis. This is because the underlying services are contestable and as such, an ongoing net frontier shift is determined by market forces. Therefore, no further adjustment is necessary.

14.12 ADD12 - Developer services expenditure (excluding diversions) - water (Welsh companies) (DS2w equivalent; post-frontier shift efficiency and real price effects basis)

Table not required for UUW.

14.13 ADD13 - Developer services expenditure (excluding diversions) - wastewater (English and Welsh companies) (DS3 equivalent; post-frontier shift efficiency and real price effects basis)

The numbers input into the table match those provided in DS2e.

Our developer services tables are equivalent on a pre and post frontier shift and real price effects basis. This is because the underlying services are contestable and as such, an ongoing net frontier shift is determined by market forces. Therefore, no further adjustment is necessary.

14.14 ADD14 - IED table BIO 7 - Bioresources - Industrial Emissions Directive scheme costs and cost drivers

The requested information in table ADD14 was first provided in our response to an Industrial Emissions Directive (IED) information request in August 2023, and a subsequent further information request on associated cost drivers for IED in query OFW-OBQ-UUW-079, submitted 20 December 2023.

Commentary for changes to our data presented in ADD14 between the submission in response to query OFW-OBQ-UUW-079 and our resubmission post draft determination is provided below. This commentary should be considered in relation to our commentary document for our initial submission; *UUW_079_1 Response to IED data requests and updated compliance position,* which sets out the scope of IED costs presented in ADD14. Additional commentary is provided within the data table submission, please refer to column BQ of table ADD14.

To support our submission, we have sought independent third-party assurance, which has been completed by Jacobs, who have reviewed our proposed enhancement scope against permit requirements and our IED submission for the significant areas of expenditure; tank covering and secondary containment, the costs for which are represented in table ADD14 and have stated:

"*While there are areas for improvement, we have found nothing which ought to prevent United Utilities submitting the IED costs within scope to Ofwat as part of its revised PR24 Business Plan.*[1]"

Industrial Emissions Directive Scheme Costs

Following draft determination, we have reviewed and assessed the impacts of Ofwat's cost modelling approach, and our representation on Ofwat's approach to derive efficient costs for IED is detailed in document; *UUWR_13 – Bioresources*, *section 2: IED compliance at anaerobic digestion sites (costs).* We have also made representation on Ofwat's proposed econometric models for IED which can be found in document; *UUWR_27 – Enhancement modelling consultation, Section 11.6 – Bioresource Industrial Emissions Directive (IED).*

As set out in our representations, our proposals for refinements to cost modelling have informed our revised IED compliance costs, and we have proposed further 'stretch' efficiencies to our IED enhancement costs which are presented in ADD14. Forecast expenditure has been updated with revised delivery profiles and adjusted based on

[1] Jacobs, PR24_SAF_United Utilities ADD14 IED, 22 August 2024.

2023/24 out turn position. A comparison of our initial submission in response to query OFW-OBQ-UUW-079 and our resubmission in ADD14 is shown in the table below.

Table 11: Comparison of IED cost submissions (Pre-Efficiency)

	Response to OFW-OBQ-UUW-079	This Submission (Aug-24)
Base Capital Expenditure	£35.583	£35.583
Base Operating Expenditure	£15.765	£16.950
Total Base Expenditure	**£51.348**	**£52.533**
Enhancement Capital Expenditure	£238.073	£205.054
Enhancement Operational Expenditure	£43.456	£27.822
Total Enhancement Expenditure	**£281.528**	**£232.877**
Total IED Expenditure	**£332.876**	**£285.409**

In the table below we present a summary of our cost estimating assumptions to demonstrate the allocation of the full cost of IED scope between base and enhancement expenditure.

Table 12: Allocation of IED scope between base and enhancement expenditure

IED Compliance Scope Element	Scope and Assumptions	Base or Enhancement Expenditure
New odour control	Costs for new odour control units to abate channelled emissions from covering tanks	Enhancement
Additional instrumentation, monitoring, and control	Costs included for new instrumentation and on-going calibration, and additional monitoring programmes.	Enhancement
Secondary containment to comply with CIRIA C736	New secondary containment, including new walls, new impermeable surfacing, kerbing, and access.	Enhancement
Site closures (St Helens, Lancaster, and Southport)	Conversion of raw sludge thickening and export sites. This is a lower cost option than making the existing anaerobic digestion assets IED compliant.	Enhancement
Abatement of fugitive emissions	New covers on existing open tanks and additional new tanks, with the abatement being a combination of new pipework for methane capture and return to the biogas system and/or new odour control units. Costs include enabling works e.g., drain and clean tanks prior to work commencing.	Enhancement
Abatement of methane emissions from open tanks	New scope to abate methane emissions from existing covered tanks are included as enhancement. The abatement is a combination of new pipework for methane capture and return to the biogas system and/or new odour control units. Current abatement solution, does not include provision of thermal oxidizers, which, if required could increase costs.	Enhancement
Abatement of fugitive emissions from lagoons	Replacement of lagoons with new enclosed tanks connected to emissions abatement. Costs include enabling works.	Enhancement
Existing odour control	Refurbishment or maintenance of existing units.	Base
Existing digester mixing	Maintain existing digestion mixing systems.	Base
Covering of existing tanks	Repair or replacement of existing tanks.	Base
Existing secondary containment integrity	Repairs to existing areas of impermeable surfacing.	Base
Existing instrumentation, monitoring, and control	Repair of existing instrumentation to comply with IED.	Base
Primary containment integrity	Inspection and repair of existing tanks and pipework to demonstrate primary containment integrity.	Base

Reconciliation of IED Costs

Enhancement capital expenditure and enhancement operational expenditure are reported in our PR24 business plan resubmission in lines CWW3.189 (CWW3 Additional line 5; enhancement wastewater/bioresources capex) and CWW3.190 (CWW3 Additional line 5; enhancement wastewater/bioresources opex) respectively. Expenditure in 2025/26 in CWW3.189 and CWW3.190 also includes the expenditure reported in AMP7, as there is no transitional investment for Bioresource price control. Base capital expenditure and base operational expenditure associated with IED are reported in our PR24 business plan resubmission within the total in lines CWW2.17 and CWW2.14 respectively.

In our APR, outturn IED base capital expenditure has been reported against *4K.16 – Maintaining the long-term capability of the assets – non-infra* for 2020/21 to 2023/24, and enhancement capital expenditure has been reported against *4M.93 Additional line 8 (Sludge enhancement (quality) – IED).* Costs associated with IED permitting have been reported in *4K.14 - Cost associated with the Industrial Emissions Directive*, and any other base operational costs associated with IED are reported within *4K.6 – Other operating expenditure.*

Industrial Emissions Directive Scheme Cost Drivers

We have been working to improve our data quality since our initial submission and we identified some small changes to the non-financial cost drivers for secondary containment (containment bund wall length, containment bund wall weighted average height, and impermeable surface area upgraded). We have provided revised values in ADD14. The changes on wall length have reduced overall length across all sites by 1%. For specific sites wall heights have been amended, with an overall increase of 8% across all sites. For impermeable surfacing we identified an omission of part of the area from our previous submission and this has been added.

14.15 ADD15 - PR24 Water Industry National Environment Programme (WINEP) Cost Estimates CWW27

Table 13 includes the cost estimates of projects associated with the Water Industry National Environment Programme. Changes to our WINEP submission are detailed in the CW3 and CWW3 table commentaries.

The total costs of ADD15 and ADD16, as shown in Table 14, reconcile to the total costs of the WINEP and NEP lines in CW3 and CWW3 plus the costs included in additional lines 3 & 4 in CWW3. Additional lines 3 & 4 in CWW3 (CWW3.187 – CWW3.189) reflect the cost of the new WINEP action ID's associated with Windermere.

Table 13: WINEP costs

Data Table line	£m
CW3.40	121.243
CW12.40	9.556
CWW3.130	4,740.319
CWW12.130	139.812
CWW17.130	183.876
CWW3.152	109.681
CWW3.185	152.956
CWW3.187	33.433
Total	**5,490.876**

Table 14: ADD15 and ADD16 WINEP/NEP costs

Data table	£m
ADD15	5,486.689
ADD16	4.187
Total	**5,490.876**

There are 20 WINEP action IDs with zero costs, as show in Table 15 to Table 19 below.

Table 15: 9 actions – requirements will be identified following outcome of investigations therefore nil cost in the plan

Action ID	Action ID Name
08UU102463a	***Holding line for newly designated bathing water at Derwent Water at Crow Park***
08UU102468a	***Holding line for newly designated bathing water at Coniston Water, Brown Howe***
08UU102469a	***Holding line for newly designated bathing water at Coniston Water, Boating Centre***
08UU102470a	***Holding line for newly designated bathing water at Coniston Water, Monk Coniston***
08UU102461a	***Holding line for newly designated bathing water at Ediford Bridge***
08UU102464a	***Holding line for newly designated bathing water at Derwent Water at Crow Park***
08UU102471a	***Holding line for newly designated bathing water at Coniston Water, Brown Howe***
08UU102472a	***Holding line for newly designated bathing water at Coniston Water, Boating Centre***
08UU102473a	***Holding line for newly designated bathing water at Coniston Water, Monk Coniston***

Table 16: 3 actions – awaiting further EA guidance so all costs allocated to EnvAct_MON4 driver under Action ID 08UU101383a

Action ID	Action ID Name
08UU102430a	***Holding Line For EnvAct_MON2***
08UU102431a	***Holding Line For EnvAct_MON3***
08UU102432a	***Holding Line For EnvAct_MON5***

Table 17: 2 actions – solution for phosphorus removal delivered more than one driver with no net additional cost

Action ID	Action ID Name
08UU102455a	ECCLES WwTW
08UU102456a	ECCLES WwTW

Table 18: 1 action - Combined solution with Staveley SO and costs of storm tanks have been allocated to 08UU101249a

Action ID	Action ID Name
08UU102454a	STAVELEY WwTW 017370061ST

Table 19: 5 actions – zero cost enhancement solutions

Action ID	Action ID Name
08UU100877a	Northwich WwTW
08UU100957a	AIKTON WwTW
08UU100970a	SANDBACH WwTW
08UU101390a	BURNLEY WwTW
08UU102339a	DAVYHULME WwTW

14.16 ADD16 - PR24 National Environment Programme (NEP) Cost Estimates CWW28

This table includes the cost estimates of projects associated with the Welsh National Environment Programme. Our NEP projects are set out in detail in our submission document *UUW_60 - Water Enhancement Cases*. The values of these projects have not changed since business plan submission, and we make reference to these costs in our draft determination representation document *UUWR_32 - Water WINEP*.

14.17 ADD17 - Sanitary determinands scheme data – CWW23

This table has been completed with data provided in the table submitted in response to query OFW-OBQ-UUW-077. Please also see the additional word document for OFW-OBQ-UUW-077. Any changes to data provided in the query response are highlighted below.

The schemes identified are based on the July 2024 issue of the WINEP, resulting in an additional 8 schemes reported compared to the original table submitted in December 2023 in the UUW response to query OFW-OBQ-UUW-077.

These are 3 village drains schemes: Grinsdale, Hilton and Knock, and 5 additional schemes in the Windermere catchment : Near Sawrey, Langdale, Hawkshead, Troutbeck and Far Sawrey.

There are two WINEP ids for Davyhulme; this is to reflect there are two changes to BOD permit in AMP8, with different WINEP ids; the permit reduces from 20 mg/l to 15 mg/l on 1 April 2025, and again to 8 mg/l.

Scheme delivery dates have been updated where applicable to reflect the July 2024 WINEP.

Primary driver codes for all schemes have been taken form the JULY 2024 WINEP. Please note the primary driver code is not always the primary driver of cost. This is the lead driver in the driver code hierarchy determined by the EA. For further information on schemes which do not have a sanitary driver as the primary WINEP driver please see response to OFW-OBQ-UUW-077.

Capex and opex costs have been added for the scheme at Wigan whereas previously this was reported as zero. This is due to a revised cost allocation; previously all costs were allocated to the P removal scheme.

Population equivalent served – figures match those in CWW7a, including those the new Windermere schemes. Village drains: Due to the nature of these schemes the population served is not included within table CWW7a until FY30 when the schemes will be complete, population for FY26-29 is the current population. The solution for Knock village drains is to transfer the flows to the existing WwTW at Knock. The after 2030 column represents the Knock WwTW scheme total population equivalent. As this is a U_IMP7 driver it is not represented on an additional line within this table.

Cost driver 1 – design PE for all schemes updated to show information for 8 new WINEP schemes

Cost drivers 2,4,6 – Information from existing site permits where a limit is in place. All those with no permit limit for these determinands have been left blank.

Cost drivers 3, 5 and 7 - based on future permit limits as per July 2024 WINEP. In the previous response we did not have limits confirmed for Alpraham these are now included. Data table reflects the limits now set by the EA. Permit limits have been populated for the new Windermere schemes, but we have no permit limits proposed as yet by the EA for the three village drain schemes. These have been identified as TBC.

Cost driver 8 – Wigan was identified as permit change only in the previous table version. This was because all costs at that time were allocated to the P scheme. This has now been reassessed and costs split across sanitary and phosphorus scheme costs, this is now represented in CWW3. The schemes marked as yes in this column require no capital works to achieve the revised permit limit.

Cost driver 9 – We have no catchment based solutions.

Cost drivers 10 and 11 – Knock village drains scheme has a transfer solution. This involves transferring flows from the newly served customers to the existing treatment works at Knock WwTW.

Cost driver 12 - Fifteen of the schemes included within this programme also have a WINEP P driver. The cost element allocated to P removal is shown in table CWW19 of the UUW business plan submission. Please note the phosphorus removal driver for Davyhulme has a different WINEP ID than those related to the sanitary determinand schemes and is 08UU100878a.

Cost driver 13 - General approach to completing this column is that the element of the solution required to achieve the sanitary determinand driver(s) has been identified. Where other or combination solution has been chosen as the option, further information as to combination of treatment stages has been identified in driver 15.

For those schemes where the sanitary parameter will be delivered by delivering the phosphorus scheme, we have classified these as no 'additional treatment capacity' as no additional assets required to also meet the sanitary parameter solution.

Cost driver 14 – new driver, allocations as per table CWW3.

Cost driver 15 – new driver - Summary detail in response to 'other' response for cost driver 13 and 14. For solution type identified as other or combination solution we have identified the treatment stage processes forming the solution. Further detail on a number of these schemes has also been provided in the following query responses: OFW-OBQ-UUW-077, OFW-OBQ-UUW-132 and OFW-OBQ-UUW-140.

The Wigan solution is complex to summarise in driver 15. At a high level the solution is a combined plant for Wigan and Skelmersdale which also accommodates an increase in FTW (and FTFT) due to the increase in pass forward flow from the network due to overflow schemes to address water quality in Pennington Flash. Following primary treatment flows from Skelmersdale will be sent to Wigan where they will combine and go into a new BioP ASP plant. In addition, the solution also includes a SAS (Surplus Activated Sludge) thickening plant, rapid gravity filters and pH correction and new UV plant. Costs are split appropriately.

As per the table guidance we have included any 2023-24 expenditure in this Cost Driver.

14.18 ADD18 - RR30 (Post DD) RORE Analysis

Our approach to calculating the upside (P90) and downside (P10) ranges within each component remains consistent with that taken for the October business plan submission to populate RR30, set out previously in October submission document UUW82 (page 53). Where we have made changes to the approach, these are set out in the relevant section below.

For ADD18, in line with Ofwat's response to query #384, we use a single version of regulated equity; Ofwat's draft determination view, which is significantly lower than the regulated equity proposed in our response to the draft determination. We have entered the correct anticipated value for each component rather than adjusting it to result in the correct percentage. This will mean that both upside and downside ranges as a percentage of regulated equity for the impact of changes proposed in our representations will be overstated. However, within this commentary, for each of the changes proposed in our representations (also referred to as 'UU DD response'), we also adjust all percentages so that they are presented relative to the corresponding regulated equity for each scenario in order to present an accurate P90 and P10 in aggregate on a percentage basis.

We have populated ADD18 to comply with the prescribed guidance, specifically that P90 and P10 values are both shown as "*variations from the company's central estimate of RORE performance. Therefore, the high scenario must be either positive or zero and the low scenario must be negative or zero*". This means that the resulting percentages in ADD18 cannot be added to the base return to calculate the high/low cases for instances where the company does not expect to earn the base return within its P50 central estimate (as is the case for the company view of the draft determination). For this reason, we also present the RoRE ranges within each section of this commentary as being relative to the base return, rather than the P50, to more accurately present the balance of risk and return opposite what is remunerated through the allowed return on equity. This, for example, means that we do not constrain upside ranges to being positive if the result is that even in the upside scenario, the company would expect to make a negative return for that element. Whilst this can make the graphical representation harder to interpret, it results in the correct total P90 position once all components have been accounted for and enables better comparison between ranges at different points in time by UUW and Ofwat.

The guidance for ADD18 also states that "*adjustments for tax are required for cost and finance lines to indicate the impact on returns. We expect companies to adjust by a factor of 1 less the headline rate of corporation tax. Note that we take into account tax in our reconciliation of ODI payments and so we would not expect these lines to be adjusted*." We have made these tax adjustments in ADD18 but for the purposes of this commentary and all graphical illustrations we have excluded these tax adjustments in instances where we do not anticipate being tax paying in AMP8 to avoid including uplifts for tax that will misleadingly overstate any risk range for investors.

RoRE Overview

UUW business plan

In our October 2023 business plan, we presented a largely symmetrical RoRE range, which was aligned to Ofwat's PR24 methodology ranges with the exceptions being totex and financing risks.

- For totex risk, we noted that there was "*an inherently asymmetric risk. It is much more likely that we will encounter unforeseen additional costs over AMP8, than opportunities to deliver additional efficiencies above and beyond those in our plan. The plan we need to deliver is significant in size and requires new capabilities. We are attempting to our largest ever programme, at a faster pace, and at efficient cost. There is inevitably a risk that in order to deliver such a programme, costs may be higher than forecast in order to deliver projects on time and to the standard customers expect. With other water companies facing the same environmental and social pressure to deliver significant investment over AMP8, we're expecting one of our key pinch points to be around availability of equipment and materials. We have already began engaging with suppliers on some materials, but it is clear that scarcity of materials and key equipment will be one of our main challenges*" (UUW82, page 53).
- For financing risk, one of the main causal factors of the negative skew was caused by the proportion of new debt within the allowed cost of debt calculation being significantly below that which we faced in practice due to the significant increase in investment requirements in AMP8. As the cost of new debt is higher than the cost of embedded debt, this resulted in a more negative skew to reflect the underperformance in aggregate expected.

The resulting RoRE range for our submission is shown in Table 20 with a P90 upside of +4.43% and P10 downside of -6.28% around the P50 central estimate of +4.14% (the allowed cost of equity in the final methodology). These values presented (and within all tables in this commentary) are the variance from the base allowed return, rather than the total return (hence a P50 of zero means no out or underperformance in addition to the base return).

Table 20: RoRE ranges presented in UUW business plan

UU business plan	P90	P50	P10
Financing	£421m [1.15%]	£0m [0%]	£-646m [-1.74%]
Revenue & other	£0m [0%]	£0m [0%]	£-18m [-0.05%]
Totex	£354m [0.97%]	£0m [0%]	£-805m [-2.2%]
Outcome delivery incentives	£732m [2.02%]	£0m [0%]	£-702m [-1.94%]
Customer measures of experience	£105m [0.29%]	£0m [0%]	£-127m [-0.35%]
Price control deliverables	n/a	n/a	n/a
Total	**£1612m [8.57%]**	**£0m [4.14%]**	**£-2297m [-2.14%]**

Source: October submission data tables UUW93, RR30.

Ofwat draft determination

In *PR24 draft determinations: Aligning risk and return appendix*, Ofwat set out its view of the RoRE ranges of its draft determinations for each company and the reasoning behind each of the component ranges. Although many companies argued that there was more downside risk inherent within the methodology and their plans, Ofwat has presented a much more symmetrical range albeit around a higher base return, reflecting the increase to the allowed cost of equity in the draft determination (4.80%) and the QAA reward for UUW (+5bps). Most notably it proposed that whilst there may be a downward skew in 'operational' risk components (cost and outcomes) this was offset by an upward skew on financing (for the median company). It also recognised the risk of price control deliverables (PCDs) on the RoRE, which had been excluded in the original assessments required of companies in their submissions, proposing a range with a slight positive skew for UUW. Because Ofwat's approach was to calculate percentages for each component and then apply these to the regulated equity for each company, the

monetary ranges for Ofwat's draft determination are much smaller than that proposed by UUW and other companies as Ofwat has made significant reductions to allowed totex.

The resulting RoRE range for Ofwat's draft determination for UUW in Table 21 with an P90 upside of +4.33% and P10 downside of -3.90% around the P50 central estimate of +4.85% (the allowed cost of equity in the draft determination plus the QAA reward).

Table 21: RoRE ranges presented in Ofwat draft determination

Ofwat DD	P90	P50	P10
Financing	£296m [0.9%]	£0m [0%]	£-132m [-0.4%]
Revenue & other	£0m [0%]	£0m [0%]	£-16m [-0.05%]
Totex	£392m [1.19%]	£0m [0%]	£-392m [-1.19%]
Outcome delivery incentives	£346m [1.05%]	£0m [0%]	£-366m [-1.11%]
Customer measures of experience	£313m [0.95%]	£0m [0%]	£-313m [-0.95%]
Price control deliverables	£79m [0.24%]	£0m [0%]	£-66m [-0.2%]
Total	**£1426m [9.18%]**	**£0m [4.85%]**	**£-1284m [0.95%]**

Source: UUW analysis of Ofwat draft determination

Company view of draft determination RoRE range

Although there have been positive (yet insufficient) adjustments to calculating the allowed cost of equity since the PR24 final methodology, we do not agree with Ofwat's view that the balance of risk faced by equity in the draft determinations is commensurate with an allowed (real) return of 4.80%. Not only do we think that risk ranges for some components have been understated, but Ofwat has made several significant interventions to company business plans that will result in additional downside risk to be managed for a company to simply earn the base allowed return, with very little potential for upside and a significant risk of earning a return below the cost of equity if the additional these risks materialise. Risk and return principles dictate that the allowed cost of equity must appropriately remunerate investors for the risk it bears. Asking investors to bear more risk is not an unreasonable ask (if that is what is desired and who is best placed to manage the risk), but it must be reflected in the rate of return that is on offer. If the return is set too low in relation to the level of risk borne, a rational investor will have no incentive to invest as less risky alternative investments will be available for the same level of return. Our view is that the net impact of the methodology and interventions made by Ofwat in its draft determination result in a significant increase and downward skew to the risks faced by investors. However, as is apparent from Ofwat's view of the RoRE range being symmetrical (indeed slightly positive) these additional risks have clearly not been reflected in the calibrations of the draft determination allowed cost of equity. This means that the draft determination cost of equity is not a reasonable level of return to remunerate investors for the actual risks faced (i.e. it is not a 'fair bet'). To attract investors to the sector, companies must be able to offer a level of return commensurate to the risk faced and the draft determination, as a package, has not struck the right balance between risk and return.

In its recently published sector report[1] Moody's also highlights the likelihood of significant penalties associated with performance commitments across the sector in AMP8, stating: "*Ofwat has set more demanding operational performance targets and strengthened incentive rates. Based on the draft determination and if companies perform in line with their business plan assumptions, we estimate that most companies are likely to incur net penalties over the next five years, in aggregate amounting to around £2 billion across the sector.*"

Our view of the resulting RoRE range for Ofwat's draft determination for UUW is presented in Table 22 and Figure 1.

[1] Moody's Sector In-Depth: Regulated Water Utilities – United Kingdom. Regulator's draft determination increases sector risk 14 Aug 2024 (https://www.moodys.com/research/doc--PBC_1417545)

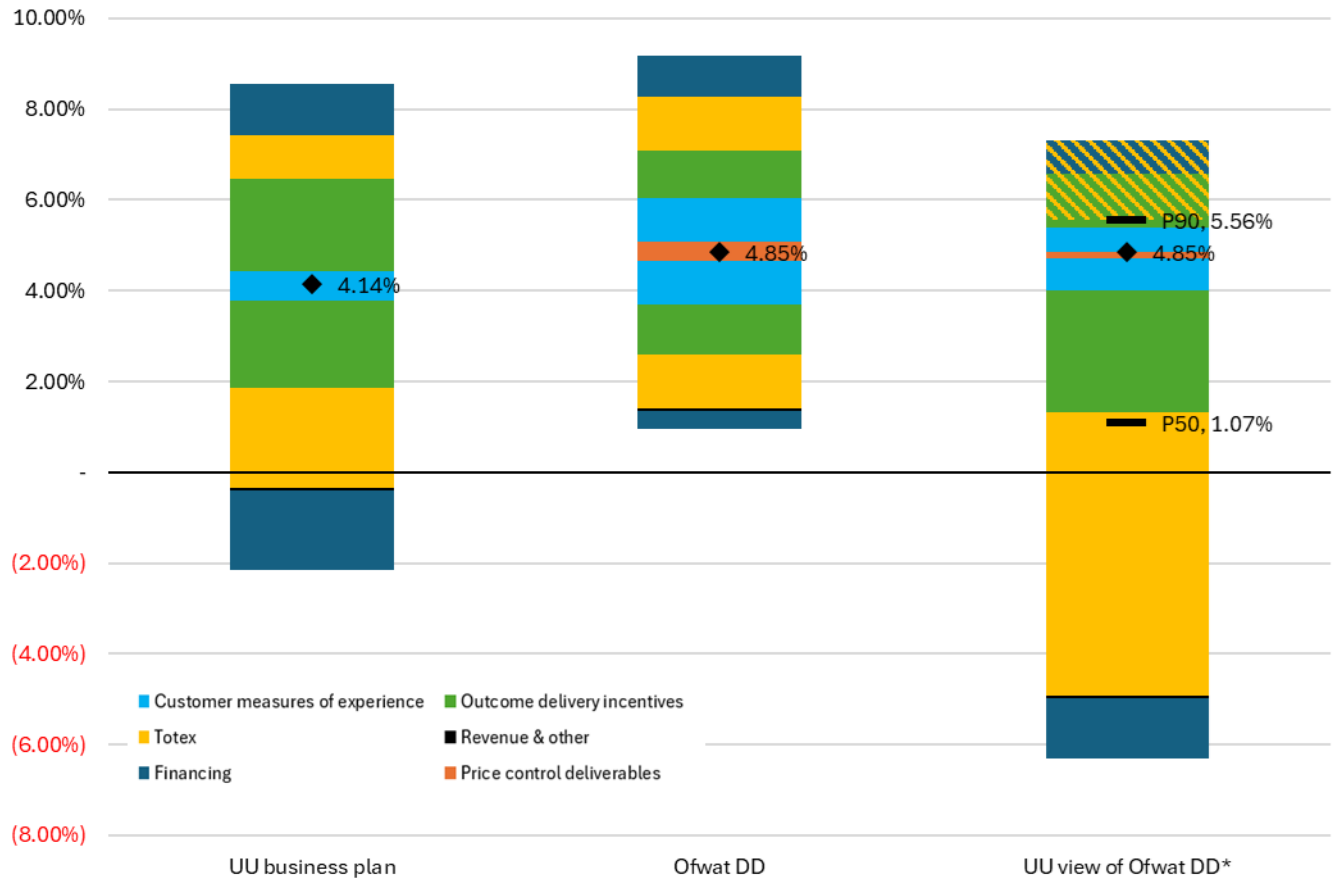
Whilst we view the magnitude of the ranges either side of the P50 are broadly in line with our submission (as presented in ADD18); with a P90 upside of +4.49% and P10 downside of -7.39%, the P50 central estimate of +1.07% is significantly below that of the base allowed return of 4.85%. This means that the actual expected return, upside and downside risk ranges faced by investors are much more negatively skewed than Ofwat presents in its draft determination.

Table 22: Company view of draft determination RoRE range

UU view of Ofwat DD	P90	P50	P10
Financing	£236m [0.72%]	£-99m [-0.3%]	£-441m [-1.34%]
Revenue & other	£0m [0%]	£0m [0%]	£-16m [-0.05%]
Totex	£-573m [-1.74%]	£-927m [-2.81%]	£-2057m [-6.25%]
Outcome delivery incentives	£397m [1.21%]	£-178m [-0.54%]	£-885m [-2.69%]
Customer measures of experience	£176m [0.53%]	£-21m [-0.06%]	£-231m [-0.7%]
Price control deliverables	£-1m [0%]	£-19m [-0.06%]	£-46m [-0.14%]
Total	**£235m [5.56%]**	**£-1244m [1.07%]**	**£-3677m [-6.32%]**

Source: UUW analysis

Figure 1: Comparison of Company and Ofwat RoRE ranges over time



This significant downward skew and P50 below the base return implies that either the cost of equity is set too low, or the amount of risk required to be borne by investors is too high and therefore for the plan to be investable, something must change. There are frequent examples of 'aiming down' which combined undermine any sense of a 'fair bet'. Within representation document UUWR_70 we present the overall level of return that Frontier Economics believes is appropriate for investors given the risk present within our business plan

representation and current market conditions. This base return, which is higher than Ofwat's draft determination cost of equity, has been used as the central estimate for presenting the P90 and P10 ranges for each component for our view of the representation ranges within this commentary and in the ADD18 data table. There are some significant differences between Ofwat's view and our view of the risk ranges for each component in the draft determination. We provide details of the differences in each of the component parts of the RoRE calculation separately below, with each component having two sections; one section to comment on the company view of the Draft Determination and one to comment on the impact of changes proposed by the company in our representations.

Totex scenarios (see UUWR_20_Costs and PCD)

Company view of draft determination

There have been some positive decisions in cost assessment that will reduce the risk within the draft determinations, most notably.

- Ofwat's draft determination viewed our Wholesale base expenditure and Retail expenditure as being amongst the most efficient companies,
- Recognition of real price effects within the Retail price control,
- Asymmetric cost sharing rates for some areas, recognising the uncertainties arising in enhancement modelling,
- The reintroduction of cost sharing within Bioresources (albeit currently without the RCV protection required to render a cost sharing mechanism as effective),
- Enhanced cost sharing on business rates,
- The introduction of the 'Aggregate Sharing Mechanism', designed to "*protect customers against exceptional outperformance, and to support continued investment in the event of material underperformance*"[2].

Additional levels of cost sharing will help to mitigate some of the downside risk that investors are facing in the draft determinations, but it does not, and should not, obviate the need for Ofwat to set appropriate ex-ante allowances, which has been the case in the draft determination. It is also questionable whether the aggregate sharing mechanism will be effective enough to support continued investment or whether the threshold is set at such a severe level that financeability issues would be such that the company would be unable to continue to operate, thereby rendering the mechanism ineffective for the purposes of achieving its stated intention.

There are many examples of 'aiming down' which combined undermine any sense of a 'fair bet' and in many cases have been introduced to obviate the need to set an appropriate allowance ex-ante.

- a significant amount of enhancement expenditure has been removed from UUW's proposals; primarily across Wastewater WINEP and within Bioresources, resulting in a net totex gap of over £2.7bn at the draft determination,
- Many of the cost challenges are on statutory environmental improvements, meaning that they are associated with requirements that are not discretionary and must be delivered. This means that any cost challenge on these areas will increase the risk of totex underperformance,
- In the draft determination Ofwat has based the business rates allowances on the rateable values set at the 2023 revaluation and the 2023-24 multiplier set by central government. Ofwat point out that it has not reflected the revaluations due in 2026 and 2029 in its allowances, nor increased business rates due to changes in the wastewater asset stock in the period 2025-30 (PR24 draft determination: expenditure allowance section 2.3.1),
- The introduction of gated mechanisms for large enhancements, in particular the large project gated scheme mechanism whereby no ex-ante allowance is made other than for development costs. (Although this *should*

[2] PR24-draft-determinations-Aligning-Risk-and-Return-Appendix-1.pdf (ofwat.gov.uk) page 10

not directly lead to any totex risk, it does increase financing risk and is further evidence of Ofwat 'aiming down' and passing more risk onto investors).

- Ofwat has overestimated the frontier shift that is achievable, leading to increased risk that cost allowances are set too low,
- The proposed uncertainty mechanism within Bioresources to address the risk of a loss of landbank is insufficient and will not mitigate the risk that it is designed to address.

To assess the P50 for totex, we calculate the net downside risk (after cost sharing) faced by UUW at the draft determination in Table 23 using the various sharing rates and totex gaps.

Table 23: Derivation of the P50 view of totex for the company view of the draft determination

Company share	Area of totex	UU plan £m	Ofwat DD £m	Gap £m	Gap post sharing £m
50% of overspend 50% of underspend	Base spend	4,994	5,130	136	68
40% of overspend 40% of underspend	Enhancement spend including "large project gated spend"	6,823	4,494	(2,329)	(932)
25% of overspend 25% of underspend	IEDs and projects in enhanced scrutiny and cost sharing gate spend	808	435	(373)	(93)
10% of overspend 10% of underspend	Business rates	565	399	(165)	(17)
100% of overspend 100% of underspend	Retail & Developer Services	636	689	52	52
	Subtotal (prior to ASM)	**13,825**	**11,146**	**(2,679)**	**(921)**
50% of overspend 50% of underspend	Aggregate sharing mechanism (ASM) – applies to cost over/underspend in excess of 2% of RoRE.				157
	Total (post ASM)	**13,825**	**11,146**	**(2,679)**	**(764)**

Source: UUW analysis

As Table 23 illustrates, the reduction to cost allowances in the draft determination result in a P50 of -£764m once cost sharing and the aggregate sharing mechanism has been accounted for, which equates to -2.32% of RoRE. We then apply the same upside and downside risk values (not percentages[3]) to this P50 as we did for our business plan +£354m to -£805m other for halving the size of the risk in Bioresources to capture the reintroduction of cost sharing. We are using the same range for out and underperformance as we do not believe that any of the justifications that we previously stated in our business plan for an asymmetrical range have been shown to be no longer valid.

In line with the table guidance, we only include the timing reward/penalty within the PCD computation, therefore the repayment aspect is included within the totex risk range. We do not agree with Ofwat's assertion that this is nil impact for RoRE as the current approach can result in companies repaying allowances to customers where they are spending money but have not yet delivered the output. We cover this in more detail within the 'price control deliverables' that follows. Table 24 shows the amount that we include within the totex risk range for 'PCD net payment non-delivery'.

This results in a P90 and P10 of -1.74% to -6.25% with a P50 of -2.81%, which will display in ADD18 as a P90 of +1.07% and a P10 of –3.43%.

[3] We use the values rather than the percentages as the regulated equity in the draft determination is significantly lower, but the risk quantum applies to the business plan totex and not Ofwat's draft determination. This will increase the percentage.

Table 24: Our view of Ofwat DD - Price control deliverables impact split between timing and repayments

	P90	P50	P10
PCD net payment time incentives £m	(£1m)	(£19m)	(£46m)
PCD net payment non-delivery £m	£0m	(£163m)	(£326m)
Total	**(£1m)**	**(£182m)**	**(£372m)**

Source: UUW analysis

Impact of changes proposed by company in representations

Where we have not accepted Ofwat's draft determination for cost assessment and the resulting totex, we have provided further evidence as part of our representations for where we believe that Ofwat needs to make additional allowances. Please see tab 'RP2' within our pro forma response file for a full list of the aspects of cost assessment that we propose Ofwat changes for the final determinations.

Our assumption is that Ofwat will accept our proposed changes in full and so the P50 totex risk against our representation is set to zero. Against this we factor in two changes to both the upside and downside ranges used in the business plan and our view of the draft determinations. These are, firstly, the additional efficiency challenge that we have accepted as part of our representation, totalling £86m, and secondly the (as yet unidentified) £250m of further stretch identified within the least cost version of the plan. We believe that it is appropriate that these values are deducted from the upside and added to the downside, shifting the range to be more negatively skewed as such efficiency challenges will reduce the potential to outperform and increase the risk of further underperformance. This results in a P90 and P10 of +0.35% to -3.01% with a P50 of -0.07%, which will display in ADD18 as a P90 of +0.42% and a P10 of -2.94%.

In line with the table guidance, we only include the timing reward/penalty within the PCD computation, therefore the repayment aspect is included within the Totex risk range. We do not agree with Ofwat's assertion that this is nil impact for RoRE as the current approach can result in companies repaying allowances to customers where they are spending money but have not yet delivered the output. We cover this in more detail within the 'price control deliverables' that follows. Table 25 shows the amount that we include within the totex risk range for 'PCD net payment non-delivery'.

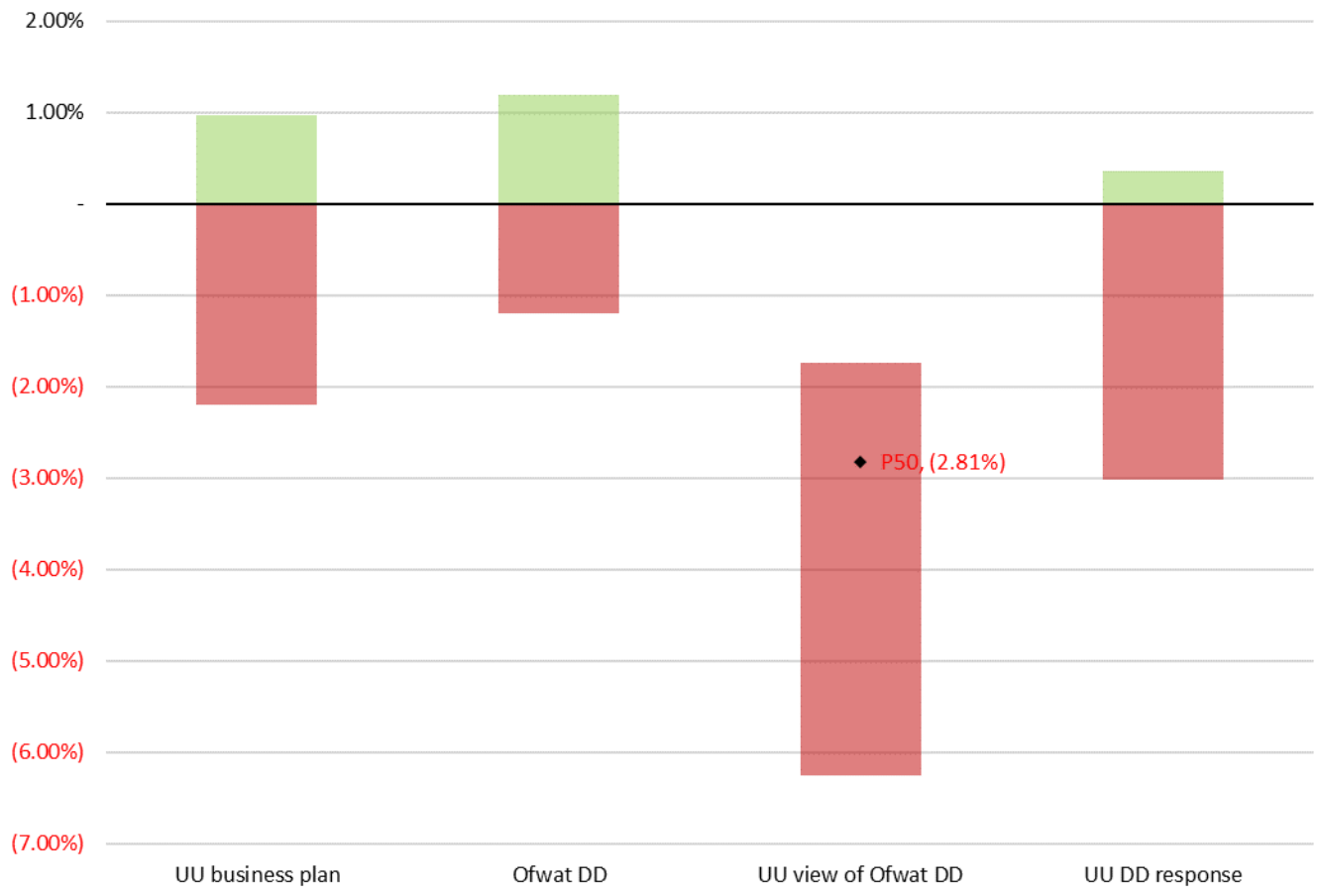
Table 25: Impact of changes proposed by company in representations - Price control deliverables impact split between timing and repayments

	P90	P50	P10
PCD net payment time incentives £m	£51m	(£0m)	(£97m)
PCD net payment non-delivery £m	£0m	(£26m)	(£129m)
Total	**£51m**	**(£26m)**	**(£225m)**

Source: UUW analysis

Figure 2 summarises the different totex ranges presented by UUW and Ofwat in the various publications that are used in our overall view of RoRE.

Figure 2: Comparison of Company and Ofwat Totex RoRE ranges over time



Source: UUW analysis

Price control deliverables (see UUWR_20_Costs and PCD)

Company view of draft determination

Ofwat proposes a PCD regime that has a number of significant methodological issues, which creates a significant downside financial skew to the PR24 package, which is unrecognised by Ofwat in its RoRE assessment. This downside skew arises from:

- A misconception that non-delivery payments will be neutral relative to avoided costs. In reality, non-delivery may be judged following significant investment in an alternative delivery option, that Ofwat may reject as a permissible substitution, or an output that has been significantly delayed in completion.
- Time incentives which are downside skewed and sparsely applied.
- Time incentives which are in advance of PCD delivery and totex profiles (and hence in advance of what customers have paid for, again contrary to Ofwat's stated intent for PCDs).
- Double jeopardy of ODI penalties for late delivery which is significantly underestimated by Ofwat.

Ofwat has countered this downside skew by assuming that companies are most likely to deliver programmes of work (consistent with Ofwat's rather inflexible view of delivery), and most likely to deliver them on time. However, if Ofwat believed that such assumptions were true, then that would undermine the need for PCDs in the first place – if companies generally deliver, and on time (or early) then it is difficult to see what benefit the PCD mechanisms will have for customers. However, they will create additional regulatory complexity and an additional reporting burden, and additional downside risk for companies.

It cannot be emphasised enough, that the risk of insufficiently scrutinised, and poorly implemented new regulatory mechanisms in this area could lead to significant financial downside. This is not recognised by Ofwat in

its RoRE assessment[4]. Ofwat has now included in the revised RoRE risk table ADD20 and Ofwat's RoRE risk assessment of the draft determination. However, we consider that Ofwat's assessment of the downside skew in risk posed by PCDs is significantly understated. We have also been unable to replicate Ofwat's RoRE range using the assumptions and PCD formulae that Ofwat provided in its draft determinations.

Ofwat's time incentives – where they exist – are downside skewed. They apply to only five of UUW's 18 PCDs but the reward rates for early delivery a quarter of those for late delivery. Whilst we are content for Ofwat to retain its lower incentive rate for "on-time" delivery, we consider it more appropriate that Ofwat uses the full PR24 WACC to value time incentives for both early and late delivery.

Such uncertain PCD methodologies at draft determination means that it is difficult for companies to fully assess the financial risk inherent within PCDs. We have attempted to quantify the risk ranges that we think are present in the draft determination.

We estimated the PCD time incentive net payments based on Ofwat's methodology, as described in the Price control deliverables appendix. UUW's totex (which is subject to time incentive PCD) was profiled across AMP8 on the basis of P10/P50/P90 delivery assumptions. We calculated the annual time incentive under-performance payment by taking the difference between actual PCD performance and PCD target performance and multiplying this by the penalty rate (3.66%). We calculated the annual time incentive out-performance payment by taking the difference between current year PCD performance and previous year PCD performance and multiplying this by the reward rate (0.92%). We summed the under- and out-performance payments to arrive at the net PCD time incentive payment, for each year. Individual year net payments were then summed to arrive at the overall PCD net payment.

The result of this is that our view of the draft determination is that PCDs as currently defined will result in a -0.06% P50, a -0.00% P90 and a -0.14% P10, which will display in ADD18 as a P90 of +0.05% and a P10 of -0.08%.

Impact of changes proposed by company in representations

We submitted a robust and well considered proposal in our PR24 business plan submission for how Ofwat could implement a successful PCD regime into the existing PCD regime. Whilst we can see elements of our proposals in Ofwat's DD PCD publications we consider that changes to its proposals are vital to avoid significant distortionary effects on RoRE.

Ofwat should introduce a more limited scope of better designed and specified PCDs at PR24, seeking to ramp up their significance and remit from PR29 onwards.

We strongly encourage Ofwat to engage constructively with the sector in the remaining time available to ensure that the new PCD regime is enacted in the most effective manner possible. Without such engagement and redesign, Ofwat risks significant downside financial risks for the sector.

Ofwat should publish more detailed specification of its PCD delivery metrics - for example, in the measurement of the A-WINEP PCD there is a lack of definition for what Ofwat regards as a "non storage solution". This could lead to a situation where Ofwat *ex post* decides that one of our solutions does not meet their criteria and hence result in an unpredictable PCD penalty.

Ofwat should publish the detailed calculation of its RoRE ranges, as we have been unable to replicate Ofwat's symmetric time value risk, based on the formulae it has provided.

Ofwat should apply a symmetric incentive rate for early delivery, whilst maintaining its proposed (lower) incentive rate for "on-time" delivery).

Ofwat should rely on the efficacy of its outcomes framework and related ODIs, and not implement PCDs where an area has a suitable ODI. An ODIs should also be preferred over PCDs where there is significant overlap (e.g. the P removal PCD should be removed, and the related ODI be reinstated).

Ofwat should ensure that PCD delivery profiles reflect anticipated delivery from funded investment, and not for PCD delivery to be tested ahead of investment (e.g. on IEDs in Bioresources).

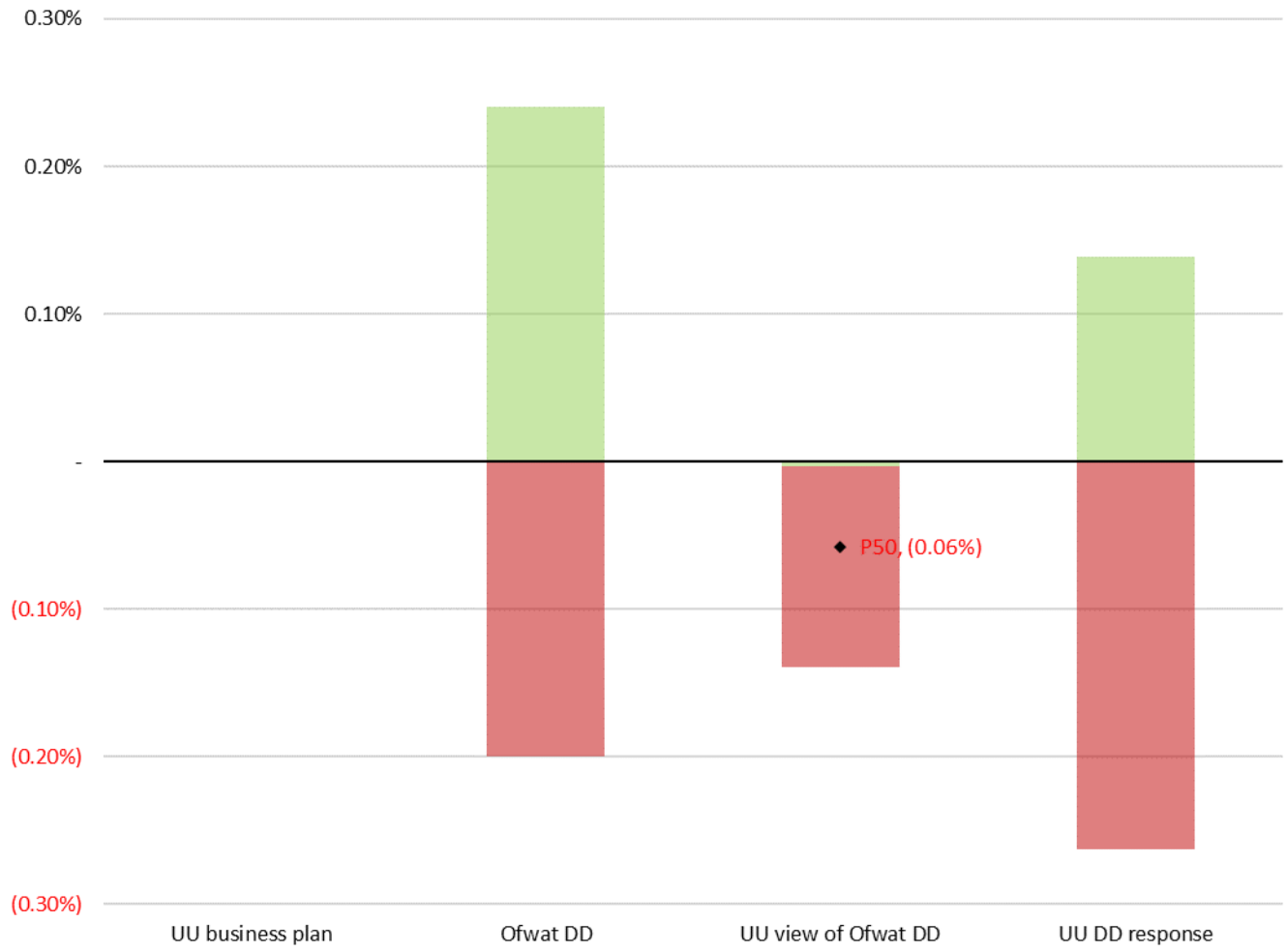
[4] 'PR24 draft determinations: Aligning risk and return appendix', pages 11-12

PCDs should, in general, not be applied to investments from botex.

If Ofwat accepts our proposals for how PCDs should be implemented, we calculate that this will result in a -0.00% P50, a +0.14% P90 and a -0.26% P10, which will display in ADD18 as a P90 of +0.14% and a P10 of -0.26%.

Figure 3 summarises the different PCD ranges presented by UUW and Ofwat in the various publications that are used in our overall view of RoRE.

Figure 3: Comparison of Company and Ofwat PCD RoRE ranges over time



Source: UUW analysis

Outcome delivery incentive scenarios (see UUWR_50_Outcomes)

Company view of draft determination

Ofwat represents that it has presented a balanced risk range for UUW's PR24 draft determinations Outcomes package, at -2.06% to +2.00% (including customer measures of experience). However, we do not consider that the range presented accurately reflects the risks embedded in the PR24 Outcomes package. These arise from Ofwat's broad removal of risk protections, the inclusion of significant exogenous factors on companies' measured performance, the significant increase in ODI rates disjointing them from customer research and historic rates, the inclusion of three penalty only PCs and one reputational only PC, and the mistargeted changes to C-Mex from a well-functioning AMP7 metric to one which appears like to be de facto "penalty only" for the industry.

Ofwat's risk ranges for the Outcomes package are not reflective of individual company performance risk and do not appear credible when set against UUW's PCLs, historical performance ranges, the absence of effective risk protections in the Outcomes package and the broad definition of performance commitments which encapsulates many more exogenous factors than in previous price controls. Ofwat appears to have assessed P10 and P90 performance ranges on an industry wide basis, rather than at a company level basis and also to have removed outliers from its dataset.

Whilst Ofwat's common PC suite is far narrower at PR24, compared to previous price review, what performance is captured by these PCs is far broader. In many instances, the performance measured is so broadly defined that it is substantially exogenous to the regulated company itself. This creates an increased risk for companies which should be effectually managed by risk protection instruments in the Outcomes package.

Ofwat's disapplication of deadbands and the setting of caps and collars at distant levels that are ineffective as mitigation means that these mechanisms do not offer appropriate or effective protections opposite these expanded risks.

Ofwat has not proposed caps and collars set with reference to the performance levels that they are also requiring of companies, but rather with reference to their regulated equity (i.e. their past historical investment). This means that not only are caps and collars divorced from performance levels, but that companies do not have common cap and collar levels for common areas of performance, not even for those PCs where the PCLs are set at a common level across companies. In some cases, this means that the caps and collars fail to provide any meaningful level of protection for either customers or companies. We note that this is a materially different application than was made by Ofwat at both PR19 draft and final determinations.

Ofwat's risk protection approach is out of step with its PR24 method of defining PCs and what is in or out of company control. It is also out of step with the financial risk which companies now face from significantly increased ODI rates, where UUW's PR24 DD rates have increased from PR19 FD by up to 18 times.

We do not think that Ofwat should exclude outliers from the historical data set. In Ofwat's DD document "PR24-DD-ODI-risk-Monte-Carlo-set-up.xlsx" tab "Cover" Ofwat states: "*The normal distribution is informed by historical percentage difference between company performance and the performance commitment level (PCL) target using data from 2011 to present, where available. To form a normal distribution, we remove outliers that may skew the normal distribution values*". Over a long data set, such outliers are highly likely to represent statistical P10 and P90s and should not be excluded. Excluding data at either extreme will result in an understated risk range. The purpose of using the P10 and P90 values rather than the maximum and minimum is to prevent extreme outliers from skewing results but excluding them from the dataset will mean that the proposed P10 and P90 are understated and not true P10 and P90 values. This is inappropriate when modelling the statistical risk that companies are exposed to, based on historical data sets. Including all observations within the historical data set is even more important when considering that 'extreme' events, particularly due to weather events, are becoming more common with the impacts of climate change. To present the correct risk ranges faced by companies and investors, Ofwat must use the entire dataset when assessing the P10 and P90.

In addition to being understated due to omissions in the historical data set, the risk range that Ofwat presents in its draft determination also does not reflect the inherent downside skew which Ofwat has intentionally built into the Outcomes package. Not only are there three penalty-only PCs, but there is also the impact of the revised C-Mex PC which statistically will be significantly downside skewed but has been represented in Ofwat's draft determinations (see Figure 5 page 15 "PR24 draft determinations: Aligning risk and return appendix") as having a balanced P10 to P90 range of 0.5% RoRE, the extremes available for this measure. All customer experience measures have been similarly represented in Ofwat's draft determination risk assessments. However, only C-Mex now carries this innate downside bias due to its revised calculation method.

In addition, there appear to be errors within Ofwat's ODI risk range models. For example, the Biodiversity P10 and P90 are both stated as positive values, relative to the PCL. This implies that there is assumed to be no underperformance possible on this PC, but it is clearly stated in the performance commitment definition document and Key-dataset-1 to have an associated underperformance ODI rate.

Our own assessments of Ofwat's proposed PCLs and incentive rates would indicate that a more accurate view of the risk contained within the draft determinations to be a P50 of -0.54%, with an upside P90 of +1.21% and a downside P10 of -2.69%, which will display in ADD18 as a P90 of +1.75% and a P10 of -2.15%.

Impact of changes proposed by company in representations

The PR24 Outcomes package is significantly downside skewed. We do not agree with Ofwat's estimation of the draft determination ODI risk range as being broadly symmetrical. We consider that it is significantly downside skewed at -3.4% to +1.7% (including customer measures of experience). This is even after taking account of the

application of the aggregated sharing mechanism which only takes effect at very severe levels of penalty. We propose targeted improvements to bring the package more into balance, more reasonable and more acceptable to UUW. Our draft determination response would produce a P10 to P90 range of -2.7% to +2.3% after application of the aggregated sharing mechanism. Our proposed improvements include:

- appropriate PCLs, a collar and ODI rates for the Internal Sewer Flooding performance commitment which are in line with our PR24 business plan submission;
- appropriate and effective caps and collars for storm overflows based on modelled performance data rather than a company's regulated equity which will afford different levels of risk protection based on companies' historic investment decisions rather than performance ranges related to the PCL; and,
- ODI rates for customer contacts about water quality which bring the rate per contact per issue more into line with customer valuations and more calibrated with the annual water services bill.

We consider that Ofwat should re-estimate plausible performance ranges to understand the true risk range of its Outcome package on companies. Ofwat should observe the impact of its PR24 DD Outcomes proposals on historic performance levels, including companies' most recent performance in the 2023/24 APRs. We note that the combined effect of Ofwat's PR24 draft determination ODI rates and PCLs on 2023/24 outcomes would be to significantly increase penalties – by an overall 500% - on those measures which carry over into 2025-30, especially on Wastewater PCs and C-Mex.

We do not support the proposed approach for calculating risk protection mechanisms – caps and collars - based on the proportion of each companies' regulated equity. This approach suggests that the limits up to which performance is incentivised for each company should be set with reference to the scale of past capital investments. This would lead to the extremes of performance in some areas of England and Wales being valued over ten times higher than in other areas. In line with past determinations and our PR24 business plan submission we propose that caps and collars should be expressed and calculated with reference to performance levels. We provide caps and collars expressed with reference to performance levels in the outcomes section of this document. A top-down calculation of financial risk which a company is exposed to – calibrated to its past capital investments – is not an appropriate way to limit the financial exposure of customers or companies or set the range above or below which companies are no longer incentivised to perform at.

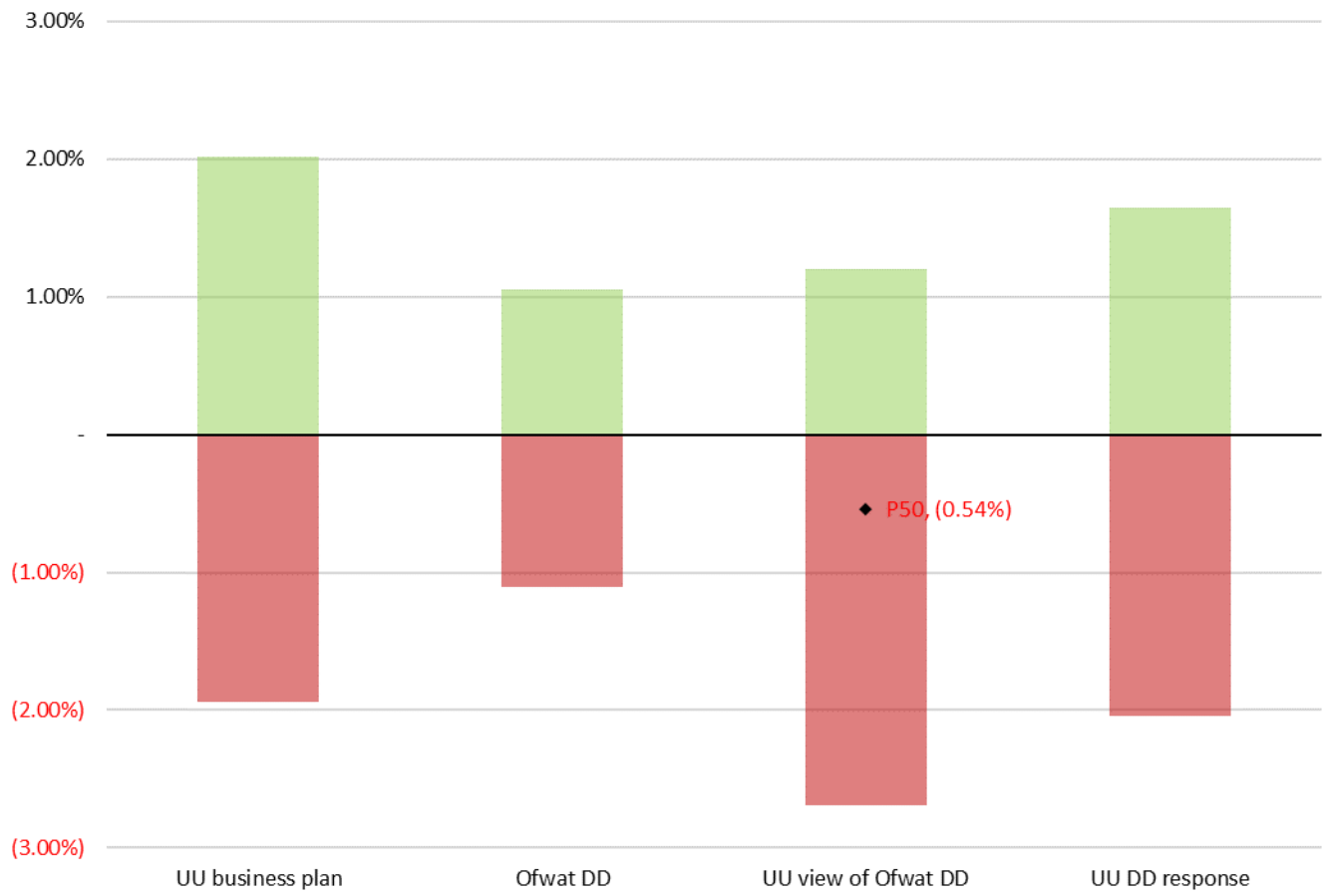
We propose instead that caps and collars should be calculated based relative to PCLs. This is how we have proposed the appropriate cap / collar for the Storm Overflows PCL and provided compelling evidence to support the level at which we have proposed it (detailed in 'UUWR_10').We believe we presented strong evidence in our PR24 business plan submission on the appropriate use of caps and collars, particularly for internal sewer flooding, and for storm overflows where we propose a cap/collar at +/-30% of the PCL.

We urge Ofwat to consider our proposals and set appropriate risk protections with reference to performance rather than with reference to past capital investments. Ofwat considers it appropriate to take into account the size of companies' RCVs when setting ODI, so as not to over-power ODIs. However, it has not been consistent in also considering that using RCVs to set acceptable performance extremes means that companies' risk exposures are significantly different on the same PC (sometimes with a common PCL) for no other reason than past capital investment has produced significantly different RCVs.

The changes we propose in our draft determination response (UUWR_50_Outcomes), to performance commitments and incentive rates and structure, should deliver a reasonable balance between underperformance and outperformance and is in accordance with the framework for setting outcomes and incentives.

If Ofwat accepts our proposals on this package, we calculate that this will result in a +0.07% P50, a +1.65% P90 and a -2.04% P10, which will display in ADD18 as a P90 of +1.58% and a P10 of -2.11% (excluding customer measures of experience). Our proposed package provides the appropriate balance between stretching performance improvements and offering appropriate protection and remuneration for both customers and companies if companies out/underperform their performance commitment levels.

Figure 4: Comparison of Company and Ofwat ODI RoRE ranges over time



Source: UUW analysis

Customer measures of experience scenarios (see UUWR_51_Customer (C-MeX))

Company view of draft determination

We understand Ofwat's desire to set outward looking customer service performance standards for the sector. We agree that improving customer service requires us to look beyond the water sector and support Ofwat's aspiration for continual improvement in customer service. We are whole-heartedly committed to improving and investing in the service customers receive from their water company.

However, following careful consideration of the proposed changes to calculating incentive payments for C-MeX, we believe the proposed changes to C-MeX need substantial revision in a number of areas. The proposed approach to the C-MeX incentive will not achieve Ofwat's stated aim of improving incentives for companies to increase levels of customer service, asymmetrically skew incentives, and increase overall company risk.

There are four key areas of proposed change that can be shown to directly undermine the stated aim of C-MeX to incentivise improved customer service:

(1) Using the UKCSI all sector average to set benchmark performance is incompatible with the risk/reward requirements set out in Ofwat's PR24 final methodology. As Ofwat itself states, the overall incentive is substantially skewed towards penalty. In 2023/24 all companies fell short of proposed benchmarks.

Ofwat has stated that PCs should be symmetrical and that whilst C-MeX would be symmetrical in theory, in reality it would be an asymmetric PC. In using an all sector UKCSI score, water companies are being compared to sectors where market choice predisposes customers to provide higher satisfaction scores.

(2) The proposed methodology for translating UKCSI measures into C-MeX benchmarks will yield highly unpredictable results. The proposed approach generates a large swing in the annual benchmarks,

resulting from relatively minor changes in UKCSI and C-MeX scores that sit outside of companies' control. Two examples of the effects of the UKCSI volatility on ODI outcomes are:

a. Wessex Water's score dropped from 80.7

b. in year 1 to 84.8 in year 2, yielding an increase in reward from 0.07% to 0.35% RoRE (a fivefold increase).

c. Bristol Water's score increased from 80.7 in year 3 to 81.0 in year 4, yielding an increase in penalty from -0.05% to -0.08% RoRE

Benchmark and ODI volatility is compounded by the UKCSI's minimum sample size and the fact that C-MeX and UKCSI use data sets that are mismatched over time. Mismatches in survey timings is a particularly important issue when the purpose of the surveys is to measure year on year changes in customer experience.

(3) **Ofwat should not drop check and challenge or move to mostly digital surveys without an online correction factor.** The C-MeX surveys are already volatile with relatively large uncertainty ranges compared to the observed range of company scores and the scale of financial incentive at stake. Dropping check and challenge and moving to mostly digital surveys will further degrade a survey approach which struggles to meaningfully engage respondents and elicit relevant responses.

(4) **The proposed RORE range is too large and RCV should not be used to calibrate incentive payments as it drives undefendable inequalities in companies' incentives to improve customer service.** The size of ODI payments is not proportionate with customers' valuation of customer service and should target +/-0.4% of RORE, in line with the approach applied to other PCs. The use of regulated equity to calculate incentive payments is also unreasonable as it drives large, and indefensible differences in the value placed on customer service across different parts of the country.

Our own assessments of Ofwat's proposed PCLs and incentive rates would indicate that a more accurate view of the risk contained within the draft determinations to be a P50 of -0.06%, with an upside P90 of +0.53% and a downside P10 of -0.70%, which will display in ADD18 as a P90 of +0.60% and a P10 of -0.64%.

Impact of changes proposed by company in representations

With the intention of moving to a new benchmark by year 2 of AMP8, we propose Ofwat should recalibrate its approach and work with water companies and the Institute of Customer Service to develop an appropriate and robust benchmark for C-MeX, which establishes an external benchmark which is both stretching and encourages improvement customer service by recognising industry specific factors and addressing concerns around target predictability.

In year 1 of AMP8 we propose retaining the existing benchmark and ODI approach, with some smaller changes such as the increased weighting of CSS. Ofwat should retain the use of retail revenue for ODI, and the check and challenge process.

There is precedent for altering the specification of MeX measures after Final Determinations. It is key that an improved benchmark focusses on customers' actual service experience, avoiding being overly influenced by wider perception measures or questions which don't apply to universal utility providers (like Net Promoter Scores). Addressing concerns around benchmark relevance and reliability can help command the confidence of water companies, unlocking future investment.

The RORE range is too large, and Ofwat should target a general +/-0.4% of RORE, in line with the approach applied to other PCs. The use of regulated equity to calculate incentive payments is also unreasonable as it drives large, and indefensible differences in the value placed on customer service across different parts of the country. Instead Ofwat should apply a simple standardised incentive rate per customer served approach.

If Ofwat accepts our proposals on C-MeX, we calculate that this will result in an overall risk range for the MeX measures of a +0.65% P90 to a -0.65% P10, with a P50 of 0%. This will therefore also display in ADD18 as a P90 of +0.65% and a P10 of -0.65%.

Figure 5: Comparison of Company and Ofwat customer measures of experience RoRE ranges over time

Source: UUW analysis

Financing scenarios

Company view of draft determination

We view the draft determination financing RoRE range as being overly optimistic in relation to the outperformance potential of the notional company on new debt. The draft determination has proposed a range of 0.7% outperformance to 0.3% underperformance based on a sample of 60 issuances.

We think this evidence is too out of date and doesn't accurately reflect the cost at which companies are able to issue debt. As presented more thoroughly in our financing representation UUWR_70, the sector (large WaSC) weighted average performance versus the iBoxx A/BBB index (with no adjustment) over the 12 months to 31 July 2024 representing £4.835bn of debt was underperformance of >1%, with a range of 0.16% outperformance to c2.34% underperformance.

Even if issuance from Thames and Southern were removed, the weighted average performance was c0.3% underperformance, with a range of 0.16% outperformance to 0.74% underperformance – this is still an optimistic position as this is based on underlying debt of which 67% was issued by 'best in class' issuers United Utilities, Severn Trent and South West Water, some of which are rated more strongly than the notional company and so should be able to consistently issue debt in line with or outperform the index. Further performance versus the index will become even harder once Thames is removed from the iBoxx BBB index in August 2024.

We do not challenge the draft determination view of the financing risk ranges caused by a) the impact of inflation on nominal debt nor b) revenue recovery.

Given the increase in the proportion of new debt to embedded debt in the draft determination WACC we have been able to remove our previous negative adjustment to the financing RORE range reflecting the likelihood (at that point) that the notional company would have more new debt than allowed in the WACC.

The draft determination also included a number of contingent allowances within the 'Large Scheme Gated Process', whereby no ex-ante cost allowances are made other than for development costs and the schemes progress through a gated process during the AMP to determine the appropriate cost allowance (similar to the RAPID gateway approaches for Strategic Resource Options). We cover this in more detail in section 7 of UUWR_11_Gated mechanism. One of the key issues with this mechanism is that Ofwat has stated there is a presumption that there is no allowance for financing costs (and that financing costs become an implicit efficiency challenge for companies), therefore we have factored into our assessment the additional impact that this will have on RoRE. Ofwat has excluded £765m of expenditure from its ex-ante allowance and we estimate that financing this will incur an additional £99m (0.3% of RoRE) of interest payments over AMP8 (financed at the allowed cost of new debt). We therefore include this as additional downside to the P50 as well as the P90 and P10 ranges.

Our own assessments of Ofwat's proposed financing risk would indicate that a more accurate view of the risk contained within the draft determinations to be a P50 of -0.30%, with an upside P90 of +0.72% and a downside P10 of -1.34%, which will display in ADD18 as a P90 of +1.02% and a P10 of -1.04%.

Impact of changes proposed by company in representations

The financing RoRE range included in our representation was a RoRE range of +0.92% to -1.12%, with a P50 of zero, which will display in ADD18 as a P90 of +0.92% and a P10 of -1.12%. We have calculated this as:

- **Performance raising new debt**: 0.16% outperformance to 0.74% underperformance, based on large WaSC (excluding Thames and Southern) experience over the past year to 31 July 2024, which is equivalent to a RORE range of +0.06% to -0.26%;
- **Inflation impact on nominal debt**: symmetrical 1% assumption in line with the draft determination, which is equivalent to a RORE range of +0.86% to -0.86%;
- **Performance due to revenue recovery**: We have adopted a 0.05% downside risk only in line with the PR24 draft determination.
- **Large Scheme Gated Process**: we propose that Ofwat should make an adjustment for financing costs as part of the end of period reconciliation and PR29 midnight adjustment. This removes the risk that we quantified in our view of the draft determination.

In relation to the performance raising new debt, we note that the evidence set out in our financing representation UUWR_70 indicates that there should be a P50 impact of 0.3% under performance, we have not included this P50 underperformance to be consistent with our financing assumptions of adopting (but not endorsing) the draft determination WACC for consistency and comparability purposes.

Figure 6: Comparison of Company and Ofwat Financing RoRE ranges over time

Source: UUW analysis

Revenue & other impacts

Company view of draft determination

We do not challenge the draft determination view of the risk ranges surrounding 'revenue and other impacts' and so continue to set this in line with Ofwat's PR24 methodology values for both the upside and downside risks. We therefore continue to consider a P10 of -0.05% and a P90 and P50 of zero as appropriate.

Impact of changes proposed by company in representations

We do not challenge the draft determination view of the risk ranges surrounding 'revenue and other impacts' and so continue to set this in line with Ofwat's PR24 methodology values for both the upside and downside risks. We therefore continue to consider a P10 of -0.05% and a P90 and P50 of zero as appropriate.

Approach for final determinations

We strongly believe that the risk and return balance needs to be recalibrated for the final determination to enable companies to have reasonable prospects of earning allowed returns without excessive downside risk, to be able to attract necessary investment. There should be clear opportunities for rewards in the event of exceptional performance and clear (and significant but not excessive) penalty consequences in the event of underperformance.

The asymmetric negative skew and P50 below the base return in the draft determination implies that either the cost of equity is set too low, or the amount of risk required to be borne by investors is too high and therefore for the plan to be investable, something must change. There are many examples of 'aiming down' which combined

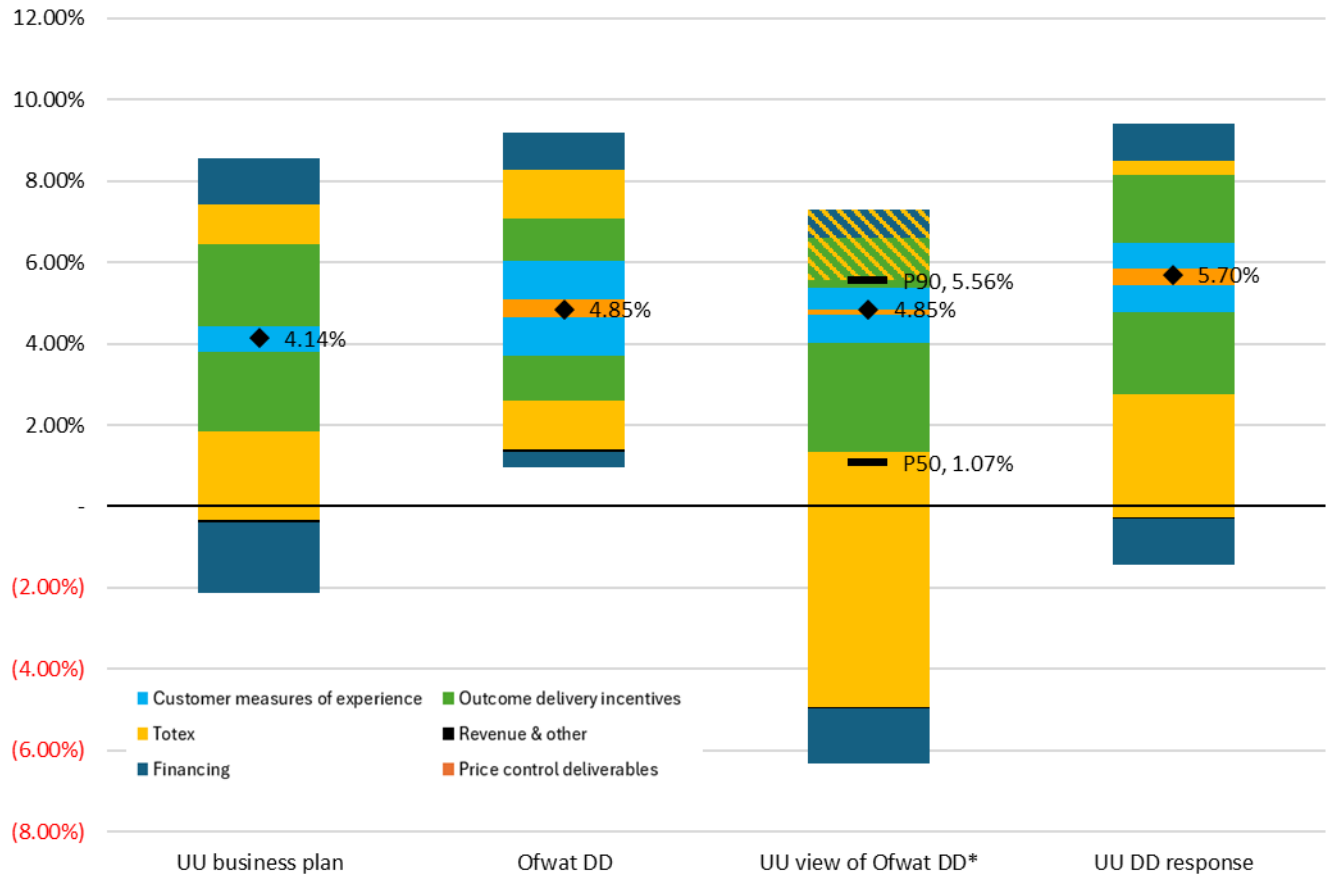
undermine any sense of a 'fair bet'. Our representation puts forward a package with the appropriate balance between risk and return, where efficient expenditure allowances facilitate the investment required to improve services for customers and the environment, an outcomes package that is balanced and appropriately calibrated and a level of return commensurate with the risk required and most importantly, set at a level that can attract investors to the sector.

Table 26: Resulting RoRE after impact of changes proposed by company in representations

UU DD response	P90	P50	P10
Financing	£337m [0.92%]	£0m [0%]	£-411m [-1.12%]
Revenue & other	£0m [0%]	£0m [0%]	£-18m [-0.05%]
Totex	£130m [0.35%]	£-26m [-0.07%]	£-1106m [-3.01%]
Outcome delivery incentives	£542m [1.65%]	£22m [0.07%]	£-672m [-2.04%]
Customer measures of experience	£214m [0.65%]	£0m [0%]	£-214m [-0.65%]
Price control deliverables	£51m [0.14%]	£0m [0%]	£-97m [-0.26%]
Total	**£1362m [9.41%]**	**£-2m [5.7%]**	**£-2620m [-1.43%]**

Source: UUW analysis

Figure 7: Comparison of Company and Ofwat RoRE ranges over time



*Source: UUW analysis [*P90 totex and PCD for 'UU view of Ofwat DD' is negative.]*

14.19 ADD19 - Wastewater network+ - Growth at STWs scheme costs and cost drivers

The 12 schemes proposed are those identified in the original business plan submission, please see UUW65 for further detail.

Although no funding was allowed for Clitheroe in the draft determination we have included this in the list of schemes as we have identified a mismatch in the original table included in response to query OFW-OBQ-UUW-044, and have carried out a further detailed review of this scheme allowing us to present our updated figures.

Capex and opex figures have been updated following review of the DD modelled allowance for growth, and changes made shown in the revised figures used to populate the table

Population Equivalent served

The PE figures are taken from the trend based WEF forecasts and correspond with table CWW7a, as discussed in query response OFW-OBQ-UUW-044

2024-25 to 2029-30 – the table submitted in response to this query has been completed using data from CWW7a as requested, but this is not representative of the additional population that the proposed interventions will address. The resident population data set used for CWW7a is a Trend based projection. This aligns with the approach used for APR reporting of wastewater treatment works loads and is consistent with the methodology used for reporting sewage loads in the forecasts which were developed and submitted at PR19

The figures that make up the basis of the growth enhancement case are based on a more detailed review of local authority planning data for these locations. This information is shown in *Table 5 Defined supply and demand schemes* included in our original submission document *UUW65 – Wastewater quality additional requirements enhancement claims.*

After 2029-30 – The figures used to populate the column in the table submitted in response to this query are based on PE design figure for each location and include baseline household and visitor numbers in line with CWW7a.

The increase in capacity shown is the total population increase from the baseline year when the programme was compiled, 2021 to design horizon of 2050 and reflects the increase in total PE capacity to be delivered by each scheme.

Carlisle – the figures provided up to 2029/30 are the PE forecasts for the existing wastewater treatment works at Carlisle. The solution to accommodate growth here is to build a new treatment works to the south of the city. The post 2029/30 and increase in capacity figures therefore relate to the design PE of the new wastewater treatment works. Although there is an AMP8 WINEP P removal project at Carlisle WwTW, as this case is for a new WwTW 'Type of WINEP quality schemes at site' has been left blank.

Assumptions made
Cost drivers 1,3,5,7, 9 & 11 – Current permit conditions anticipated to be in place at the end of AMP7. Where no permit limits have been set for the parameters in question these cells have been left blank.

Cost drivers 2, 4, 6, 8, 10 & 12 – **Please note none of these assumed limits have been confirmed by the EA.** Future permit requirements for all sites are subject to change on application to the Environment Agency. The future permits are based on our modelling and assessment of each treatment works and could change following formal application to the Environment Agency.

Carlisle

For the new Carlisle (South) treatment works we have assumed best available technology (BAT) limits for all discharge parameters. Discussions are ongoing with the Environment Agency so these limits are also still to be determined.

Clitheroe
We have corrected a mismatch in the original data table provided in response to query OFW-OBQ-UUW-044 and corrected this figure from 24,946 to 28,887. This also aligns with the figure used for CWW19 and that was used in table CWW19 in the October business plan submission. Please note, this scheme also has a WINEP driver for P removal and costs have been split and allocated on a 50:50 basis and the costs submitted are not a duplication as suggested in the PCD model document.

Descriptive treatment works: We have three schemes within our proposed programme that currently have descriptive permits. These are Calveley, Calverhall North and Cockerham. Of these, we have forecast that two will remain as descriptive due to population remaining under the 250 PE threshold for appropriate treatment. These are Calveley and Calverhall North, subject to confirmation by the Environment Agency.

Although we have assumed permits will remain as descriptive, the design parameters used to determine costs for Calveley and Calverhall North are 40 mg/l/60 mg/l BOD/Suspended Solids quality standards. Similarly cost drivers 2 and 4 for these sites - Future DWF and FTFT permits respectively have been completed for these sites based on an assumption of design parameters to allow comparison, rather than being our current assessment of future limits.

Cost driver 13 - Storm tank capacity - we have assumed that the permitted volume is the maximum available storage on site.

Three sites Calveley, Calverhall North and Cockerham are currently permitted to treat all flows, so storm tank capacity increase is assumed to be 0m3.

Cost Drivers 14 – 17

Of the four sites with a WINEP quality driver in AMP8, costs have been split and allocated accordingly to each driver. Costs in ADD19 relate to costs associated with growth only and not quality or maintenance drivers.

Cost driver 16 - Capacity is not being added to address existing non-compliance with permits

Cost driver 17 – Process capacity required to meet future permit limits. Figures provided are the additional PE capacity required to meet the design horizon, based on 2021 baseline.

Cost driver 18 & 19 – Compliance with DWF permit conditions for each site in 2022.

One scheme has incurred expenditure prior to 2024-25, this is the Clitheroe project with expenditure of £0.061m

14.20 ADD20 - Wastewater network+ - WINEP storm overflow scheme costs and cost drivers

The new data table, ADD20, builds on the storm overflows PCD table (UUW33) and additional information provided through the Ofwat query process. There are [449] storm overflows that have been identified as part of our AMP8 programme delivering spill reduction of [22,072] on average by 2030, financial and performance information can be found in the relevant cost drivers. Commentary on ADD20 cost drivers can be found below.

Totex costs in ADD20 reconcile to table CWW3.13-48 plus lines CWW3.185-186 which include the new Windermere overflow costs.

Expenditure for 2023-24 has been included in the cost driver 33 column.

Cost drivers 1 to 4 - Equivalent storage
Lines equate to equivalent storage volumes identified for the AMP8 storm overflow programme. The storage volumes provided reflect the modelled total equivalent storage volume required to meet the spill frequency reduction set out in the WINEP.

The storage volumes provided are indicative of the AMP8 solution and may change upon further investigation, model optimisation and detailed solution design.

Where a scheme delivers spill reduction through conventional storage, increasing pass forward flow or through nature-based solutions, an equivalent storage volume has been calculated and provided within the table.

The equivalent storage volumes associated with increases in pass forward flow can be found in the supplementary table submitted in response to query reference OBQ–REP–UU-001.

For some schemes, the solution will deliver multiple storage tanks in order to meet the required volume needed to reduce spill frequency, likewise, some schemes will deliver a single solution to meet the spill frequency requirements at multiple sites. Where possible storage volumes have been spilt across different storm overflows within ADD20.

Grasmere WwTW SO 017370027SO is new scheme added to the programme since our October submission. This is a unique area and the solution to reduce storm overflow spill frequency will require the addition of storm storage and surface water separation.

Within PR24 data table *UUW33*, UUW identified 16 solutions with green equivalent storage and zero grey storage based on the output of the models. In reality these schemes will be a combination of grey and green. At draft determination it was clear that Ofwat has assessed these schemes as 'green only' solutions rather than 'hybrid' solutions. To avoid any doubt we believe that these are hybrid solutions and therefore have moved the equivalent storage to 'grey' from 'green' to ensure they are included within the correct cost model. We have kept the hectares of area removed and the notional solutions the same.

There is no volume identified under cost driver 4.

Cost drivers 2 and 3 align to storage volumes reported within CWW20 line 14/15 (STW), CWW20 lines 36/37(Network). For schemes with a completion date after 31/03/2030, the equivalent storage volume will not be reported within CWW20.

All overflows included in the AMP8 WINEP programme solutions have been derived from the DWMP or specific AMP8 drivers using wastewater network hydraulic models. Full coverage of EDM data on storm overflows allows us to record and report data to a high level of detail. This means we can reflect more accurate information on our network's performance within our cost driver data.

In AMP7, we have been using the EDM data as a check against our model performance to provide confidence to the Environment Agency on an overflow's impact and proposed solution. This process, which we term 'Fit for Use' (FFU) is now standard practice at UUW on all projects using network models.

Simplistically the FFU process is about running the baseline models with the latest rainfall and comparing the EDM spill and duration against the model. In most situations this is the end of the task, and we continue to use the model to develop the detailed solution. In some circumstances there is a discrepancy between the performance figures and the predicted model performance and further investigation is required. This may simply be a level discrepancy requiring an asset survey to rectify, or an issue with the EDM data, but in some cases, we may be required to undertake a short term flow survey to check a model's verification which can take longer to get to the FFU (typically 9 to 12 months). An example of this may be where the model was previously verified for a different purpose i.e. summer season for bathing water, but winter flows are critical for a 10 spills solution to match the EDM, so we need a winter survey.

This process is part of the overall capital delivery process, but at the time of PR24 we could only use the models that were available. Therefore, following the FFU process, some site solution requirements may increase i.e. increase storage to meet the spill target, but similarly some may decrease.

Ofwat's decision to allow PR24 transitional expenditure has facilitated an accelerated rate of FFU reviews. This programme of work has provided new refined solution data which we have reflected in the ADD20 table at DD. This is mainly reflected as revised storage volumes in the table but in some cases, we have identified some sites where FtFT would be required, which was not included in the PR24 submission. This has led overall volumes to increase.

While changes to cost drivers will be reflected in ADD20, we are not seeking additional cost allowances relating to the overall increase in storage volume. As such, our costs will not change as a result of this FFU update.

Cost driver 5 – Spill reduction
This is the modelled spill reduction based on our AMP8 WINEP programme. This value is calculated as: *Model predicted spills (cost driver 38) minus Target spills (cost driver 39).*

The spill frequency target is stipulated by the WINEP driver.

Cost driver 6 – Priority sites
This aligns to the storm overflow action plan published 15th March 2024. Subsequent changes to the prioritisation as a result of investigations or other activities, are not reflected within this column.

Cost driver 7– New screen requirements
Based on the latest publication of the AMP8 WINEP, released 5th July 2024. Sites with an AMP8 requirement for a new screen under the WINEP driver EnvAct_IMP5 have been included within this column. This aligns to the figures reported in CWW20 line 48.

Note several schemes have a screening driver as a 4th/5th driver which cannot be easily identified within the WINEP.

Any new screen requirements in the July 24 release of the WINEP have been reflected within this column. This includes new requirements at Princes Street CSO, Glebe Road PS and Grasmere WwTW .

Cost driver 8 – 10 permit information (permit reference and PFF)
Information from current permit.

Cost driver 11 and 12 – PFF (modelled and calculated) and Formula A
Values based on modelled PFF data, associated commentary can be found in cost driver 16.

We have included relevant Formula A values within the table. Recently the EA shared a document associated with permitting of storm overflow pass forward flows and Formula A. The EA's recommendation approach to Formula A calculations is:

'not to develop a standardised approach for calculating Formula A, or to review current practices among different water companies. As above, approaches have varied in the past and these were often explicitly allowed for in guidance. Formula A was never intended to achieve a certain design spill frequency, solely to create a level of dilution in the sewer for pollutants before a spill occurred. The actual spill frequency is affected by the nature of the upstream catchment and the flows arriving at the site e.g. whether the catchment is fully combined or partially separate. Other factors such as the rainfall characteristics for the catchment are also important.

Although Formula A wasn't designed to achieve a certain spill frequency, overflows set at Formula A will often spill very frequently, especially in fully combined drainage areas in parts of the country with high average annual rainfall. The new backstop spill frequency design standard of no more than 10 spills per year on average under the Defra Storm Overflows Discharge Reduction Plan represents a major improvement over Formula A. Consequently, Formula A will no longer represent a useful good practice design standard and will effectively become obsolete. The recommendation is to no longer use Formula A as an intermittent design standard for inland or coastal storm overflows'.

Cost driver 13 and 14 – Storage
Permitted storage volumes have been provided within the table including online and offline storage. Where a site is permitted for both online and offline storage, the sum of the volumes has been used within the table. Where additional information on asset volume is available, this is provided in cost driver 14, as a default permit information used.

Cost driver 15 - Permitted annual spill frequency (where stated)
UUW does not have any storm overflow permits with annual spill frequency conditions and therefore these cells have been left blank for all sites.

Cost driver 16 – Justification
Commentary on PFF provided in the table.

Cost driver 17 and 18 – Permitted and actual screening provision
Permitted screening requirements provided. Where additional asset information is available, this is provided in cost driver 18, as a default permit information used.

Cost Driver 19 – Screen totex
Screens totex has been included as per the table guidance, for avoidance of doubt this includes £1.432m of After 2029-30 costs.

Cost driver 20 – SOAF stage
UUW have identified the SOAF stage for all ongoing or completed investigations in AMP7. This includes any sites that have been identified within the AMP7 WINEP with a U_INV driver and any site delivered under the AMP7 Green Recovery programme.

For WINEP SOAF investigation that have complete UUW have identified these as 'Stage 3'. Ongoing investigations due to complete in FY25 have been identified as 'Stage 2'.

Within the Green Recovery plan, UUW identified a stepped approach to delivering SOAF investigations, recognising that not all investigations would be required to go to stage 3 or 4. UUW committed to delivering up to 587 stage 1 investigations and up to 300 stage 3 investigation only. As a result, not all sites with a stage 1 investigation will be taken forward for further investigation in AMP7.

Investigations delivered under Green Recovery have been categorised into two stages. Stage 1 identifies sites that have been delivered up to stage 1 only, in some cases these sites may be identified as 'Stage 3' if they have been complete and evidence uploaded to DEFRA SharePoint.

Cost driver 21 and 23 – Pass forward flow (PFF) increase
Values and costs predominantly align to PFF values given in query reference OFW-OBQ-UUW-141. This is indicative of the solution however, these may change at detailed design.

The PFF value has been updated for Hawkshead WwTW to reflect the change in solution as a result of a new WINEP driver, EnvAct_IMP4, which requires a tighter permitted spill frequency of 10 spills on average per annum.

The PFF values for Orton WwTW, Heversham Sewage PS, Warton PS, Moresby Park PS and St Michaels Way CSO have been removed, upon further investigation we have confirmed that only the storage solutions are required and the inclusion of a PFF and storage solution for these sites was in error. All costs are associated with the storage volumes.

The addition of Staveley WwTW 017370061 storm tanks into the WINEP have also resulted in a change to this line. The indicative solution at Staveley WwTW is to increase PFF by 27l/s, this is a combined solution with Staveley WwTW inlet CSO.

The location of the PFF increase presented in cost driver 22 is indicative and may be subject to change.

Cost driver 24 to 27– Surface water separation and wetland area
UUW have not identified any surface water separation schemes or wetland solutions within our PR24 submission.

In response to query OFW-OBQ-UUW-151 we identified that identification and delivery of 'green solutions' is still within its infancy and therefore we anticipate that companies will have taken different approaches to identifying the equivalent storage for green or hybrid solutions.

Our approach to calculating the area of green solutions (reported in CWW20.15 and CWW20.37) was to deploy modelling tools to consider the area hydraulically connected to each overflow. Then within this connected area, an amount of viable land for green solutions and the type of green solutions, which would be viable for reducing or attenuating the impermeable area, was identified. This area of opportunity within the hydraulically connected area represents the reported area separated / attenuated.

The type of green solutions across the programme were identified on a site-by-site basis from the opportunity mapper and are summarised in the table below:

The type of green solutions across the programme were identified on a site-by-site basis from the opportunity mapper and are summarised in Table 27.

Table 27: Summary of green solutions by type

Type of SUDS	% of programme
Attenuating rain gardens	16.7
Attenuation pond	1.0
Bioretention	2.8
Disconnect downpipes	0.3
Filter drains	1.3
Green roof	1.0
Permeable block paving	46.0
Rain garden box	0.8
Rain gardens (surface)	1.1
Soakaway	0.1
Swales	58.5
Tree pit	2.1
Wetland	0.0

In response to query OFW-OBQ-UUW-178 we provided the notional blue/green solution components identified for each site alongside the hectares of area removed. As there is nowhere within the ADD20 data tables to share this data we have included this data within the company commentary – costs drivers 30 and 31.

Cost driver 28– Forecast scheme completion date
The business plan completion date, this aligns to the totex plan and these dates have been used within our PCL and PCD proposal.

Cost driver 29 - Combined scheme (provide name of combined scheme)
Unique reference given to combined schemes within ADD20 cost driver 29.

Cost driver 30 and 31 - Company specific commentary
Cost driver 30 identifies the **hectares of area removed** for all sites identified as a hybrid solution within our PR24 submission and within query response OFW-OBQ-UUW-151 and OFW-OBQ-UUW-178. The figures reported within this column are aligned to CWW20 line 43 and also represented in query 178.

Cost driver 31 identifies the **notional blue/green solution components** identified for all relevant scheme, originally identified within response to query OFW-OBQ-UUW-178.

Values for cost driver 30 and 31 have been taken from the PCD table attached in response to query OFW-OBQ-UUW-178: 'OFW-OBQ-UUW-178 - UUW33_Storm_Overflows_PCD_template_Apr_24'.

Note that within PR24 data table *UUW33*, UUW identified 16 solutions with green equivalent storage and zero grey storage based on the output of the models. In reality these schemes will be a combination of grey and green. At draft determination it was clear that Ofwat has assessed these schemes as 'green only' solutions rather than 'hybrid' solutions. To avoid any doubt we believe that these are hybrid solutions and therefore have moved the equivalent storage to 'grey' from 'green' to ensure they are included within the correct cost model. We have kept the hectares of area removed and the notional solutions the same.

Cost drivers 32 – Company specific
This column is blank.

Cost drivers 33 – Additional commentary
This cost driver contains 2023-2024 totex values.

Cost driver 34 to 37 - Current spills (annual spills - EDM, 2020 - 2023)
Data taken from EDM annual returns 2020 to 2023.

Cost driver 38 – Model predicted spills (annual, 2025)
2020 Modelled spill frequency based on ten years of historic rainfall data.

Cost driver 39 – Target spills
Spill frequency target required to meet the AMP8 WINEP drivers.

Cost driver 40 and 41 - Company forecast spill position (2024 and 2025)
Calculated as:

Annual forecast performance = 2020 modelled spill frequency - pro-rated spill reduction benefit for schemes delivered within relevant calendar year

Note the spill reduction benefit accounts for enhancement improvements only. Improvements through base are not modelled nor identified at a site-specific level and therefore cannot be replicated within this table.

We described within our response to query OFW-OBQ-UUW-165 that pro-rated or proportional benefit has been derived based on historic data. We analysed the number of spills recorded within each month for the past three calendar years (2020 to 2022) to identify the percentage of spills recorded each month on average based on three years of data. We have then identified a proportional benefit based on the delivery month. Actual spill reduction recorded within a year will vary subject to rainfall.

Cost driver 42 to 46 - Cumulative spill reduction benefits
Calculated as:

Forecast performance = pro-rated spill reduction benefit for schemes delivered within relevant calendar year

Note the spill reduction benefit accounts for enhancement improvements only. Improvements through base are not modelled nor identified at a site-specific level and therefore cannot be replicated within this table.

The data identified within cost drivers 42 to 46 aligns with the spill reduction benefit seen in OUT3.17, average spill reduction from enhancement expenditure as shown in Table 28 and Table 29.

Table 28: Spill reduction benefits from ADD20 and umber of storm overflows from OUT5

	Cost driver 42	Cost driver 43	Cost driver 44	Cost driver 45	Cost driver 46
	2024-25	2025-26	2026-27	2027-28	2028-29
Sum of spill reduction benefits (ADD20)	246	1,247	4,523	11,790	22,072
Total number of storm overflows (OUT5.73)	2267	2267	2267	2267	2267
Average spills from enhancement	**0.11**	**0.55**	**2.00**	**5.20**	**9.74**

Table 29: Average storm overflow spill reduction from OUT3

	2024-25	2025-26	2026-27	2027-28	2028-29
Storm overflows (average spill reduction)	**0.11**	**0.55**	**2.00**	**5.20**	**9.74**

Note that for draft determination representation, UUW has not updated the AMP9 figures within PR24 data table for storm overflows.

As per PCDWW5 we have included a reconciling item relating to the Advanced WINEP programme which is included in the CWW3 lines which ADD20 reconciles too.

14.21 ADD21 - Resilience Interconnector Schemes

We have not included any data within this table as we do not have any Resilience Interconnector Schemes.

14.22 ADD22 – Bespoke performance commitments

14.22.1 Summary of our bespoke performance commitments

Completion of tables and lines related to bespoke PCs

Ofwat has created table ADD22 and pre-populated it with the bespoke performance commitment calculations for those bespoke PCs which it includes in the draft determination. This new DD table therefore supersedes the need to complete any other bespoke PC lines in the OUT data tables. In our DD response data table set we have therefore not populated the following lines in the OUT tables, following Ofwat's 6 June 2024 guidance:

- OUT1.27 to 1.32
- OUT2.27 to 1.32
- OUT3.27 to 1.32
- OUT7.27 to 1.32
- OUT10 – all lines
- LS1 – all lines
- LS2 – all lines.

14.22.2 Embodied greenhouse gas emissions

Performance Commitment Level

We do not propose an alternative value to Ofwat's DD PCL outlined in *United Utilities – Outcomes appendix* and *PR24 Key Dataset 1: Outcomes data.*

Calculation of PCL

We do not propose to calculate the PCL in a different way to how Ofwat has in the DD documentation. The PCL is however calculated incorrectly for this PC in Ofwat's ADD22A tables, this is detailed further in the 'ADD22A' section below and we have provided a proposed correction for final determination.

Calculation of ODI rate

We have populated ADD22D.3 with the ODI rate as stated in Ofwat's draft determination document *United Utilities – Outcomes appendix.*

Caps and collars

See section 2.3.

ADD22A

For Overall Outcome Performance (ADD22A.3) the proposed Ofwat based auto-calculation returns an error ('#DIV/0!), whereby it should return the PCL forecast for the PC as per Ofwat guidance (*PR24 BP Table Guidance Part 13; New tables for Draft Determination representations).* As referenced in Ofwat's *PR24 Key Dataset 1: Outcomes data* the PCL for this PC is 5%, which is only applicable in FY2039/30 only.

The reason that ADD22A.3 returns an error at draft determination is because it is calculating from ADD22E.18, which will only populate once we start to report 'built solution' emission (ADD2EE.16) data from FY2025/26 onwards. ADD22E.18 therefore reflects the actual annual performance of the PC and not the forecasted PCL. On that basis ADD22E.18 should not be used to populate ADD22A.3. We propose that Ofwat should use the following ADD22A.3 table for final determination:

Line description	PC reference	Units	DPs	2025-26	2026-27	2027-28	2028-29	2029-30
Embodied greenhouse gas emissions [UUW]	PR24_EGG_UUW	%	2					5.00%

This table correctly references the PCL from *PR24 Key Dataset 1: Outcomes data* and leaves FY2025/26 to FY2028/29 blank where the PCL is not applicable.

ADD22B

We have updated our data in ADD22B.3 to reflect that a small proportion of our outcome performance for the bespoke performance commitment will be derived from base expenditure. This has been calculated by:

$$\frac{Total\ base\ expenditure\ for\ the\ PC\ programme\ baseline\ (£)}{Total\ CAPEX\ for\ the\ PC\ programme\ baseline\ (£)} \times PCL$$

As the PCL is only applicable to FY2029/30 (as shown in *PR24 Key Dataset 1: Outcomes data*), we have left FY2025/26 to FY2028/39 blank.

ADD22C

We have updated our data in ADD22C.3 to reflect that the majority of our outcome performance for the bespoke performance commitment will be derived from enhancement expenditure. This has been calculated by:

$$\frac{Total\ enhancement\ expenditure\ for\ the\ PC\ programme\ baseline\ (£)}{Total\ CAPEX\ for\ the\ PC\ programme\ baseline\ (£)} \times PCL$$

As the PCL is only applicable to FY2029/30 (as shown in *PR24 Key Dataset 1: Outcomes data*), we have left FY2025/26 to FY2028/39 blank.

ADD22D

- There has been no change in 'Price Control Allocation' from our October 23 business plan (OUT7 table), all projects are from the wastewater network plus category.
- Marginal benefits has been calculated by dividing the proposed incentive rate (£188/ tCO_2e) by the benefit sharing factor (70%, in line with regulatory guidance for performance commitments). The proposed incentive rate, £188/ tCO_2e, is therefore 70% of the calculated marginal benefit rate (£268.57/ tCO_2e). Please note the values within this line reference have been divided accordingly to convert to £millions.
- For 'Standard Underperformance Rate (£m)' the proposed Ofwat based auto-calculation returns the wrong value. This is because the proposed underperformance rate (£94) is not symmetric with the incentive rate, therefore the 'Standard Outperformance Rate (£m)' cannot be used as a basis of calculation. We propose to use the 'Standard Underperformance Rate (£m)' calculation as follows:

$$\frac{-[Penalty\ Rate\ (£94)[}{1{,}000{,}000\ (£)}$$

- The above calculation returns a value of -£0.000094m which reflects the penalty rate proposed by Ofwat at draft determination.
- The 'ODI type' has been updated to 'Outperformance and underperformance payments' to reflect Ofwat's proposed changes to the performance commitment at draft determination.
- The 'ODI form' and 'ODI timing' has not changed since our October 23 business plan (OUT7 table) and remains as 'Revenue' and 'End of Period' respectively.
- The calculations that determine the PCL in ADD22E show a reduction as a positive percentage, therefore the 'Direction of Improving Performance' in this line reference is referenced as 'Up', this is a change from our October 23 submission.

ADD22E

- The individual projects included in the PC baseline are listed in *UUWR_68_Embodied GHG Definition Document*. As detailed in our representation document *UUWR_67 Embodied GHG*, we propose that Davyhulme WwTW P Removal and Eccles WwTW should be removed from the baseline if Ofwat disagrees with our large scheme gated mechanism approach for these projects. We have provided a modified ADD22E table within *UUWR_67 Embodied GHG* for this scenario.

- We have profiled our PC baseline in ADD22E between FY25/26 and FY29/30, based on forecasted and draft project-in-use (PIU) dates. Our actual PIU dates will be developed and confirmed as the delivery plan for our PC projects develop transitioning into AMP8. The PC baseline profile (i.e. between FY25/26 and FY29/30) may therefore change, however all PC projects will still be delivered before the end of the FY29/30 period.
- As requested by Ofwat, we have included additional information on 'Programme baseline without reductions' and 'Reduction in emissions incorporated into baseline'. These are shown in ADD22E.10 and ADD22E.12 respectively. Further information on how these emissions were calculated can be found in *UUWR_68_Embodied GHG Definition Document*.
- The calculated ADD22E.14 'Programme baseline, Tonnes CO2e' associated with this performance commitment is lower than our October 23 and January 24 submission. This is because we have corrected and removed the inclusion of replacement carbon (lifecycle module B4) from our projects in our previous submission, which did not meet the definition criteria of the performance commitment. All emissions data submitted into ADD22E in our draft determination response aligns to the performance commitment definition criteria in *UUWR_68_Embodied GHG Definition Document*, specifically embodied emissions associated with lifecycle modules A1-A5 or cradle to build gateways.
- Where ADD22E calculates cumulative baseline data i.e. 'Programme baseline without reductions, cumulative' (ADD22E.11), 'Reduction in emissions incorporated into baseline, cumulative' (ADD22E.13) and 'Built solutions at project-in-use gateway (AMP8), cumulative programme' (ADD22E.17), we propose that these should be changed to auto-calculations (including changing the cell shade type accordingly) for final determination, in line with Ofwat's ADD22E guidance document (*PR24 BP Table Guidance Part 13; New tables for Draft Determination representations – Table ADD22E*).
- We have left 'Built solutions at project-in-use gateway' (ADD22E.16) and 'Built solutions at project-in-use gateway (AMP8), cumulative programme' (ADD22E.17) blank as these are input values that are required for reporting within each financial year period over AMP8. As a result 'Reduction % from baseline' (ADD22E.18) returns a '#DIV/0!' error in our draft determination response as it auto calculates from ADD22E.15 and ADD22E.17. This error will be corrected as we populate data for ADD22E.17 each financial year for reporting purposes.

14.22.3 Wonderful Windermere

Performance Commitment Level

We do not propose an alternative value to Ofwat's DD PCL outlined in *United Utilities – Outcomes appendix* and *PR24 Key Dataset 1: Outcomes data.* However, we do propose an additional rate threshold for this PC as can be seen in Table 30.

Table 30: Proposed PCL and additional rate threshold Wonderful Windermere

	2025	2026	2027	2028	2029
PCL catchment interventions	9.5	38	38	57.7	77.4
TAL load for all UUW WwTW in catchment	522.9	522.9	522.9	522.9	522.9
Additional rate threshold	532.4	560.9	560.9	580.6	600.3

Source: Farmscoper and UUW analysis

Calculation of PCL

The PCL is calculated using the Environment Agency's Farmscoper tool. Further detail is included within *UUWR_65_Wonderful Windermere*.

Calculation of ODI rate
We have populated ADD22D.3 with the ODI rate as stated in Ofwat's draft determination document *[United Utilities – Outcomes appendix].* We also propose an additional rate which we are unable to include within the data table of £9,530 per Kg for phosphorus removed beyond the additional rate threshold.

Caps and collars
See section 2.3.

ADD22A – this is a calculated table pulling the PCL for catchment interventions through from ADD22E.

ADD22B – All performance for this measure is from base

ADD22C – There is no performance for this measure associated with enhancement expenditure

ADD22D - The standard rate has been added to the table, however, we propose an additional rate of £9,530 for this PC for phosphorus removed above the additional threshold rate, as can be seen above.

ADD22E – Where ADD22E calculates cumulative baseline data in line 'Total Kgs of phosphorus equivalents removed from Windermere catchment (cumulative)' line ADD22E.34 the formulas for calculation of the cumulative PCL are not correct. To ensure the correct numbers are pulled through to table ADD22A we have included figures in line 'Kgs of phosphorus equivalents removed from Windermere catchment' ADD22E.33 to make the existing incorrect formulas give the correct cumulative PCL number. Please note that if the formulas for cumulative calculation are corrected the numbers in line ADD22E.33 will need to be updated. The numbers in ADD22E.33 should be as in Table 31.

Table 31: Line ADD22E.33 correct numbers

2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
9.500	28.500	0.000	19.700	19.700	0.000	0.000	0.000	0.000	77.400

Source: UUW analysis

Please also note that we do propose an additional rate threshold for this PC as can be seen in the text above.

Caps and collars
See section 2.3.

14.23 ADD23

Not required for UUW.

14.24 ADD24 – Large schemes

This table has been populated in alignment with the guidance in the tables file, it also aligns with our representation document *UUWR_11 Gated Mechanism* and associated appendices.

ADD24 does not include expenditure for 2023-24 and 2024-25 or costs after 2030. Please see Table 32 which includes these missing costs.

Table 32: Large schemes table

Scheme Name	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	After 2029-30
Windermere	-	-	11.153	13.634	53.031	62.455	46.115	-

Scheme Name	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	After 2029-30
Davyhulme P Removal	0.335	1.375	3.297	16.183	24.943	12.752	15.739	141.964
Davyhulme Sanitary	0.067	23.149	32.236	34.463	34.218	40.328	53.108	193.638
Wigan	1.280	8.205	20.605	27.763	54.501	113.637	53.161	11.268
Eccles	-	10.747	10.356	49.314	82.399	37.386	8.139	5.064
Salford	0.231	10.143	39.701	74.623	80.587	46.481	9.115	7.168
Pennington Flash	-	3.442	4.954	4.626	36.727	37.300	37.185	1.059

14.25 ADD25

Not Required for UUW.