UUWR_30

PR24 Draft Determination: UUW Representation

Area of Representation: Cost and PCD - Carbon Net Zero Enhancements

August 2024

This document outlines our representation in response to Ofwat's draft determination related to our Carbon Net Zero Strategy, including the Net Zero Enhancement programme

Reference to draft determination documents:
Ofwat's draft methodology, Appendix 9, page 89
PR24 draft determinations: Expenditure allowances
Appendix 9 Setting Expenditure Allowances, p93
PR24-DD-WW-Net Zero, Analysis tabs (Phase 1)
PR24-DD-WW-Net Zero, Analysis tabs (Phase 2)
Ofwat Net Zero Technology Review, page 25
Our draft determinations for the 2024 price review – sector summary, page 13
PR24CA118 Net Zero PCDs.xlsx

United Utilities

Water for the North West

1. Key points

- **Ofwat has made material errors in its assessment of our Net Zero Enhancement (NZE) programme, incorrectly classifying activities as maintenance:** For example, Ofwat has assumed process emissions enhancement expenditure is a potential driver of improved asset operation and performance: we disagree. The only driver for this enhancement is net zero, and it therefore must be classified as enhancement expenditure. There are no other benefits for customers.
- **Net Zero is an enhancement in service, not part of base:** We believe we have put forward legitimate, cost beneficial projects to deliver against the net zero requirement expected by customers and stakeholders. Ofwat has made an incorrect judgement to allocate to base, and we encourage Ofwat to reconsider its assessment and ensure this crucial requirement is appropriately funded.
- **The net zero cost adjustment, (£7m for UUW), that Ofwat has made for net zero investments relating to heat and vehicles is significantly below the value of investment that is needed to meaningfully address the net zero challenge:** We are concerned that Ofwat has significantly underestimated the scale and pace of change the sector needs to deliver in AMP8 if the government's target of net zero 2050 is to be delivered.
- **We submitted several net zero enhancements with sector leading £/tCO₂e:** It appears enhancement cases were awarded on the basis of perceived innovation, rather than deliverable tCO_2e benefit at efficient cost. We encourage Ofwat to reassess these proposals based on the guidance Ofwat published to support the development of net zero enhancement submissions which stated "*we will consider eligible company proposals for the net zero challenge on a competitive basis based primarily on the unit rate of emission abatement delivered for each investment*." [1].
- **£67m of UUW's Net Zero Enhancement cases that have been rejected by Ofwat should be included in UUW's final determination:** Process emissions (Wastewater) (E00001339). Peatland restoration (E0001344) and Woodland creation (E00001345), Transport fossil fuel reductions – green fleet LCVs phase 1 (E00001340) and Transport fossil fuel reductions – green fleet Biomethane HGVs (E00001342)

2. UUW's PR24 proposal

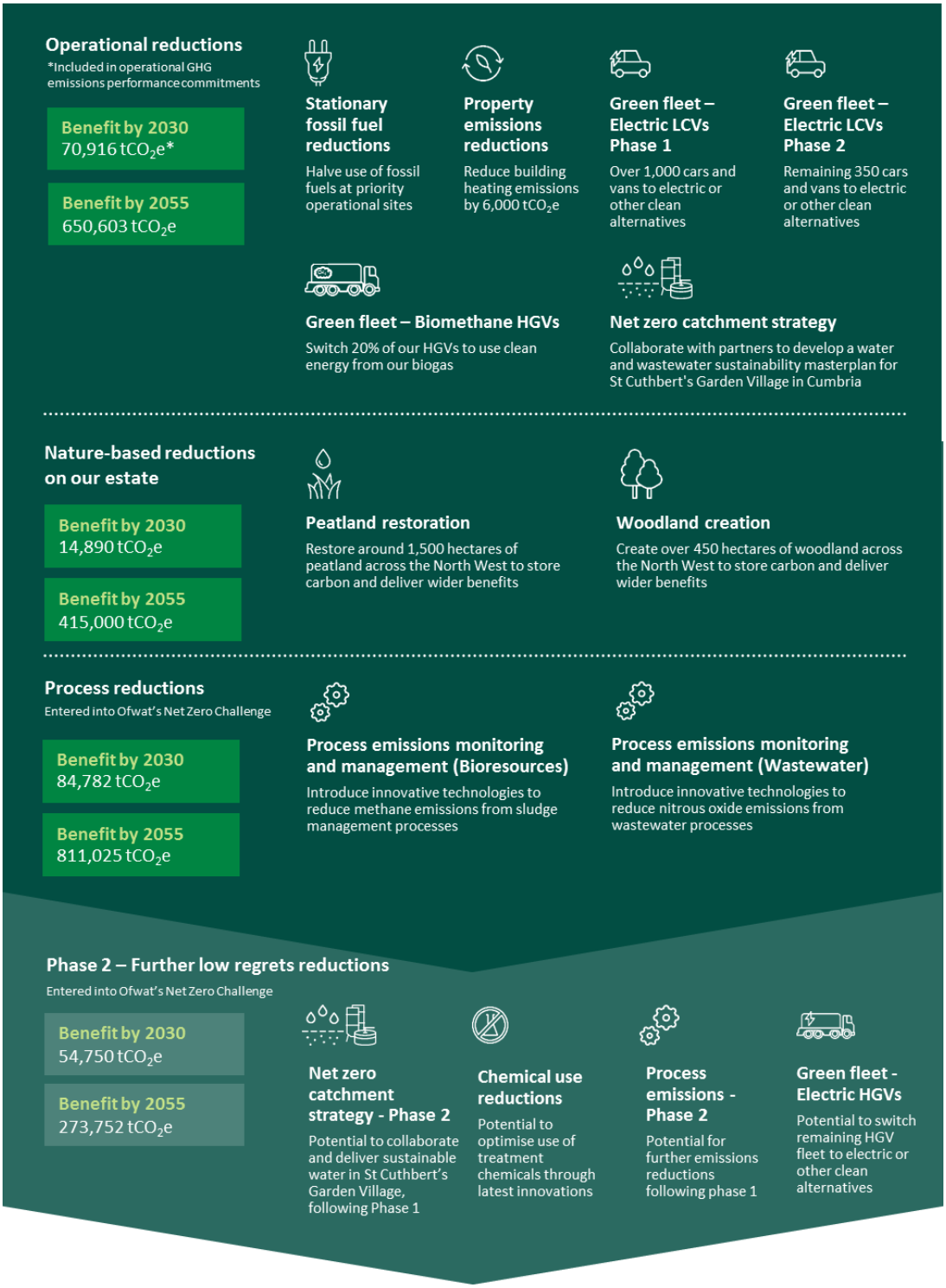
United Utilities has a highly ambitious plan for delivering against our Net Zero target and we disagree with Ofwat's assessment of our proposals being unambitious. The classification of "moderately ambitious" or "unambitious" is based on Ofwat's methodology for its performance commitment, not on globally accepted carbon accounting approaches under the GHG Protocol and UK water sector-wide Carbon Accounting Workbook. We have addressed this point in detail in our representation *UUWR_53_Operational GHG PCs for Water and Wastewater*.

Retaining a science-based trajectory in AMP8 and beyond will require transformation and substantial investment beyond our historic base allowances. We proposed a £196.3million net zero enhancement (NZE) programme to deliver a benefit of over 200,000 tCO_2e by the end of AMP8. It prioritised the most cost-effective deployable projects with emissions reduction as the primary driver. As well as immediate reductions by 2030, this programme provided essential enablers to longer-term benefits that will accelerate decarbonisation for both us and the sector, as we are committed to sharing our learning from new innovations and ways of working.

As referenced in document *UUW67_Bespoke PC - Embodied GHG Emissions,* our proposed net zero enhancement programme consisted of 11 projects and aimed to enable over 200,000 tCO_2e of operational greenhouse gas (GHG) emissions benefit in the period 2025 to 2030, and over 2 million tCO_2e into the future. The programme is summarised Figure 1 below.

[1] PR24-draft-determinations-Expenditure-allowances-to-upload.pdf (ofwat.gov.uk) Page 44

Figure 1: Summary of UUW's Net Zero Enhancement proposal



To ensure a high value and low regrets approach, projects were optimised based on their cost per tonne of GHG emissions reduction (£/tCO_2e) and feasibility for delivery. All projects in this programme offer multiple other benefits that customers confirm are priorities, including: water quality and storage, nature, recreation and public health. In addition, third party assurance has been undertaken across our net zero plan to challenge and validate the robustness of our approach.

2.1 UUW's understanding of the position in the draft determination

Following draft determination, the following conclusions were reached by Ofwat:

- Net zero carbon emissions from UUW's water activities were moderately ambitious (Quality and ambition appendix, page 2/3).
- Net zero carbon emissions from UUW's wastewater activities were unambitious (Quality and ambition appendix, page 2/3).
- Four companies had one or more wastewater NZE accepted. No water services enhancements were accepted for any companies. By cost, only 32.6% of NZE proposals were accepted at an industry level.
- All accepted NZEs were for process emissions, except UUW's whose process emissions enhancement was not accepted, but whose net zero catchment strategy enhancement was accepted.
- The majority of UUW's enhancements were rejected as Ofwat considered them to be base activities.
- UUW's £/tCO_2e across enhancements were generally the lowest in the industry but were not accepted, despite Ofwat's guidance stating "*We will consider eligible company proposals for the net zero challenge on a competitive basis based primarily on the unit rate of emission abatement delivered for each investment*[2]*".*
- UUW's net zero catchment strategy enhancement was approved allowing UUW £1m out of £196.3m proposed. The £1m to be spent on the net zero catchment strategy enhancement does not have any associated carbon savings for AMP8, but will deliver benefit in the longer term.

3. Issues and implications arising from the draft determination

Having considered Ofwat's response to our net zero enhancement strategy, there are five of our Net Zero Enhancement cases that we believe should be included in the final determination. These Net Zero Enhancement cases are:

- Process emissions (Wastewater) (E00001339)
- Peatland restoration (E0001344) and Woodland creation (E00001345)
- Transport fossil fuel reductions – green fleet LCVs phase 1 (E00001340) and green fleet Biomethane HGVs (E00001342)

The specific case for each of these is set out in Section 4, and below we cover in more detail the main points of disagreement with Ofwat's decision.

In relation to the other Net Zero Enhancement cases, we welcome the acceptance of the Net Zero Catchment Strategy (E00001425), and accept the rejection of the other cases for the following reasons:

- Stationary fossil fuel reductions (E00001337), Transport fossil fuel reductions - phase 2 (E00001341) and Property emissions reductions (E00001346) total cost £34m: We recognise that Ofwat has made a one off uplift in the base allowance, equating to £7m for UUW, and that this is intended to fund activities similar to those proposed in these NZE proposals. As outlined below, we are concerned that £7m is insufficient, and that these activities should not be funded as base. However, we recognise the £7m funding Ofwat has made available as Ofwat's acceptance of the need for these activities and so UUW is not asking Ofwat to revisit their decision on these NZE cases.
- Process Emissions (Bioresources) (E00001338) £14m: UUW recognises that Ofwat didn't support methane emissions reduction enhancement cases for any companies, and accept that there are other drivers for methane emissions reduction.

[2] PR24-draft-determinations-Expenditure-allowances-to-upload.pdf (ofwat.gov.uk) Page 43

- Further low regrets emissions reductions in AMP8 (E00001426) £84m: As these Phase 2 activities were going to build on the delivery of a number of the other NZE deliverables that have not been funded, UUW accepts that this phase 2 funding has not been allocated.

3.1 Net zero activities are an enhancement activity

Ofwat has stated that the activities proposed under UUW's net zero enhancement should be funded through base or maintenance, and that they are not enhancement. Achieving Net Zero by 2050 is a legally binding commitment of the UK government, and as stated in Ofwat's draft methodology (Appendix 9, page 89) Ofwat expects that "*companies' plans align with national government net zero targets, addressing both operational and embedded emissions in doing so, and prioritising the elimination and reduction of greenhouse emissions (GHG) before the use of offsets*."

It is our interpretation that the activities needed to meet this obligation represent a permanent change in the way UUW will need to operate to make a step change in our GHG emissions.

Furthermore, not all investments that benefit GHGs would be made to enhance efficiency. It is a misconception that all activities to reduce GHG emissions have an associated financial efficiency, such as a reduction in power or chemicals usage, or an increase in biogas quality or volume. In section 4, we expand on how reducing nitrous oxide (N_2O) emissions has no efficiency driver and is an activity that would only be considered for its beneficial impact on GHG emissions. The global warming potential of nitrous oxide is 298 times that of carbon dioxide, so removing it from process emissions has a significant impact on reducing GHG emissions. However, we expect that removing N_2O will increase treatment costs associated with aeration, meaning this investment is only viable when the value of the GHG emissions reduction is considered as a driver.

We believe that Ofwat has incorrectly interpretated some net zero activities as base, particularly five investments (£67m totex) from UUW's net zero enhancement proposal (outlined in section 4). Our conclusion is that these investments meet the criteria for enhancement expenditure, as they are not driven by financial efficiency and are designed to meet the environmental improvements needed to meet new net zero obligations.

3.2 The base allowance for Net Zero expenditure is insufficient to address the challenge

We recognise that Ofwat has given a one off uplift to base for net zero activities relating to the use of vehicles and heating of £7m for UUW. This only addresses the supporting infrastructure rather than the key assets themselves, and only for a small proportion (8%) of what makes up our GHG emissions, and so will not enable us to "deliver a step change" "as rapidly as reasonably practicable" as it intends to do (*PR24 draft determinations: Expenditure allowances)*.

We also have concerns around the total allowable expense for the sector to meet net zero, inclusive of incentivised performance commitments, the base uplift, net zero enhancements and improvements from standard enhancements. The Climate Change Commission, estimated in 2019 that the investment needed to meet net zero is around 1 – 2% of GDP for the UK, or approximately £30 – 60bn annually[3]. The UK water sector is estimated to make up around 1% of UK emissions[4]. Based on this, it is not unreasonable to assume that the level of investment needed for the UK water sector to meet net zero to be in the region of £300m - £600m per year, or £1.5bn - £3bn for per AMP. Ofwat has noted in *PR24 draft determinations: Expenditure allowances* that £60.51m has been allocated across water and wastewater as an adjustment for the whole sector, and £317m for net zero enhancements across the whole sector. Whilst some improvement can be delivered through efficiency gains in base, there will still be a sizeable investment gap for the sector to meet net zero.

[3] Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf (theccc.org.uk)

[4] A-Blueprint-for-carbon-emissions-reductions-in-the-water-industry.pdf (ciwem.org)

3.3 The scale of UUW's ambition and the low £/tCO₂e of UUW's enhancements has not been duly considered

We are disappointed to see that the majority of our net zero enhancements were not included in Ofwat's draft determination. This does not appear to be in line with criteria set out by Ofwat on awarding to the most efficient schemes. We believe Ofwat should review the following responses to rejection of five of our net zero enhancements. The total value of net zero enhancements to be considered is £67m.

Note that some net zero enhancements do not show a measurable reduction to the PCL in AMP8, but are necessary to progress now in order to accelerate our journey to net zero, and lay the foundations to limit the size of the challenge in AMP9 and beyond.

As per *Appendix 9 Setting Expenditure Allowances,* p93, Ofwat stated that "we will prioritise funding via the net zero challenge based on companies having the following:

- Stretching operational GHG emissions reductions through base expenditure; and
- Efficient net zero enhancement bids on a cost per unit of operational GHG emission (£ per tCO_2e) abated basis"

As discussed in our Operational Carbon PC response document, UUWR_53, we believe that our targets for operational GHG emissions reductions are ambitious and stretching and therefore meet the first requirement. In addition, our cost per unit of operational GHG emissions are efficient, especially when compared to those of other companies' enhancements.

UUW's proposals were amongst the lowest £/tCO_2e associated with its proposals for process emissions (wastewater) (see section 4.1), but this was rejected in favour of other proposals with a higher £/tCO_2e. Table 1 shows how UUW's NZE for Process Emissions (Wastewater) has a considerably lower £/tCO_2e compared with the accepted projects from other companies. This appears not to be in line with the prioritisation criteria Ofwat had set out. Optimising existing assets to reduce N_2O emissions is a more cost effective strategy than investing in new and novel technologies to achieve reductions in N_2O (see section 4.1). As outlined above, where the only driver for the asset optimisation is N_2O reduction and there are no other process benefits, this is not base and should be funded as an enhancement.

Table 1: £/tCO_2e over AMP for UUW's rejected NZE for Process Emissions (Wastewater), compared with accepted projects from other companies

Company	Scheme ID	Scheme name	Unit cost over AMP8 (£/tCO_2e)
UUW	E00001339	Process Emissions (Wastewater)	543.88
SVE	NZ#2	Cover & Treat	1,251.29
SVE	NZ#1	Digital Twin	1,496.76
SVE	NZ#3	ASP Intensification	2,083.91
HDD	CWW22.1	Process Emissions Reduction	2,100.16
ANH	CWW22.15	Colchester STC Fugitive emissions N_2O	2,586.21
ANH	CWW22.16	Cliff Quay STC Fugitive emissions N_2O	5,882.78
ANH	CWW22.14	Basildon STC Fugitive emissions N_2O	8,977.01
ANH	CWW22.45	Colchester WRC Fugitive Emissions N_2O	13,179.70
ANH	CWW22.29	Flitwick WRC Fugitive Emissions N_2O	46,253.42
ANH	CWW22.1	Cotton Valley STC - Centrate quality	76,031.36
ANH	CWW22.25	Letchworth WRC Fugitive emissions N_2O	88,989.03
ANH	CWW22.28	Dunstable WRC Fugitive Emissions N_2O	163,359.89
ANH	CWW22.26	Newmarket WRC Fugitive Emissions N_2O	173,886.79

4. Net zero carbon enhancements must deliver high value, long-term benefits that customers want

4.1 Response to process emissions (Wastewater) (E00001339) enhancement rejection

Table 2 presents a breakdown of key information relating to our process emissions (wastewater) net zero enhancement.

Table 2: Key information for our process emissions net zero enhancement

Key information	
Total AMP8 operational emissions benefit (tCO_2e)	-62,705*
Total operational emissions benefit 2030-2050 (tCO_2e)	-627.052**
Total AMP8 embodied emissions (tCO_2e)	30
Total AMP8 Totex (£m)	33.71
Benefits	Improving public health Increasing resilience
Net Zero Enhancement or Challenge	Net Zero Challenge
Applies to the GHG common performance commitment level	No

** Emissions benefits are stated as negative values to show a reduction, as per Ofwat's PR24 data table guidance*
***Total operational emissions aligns to PR24 data tables CW15 and CWW15*

Ofwat has not included this project in its draft determination based on the following justification: "This scheme proposes using technology which represents an improvement in operations of the asset. This comes under general maintenance and base spending." *PR24-DD-WW-Net Zero, Analysis tabs (Phase 2)*

The enhancement was not included as it was deemed as business as usual however, we do not agree. Optimising for N_2O would not be required to meet other permit requirements and does not bring other benefits, such as efficiencies, that would otherwise give reason for this expenditure. The driver for N_2O optimisation is reducing greenhouse gas emissions. To expand on this point, it is important to note:

- Ofwat has misinterpreted the Net Zero Technology Review report and requires clarity around the use of process optimisation and real time control for N_2O.
- Optimising sites for N_2O is fundamentally different to optimising sites for energy, chemicals and effluent compliance. Optimisation of N_2O may result in greater aeration energy requirement on some sites and may also require changed process recycles and system functionality to change solids wasting. These examples demonstrate how this is not part of standard optimisation activities and may incur additional operational cost and effort.
- N_2O measurement equipment is not required on site for any drivers other than monitoring greenhouse gas emissions, and it is necessary to measure baseline operation and validate emissions reductions.
- Real time N_2O control cannot be done with existing real time process control solutions, and this level of control is what has been most widely demonstrated to date to deliver emissions reductions.
- An array of new vendor offerings specific to N_2O optimisation are emerging and these all include elements of modified process control and data driven approaches to leverage existing data streams and machine learning. Some mechanistic modelling and/or hybrid attempts to control N_2O are in progress though not commercialised vendor offerings, remaining largely in academia. If Ofwat only fund new innovative assets, as they have for other companies, these less established approaches hold inherent risk. UUW has focused on tried and tested solutions in this enhancement, to reduce risk with customers' money, and is focused on a

lower £/tCO_2e than other innovative projects that Ofwat has accepted. Innovation should be funded with specific funding set aside for specifically for innovation.

The unit cost over AMP8 for this enhancement is £543.88/tCO_2e. This is much lower in comparison to other companies' unit costs for process emission enhancements, where these enhancements have been accepted. As previously stated by Ofwat "We will consider eligible company proposals for the net zero challenge on a competitive bases based primarily on the unit rate of emission abatement delivered for each investment. The net zero challenge is different to standard enhancement funding primarily as where appropriate we will fund scheme based on the unit cost presented to the determine deficient unit cost" (*Appendix 9 Setting expenditure allowances, p93*). We appreciate the uncertainty in existing baselines, reductions possible and therefore cost per tCO_2e for abatement, but it is not clear how cost has been considered by Ofwat in the NZE determinations. For the three companies that had process emissions enhancements accepted, the average unit costs were £1,610.66/tCO_2e, £2,100.16/tCO_2e, and £64,349.58/tCO_2e.

In the PC definition, Ofwat has used the population basis for the calculation of process emissions. As N_2O emissions are reported based on population, this means that in an area such as the North West of England where the population is forecast to grow in AMP8, it would not be possible to demonstrate a reduction in emissions, as they are directly linked to population growth and not to United Utilities actual emissions. This further highlights the need to measure emissions so that actual reductions can be demonstrated, and supports its inclusion as part of this enhancement. This also explains why this enhancement cannot be included in the PCL as it follows a different methodology, focusing on measured data. There is no way to get the benefit into the PC until the methodology for process emissions changes from one based on the population methodology.

This determination removes the opportunity for UUW to reduce our largest source of scope 1 emissions. Where other areas, such as electricity, are decarbonising as part of the government trajectory to net zero, process emissions reductions will not be achieved if the water sector do not appropriately invest to monitor and mitigate emissions. These emissions will not be addressed by other sectors, hence it is critical that suitable investment is available to progress reducing these emissions to achieve net zero. This enhancement is essential to our ability to retain a science-based trajectory to the national legal requirement for net zero 2050 and five-year carbon budgets as explained in the *Ofwat Net Zero Technology Review (Page 25).*

4.2 How a price control deliverable should be applied to these enhancements

For this enhancement, we are not proposing a PCD due to the need to baseline the measured emissions before we can ensure accurate monitoring and reporting.

4.3 Response to Peatland restoration (E0001344) and Woodland creation (E00001345) enhancement rejections

Table 3 presents a breakdown of key information relating to our peatland and woodland net zero enhancement.

Table 3: Key information for our peatland and woodland net zero enhancements

Key information	E0001344 Peatland restoration	E00001345 Woodland creation
Total AMP8 operational emissions benefit (tCO_2e)	-13,227*	-1,663*
Total operational emissions benefit 2030-2050 (tCO_2e)	-277,767**	-137,578**
Total AMP8 embodied emissions (tCO_2e)	0	0
Total AMP8 Totex (£m)	20.00	2.50

Key information	E0001344 Peatland restoration	E00001345 Woodland creation
Benefits	Improving water quality Natural environment protection Increased resilience	Improving public health Improving water quality Natural environment protection Increase resilience
Net Zero Enhancement or Challenge	Net Zero Enhancement	Net Zero Enhancement
Applies to the GHG common performance commitment level	No	No

** Emissions benefits are stated as negative values to show a reduction, as per Ofwat's PR24 data table guidance*

**Pending Issuance Units only (note: tCO_2e from peatland restoration and woodland creation are provided as Pending Issuance Units (PIUs) at the end of AMP8 with Carbon Units expected to be available for use against reportable emissions from 2032 for Woodland and 2035 for Peatland, according to current best practice frameworks.)*

***Total operational emissions aligns to PR24 data tables CW15 and CWW15*

Land net zero enhancement, which includes peatland restoration and woodland creation, was not included in draft determination as it was deemed to be base allowance.

We believe that the outlined investment should be considered enhancement as Ofwat cost models do not include the amount or type of land owned and managed by water companies. We are not funded in base to restore peatland or plant new woodland. All previous investment in land has all come under WINEP enhancement with a drinking water quality driver. This activity is essentially the same as that previously recognised enhancement, but with greenhouse gas abatement and net zero as the driver instead.

Benefits from this investment will continue into the long term and the schemes are proposed to be 50% partnership funded, demonstrating efficiency. An additional £22.5m of partnership funding would also be unlocked through the delivery of these schemes; this would be impacted should the enhancement be rejected.

Ofwat outlines that innovative projects have been supported to meet net zero including "creating woodland and restoring peatland" (*Our draft determinations for the 2024 price review – sector summary, page 13*). It is unclear how Ofwat has supported projects to create woodland and restore peatland as it has not supported any woodland creation or peatland restoration net zero enhancements proposed by UUW or any of the other companies.

As stated in our *Enhancement Case: Carbon Net Zero document, UUW37*, for both peatland restoration and woodland creation, "this enhancement case does not overlap with any activities delivered through base as all viable emissions reductions that can be delivered through base expenditure have been explored" (p45 and 52).

Where enhancement funding has previously been given to restore peatland or plant new woodland, the ongoing work to maintain those peatlands and woodland is funded as base (plus other grant funding), but new improvements to land are considered enhancements. This is backed up in the WINEP funding for peatland restoration.

- **Base:** We currently have 4,944.47 ha of woodland being managed sustainably against UKFS & UKWAS. Since 2003 we've been Forest Stewardship Council® (FSC®) certified - Licence number FSC-C005555, this certification covers 4,373.80 ha of our woodland estate. Management of existing woodlands is done using revenue budgets, existing grants, and small amount of income generation.
- **Enhancement:** our woodland creation proposal is to create an additional 550 ha of new woodland, which once established will also be certified and managed sustainably. Enhancement funding will enable us to deliver our ambitious target of creating 550 ha of new woodland by facilitating land release from current use as well as making up the shortfall between available grant funding and the cost of delivery on sensitive catchment land.

When judged on AMP8 benefit alone, peatland and woodland schemes appear to have a higher cost per tCO_2e. However the nature of these schemes is that the benefit will continue to grow into the future, both in terms of carbon abatement, but also biodiversity and environmental resilience.

Note that as part of this enhancement case, all of the 1,494 hectares of peatland and 456 hectares of woodland in AMP8 will be assured and Pending Issuance Units (PIUs) issued following completion of the projects. These PIUs will be used to evidence that the project has been completed and provide confirmation of the proposed carbon benefit to be delivered from 2030. Following verification by the Peatland Code, carbon units will be provided after a minimum of 5 years post intervention. We expect woodland carbon units to be available for use in our UK-based emissions reporting from 2033, following verification. We intend to use these carbon units within our UK-based emissions reporting when reporting our total net emissions. We therefore expect to see wider carbon benefits beyond AMP8, linked to our long-term ambitions and net zero strategy.

4.4 How a price control deliverable should be applied to these enhancements

As stated in our submitted enhancement case document *UUW67_Bespoke PC - Embodied GHG Emissions, Carbon Net Zero*, we are proposing a PCD for our submitted net zero enhancement projects. This has been updated to reflect our draft determination response. Table 4 presents our PCD forecast deliverables and benefits for Woodland and Peatland.

The PCDs we are suggesting will be measured in tonnes of carbon dioxide equivalent (tCO_2e). This consistent unit across all net zero enhancement projects allows for comparison between projects within the PCD, even though their methodologies and delivery mechanisms are different. We do not think it is appropriate to include specific sites as part of the PCD, as it limits flexibility and innovation in delivery.

Table 4: Price control deliverable for Woodland and Peatland

Deliverable	Unit	2025-26	2026-27	2027-28	2028-29	2029-30
tCO_2e from 2025-2030 Peatland restoration	tCO_2e	0	0	0	0	-13,227
tCO_2e from 2025-2030 Woodland creation	tCO_2e	0	0	-427.015	-854.03	-1,662.63

4.5 Response to Transport fossil fuel reductions – green fleet LCVs phase 1 (E00001340) & Transport fossil fuel reductions – green fleet Biomethane HGVs (E00001342)

Table 5 presents a breakdown of key information relating to our Transport fossil fuel reductions – green fleet LCVs phase 1 & Biomethane HGVs net zero enhancements.

Table 5: Key information for our Transport fossil fuel reductions – green fleet LCVs phase 1 & Biomethane HGVs net zero enhancements

Key information	E00001340 Transport fossil fuel reductions – Green fleet LCVs phase 1	E00001342 Transport fossil fuel reductions – Green fleet Biomethane HGVs
Total AMP8 operational emissions benefit (tCO_2e)	-19.060*	-3,866*

Key information	E00001340 Transport fossil fuel reductions – Green fleet LCVs phase 1	E00001342 Transport fossil fuel reductions – Green fleet Biomethane HGVs
Total operational emissions benefit 2030-2050 (tCO_2e)	-225,458**	-38,659**
Total AMP8 embodied emissions (tCO_2e)	0	0
Total AMP8 Totex (£m)	8.80	1.20
Wider benefits	Improving public health	Improving public health
Net Zero Enhancement or Challenge	Net Zero Enhancement	Net Zero Enhancement
Applies to the GHG common performance commitment level	Yes – Water and Wastewater	Yes – Wastewater

* Emissions benefits are stated as negative values to show a reduction, as per Ofwat's PR24 data table guidance
**Total operational emissions aligns to PR24 data tables CW15 and CWW15

Ofwat has rejected these enhancements for transport fossil fuels, deeming that transport has historically been funded by base expenditure *(PR24-DD-WW-Net Zero, Analysis tabs (Phase 1)).*

As stated in our enhancement case, these enhancements do not overlap with any activities delivered through base. Our light commercial vehicle (LCV) phase 1 and biomethane HGV enhancement cases will replace existing diesel vehicles that have come to the end of their life and are due for renewal at the beginning of AMP8. The costs associated with this case cover the uplift costs to EV only, above and beyond base expenditure.

Green fleet LCVs Phase 1 was modelled using base funding (£28.5m for LCV from £52m overall) that could purchase 1,021 diesel LCVs due for renewal early AMP8 at the average cost for all sizes and fit outs. The additional funding from the enhancement is required to upgrade from diesel to EV.

For HGVs, the best available cost-effective option when looking at the direct totex impacts for HGV replacement that we can deliver from base is like for like diesel replacement. The enhancement proposes to covert 21 bioresources HGVs to biomethane, which would not be covered by base expenditure.

Both of these net zero enhancements demonstrate an efficient £/tCO_2e at £317/tCO_2e for biomethane HGVs and £469/tCO_2e for phase 1 LCVs, both lower than the median determined across companies to be £757.82/tCO_2e, as noted in *PR24 draft determinations: Expenditure allowances* in reference to the net zero base cost adjustment.

4.6 How a price control deliverable should be applied to these enhancements

As stated in our submitted enhancement case document *UUW67_Bespoke PC - Embodied GHG Emissions*, we are proposing a PCD for our submitted net zero enhancement projects. This has been updated to reflect our draft determination response. Table 6 presents the PCD forecast deliverables and benefits for Green Fleet LCVs Phase 1 and Biomethane HGVs.

The PCD we are suggesting will be measured in tonnes of carbon dioxide equivalent (tCO_2e). This consistent unit across all net zero enhancement projects allows for comparison between projects within the PCD, even though their methodologies and delivery mechanisms are different. We do not think it is appropriate to include specific sites as part of the PCD, as it limits flexibility and innovation in delivery.

Table 6: Price control deliverable for Green Fleet LCVs and Biomethane HGVs

Deliverable	Unit	2025-26	2026-27	2027-28	2028-29	2029-30
tCO_2e from 2025-2030 Green fleet LCV's	tCO_2e	-521	-1,692	-3,644	-6,050	-7,153

Deliverable	Unit	2025-26	2026-27	2027-28	2028-29	2029-30
tCO_2e from 2025-2030 Green fleet Biomethane	tCO_2e	-155	-464	-773	-1,082	-1,608

4.7 Response to accepted Net Zero Catchment Strategy (E00001425)

We welcome Ofwat's decision to accept our Net Zero Catchment Strategy (E00001425), allowing £1m for its development. This element of our Net Zero enhancement was proposed as a planning activity (Phase 1) working with partners to develop a water and wastewater sustainability masterplan for the St Cuthbert's Garden Village development in Cumbria. The delivery of actions identified in this plan would follow in Phase 2, which was part of our proposed Further Low Regrets Emissions Reductions in AMP8 (E00001426), which has not been funded as part of UUW's Net Zero Enhancements.

Following draft determination, Ofwat has proposed the following conditions on the Phase 1 Net Zero Catchment Strategy enhancement scheme:

"Provision of detailed costing for the plan, including design costs for the plan, details on the timing of the work and future milestones for delivery" (PR24CA118 Net Zero PCDs.xlsx).

We understand this condition as providing detailed costings, delivery dates and future milestones for interventions and opportunities identified within the masterplan document, that would be delivered following completion of Phase 1.

As funding has not been allocated for the future delivery of interventions that will be identified in the plan (Phase 2), we are not able to commit to delivering the *"details on the timing of the work and future milestones for delivery"*. As an alternative we propose to provide "*design costs for the plan*", for interventions identified in Phase 1. These costs will be provided within the masterplan document.

In addition, we will provide costs within the masterplan for any trials of interventions explored within Phase 1, subject to build out and phasing of the Garden Village and support from the relevant stakeholders i.e. local council and developers.

Ofwat has also requested UUW provide *"Signed letters of support" (PR24CA118 Net Zero PCDs.xlsx)* which is understood to mean providing signed letters of support from key stakeholders responsible for the development of the St Cuthberts Garden Village.

We propose to provide signed letters of support as part of the masterplan deliverable. Letters of support will be obtained to endorse the principles of the masterplan and support, in principle, interventions identified. They will not represent a commitment to deliver interventions within the masterplan as funding for delivery has been rejected.

We are currently in discussions with the Environment Agency on the creation of a new wastewater treatment works (WwTW) to facilitate the expected population growth from the St Cuthberts Garden Village. We have included this as a named scheme in our growth programme for AMP8. We are anticipating that we will be successful in obtaining the necessary permits for a new wastewater treatment works. Other consents such as planning approval and land purchase will also be required. In the event that we are unsuccessful in obtaining the consents and approvals required to progress a new wastewater treatment works, we propose to develop the masterplan document and adapt our approach.

4.8 Implications

Net zero enhancement cases not included

As stated in our business plan submission *UUW37 – Our strategy to net zero 2050*, reducing greenhouse gas emissions is important to customers. Without investment in enhancement cases to reduce emissions and

sequester environmental carbon, our science based target for net zero that we have committed to with customers and investors is being put at risk.

The net zero enhancements we have suggested to be included in our final determination also deliver wider benefits in terms of ecosystem resilience in the case of peatland and woodland restoration. The process emissions proposal will increase knowledge and data on a critical element of water sector greenhouse gas emissions. The learning will be shared with other companies to support the achievement of net zero across the whole sector. It would be disappointing to lose this opportunity to act now in reducing the burden on future investment periods to tackle emissions.

Out of the net zero enhancements that we have suggested to be included in our final determination, those that impact the PCL within AMP8 are Transport fossil fuel reductions – green fleet LCVs phase 1 (E00001340) & Transport fossil fuel reductions – green fleet Biomethane HGVs (E00001342). These have been included as part of enhancements within the OUT data tables and therefore form part of our proposed PCL. The others do not impact the PCL in AMP8 but are necessary to achieve future emissions reductions.

Net zero catchment strategy

As stated in our business plan document *UUW37 – Our strategy to net zero 2050*, this is exploratory proposal, and we may not be able to directly change national planning documentation. In the event that we do not choose, or are not able to build a new WwTW we would need to consider the implications on the master plan. We also have minor concerns on the level of expected reporting burden suggested in Ofwat's draft determination for a relatively nominal project.

4.9 What Ofwat can do in the final determination to address these issues

Ofwat only accepted £1m out of £196.3m proposed Net Zero Enhancements. We believe it should increase the allowance by £67m. We encourage Ofwat to reconsider its assessment, in line with its methodology, in particular to:

- Reconsider process emission (wastewater) enhancement rejection due to being classed as base by Ofwat. We argue that this has a primary driver of GHG reductions by optimising the treatment process to reduce the GHG N_2O and is not a base activity to use real time control to optimise this measure.
- Reconsider net zero cost adjustment from base, as it's not sufficient to meet the proposed emissions reduction. We urge Ofwat to reconsider the value of the investment that is required in AMP8 to ensure it is proportionate to the step change we need to deliver to remain on track to meet net zero by 2050.
- Consider £/tCO_2e of different net zero enhancements to ensure that customers are getting the best value investments. Enabling the optimisation of existing process units is key to ensuring best value for customers, and where the sole diver for the optimisation is to reduce GHG emissions this should be funded as an enhancement.
- Reconsider classification of woodland and peatland investment as base as these activities have previously been funded as enhancements. They also offer excellent value to customers through the opportunity to unlock partnership funding, and they align to the “creating woodland and restoring peatland” that Ofwat states it is supporting to meet net zero (*Our draft determinations for the 2024 price review – sector summary, page 13*).

5. Net zero base cost adjustment, linked to net zero enhancements

Response to £7m base uplift (£2m for water and £5m for wastewater)

We appreciate Ofwat's commitment to net zero, and agree that a suitable mechanism is needed to ensure that the net zero obligation is appropriately funded in order to support the sector in achieving net zero emissions.

However, as discussed in section 3.3 of this document, we don't believe that the vast majority of investment for net zero should be classified as base. There are exceptions where gains in financial efficiency can drive emissions benefit, however a credible plan to net zero should recognise that significant additional investment is needed. In most cases, other drivers, such as environmental improvements and storm overflow investment will drive more emissions into the sector. The base cost adjustment allocated by Ofwat does not enable us to transform at the speed we need to meet net zero.

If the base cost adjustment remains in the final determination, we will use the detailed plans from our proposed net zero enhancement proposal on heat to identify projects with the lowest £/tCO_2e in order to allocate the £7m expenditure in the most efficient way. In our net zero price control (*UUW67_Bespoke PC - Embodied GHG Emissions*), we proposed £12.62m across AMP8 for stationary fuel reductions in return for 35,277 tCO_2e reduction. The £7m could cover the capex investment required to then enable the use of lower carbon fuels. Although the capital investment does not equate to reduced emissions, in combination with the purchase of lower emissions fuel, there is an opportunity to reduce emissions.

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