UUWR_54

PR24 Draft Determination: UUW Representation

Area of representation: Outcomes – Discharge Permit Compliance

August 2024

This document outlines our representation in response to Ofwat's draft determination related to the discharge permit compliance performance commitment

Reference to draft determination documents:
PR24-draft-determinations-Delivering-outcomes-for-customers-and-the-environment
8.6 Discharge permit compliance, page 63 - 65

United Utilities

Water for the North West

1. Key points

- **We propose a deadband for this measure at the 99% level:** We consider that a 100% performance target with no deadband is an unrealistic expectation for performance; past performance does not suggest that companies can reliably perform at this level on a consistent basis. We provide evidence that nearly all the examples relied upon by Ofwat for historic performance at the 100% level are unrepresentative of the challenges faced by the industry as a whole. Further, given the potential for further changes to the assessment of permit compliance, 100% compliance is likely to become an even more challenging target during AMP8.
- **The Environment Agency and the CMA have each recognised that even the leading companies are unlikely to achieve a 100% perfect score:** The EA fully recognises the importance of this measure as an EPA "core" gateway metric; however, it sets a "Green" threshold of 99% recognising that continuous perfection is unlikely to be attainable. Likewise, in its PR19 redeterminations, the CMA observed that a 100% target would be uneconomic and/or unreasonable as a base expectation for compliance.
- **Provision of a deadband does not conflict with companies delivering their statutory duties:** Companies that are consistently failing in their statutory duties should be held to account through enforcement routes. However, Performance Commitments should incentivise efficient delivery for customers and the environment in a live operational setting.
- **In the event that Ofwat will not provide a deadband on this measure, then it should consider what other options exist to avoid imposing near certain penalties on even strong performing companies:** These could include provision of a limited number of acceptances for marginal operating failures during the year or a differentiated approach between WaSCs and WoCs.

2. UUW's PR24 proposal

In our business plan UUW proposed a deadband set at 99.0% to mitigate the risk from external factors leading to non-compliance. This is aligned to the Environment Agency's Environmental Performance Assessment (EPA) Version 11 for 'Green' Discharge permit compliance. The EA has also confirmed that version 11 of EPA, and therefore the deadband of 99.0%, will persist for at least year 1 of AMP8. Any changes to EPA will be subject to consultation.

Within our submission we included the Ofwat indicative incentive rate for performance beyond the deadband. We used the indicative ODI rate of £2.88 million in the UUW submission.

3. UUW's understanding of the position in the draft determination

The draft determination includes a PCL of 100% compliance with no deadband. It also increases the ODI penalty rate from the indicative figure of £2.88m to £5.98 million.

4. Implications of this for the draft determination

In the draft determination for the Discharge Permit Compliance performance commitment Ofwat has elected to retain its performance commitment methodology definition and has not applied a deadband. We continue to consider that a deadband supports continued improvement for the environment and is appropriate within the context of the expansion to also cover water only companies as a common measure. Our representation is based on five key factors which are covered in the sections below.

4.1 Cross regulator and stakeholder clarity of performance

In AMP7 Ofwat moved towards common measures for performance commitments and adopted the existing methodology already being used by the Environment Agency for treatment works compliance. Alignment to this measure allows Ofwat to continually incentivise performance in line with the requirements and expectations of the EA as they tighten and evolve the methodology over time. The Environment Agency metric and its inclusion within the Environmental Performance Assessment (EPA) is an established tool for driving improvement and is readily available for both the public and other stakeholders to view and monitor water industry performance.

The EA consults on changes in the context of the overarching goals and expectations outlined in the Water Industry Strategic Environmental Requirements (WISER) as part of the cyclic review of the EPA methodology, during which it sets appropriate thresholds for each metric. UUW fully supports Ofwat's decision to align completely with the EA methodology with respect to reporting the percentage compliance to 1 decimal place, rather than the two decimal places required in AMP7. The variance in reporting was an inconsistency and for UUW resulted in reporting of underperformance against the performance commitment in some years whilst simultaneously achieving the EA expectations. Such outcomes are contradictory and confusing to stakeholders and UUW welcomes the resolution of this discrepancy.

In order to preserve the alignment of the EPA measure and performance commitment, we retain the view that the PC should contain a deadband and that this should be set in alignment with the green thresholds for EPA of 99.0% compliance. This will mean that there is alignment between both Ofwat and the EA.

We note that the FD19 CMA redeterminations reflected that deadbands should be applied for compliance related performance commitments such as CRI and Treatment Works Compliance (the pre-cursor to PR24's PC DPC), statutory PCs (where there is an associated relevant regulatory body monitoring performance, the DWI and the Environment Agency) where the PCL is full compliance (e.g. no quality related failures). The CMA stated in its PR19 redeterminations:

"We also agree that deadbands may be appropriate in certain circumstances. Deadbands may be appropriate where outcomes may not be fully within the control of management such as in the following circumstances:

(a) The measure itself allows very little tolerance: In these cases, a company might 'miss' the PC without necessarily having objectively failed in management of the commitment. Ofwat set deadbands for the two statutory PCs (the water quality index CRI, and Treatment works compliance), for which the PC level is full compliance (an index score of zero, or 100% treatment works compliance)." [1]

In practice this full compliance is very difficult to achieve, and it is likely that almost every company would be subject to an underperformance penalty in each year of the period if there were no deadbands. Both quality regulators (the DWI and the Environment Agency) have shown support for deadbands for these performance commitments.

4.2 Company differences and volatility

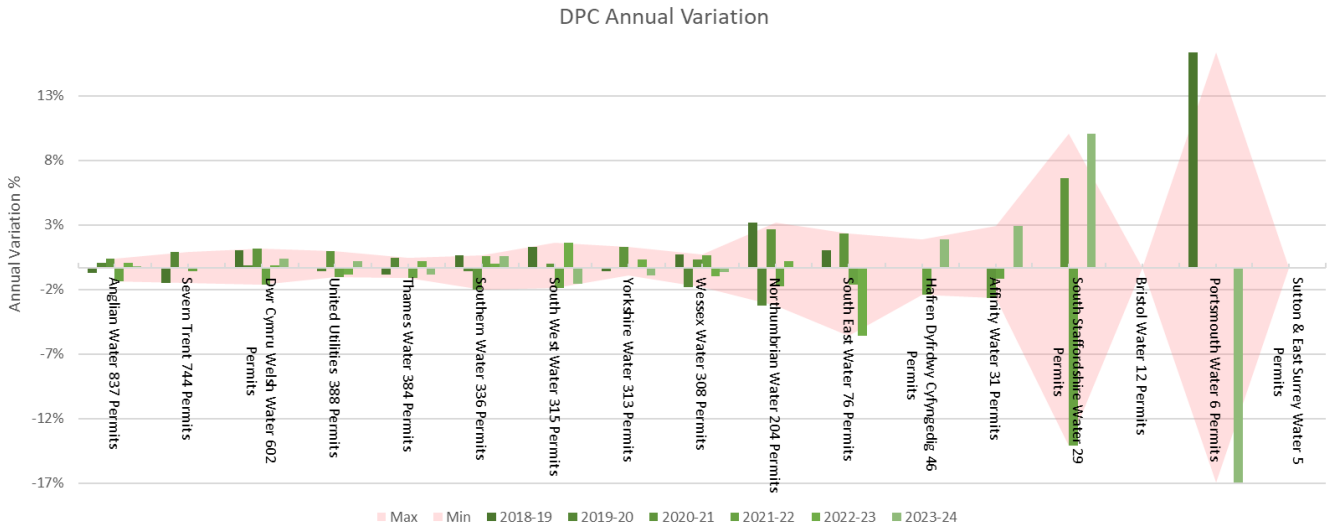
In "PR24 final methodology Appendix 7: Performance commitments", s4.5.4 "Our final decision and reasoning", page 60, Ofwat acknowledges the potential issue of differing sizes of companies and that smaller companies' reported performance is likely to be more volatile. Ofwat states that it considers volatility risk can be addressed in the design of ODIs (rate, collars, aggregate collars). Ofwat's Draft Determination document PR24 draft determinations: Delivering Outcomes for customers and the environment s8.6.4 "Risk protections", page 65 "Since this is an established metric where we expect full compliance, we are not setting any risk protections on this performance commitment." These two statements appear to be contradictory with respect to this performance commitment and not applying a deadband does not help alleviate this volatility risk.

[1] "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations - Final report", CMA Competition and Markets Authority, 17 March 2021, https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final_Report_---_web_version_-_CMA.pdf, page 631 section 7.103

Whilst this is an established metric, the way in which compliance is being assessed is changing. The EA have consulted on changes and are proposing to include additional metrics in their assessment of this measure for including OTAs {expand here with a little more detail] making achievement of 100% even more stretching for WaSCs.

Ofwat noted in Draft Determination 19 for compliance risk index (CRI) and treatment works compliance (TWC): *"We also consider deadbands are appropriate for these performance commitments with full compliance to provide for some fluctuation in performance, whilst providing a strong incentive to minimise compliance failures2."* We consider that the same logic should apply to discharge permit compliance at PR24. As the graph below shows (Figure 1), there is significant fluctuation in performance even by the best performing companies against the TWQ/DPC measure. There is a lack of consistency of performance across the industry, and a lack of consistency of performance within each company, year on year. This implies that good performing companies find it very difficult to maintain this good performance consistently, leading to significant fluctuation across years and across companies. A deadband would seem a reasonable approach in the face of such a distribution curve.

Figure 1: Annual variation in DPC performance per company



Source: Environment Agency EPA performance assessment of companies discharge permit compliance annual assessment

The EPA metric thresholds are set based on statistical analysis of performance data and EA expectations of the sector. Whilst targets may be set at 100%, performance thresholds for industry leading are set below 100%. For Discharge permit compliance this recognises that perfection is unlikely to be achieved on a reliable, consistent basis and provides a stretching performance threshold which scales with the number of works that a company operates.

4.3 Nature of compliance sampling for discharge permit compliance.

Ofwat notes that five water only companies have achieved 100% discharge permit compliance as support for the PCL of 100% and absence of a deadband. We do not agree that this establishes adequate precedent for the performance level and loss of risk mitigation. Water only company performance is not directly comparable with WaSCs and must be taken within the appropriate context which we establish below.

Ofwat should recognise that the operation of WTW discharges differs materially from WwTWs. Water treatment works discharges are firstly, trade effluent rather than sewage and secondly a by-product of the production of potable water which occurs intermittently. Examples include filter backwash waters / backwash supernatants and

[2] Report (ofwat.gov.uk)

FD19 re: CRI and TWQ (table 3.1 page 16)

sludge consolidation effluents. These discharges by their nature occur in line with the peaks and troughs of demand and production, not aligned to the typical continuous flow one might expect from wastewater treatment. Due to the nature of WTW they can be switched off when problems occur, so require a lower level of redundancy (compared to WwTW) to achieve the same discharge performance. Whereas WwTW are required to operate continuously.

An initial review of WTW TE discharge compliance data for 2023 (available from the EA open data portal) supports a view that approximately 30% of sites with a WTW discharge were 'No flow' for 100% of their compliance sampling attempts. Whilst compliant under EA guidelines, Ofwat should recognise that a high discharge permit compliance for water only companies which is based on permitted discharges which do not discharge, is not a reasonable equivalence with WaSC sewage discharges which operate continuously and at high volume. If the PCL is maintained at 100% despite no significant evidence of actual industry performance at this level (beyond no flow samples) as precedent, we propose that a deadband set at the level previously agreed for AMP7 is needed to alleviate the undue risk to WaSCs of significant under performance payments in each year. We propose this for all companies. However were Ofwat to apply a deadband only to WaSCs in recognition of the differing nature of discharge operation UUW would be supportive of this approach.

4.4 Scale and Complexity

In further support of our position we draw Ofwat's attention to the significant difference in both scale and complexity for water and sewerage companies when compared with water only companies. We acknowledge the utility of the discharge permit compliance measure created by the Environment Agency as a high level benchmarking tool. However, there is more to consider when understanding industry performance. Numeric permit conditions encompass a broad array of requirements. A small discharge with only a few numeric limits is easier to maintain compliance at than a more complex system with dozens of conditions. In our analysis below we demonstrate the difference in complexity and relate this to historic performance.

UUW has analysed data from Ofwat tables PR24 Data tables 7b for WaSCs. This table quantifies the number of WwTWs with numeric permits based on key sanitary parameters. Applying the further context and conservative estimates outlined below, we demonstrate the significant difference in scale of the compliance conditions to which WaSCs are subject when compared with WoCs.

We identify the total number of compliance conditions documented in the explanatory factors tables and make estimations for related conditions which are imposed during the permitting process. We apply the following assumptions:

- WwTW with a P limit typically utilise chemical dosing. Chemical dosing requires limits for iron or aluminium as the standard dosing chemicals;
- WwTW with a P limit typically utilise chemical dosing. Chemical dosing requires limits for pH either to ensure no adverse impact of the iron or aluminium salts, or to ensure that pH balancing (which is often required to provide sufficient alkalinity for ammonia removal processes) is operating correctly;
- WwTW with a UV disinfection process typically require a daily dosing limit with a non compliance window of only 2.4 hours and an annual requirement;
- In the absence of data for Water only companies other than the number of discharges, we assume that the most onerous UUW water permit which has 7 conditions is a reasonable representation of a worst case scenario that water only company discharges are subject to; and,
- In the absence of data on water discharges for other WaSCs, we conservatively assume the lowest number of conditions of one.

It should be noted that this is a conservative approach because it does not account for the following factors which exist in practice such as:

- WwTW with a BOD limit typically confer a suspended solids limit to accompany it; and,

- We make no estimation for percentage removal requirements nor for any limit not represented within CWW7a (APR table 7D). It is notable that limits will be dictated by the sewerage catchment served for Trade effluent chemical requirements which we are bound to receive but which are not reportable under Ofwat table guidance.

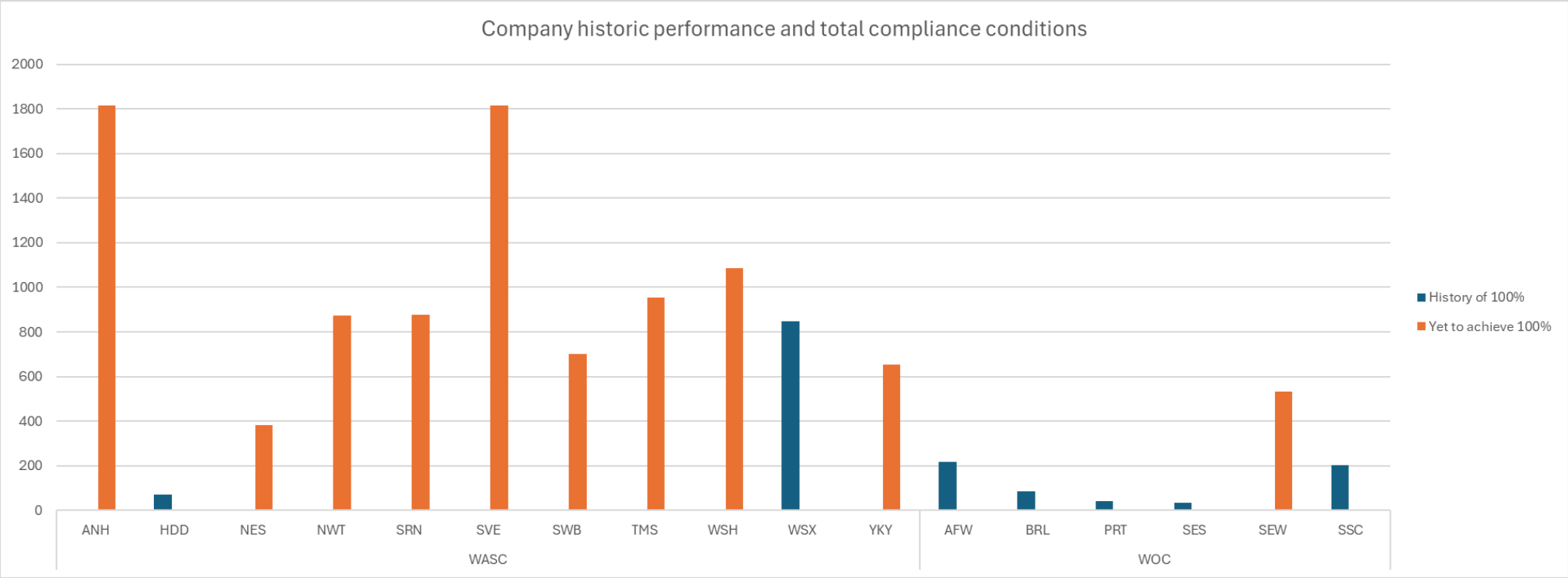
As can be seen from Table 1 and Figure 2, the companies Ofwat has identified as exemplar for achievement of 100% compliance are operating with the fewest compliance conditions. This represents an unrealistic view of the overall expected industrywide performance, which will only be exacerbated by the extensive enhancement programme for WaSCs in AMP8 introducing new and tighter limits.

Table 1: WaSCs and WoCs discharge permit conditions and historic performance

Company Ref	Total STWs	P works Sum of STWCP121,122 and 123	BOD STW STWCB1 1,122,123 and 124	Ammonia STW STWCA121 ,122,123 and 124	UV Works STW Sum of STWCU025 and STWCU026	Suspended Solds STW (Assume BOD confers Solids)	Number of numeric discharge permits (water) OUT4_15_B_PR24	Conditions for UV = 2 Daily, Annual	Conditions for P = 1 iron or Alum	If Iron or Alum then pH	Conservative total conditions for WW	Worst case total conditions for Water, best case Total for Waste	Total compliance conditions WW + W	Historic DPC performance	Company type	Achieved 100% for DPC years count
ANH	1,122.000	178	708	466	12	708	85	24	178	178	1732	85	1817		WASC	
HDD	50.000	1	39	25	0	39	3	0	1	1	67	3	70	History of 100%	WASC	4
NES	413.000	23	159	97	6	159	44	12	23	23	337	44	381		WASC	
NWT	584.000	85	348	192	32	348	14	64	85	85	859	14	873		WASC	
SRN	363.000	116	293	193	9	293	24	18	116	116	852	24	876		WASC	
SVE	955.000	219	648	462	0	648	48	0	219	219	1767	48	1815		WASC	
SWB	655.000	24	300	186	66	300	10	132	24	24	690	10	700		WASC	
TMS	355.000	108	345	249	0	345	36	0	108	108	918	36	954		WASC	
WSH	828.000	46	560	285	32	560	40	64	46	46	1047	40	1087		WASC	
WSX	398.000	83	286	255	19	286	18	38	83	83	828	18	846	History of 100%	WASC	2
YKY	605.000	37	259	252	7	259	19	14	37	37	636	19	655		WASC	
AFW							31				0	217	217	History of 100%	WOC	3
BRL							12				0	84	84	History of 100%	WOC	4
PRT							6				0	42	42	History of 100%	WOC	
SES							5				0	35	35	History of 100%	WOC	6
SEW							76				0	532	532		WOC	
SSC							29				0	203	203	History of 100%	WOC	1

Source: UUW analysis of company data share data

Figure 2: WaSC and WoC historic discharge permit compliance



Source: UUW analysis of company data share data

Water treatment works are also not subject to the same complexity in terms of variability of operating conditions. For example, WTW discharges not are widely subject to environmental improvement drivers. Implementing capital works to meet WINEP statutory requirements introduces an element of risk which must be managed proactively throughout the life of a project. EA exemptions for sample exceedances have a strict threshold for acceptance and not all exogenous factors are adequately covered by EA exemption guidance. Growth, variance in load, tourism impact and illegal discharges are all complexities which must be actively managed at WwTW which are not a consideration for WTW. WTW processes are also simpler in operation, UWW sites use mechanical filters and chemical dosing apparatus which is not vulnerable in the same way as the biological processes which are a core element of WwTW treatment. Extremes of temperature, insufficient load to support the organism populations due to dilute influent and rapid changes in flow rate are factors to which WwTW are subject to, contrary to the production based operation of a WTW scaling with customer demand.

In our view, WaSCs should not be unduly penalised for simply operating within a more diverse and challenging set of requirements. We believe that the aforementioned deadband is a reasoned and established control for balancing the additional risk inherent to Wastewater treatment.

4.5 Change control and uncertainty

Prospective regulatory guidance changes, resulting from the Environment Agency consulting on changes to the EPA and its constituent metrics, present material uncertainties about how performance for this measure will be assessed and calibrated through AMP8. As revisions to the EPA have not yet been consulted on we do not have any certainty on what this may or may not include. This is of great concern to us and thus, we believe it necessitates careful consideration by Ofwat to manage the impact on this measure through the change control process.

Within its PR24 draft determinations: Delivering outcomes for customers and the Environment section 7. Change control process Ofwatstates ‘In line with our PR24 methodology, where performance commitment definitions include references and/or links to materials produced by a third party, we expect to set performance commitments based on the versions of those materials which are in effect at the date of our PR24 final determinations.’ It also states within the discharge permit compliance section 8.6 ‘This performance commitment builds on the existing treatment works compliance performance commitment also linked to the Environmental Performance Assessment metric’. These documents confirm the position that there is uncertainty within this metric. A deadband set at 99.0% would both align with the current version of EPA and protect companies from this uncertainty.

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

In its final determination Ofwat should include a deadband for discharge permit compliance performance commitment at 99.0%. Taking this action will:

- Support industry progress towards 100% compliance whilst acknowledging that perfection is not a realistic performance expectation which can reliably be delivered consistently.
- Protect against the volatility inherent to a percentage based metric where the number of included assets which companies operate differs by several orders of magnitude.
- Align with the Environment Agency as the quality regulator and the Competition and Markets authority position on penalty only measures. Fully align with the third party methodology documentation upon which the common performance commitment methodology is ostensibly based.

If Ofwat does not wish to apply an industry-wide deadband then Ofwat can include a deadband specifically for WaSCs, reflecting the differing challenges between the operator types. A WaSC specific deadband would serve to partially ameliorate the issues we identify in section 4.3 and 4.4.

If Ofwat does not wish to pursue either of these approaches then it may wish to apply a flexible deadband. This could, for example, take the form of a deadband that would apply only twice within the AMP period. Ofwat could require 100% compliance through the PCL, but allow that the deadband be applied at the 99.0% level on two occasions for each company when performance is not at 100%. Historic industry performance shows that in addition to the challenge of 100% compliance, even high performing companies find achieving multiple instances of 100% and consecutive instances of 100% within an AMP to be challenging. This would support efforts to improve towards the PCL whilst accommodating to a small degree the variability which is inevitable when trying to achieve complete compliance. Allowing a deadband for up to two of five years within the AMP would act as a mid-point position between a fixed deadband and the absence of a deadband. Table 2 demonstrates how such an approach might be applied.

Table 2: Percentage underperformance against 100% PCL, adjusted for flexible dead band approach*

	2020-20		2021-21		2022-22		2023-23		2024-24	
	Reported	Flexible	Reported	Flexible	Reported	Flexible	Reported	Flexible	Reported	Flexible
ANH	0.7%	0.0%	1.8%	0.8%	1.4%	1.4%	1.4%	1.4%	1.3%	1.3%
WSH	0.3%	0.0%	1.7%	0.7%	1.5%	1.5%	0.8%	0.8%	0.8%	0.8%
HDD	0.0%	0.0%	2.1%	1.1%	2.2%	1.2%	0.0%	0.0%	0.0%	0.0%
NES	0.5%	0.0%	2.0%	1.0%	1.5%	1.5%	1.5%	1.5%	1.0%	1.0%
SVE	0.4%	0.0%	0.7%	0.0%	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%
SBB										
SRN	2.9%	1.9%	2.1%	1.1%	1.8%	1.8%	0.9%	0.9%	0.9%	0.9%
TMS	0.3%	0.0%	1.0%	0.0%	0.5%	0.5%	1.0%	1.0%	0.3%	0.3%
UUW	0.3%	0.0%	1.0%	0.0%	1.5%	1.5%	1.0%	1.0%	1.0%	1.0%
WSX	0.9%	0.0%	0.0%	0.0%	0.6%	0.0%	1.0%	1.0%	1.0%	1.0%
YKY	1.0%	0.0%	1.0%	0.0%	0.3%	0.3%	1.0%	1.0%	1.0%	1.0%
AFW	2.4%	1.4%	3.2%	2.2%	3.2%	3.2%	0.0%	0.0%	0.0%	0.0%
PRT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	15.7%	0.0%	0.0%
SEW	1.3%	0.3%	2.6%	1.6%	7.9%	7.9%	7.9%	7.9%	3.9%	3.9%
SSC	0.0%	0.0%	13.8%	12.8%	13.8%	12.8%	3.4%	3.4%	0.0%	0.0%
SES	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SWB	1.0%	0.0%	2.5%	1.5%	0.6%	0.6%	1.9%	1.9%	1.0%	1.0%
BRL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: UUW analysis of company data share

Performance above deadband

Performance above deadband, deadband applied, deadband "Life" used

*Base values as per Ofwat PR24 DD PCM Discharge Permit compliance

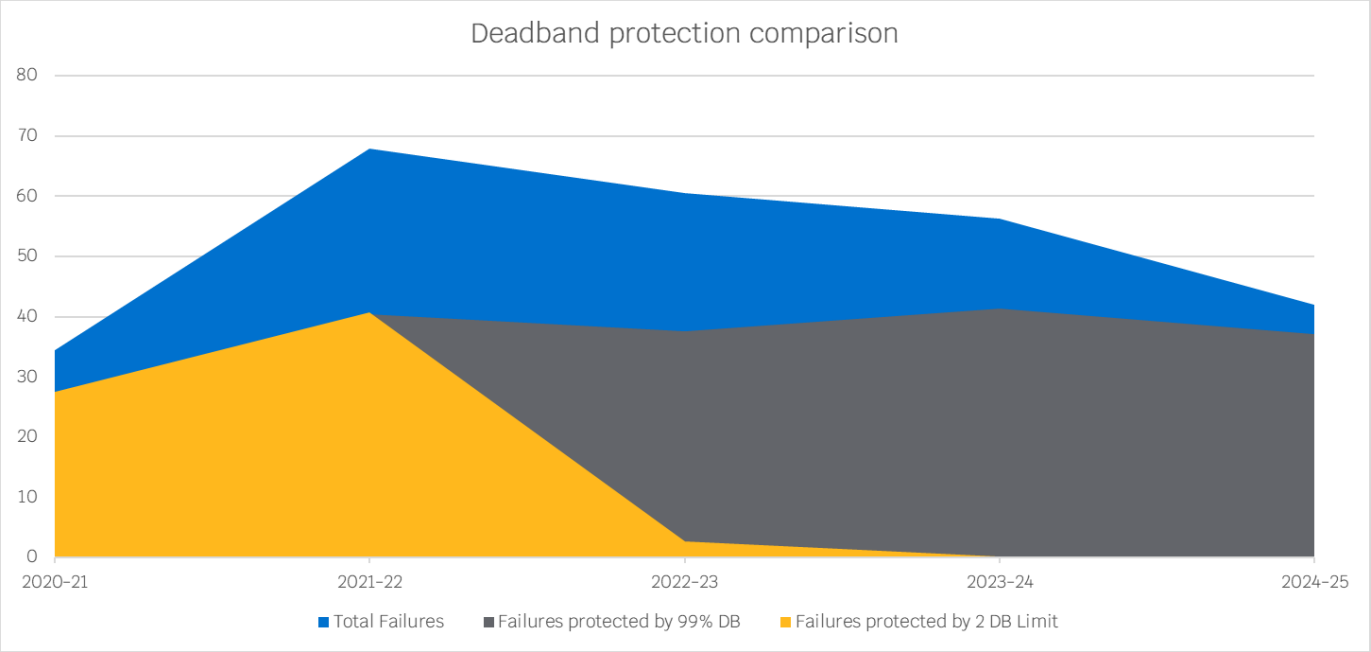
Applying this approach to the historically reported performance and company forecasts for the remainder of AMP7 we can see that:

- Not all companies would require the two instances to be applied;
- There is variability in the years in which companies would have used the two instances;

- One company would not have used any instances; and
- The closer to 100% a company achieves, the less underperformance is mitigated by the dead band. This supports companies which are on an improvement trajectory by not penalising improved performance within the penalty only measure, and gives progressive reduction in utilisation of the deadband which aligns with the drive towards the target of 100%.

Analysis of AMP7 data using the 99.0% deadband shows that approximately 70% of treatment works discharge failures were protected from underperformance payment by the deadband. Utilising the approach outlined above, this figure would fall to 27% of failures for the same data set. This is still a significant tightening and would serve as a stretching threshold for AMP8, in contrast to the current methodology which would require companies to not only achieve their best ever performance prior to even commencing AMP8 (as this is a calendar year assessment), but to also maintain this level through to 2030.

Figure 3: AMP7 discharge permit compliance comparison of no deadband and deadband set at 5 and 2 years



Source: UUW analysis of company data share information