United Utilities Water

Storm overflow incentives for PR24

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United Utilities

Water for the North West

Contents

1. Introduction

This paper provides UUW's response to Ofwat's proposals for a PR24 performance commitment for storm overflows which were first published in its July 2022 draft methodology.

It reviews the criteria that should be applied to assess the effectiveness of any measure and considers whether Ofwat's current proposals comply with these requirements. It also sets out alternative proposals to frame performance commitments for AMP8 which incentivise prompt company action to operate [and maintain] their existing assets effectively and to progressively improve future performance – as measured by the average number of spills – in future.

This paper also makes some recommendations on the critical next steps that Ofwat and the industry should undertake to ensure that we are in a more robust position to report overflow performance for the start of the AMP8 period.

We agree that one or more measures to incentivise performance in this area are necessary, but believe that Ofwat's current proposals would not provide appropriate incentives to companies. Under Ofwat's proposed approach, some companies would earn rewards with only minor performance improvements whilst others would incur penalties, irrespective of any credible assumption on performance improvement in the period. This falls short of the standard of setting stretching but achievable targets.

We consider that incentives need to distinguish between (a) what companies are able to deliver through base expenditure – which is principally operating and maintenance interventions – and (b) the enhancement investment that will be required to achieve the reductions in spills set out in the Government's storm overflow reduction plan. Delivering to spill targets is a new requirement and will require long-term engineering interventions to provide long-term mitigation for factors outside of companies' control including – but not limited to – rainfall intensity, prevalence of combined sewers and concentrations of urban surface water run-off. Having distinguished between the two types of interventions required, performance commitment measures could effectively work alongside other incentives to incentivise further, timely and efficient improvements in performance through enhancement programmes.

Irrespective of the measures eventually taken forward, the industry needs to do work to standardise definitions and report in advance of the AMP8 period and this requires significant preparatory effort.

2. Key conclusions and recommendations

Our key conclusions and recommendations are as follows:

- We expect that there should be three distinct programmes of work related to reducing the use of storm overflows:
  (1) A base programme, delivering continuing gradual improvements in performance, focused on avoiding maintenance/operational failures;
  (2) A WINEP enhancement programme, delivering a step change in performance to the overflows identified as part of the national programme; and
  (3) A DWMP enhancement programme, delivering a company-specific step towards the Government's 2050 expectations.
- We agree that each of these programmes should be supported by a performance commitment and ODIs and/or a PCD.
- We agree with the currently stated purpose and benefits of Ofwat's storm overflow measure: that is, that the measure should support the base programme of work, and that an effective measure in this area should encourage water companies to maintain their networks and equipment in such a way as to minimise any avoidable use of storm overflow.
- We agree that there should be a common performance commitment for storm overflows. However, we do not consider that a common target is appropriate for this PC. Companies have not previously been required to target any particular number of spills in order to meet permit requirements; this means that different companies have different starting points for the number of spills and this may be weakly correlated with environmental performance.
- We observe that the currently proposed target of an average of 20 spills would be insufficiently stretching for some companies and unachievable for others, over the remainder of AMP7. Such an approach would be inconsistent with the performance commitment design principles set out by Ofwat that targets should be stretching but achievable and delivered affordably.
- We believe that an alternative measure to incentivise base programmes of work on storm overflow should be developed and that the measure should either:
  – Focus on overall spill levels, but take account of the factors that are not materially within companies control, by setting a common measure with company-specific targets; or
  – Be based upon incentivising companies to reduce spills occurring due to operational or maintenance causes and, going forward, to further reduce spill levels reflecting the effective implementation of WINEP and DWMP based enhancement programmes.
- We recommend the second of these approaches for the following reasons:
  – It focusses foremost on the things that are under management control, rather than trying to adjust for the very material things that are not under management control;
  – It requires less detailed data collection and refinement than the first measure but will still act as an effective comparator between companies; and
  – Future reductions in spills can be built into the measure, which should incentivise the effective implementation of WINEP and DWMP based enhancement schemes. This should help to bring the number of spills down further in future.
- Delivering reductions in the number of spills to the numbers required under the Government's storm overflows discharge reduction plan is an essential target for companies to meet. Many companies have started work on this early; UUW is already committed to delivering at least a one third sustainable reduction in the number of spills recorded from our storm overflows by 2025 compared to the 2020 baseline. We

consider that further reductions in AMP8 should be incentivised in a way that reflects both the delivery that can reasonably be expected from base expenditure and the very substantial contributions likely to be made through the WINEP and DWMP programmes.

- Finally, we consider that the PR24 framework should align its incentive package with the conclusions and expectations explicitly set out in the Government's storm overflow discharge reduction plan. In particular, it should reflect:

  (1) That the cost of delivery in some regions will be higher than in other regions;

  (2) That those companies with the lowest costs should reasonably be expected to deliver earlier than those companies with larger programmes; and

  (3) That Ofwat will work with Defra and the EA to ensure that incentives for water companies take into account the specific challenges faced by each company.[1]

[1] *"The cost of delivering the storm overflow targets does not fall evenly across England. The number of storm overflows, and the modelled cost of improvements, varies regionally…. the scale of the modelled improvements required fall unevenly through the country. The three most impacted companies (Yorkshire Water, United Utilities and Wessex Water) account for over three quarters of the investment required relative to their consumer base. The Government expects all water companies to deliver the targets set out in this Plan as fast as possible and by the target end dates at the latest. Companies with a smaller share of costs relative to their customer base are therefore well placed to deliver targets ahead of schedule. Ofwat will work with Defra and the EA to ensure that incentives for water companies take into account the challenges faced by each company."*

From pages 14 -15 of the Government's Storm Overflows Discharge Reduction Plan. Available here.

3. Background

Since privatisation, companies have been required to maintain and manage storm overflows in line with permitting requirements. Historically, efforts have generally been directed by the Environment Agency to focus on reducing the adverse impact of overflows (particularly Unsatisfactory Intermittent Discharges), rather than removing them altogether or targeting a reduction to any particular number of spills.

However, in recent years there has been increasing public opposition to the use and operation of storm overflows as part of the wastewater system, even if use is compliant with existing permits. As a result, increasing public pressure is being applied to reduce or end their use. Most notably, in August 2022, the government published its storm overflows discharge reduction plan. This introduces, for the first time, new high level targets for reductions in overflow usage which can be briefly summarised as:

- **eliminating impacts on ecology by 2050** (ie: no discharge if this would have an adverse ecological impact)
- **reducing the frequency of discharges to bathing waters to meet Environment Agency spill limits by 2035** (set at 3 or fewer spills per bathing season)
- **ensuring that no overflow discharges above an average of 10 rainfall events per year by 2050**

It is important to note why overflows exist, and why they are used, which is in recognition of the finite capacity constraints of sewer networks and wastewater treatment works. In the event of public sewers being inundated by storm water, overflows act as a release valve by allowing excess water collected by sewers to be released. This prevents localised flooding and pollution events within communities (particularly where storm water drains into combined sewers). Therefore, reducing the usage of CSOs will most often require either a significant increase in storage, separation of combined sewers into separate foul and surface water networks, or diverting storm water flows elsewhere, away from the sewer network. CSO usage is not necessarily indicative of a poorly operated sewer network, but more indicative of network that lacks sufficient capacity to accommodate storm water flows.

There is material uncertainty as to the precise cost of reducing the usage of storm overflows in England and Wales, but all plausible estimates range from several billion pounds to hundreds of billions of pounds. Work commissioned by Defra[2] estimated that achieving a standard whereby no overflow discharges more than 10 times per annum could cost between £27bn and £140bn.

It is therefore clear that moving from our current situation - where companies are focussed on operating overflows well and looking to reduce their adverse impact - to a new situation - where the absolute number of spills will be targeted for reduction - is a fundamental shift in the type and level of requirements being expected from the industry.

It is also important to recognise that, historically, improving storm overflows was treated as enhancement spend and has been funded on that basis. Over time there were material increases in environmental regulation, including the Water Framework Directive and Urban Wastewater Treatment Directive. Reductions in overflow spills have been mandated in WINEP programmes – or their equivalents – with this funding treated as enhancement spend. In July 2021, Ofwat also allowed material additional funding in the Green Economic Recovery Programme which enabled companies to go beyond the WINEP enhancements considered as part of the price review. These included allowances for both UUW and Severn Trent, with the latter being awarded £78m to trial the creation of two bathing rivers, including reducing the impact from storm overflows by reducing spills into the area during the bathing season.

[2] Stantec (2021) *Storm Overflow Evidence Project*. Available here.

4. The need for a performance commitment on storm overflows

4.1 Ofwat's position in the draft PR24 methodology

Ofwat's provisional position for PR24 is set out in the draft methodology. It is clear that there is a need for a performance commitment on storm overflows and its position can be broadly characterised as:

- **Maintenance.** Four companies have committed to achieving an average of no more than 20 spills per storm overflow per year by 2025. Ofwat is therefore considering whether all companies should be set the same target for 2025 and make further reductions through the 2025-30 period through base allowances, with this target supported by a common performance commitment and a financial outcome delivery incentive.
- **Enhancement.** Ofwat expects business plans to propose significant improvements towards the long-term regulatory and governmental targets, both in the short-term and by identifying efficient interventions over the long-term. Companies have been funded (through enhancement in PR19) to investigate their PR24 WINEP programmes and well evidenced proposals to deliver improvements in AMP8 will be eligible for funding as enhancement through PR24, with a corresponding "Price Review Deliverable" commitment. In addition, as part of the DWMP process, companies are also expected to develop and put forward proposals in PR24 to reduce spills further than their PR24 WINEP programmes, in particular to address environmental impacts from high priority overflows. Again, companies will be able to submit evidence on the extent to which this should be funded in AMP8 as part of their PR24 business plans.

4.2 Previous approaches to funding and incentives on storm overflows

Since privatisation, the water industry has made significant improvements in the quality of inland and coastal waters in the UK. These historic improvements have been driven by a combination of interventions through two areas:

- **Base/maintenance improvements.** This work has often been developed and steered through interactions between companies and the local EA. In general, this work was focussed on reducing pollution and reducing environmental impact. Any resulting reduction in the ***number*** of spills was more of a consequence of other priorities, and was not specifically targeted (only bathing water permits contain permitted spill frequencies); work was focussed on reducing the ***impact*** of spills.
- **Enhancement improvements (ie: WINEP programme equivalents).** This work has been driven by increasingly stringent environmental legislation and has been focussed on improving the quality of the environment. Again, historically, this work focussed on reducing the environmental impact of spills, rather than reducing the number of spills. The current SOAF methodology[3] is subject to a cost-benefit or disproportionate cost test[4] meaning that work was targeted at those sites where improvements would offer the best environmental returns on financial investment. Again, this meant that the focus was on reducing environmental impact, rather than reducing the number of spills.

At PR19, work undertaken by UUW was underpinned by performance commitments and outcome delivery incentives in two main areas. The first of these focussed on delivery of the WINEP programme and the second focussed on pollution incidents. The focus on pollution incidents reflected both the company and regulators' view that the key issue was the potential adverse environmental impact caused by overflow discharges, rather than simply the number of times it discharged. Over AMP6 and AMP7, United Utilities has demonstrated a very strong

[3] Available here.

[4] See, for example, "Stage 2" in Figure 1 of the SOAF methodology – where an overflow spills on a high frequency due to asset maintenance issues, it is assumed that these will be resolved by the company. However, if the cause of the spill is hydraulic capacity, then an assessment of the environmental impact is required and a consequent cost/benefit assessment.

commitment to and track record of delivery in delivering its WINEP programme and reducing the number of pollution incidents.

Together with the EA's powers to monitor company performance and to prosecute and/or enforce companies to take corrective or improvement actions, these approaches have driven significant improvements in environmental performance through regulation since privatisation. However, despite the improvements that have been made, there has been significant and increasing public and political opposition to the use of storm overflows, culminating in the publication of the Government's August 2022 storm overflows discharge reduction plan and its associated targets.

As noted earlier, there is material uncertainty as to the precise cost of removing or reducing the use of storm overflows. However, the cost is likely to be material and there is strong evidence that the scale of improvements required falls unevenly across the country and will impact some regions more than others. The Government's storm overflows discharge reduction plan notes:

"The cost of delivering the storm overflow targets does not fall evenly across England. The number of storm overflows, and the modelled cost of improvements, varies regionally…. the scale of the modelled improvements required fall unevenly through the country. The three most impacted companies (Yorkshire Water, United Utilities and Wessex Water) account for over three quarters of the investment required relative to their consumer base. The Government expects all water companies to deliver the targets set out in this Plan as fast as possible and by the target end dates at the latest. Companies with a smaller share of costs relative to their customer base are therefore well placed to deliver targets ahead of schedule. Ofwat will work with Defra and the EA to ensure that incentives for water companies take into account the challenges faced by each company."

The differences in investment requirements between companies stems directly from differences in the natural rate of spills resulting from meeting compliance requirements currently set by the EA in different regions. The natural rate of spills differs between companies due to regional differences in rainfall patterns and the nature of the legacy asset base, where past investment has focused upon the impact of discharges rather than investing in sewer separation, surface water disconnection or increased capacity to reduce the frequency of discharges (as now required by the storm overflows reduction plan). In turn, these differences lead to material variations in required investment across the industry. Crucially, these regional differences are not related to performance. As a result, it would be inappropriate to assume the same spills target is currently achievable by all companies in the industry absent significant enhancement investment by some companies.

The storm overflows discharge reduction plan sets targets for the number of discharges from all overflows, irrespective of the size or scale of these discharges or their environmental impact. Setting targets in this way means that, unlike in the past, the future focus will be on delivering quantitative reductions in the number of spills, irrespective of the degree of environmental impact of such spills. This is a significant change to the past emphasis on minimising environmental impact and it will drive a significant change in future plans and activity to try and deliver against the newly specified targets. In particular, it will require steps to address fundamental design issues such as the significant proportion of sewers that carry both foul and surface water. This is because it seems implausible that spill targets could be achieved by either increased storage or green/blue solutions alone, in all areas.

UUW has long advocated that the new targets should have been calibrated to incentivise reducing the overflows driving greatest environmental impact, rather than the more simplistic approach based on counting the average number of spills, regardless of environmental impact. Nonetheless it is now clear that we will need to work to deliver the Government's published strategy, which has given clear targets for delivery. Therefore - and particularly in the context of the uncertainty around costs - both customers and companies will need the clarity and protection provided through an effective incentive regime. **In this context, we agree that it would be appropriate to develop new performance commitments, focussing on overflow discharge levels, as part of the PR24 process**.

In order to be of use in delivering a policy objective, we would advocate that a target metric should deliver on the following principles. The target should:

- Address the underlying problem rather than a symptom of that problem

- Be logically connected to the overarching policy goal
- Be realistic and practically achievable for all parties subject to the target
- Be based on reliable and consistently reported data

It is also important that any new performance commitment provides the appropriate incentives to all companies and that it works effectively with other performance commitments focussing on delivery of enhancement programmes, environmental quality and asset health.

5. Do Ofwat's draft proposals provide appropriate incentives?

In this section, we review Ofwat's approach to drafting an AMP8 performance commitment on storm overflows. We agree with some elements of its reasoning, but find that the approach of taking a simplistic average number of spills and applying this as a uniform performance target to all companies would not provide effective incentives to encourage companies to take appropriate action in AMP7, AMP8 or the longer term.

5.1 Ofwat's high level expectations

As we interpret Ofwat's draft methodology, it proposes that companies should fund improvements in overflow performance (as measured by a reduction in the average number of spills) through a mix of three different programmes of work. This would include:

- **A base programme**, delivering:
  - an appropriate initial level of spills by the end of AMP7; and
  - a continuing gradual improvements in performance and funding for maintenance and operation of overflows within their permitted levels
- **A WINEP enhancement programme**, delivering a step change in performance to the overflows identified as part of the national programme.
- **A DWMP enhancement programme**, delivering a company specific step towards the government's 2050 expectations.

In principle, we support Ofwat's view that all three strands of activity have a contribution to make towards future delivery of spill reductions. However, we disagree with Ofwat's view that the appropriate target spill frequency for all companies by the end of AMP7 is 20 spills – we believe this should be a company-specific value that reflects differences in regional circumstances, and hence regional differences in the challenge to meeting Defra's longer term spills target, as envisaged in Government's storm overflows discharge reduction plan.

5.2 Purpose and benefits of a storm overflows performance commitment

Ofwat sets out the details of its proposed PR24 performance commitments in Appendix 7 of its consultation on its draft methodology for PR24. For the storm overflow measure, Ofwat states:

Purpose: *This performance commitment is designed to incentivise a progressive reduction in the adverse impacts of discharges from the company's storm overflows.*

Benefits: *This performance commitment helps to ensure that storm overflows are used by exception, rather than as a norm. It encourages water companies to maintain their networks and equipment in such a way as to minimise any impact on storm overflow use. Fewer and less frequent discharges will help to improve the quality of the environment.*

Measurement unit and decimal places: *Average number of spills per overflow, reported to two decimal places*

Incentive type: *Outperformance and underperformance payments*

We agree that the stated purpose and benefits of this measure are reasonable, given the broader context of the storm overflow discharges reduction plan. We also consider that an effective measure should encourage water companies to maintain their networks and equipment in such a way as to minimise any storm overflow use.

Assuming that companies are satisfactorily maintaining and operating existing assets – a point which we will return to later – further reductions in spill frequency reflected in the targets should substantially result from

enhancement investment programmes to reduce usage of overflows by (for example) increasing capacity, or separating combined sewers. This performance commitment would then ensure that companies are appropriately incentivised to ensure that spill frequency reductions are maintained.

5.3 Choice between a common measure or a bespoke performance commitment

Ofwat sets out the basis for choosing between common and bespoke performance commitments and how it takes account of external factors that may influence an outcome in the selection and definition of performance commitments in Appendix 6 of its consultation on its draft methodology for PR24.

It proposes to focus more on common performance commitments, and have fewer bespoke performance commitments at PR24. Ofwat considers that bespoke performance commitments are only really appropriate, where:

- There are local circumstances that do not apply to most other companies.
- A company provides poor service on a common issue (and needs to improve).
- There are company specific circumstances which means that a bespoke PC will lead to significant additional benefits for customers unlikely to be realised without one.

As the Government's storm overflows discharge reduction plan sets targets across England, meeting these targets can be seen as a national rather than local matter. As none of the other criteria above are met for storm overflows, then it seems appropriate that a common measure is adopted.

We recognise that on this basis, a common performance commitment for storm overflows could be appropriate. However, as we set out below, we do not consider that a common target (performance commitment level) across all companies could be considered appropriate. This is consistent with the Government's published policy which notes that the approach will need to differ across different regions given the differing scale of adjustment and that some companies are better placed than others to achieve long term targets.

5.4 Should external factors be taken into account in designing the measure?

Ofwat also addresses this issue in Appendix 7. With regard to external factors, Ofwat considers that:

- A performance commitment does not need to be fully in a company's control for it to be worth incentivising company action to deliver its functions in the interests of customers.
- Exceptions to performance commitments to account for external factors are not appropriate, where companies can mitigate the impact on customers.

In principle we acknowledge that although companies do not need to be able to fully, or very significantly, control metrics, we also agree with Ofwat's conclusion in this appendix that companies need to be able to have a material influence over the outcome for the metric or to be able to mitigate the impact for customers, to be effective. Such principles can be seen at work in Per Capita Consumption targets where, although companies cannot directly control demand, they can indirectly influence demand through customer influencing and charging mechanisms.

In the case of discharges from storm overflows, other than via the enhancement programmes, companies' ability to materially influence discharges is limited to 1) the way that they operate and maintain the existing overflows and 2) the relatively small and incremental improvements that might arise from base expenditure. This is because much of the legacy network configuration – and its combined drainage system – is not something that the company can materially influence or mitigate in the short term; rather, a significant engineering intervention is required.

Absent enhancement programmes, companies' ability to mitigate the impact of discharge levels as a result of external factors such as high rainfall is also limited. In this context, it is important to recognise that the operation of storm overflows is, in itself, a mitigation. This is because they were designed precisely as a mitigation for the impacts of high rainfall. Overflows are designed to limit the flows to the downstream network and control excess water flows; overflows that operate under rainfall conditions are operating in line with what they were designed to do. If overflows now need operate less frequently under rainfall conditions, then this is a new requirement which will require investment in new solutions that enable their use to be avoided during higher levels of rainfall. They will become a less effective mitigant for high levels of rainfall in future; other solutions for rainfall mitigation will need to be identified and implemented.

We also agree with the principle that risks should generally be allocated to those that can best mitigate and bear them. In this context, it would seem reasonable to allocate to companies the risk that spills are outside of current permit conditions, including spills which are due to a failure to maintain assets. In future, companies should also be able to manage risks for which they have been funded to make improvements. This would include delivery of defined numbers of spills, as will be funded through future WINEP and DWMP programmes at price reviews.

Ahead of this investment, if companies are to be incentivised on an overall level of spills, the targets will need to be company specific, taking account of the factors that are not materially within companies' control and reflecting that prior investment has not been focussed on reducing the number of spills but instead focussed on reducing the negative impact of spills.

Delivering a robust assessment of the different targets that should be applied to companies would not be straightforward. As a starting point, however, there are some clear differentiators that should be taken into account, including:

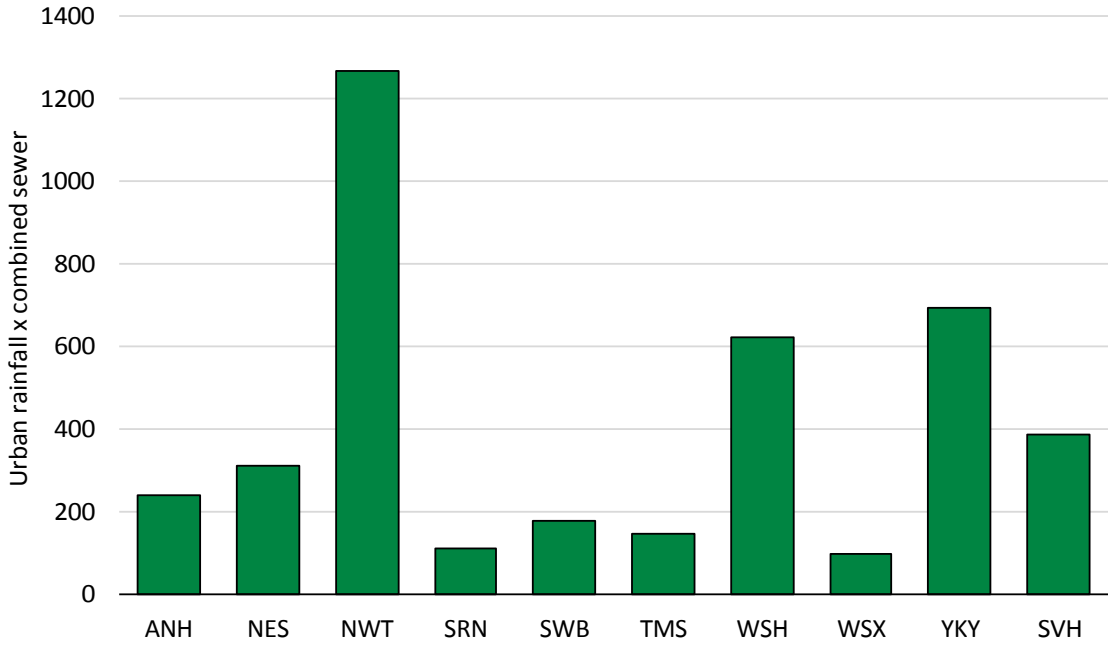
- **The design and configuration of the infrastructure.** The degree of risk faced by different companies could be assessed by reference to the percentage of combined sewers and the number of overflows.
- **The frequency of rainfall and the amount of heavy rainfall**. Ofwat has a suitable dataset that could be used to support analysis of this.
- **Ground water levels that impact the amount of infiltration of ground water into a sewer network**. A meaningful proxy for this would be evapotranspiration, which measures how easily water evaporates into the atmosphere and therefore how much is retained in the groundwater. Ofwat has already created a measure that shows the regional differences that exist.

In practice there is a compounding relationship between combined sewers and rainfall which impacts different companies to different extents. Companies with high levels of both combined sewers and high levels of rainfall will be particularly affected by hydraulic issues. Our second Future Ideas Lab paper[5] illustrated that the interrelationship between urban run-off and combined sewers is a key factor in sewer flooding.

Figure 1 shows the combination of urban rainfall and combined sewers by creating a composite variable which multiplies the two together. For example, a company with low levels of urban run-off and low levels of combined sewers will have a lower value, a company with low levels of urban run-off and high levels of combined sewers a medium value and a company with high levels of both will have a high value. The combination of these two factors is likely to have an even greater impact on overflow discharges than for sewer flooding, as overflows will act to some degree to temper some of the effects of rainfall on sewer flooding.

[5] UUW (2022) *What lessons can we learn from cost assessment at PR19.* Available here.

Figure 1 - Creating a combined variable allows us to consider the joint effect of urban run-off and combined sewers



It is clear from this chart that the likely need for (compliant) overflow usage by UUW will be far greater, at present, than those companies with significantly lower level of rainfall and combined sewers.

Although it is clearly not practical to model and discount for each individual factor, we do consider that effective company specific targets could be developed which adjust the number of spills targeted for each company to reflect the impact of issues outside of management control or influence. This would need to be a significant, detailed exercise that would need to be refined over the PR24 process and informed by significant additional data requirements.

An alternative approach would be to incentivise companies based on a) the number of spills caused by operational or maintenance issues and b) a reduction target for overall spills based on timely delivery of WINEP and DWMP schemes. In our view, this approach would have significant advantages over the alternatives including:

- Incentivising companies for what they clearly can control (operating and maintenance issues and the delivery of required engineering improvements and interventions) rather than trying to identify things that they cannot control;
- Recognising that contributions from both base expenditure (operating and maintenance issues) and enhancement expenditure (engineering interventions) have separate and distinct roles to play in delivering future performance improvements; and
- Effective incentivisation of future investment programmes that keep companies accountable for delivering statutory improvements whilst recognising that legacy regulatory approaches did not focus on the number of spills, leading to differences in spill numbers between companies.

In conclusion, we do not consider that the measure, as currently drafted, meets Ofwat's stated criteria for an effective measure in terms of recognising the external factors that impact regional performance. We do however, consider that there are two potential options that could be developed, which would allow a much more effective measure to be adopted for PR24. One of these would require significant adjustments and individual targets to reflect the circumstances which apply in each region that are materially outside management control. The other would be easier to estimate: it would incentivise companies based on reducing current spills that are due to operational or maintenance issues and on delivering future reductions in spills through WINEP and DWMP investments. This latter approach would hold companies to account for delivering meaningful improvements on

issues that are within their control, including making significant reductions in the number of spills caused by maintenance and operational issues and which data suggests accounts for circa 30% of spills.

Either of the two approaches – or potentially a combination of the two - would strengthen rather than compromise companies' focus on outcomes for customers, communities and the environment. Ofwat's current proposal appears to risk some customers over-remunerating some companies for outperforming a target that isn't appropriately stretching due to their current circumstances, and an unjustifiably penal approach towards companies where spill levels are not at the prescribed level due to historic regional factors.

5.5 Ofwat's general approach to performance commitment levels

Ofwat sets out the basis for setting the performance commitment levels (targets) in Appendix 9 of its consultation on its draft methodology for PR24. This states that:

1. Base expenditure funds companies to deliver a common level of performance on a number of measures including storm overflows and to meet companies' legal obligations.
2. Ofwat expects efficient companies to continue to improve performance from base expenditure allowances.
3. Ofwat will draw a clearer link between cost allowances and performance levels (PCLs).
4. Ofwat will adjust PCLs to reflect the impact of enhancement expenditure

We comment on these points in turn.

5.5.1 Level of service provided through base expenditure

Ofwat proposes to set the baseline performance level for an efficient company in 2024-25 ('Year 0') using historical performance information and the PR19 PCL for 2024-25 (if one exists).

Where PR19 PCLs do not exist for a performance commitment, the baseline position should be established based on available data sources, such as shadow performance reporting, company forecasts and related historical data sets. Ofwat recognises that it may be necessary to request companies to back-cast data for these performance commitments.

Ofwat expects companies to identify *stretching but achievable* PCLs in their business plans and to challenge themselves on what they can deliver for customers and the environment through their base expenditure allowances to ensure *outcomes can be affordably delivered*.

Ofwat will compare company forecasts with its own forecasts based on historical trends, to understand the level of stretch proposed by each company. Ofwat does not propose to set targets based upon frontier performance as it considers that this would not provide the incentive for companies to outperform.

UUW recognises that the target for storm overflows should be stretching and should be based upon available data sources. This is likely to require additional data to be provided than has been made available to date.

5.5.2 Continued improvement through base expenditure

Ofwat proposes to forecast performance levels through the period using historical performance trends as a linear trend, diminishing trend or an alternative relationship if appropriate.

UUW agrees with this proposal, although work will eventually be required to ensure that the targets each company faces provides an equivalent level of challenge in relation to a storm overflows target.

5.5.3 Linkage between cost allowances and performance levels

Ofwat's starting assumption is that its base cost models include explanatory variables that cover a range of exogenous factors that impact companies and as a result some companies receive a higher expenditure allowance than others. It therefore considers that if it also adjusted for these factors in their performance expectations it would be double counting their impacts.

Ofwat does, however, acknowledge that the base cost models may not reflect all drivers of differential performance and states that it will consider setting company-specific PCLs where performance is materially affected by an exogenous factor not captured in the base cost models and/or there are differences in historical enhancement expenditure allowances.

Ofwat states that it is actively engaging with the industry (through the cost assessment working group) to collect further data that could be used to understand company-specific factors. This data can potentially be used:

- as an explanatory variable in the base cost models;
- to inform symmetrical cost adjustment claims; or
- to determine efficient company-specific performance levels that can be delivered through base expenditure.

This work could result in two types of adjustment:

- an adjustment to company base expenditure allowances to enable them to deliver the expected common level of performance; or
- an adjustment to the level of performance a company is expected to deliver through its base cost allowance.

UUW recognises the linkage between cost allowances and performance levels. However, for storm overflows we consider that base cost models do not, and cannot appropriately reflect the key drivers of differential performance in a way that would adequately remunerate companies for the required differential in costs. This is for a large number of reasons, but not least because past expenditure has not been focussed on delivering the future focus for performance targets; it has focussed on reducing environmental impact, rather than the number of spills. It is clear that, on this basis, company-specific PCLs should be set.

5.5.4 Adjusting PCLs to reflect the impact of enhancement expenditure

Ofwat expects companies to set overall targets which exceed the levels set through base expenditure alone and move towards long term targets through enhancement expenditure. Where this is the case, the performance benefits from enhancement expenditure should be accounted for when setting PCLs.

UUW supports this proposal in principle and consider that forward looking targets for storm overflows should reflect reductions that will be achieved through effective delivery of WINEP and DWMP schemes.

5.6 Applying specific performance commitment levels for storm overflows

Ofwat's suggested common target for storm overflows is 20 spills per overflow by 2024-25, with further improvement beyond this point during AMP8. Ofwat considers that a common performance commitment based on a simple average of spills per overflow would be the most transparent measure and the easiest for stakeholders to understand.

The factors that Ofwat highlights as the basis for the development of the 20 spills target are:

- The government's SPS expects Ofwat to challenge water companies to demonstrate how they will significantly reduce the frequency and volume of discharges from storm overflows.
- Ofwat expects all companies to be compliant with their environmental obligations (including, environmental permits and general duties under section 94 WIA91 and related regulations).
- Companies are required to have systems in place to ensure catchments are effectually drained and sewage is effectually dealt with.
- Companies reported in 2021 that storm overflows spilled an average of 29 times, and 16% of overflows spills over 60 times per year.
- A significant proportion of spills are due to issues related to poor management of the network such as maintenance, data issues or inadequate hydraulic capacity.
- Customers should not pay for companies to recover compliance.

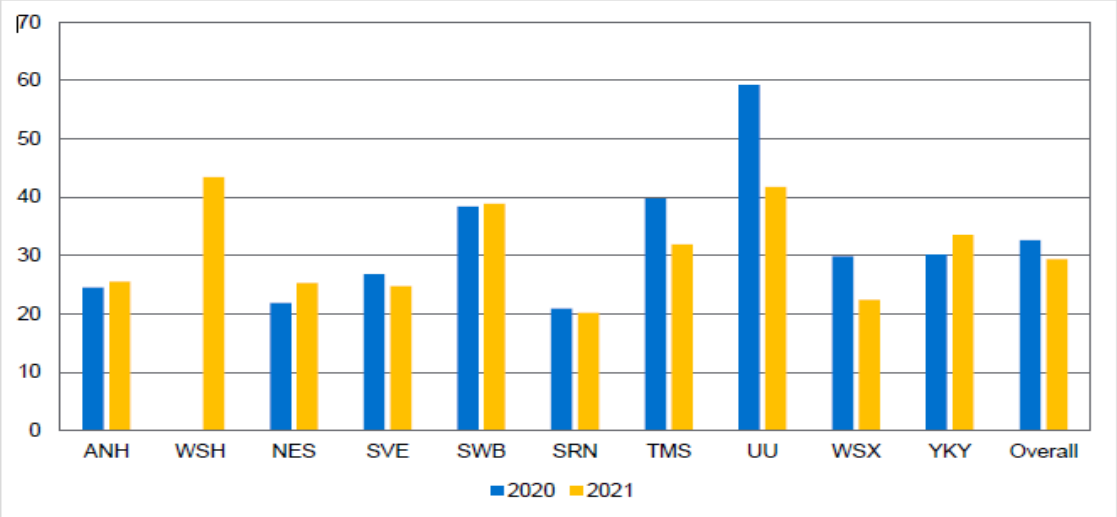
Ofwat also states that in response to its letter asking for a plan for reducing the impact on rivers from their activities including those caused by storm overflows several companies provided commitments to reduce the use of storm overflows. For example, Anglian Water, Northumbrian Water, Severn Trent Water and South West Water have committed to reaching an average of 20 spills per overflow by 2025.

On this basis Ofwat concludes that its current expectation is that all companies should reduce their use of storm overflows to meet this target and go further where their legal obligations require. Part of Ofwat's justification for this is that "such a level would reflect the feedback from companies that a significant proportion of storm overflow issues are related to maintenance or data issues".

Evidence from the Defra, 'Event Duration Monitoring - Storm Overflows - Annual Returns - 2021', May 2022 appeared to indicate that 29% of spills were attributed to asset health or data issues. This is based upon available root cause data, which was not provided by all companies and only provided for high spilling overflows (greater than 60 spills per year).

Meanwhile, figure 5.2 from Appendix 9 is reproduced below.

Figure 5.2 Average spills per storm overflow by water company (2020 and 2021)[115]



Ofwat does recognise that the frequency of spills from storm overflows can be affected by external factors beyond a company's control and states that if companies consider that an alternative target is appropriate for their circumstances, they should provide compelling evidence.

UUW does not consider that a common 2024/25 target of 20 spills per annum is appropriate, for a number of reasons. Fundamentally, there are material and objective differences between companies in terms of the factors that cause storm overflow spills.

These include:

- The design and configuration of the infrastructure (especially the presence of combined sewers);
- The frequency of rainfall and the amount of heavy rainfall; and
- Ground water levels that impact the amount of infiltration of ground water into a sewer network.

Given these exogenous factors, it seems unlikely that a single common spill target, applied across the industry, would be capable of meeting the *"stretching but achievable"* criteria that Ofwat has set out for its performance commitment design.

There is also strong, independently commissioned evidence of the total cost to the industry of reaching a twenty spill target. Specifically, the Government's JSOT taskforce estimated that the "impact to the policy of 20 spills on average per year" was of the order of "between £18 billion and £110 billion."

As this total cost is material and four companies have suggested that they require no cost (or below average costs), to meet the 20 spills target then a logical conclusion is that the costs to the remaining companies would be higher and it would take them longer to reduce spills to this level. Given this level of cost, it also seems implausible that a single spill target, applied across the industry, would be capable of implementation by companies whilst ensuring that *"outcomes can be affordably delivered"* ahead of 2025.

On this basis it seems more appropriate to set company specific targets (rather than common targets), notwithstanding that these may be more difficult to estimate and more difficult to communicate to customers than the simplistic "average number of spills" metric.

6. An alternative approach

We agree with Ofwat that companies need to be incentivised to minimise spills which are driven by operational and maintenance issues. We therefore consider that it is appropriate to split spills from overflows into two categories:

- Those which are the result of operational and maintenance issues and as such should be controlled through maintenance programmes; and
- Those which are the results of legacy issues or exogenous factors that are outside of companies' control or immediate control.

The first of these should be largely funded by companies through their base expenditure. In the latter case the required reduction in spills will largely be driven through future enhancement programmes.

Table 1 shows data taken from 2 of the tables in the most recent regulatory reporting on spill data. The bottom two lines in the table below have been derived by multiplying the total numbers of spills from Table 1 in the data tables, by the reported percentage splits for a subset of the overflows in Table 5 of the data tables. Whilst these are derived values, we consider that they could be reasonably representative, at this stage.

Table 1 Overflow performance by company

Source		WSX	TMS	ANH	SRN	NES	WSH	SVT	SWB	UUW	YKY	Total/ average
Table 1	Total no. storm overflows listed in the annual return in 2021	1,297	465	1,552	978	1,567	124	2,668	1,391	2,192	2,246	14,470
Table 1	Average no/ spills per storm overflow with spill data in 2021	22.4	31.9	25.6	20.2	25.3	29.5	24.7	38.9	41.8	33.6	29.4
Table 1	Total duration (hrs) of monitored spill events in 2021	151,258	163,090	194,594	160,684	220,560	17,163	461,135	351,785	540,753	406,131	
Table 5	Of those that spilt over SOAF thresholds of >60x in one year, what % is due to operational?	52%	61%	49%	27%	9%	20%	0%	29%	12%	n/a	29%
Table 5	Of those that spilt over SOAF thresholds of >60x in one year, what % is due to hydraulic capacity?	48%	39%	45%	64%	91%	80%	100%	71%	88%	n/a	70%
Derived	Derived average no. spills due to operational and maintenance	11.6	19.5	12.6	5.5	22	5.9	0.0	11.1	4.8	n/a	9
Derived	Average number of spills due to hydraulic capacity	10.8	12.4	13	14.7	23.2	23.6	24.7	27.8	36.9	n/a	20.5

Source: Environment Agency, Event Duration Monitoring Annual Returns

The summary table reflects some outliers and, potentially, some inconsistencies in the way that the root cause analysis is reported between companies. For example, Severn Trent uniquely indicates that there were 0% issues due to maintenance and it appears that Yorkshire has not reported root cause analysis.

It is therefore crucial that more consistent data is collected and further analysis is undertaken before setting a suitable target for 2045/25. Nevertheless, drawing on the table above it can be seen that current data points to 29% of reported spills being due to operational issues and there are large variations in the percentage of spills ascribed to operational reasons (from 0% to 61%.)

If Ofwat took the approach of setting an "average number of spills" target of 20 spills, four companies would beat this target and earn a reward, simply by addressing operational and maintenance failures whilst five companies would miss the target and be in penalty, even if they fully addressed operational and maintenance failures.

This in itself is sufficient to cause doubt that a common target of 20 spills for all companies would achieve stretching but achievable PCLs. Assuming they resolved operational and maintenance issues then four companies would earn rewards without any further action on their overflows, whereas five other companies would find themselves in penalty, with the only prospect of avoiding penalties being to make long term investments to evolve the position in the long term, in line with WINEP and DWMP enhancement programmes.

We believe there are two main approaches that Ofwat could take to resolving this issue. One option would be to make a series of detailed adjustments to the target to adjust for issues that are substantially outside of management control and that would otherwise detract from the "stretching but achievable" and "affordably delivered" criteria that need to underpin performance commitment design.

Whilst this may be a suitable option to develop further in advance of PR29, we believe that a better option for PR24 would be to develop a performance commitment that clearly focusses on the things that companies can control, being 1) operational and maintenance issues (which need to be addressed in order to reduce spills in the short term) and 2) future reductions in spills that are delivered through efficient and effective delivery of future WINEP and DWMP programmes, which companies will rely upon to deliver material interventions to reduce the future number of spills.

To recap, some of the advantages of this approach against the currently considered alternatives, we set out earlier that this measure would have the following benefits:

- Incentivising companies for what they clearly can control (operating and maintenance issues and the delivery of required engineering improvements and interventions) rather than trying to identify things that they cannot control
- Recognising that contributions from both base expenditure (operating and maintenance issues) and enhancement expenditure (engineering interventions) have distinct roles to play in delivering future performance improvements
- Effective incentivisation of future investment programmes that keep companies accountable for delivering statutory improvements whilst recognising that legacy regulatory approaches did not focus on the number of spills, leading to differences in spill numbers between companies.

We describe this approach in more detail in the next chapter.

7. Proposed performance commitment: Reducing the impact of sewer overflows

7.1 Purpose and benefits

Purpose: This performance commitment is designed to incentivise a progressive reduction in the adverse impacts of discharges from the company's storm overflows.

Benefits: This performance commitment helps to ensure that storm overflows are used by exception, rather than as a norm. It encourages water companies to maintain their networks and equipment in such a way as to minimise any impact on storm overflow use. Fewer and less frequent discharges will help to improve the quality of the environment.

7.2 Overview

This proposal would utilise a common performance commitment for storm overflow discharges with a company specific target being set for the average number of spills per overflow. This target would be based upon a **reduction** in average numbers of discharges as a result of targeting and addressing spills due to operational and maintenance issues. Future reductions are also incorporated reflecting both a) further reductions in operational and maintenance issues and b) further reductions in the number of spills due to WINEP and DWMP led investments being delivered effectively and efficiently.

7.3 Rationale

This measure targets improved environmental outcomes and adopts a similar approach to the one used to develop the river water quality metric in PR24, which is another measure with a similar environmental outcome.

For river water quality Ofwat has to meet the UK government's SPS expectation to challenge water companies to improve their day-to-day environmental performance to enhance the quality of the water environment.

Ofwat is proposing to do this through a common performance commitment for river water quality that measures the **reduction** in phosphorous from water company activities, which covers both:

- the reduction in the amount of phosphorus discharged at wastewater treatment works; and
- the phosphorous stopped from entering rivers from wider partnership working.

Ofwat considers that a performance commitment of this nature, rather than an absolute target, best reflects the impact of a company’s performance on river water quality, would provide a direct incentive to improve the environment over and above meeting statutory duties that are monitored by the performance commitments for pollution incidents and discharge permit compliance, and aligns with Defra's proposed Environment Act 2021 target on nutrient pollution from wastewater.

In a similar way, the government’s SPS sets expectations for Ofwat to challenge water companies to demonstrate how they will significantly reduce the frequency and volume of sewage discharges from storm overflows, so they operate infrequently, and only in cases of unusually heavy rainfall.

Our proposal, set out above, would utilise a common performance commitment for storm overflow discharges with a company specific target being set for the average number of spills from each overflow. This target would be based upon an absolute **reduction** in average numbers of discharges as a result of addressing operational and maintenance issues.

This measure would focus on the activities delivered through the base programmes and would work in conjunction with measures supporting the WINEP and DWMP enhancement programmes. The final targets set for this measure would need to take account of the benefits that would be delivered through the agreed enhancement programmes.

This approach would produce a company specific target that was still based on a simple average of spills per overflow (simple average means total spills for the company for the reported year divided by total overflows for the company for the reported year). This would therefore still be a transparent measure that is easy for stakeholders to understand.

The exact value of the reduction for each company would need to be developed as part of the PR24 process. However, in principle the size of the reduction should reflect the extent to which current discharge levels are the result of operational and maintenance activities and as such the extent to which they would be under the material control of companies.

Setting a target in this way would directly meet the stated benefits of this measure in that it would incentivise water companies to maintain their networks and equipment in such a way as to minimise any impact on storm overflow use. In the round this approach would also produce fewer and less frequent discharges than the current measure, as all companies would be provided with a stretching target, which in turn would help to improve the quality of the environment. Future reductions could be forecast and incentivised based on both a) expected further reductions in maintenance and operational issues and b) expected future reductions in spills based on delivery of WINEP and DWMP based improvement programmes.

As an example, and based on the most recent spill data submissions from companies in line with the table above, if the target for the end of any given period was that companies should eliminate spills due to operational and maintenance issues then, based upon the 2021 data share, the target levels for each company would be as set out in the table below.

		End of period targets	
Company	**Percentage reduction**	**Number of spills due to O&M issues**	**Average spills target**
Thames Water	61%	0	12.4
Wessex Water	52%	0	10.8
Anglian Water	49%	0	13.0
South West Water	29%	0	27.8
Southern Water	27%	0	14.7
Dwr Cymru/Welsh Water	20%	0	23.6
United Utilities	12%	0	36.9
Northumbrian Water	9%	0	23.2
Severn Trent Water	0%?	0	24.7
Yorkshire Water	??	0	??
Water company average			20.5

This approach and equivalent figures, based upon as robust and long term data set as would be practical, would result in different percentage reduction targets and different average spill targets for each company but would be based upon a common underlying performance level with regard to operational and maintenance of each companies storm overflows i.e. that spills due to maintenance and operational issues should be reduced. Based on the data used above, it would also generate an average spills target for the industry of approximately 20 spills, but would more closely relate the target to base expenditure activity on operations and maintenance.

Clearly work would be required to agree appropriate definitions for spills, for spills due to operational or maintenance reasons, and to agree what would be an appropriate start and end target should be for the AMP8 period.

However, it seems clear that this option would be much more effective in incentivising a progressive reduction in the adverse impacts of discharges by directly incentivising all water companies to maintain their networks and equipment in such a way as to minimise the use of storm overflows.

8. Key conclusions and recommendations

This paper has set out proposals for incentivising storm overflow performance. Our key conclusions and recommendations are as follows:

- We expect that there should be three distinct programmes of work related to reducing the use of storm overflows:
  - A base programme, delivering a continuing gradual improvements in performance, focused on avoiding maintenance/operational failures;
  - A WINEP enhancement programme, delivering a step change in performance to the overflows identified as part of the national programme; and
  - A DWMP enhancement programme, delivering a company specific step towards the government's 2050 expectations
- We agree that each of these programmes should be supported by a performance commitment and ODIs and/or a PCD.
- We agree with the currently stated purpose and benefits of Ofwat's storm overflow measure: that is, that the measure should support the base programme of work, and that an effective measure in this area should encourage water companies to maintain their networks and equipment in such a way as to minimise any avoidable use of storm overflow.
- We agree that there should be a common performance commitment for storm overflows. However, we do not consider that a common target is appropriate for this PC. Companies have not previously been required to target any particular number of spills in order to meet permit requirements; this means that different companies have different starting points for the number of spills and this may be weakly correlated with environmental performance.
- We observe that the currently proposed target of an average of 20 spills would be insufficiently stretching for some companies and unachievable for others, over the remainder of AMP7. Such an approach would be inconsistent with the performance commitment design principles set out by Ofwat that targets should be stretching but achievable and delivered affordably.
- We believe that an alternative measure to incentivise base programmes of work on storm overflow should be developed and that the measure should either:
  - Focus on overall spill levels, but to take account of the factors that are not materially within companies control, by setting a common measure with company specific targets; or
  - Be based upon incentivising companies to reduce spills occurring due to operational or maintenance causes and, going forward, to further reduce spill levels reflecting the effective implementation of WINEP and DWMP based enhancement programmes
- We recommend the second of these.
  - It focusses foremost on the things that are under management control, rather than trying to adjust for the very material things that are not under management control.
  - It also requires less detailed data collection and refinement than the first measure but will still act as an effective comparator between companies
  - Future and further reductions in spills can also be built into the measure which incentivise the effective implementation of WINEP and DWMP based enhancement schemes to bring the number of spills down further in future.
- Delivering reductions in the number of spills to the numbers required under Government's storm overflows discharge reduction plan is an essential target for companies to meet. Many companies have started work on this early; UUW is already committed to delivering at least a one third sustainable reduction in the number of

spills recorded from our storm overflows by 2025 compared to the 2020 baseline. Further reductions in AMP8 need to be incentivised in a way that reflects both the delivery that can reasonably be expected from base expenditure and the very substantial contributions likely to be made through WINEP and DWMP programmes.

- Incentives for companies under the PR24 framework need to reflect the conclusions and expectations explicitly set out in Government's storm overflow discharge reduction plan. In particular, it should reflect that the cost of delivery in some regions will be higher than in other regions, that those companies with the lowest costs should reasonably be expected to deliver earlier than those companies with larger programmes and that Ofwat will work with Defra and the EA to ensure that incentives for water companies take into account the challenges faced by each company.[6]

[6] *"The cost of delivering the storm overflow targets does not fall evenly across England. The number of storm overflows, and the modelled cost of improvements, varies regionally…. the scale of the modelled improvements required fall unevenly through the country. The three most impacted companies (Yorkshire Water, United Utilities and Wessex Water) account for over three quarters of the investment required relative to their consumer base. The Government expects all water companies to deliver the targets set out in this Plan as fast as possible and by the target end dates at the latest. Companies with a smaller share of costs relative to their customer base are therefore well placed to deliver targets ahead of schedule. Ofwat will work with Defra and the EA to ensure that incentives for water companies take into account the challenges faced by each company."* From pages 14 -15 of https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1101686/Storm_Overflows_Discharge_Reduction_Plan.pdf

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

unitedutilities.com

United Utilities

Water for the North West