

August 2026

PR24 cost change process – Asset health cross cutting issues appendix

About this document

This document sets out the detail on a number of cross-cutting issues arising from asset health investment proposals submitted through the PR24 cost change process during the March–May 2026 submission window

The document is structured as follows:

- **Section 1** introduces the aims of the document in more detail and describes our roadmap to understanding asset health.
- **Section 2** provides an overview of Baringa's sector-wide asset condition assessment and findings for the priority asset classes.
- **Section 3** sets out our assessment of each company's what base buys analysis for investment proposals submitted through the PR24 cost change process.
- **Section 4** presents our definition of scope boundaries applied in the asset health reopener deep dives.
- **Section 5** presents our assessment of gravity sewer inspection submissions and gravity sewer rehabilitation unit costs.

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1. Introduction

1.1 Aims of document

This document sets out the detail on a number of cross-cutting issues arising from asset health investment proposals submitted through the PR24 cost change process during the March–May 2026 submission window.

We first summarise the findings of our independent advisor, Baringa, on whether there is evidence of any asset health issues across England and Wales for each priority asset class set out in the asset health guidance.¹ The findings have informed both our assessment of the need for a step change in investment, and our draft determinations in relation to in-period revenue adjustments.

We then set out our assessment of what base buys for each priority asset class and across companies more broadly. This assessment is important so that customers are not charged twice for the same activities: first through existing PR24 base expenditure allowances and again through additional allowances provided through the PR24 cost change process.

Next, we set out the definition of scope boundaries that we have applied across asset health reopener deep dives. A number of submissions requested funding for elements which we have defined as out of scope of the asset health reopener, and hence it is important that we explain our rationale for any out of scope exclusions we have made. We have applied the same principles consistently across all submissions. Any exceptions and their reasoning are noted both in this overview and in the deep dive write ups.

We then present our assessment of gravity sewer inspection and rehabilitation costs. Gravity sewers provide one of the few areas where meaningful cross-company cost benchmarking is possible, as the activities are relatively homogeneous and comparable, as opposed to non-infrastructure and treatment works assets.

PR24 cost change assessment process

Throughout the PR24 cost change assessment process, we have sought to adopt a more supervisory approach to cost assessment within the limited timeframe available for the draft determinations. This has involved placing greater emphasis on bilateral engagement with companies, which we have found productive and which companies have generally welcomed.

Our approach to assessing what base buys has also placed greater weight on company-specific evidence rather than regulatory benchmarking. We have sought to minimise interventions where companies have provided sufficient and convincing evidence to explain deviations from sector historical expenditure trends. In some cases, companies have

¹ Ofwat, '[PR24 cost change process: Asset Health Assessment Guidance](#)', December 2025

proposed additional customer protections, such as returning any underspend against base expenditure allowances to customers.²

We have also sought to be clear about the additional evidence required. We hope this approach will help companies respond effectively to draft determinations and strengthen future PR29 business plans and cost change submissions.

The document accompanies, and should be read alongside, our 'Cost Change Draft Determinations 2026 – Sector Overview' document.

1.2 Roadmap to enhancing asset health understanding

Maintaining good asset health is critical to ensuring long-term operational resilience in the water sector. At PR24, we set out our roadmap to continue enhancing asset health understanding in the water sector during the 2025-30 period.³

The roadmap focuses on collecting robust and comparable asset condition and historical investment data for a subset of priority assets in the 2025-27 period. We worked with the sector to identify a subset of priority assets using a set of prioritisation principles, including the extent to which assets directly affect performance and whether observable condition provides a meaningful indicator of overall health.

Companies are able to request additional capital maintenance allowances through the PR24 cost change process to improve the health of the selected priority assets.

These priority assets are:

- Water network storage assets (service reservoirs, water towers, contact tanks and final water tanks)
- Water boreholes
- Rapid gravity filters (RGFs) at water treatment works (civil assets)
- Activated sludge plants (ASPs), settlement tanks, and trickle filters at wastewater treatment works (civil assets)
- Gravity sewers

Further information on the selection process is included in our update paper.⁴

² For example, Northumbrian Water proposed to return any underspend against total capital maintenance allowances over the 2025-30 period to customers.

³ Ofwat, '[Roadmap for enhancing asset health understanding in the water sector](#)', December 2024.

⁴ Ofwat, '[Enhancing asset health understanding update paper](#)', June 2025.

Since the publication of the PR24 final determinations, we have worked collaboratively with water companies, the Environment Agency, the Drinking Water Inspectorate (DWI) and Defra through the Asset Health Roadmap Working Group to develop and collect:

- Historical investment data, including workload and expenditure; and
- Asset condition data.

These data collection exercises required significant input from working group members to ensure that definitions, methodologies and guidance were clear and consistently applied. The resulting information requests and asset condition methodologies are available on our website.⁵ We expected companies to use this information, alongside company specific data, when developing asset health investment proposals.

What base buys

As part of their submissions, companies were required to provide an assessment of what base buys for asset maintenance to demonstrate that proposed investment is genuinely incremental to the outputs expected from existing PR24 base expenditure allowances. This is important to avoid customers paying twice for the same activity through both existing PR24 base allowances and PR24 cost change process allowances.

Companies were expected to use the sector workload and expenditure dataset to support their assessment. Our evaluation of company submissions on what base buys is set out later in this document.

Asset condition assessment

Companies were required to collect condition data for a representative sample of assets within each priority asset class. The companies then used and assessed this collected evidence, in conjunction with the wider detail that they hold on asset performance, to make their individual case for a step change in investment.

Alongside these company assessments, we have undertaken our own review of this asset condition data across the sector, principally led by Baringa, and present our findings in this document. The purpose of our assessment of all companies' condition data is to improve our understanding of current asset health across the sector and to allow us to assess whether there are issues that warrant additional capital maintenance allowances based on this sector wide review.

⁵ See 'Workload and Expenditure' section on our ['Priority assets - Ofwat'](#) webpage

To support high-quality submissions, we also published detailed asset health guidance documents for water and wastewater companies. These documents set out our evidential expectations and provide clarity on what constitutes a well-supported investment proposal.⁶

Later this summer, we will consult on expanding both the asset health roadmap and the PR24 cost change process to cover a wider range of asset classes, following further engagement with companies, regulators and Defra. The objective is to improve understanding of asset health across a broader asset base ahead of PR29 and to improve the quality of future business plans and investment proposals.

An expanded process would also provide companies with further opportunities to submit investment proposals where there is sufficient and convincing evidence of asset health issues that:

- require additional capital maintenance allowances;
- can be addressed before the end of the 2025–30 period; and
- can be delivered in addition to existing PR24 commitments.

The same evidential requirements set out in the PR24 cost change process asset health guidance would apply.⁷

⁶ Ofwat, '[PR24 cost change process: Asset Health Assessment Guidance](#)', December 2025; Ofwat, '[PR24 cost change process: Gravity sewers investment assessment criteria](#)', February 2026

⁷ Ofwat, '[PR24 cost change process: Asset Health Assessment Guidance](#)', December 2025

2. Sector wide asset health assessment

2.1 Assessing sector-wide asset condition issues

Understanding the current health of an asset requires gathering data on various different aspects. This might include understanding things such as visible condition (e.g. the presence of rust, cracks in concrete), failure history, and performance. Changes in the health of an asset over time can be influenced by its design (e.g. construction material, construction method) and operating environment (e.g. if it is buried or exposed). As part of our enhancing asset health workstream, companies were required to submit condition data for the priority assets, for a pre-selected representative sample.

Asset condition tells us about the physical condition of the asset, and as such is one of the primary indicators of current asset health. For the purposes of the asset health reopener, this is visible condition data, based on asset inspection and photographic evidence. We provided condition methodologies that should be followed when collecting and reporting this data for the priority assets, so that companies are reporting this data in a consistent way.

We requested a representative sample of condition data for the priority asset classes from all water companies and commissioned Baringa to undertake an independent assessment of whether there was evidence of a sector-wide asset condition issue for each asset class. This analysis formed part of the PR24 cost change process and informed our draft determinations.

Where there is **no sector-wide issue**:

We do not consider additional expenditure allowances, unless a company can provide sufficient and convincing evidence of a company-specific asset health need requiring additional investment. This would require clear evidence of site-specific needs that are genuinely incremental to the outcomes that can be delivered through existing PR24 allowances.

- Any such allowances, if made, will be through an end-of-period adjustment at PR29 only, rather than an in-period revenue adjustment (because it would not qualify as part of the asset health eligible item specified in Condition B).

We also consider these findings will provide a valuable evidence base for the development of PR29 business plans, helping companies target capital maintenance investment towards the areas of greatest asset health risk and ensuring expenditure delivers the best value for customers and the environment.

2.2 Baringa's assessment

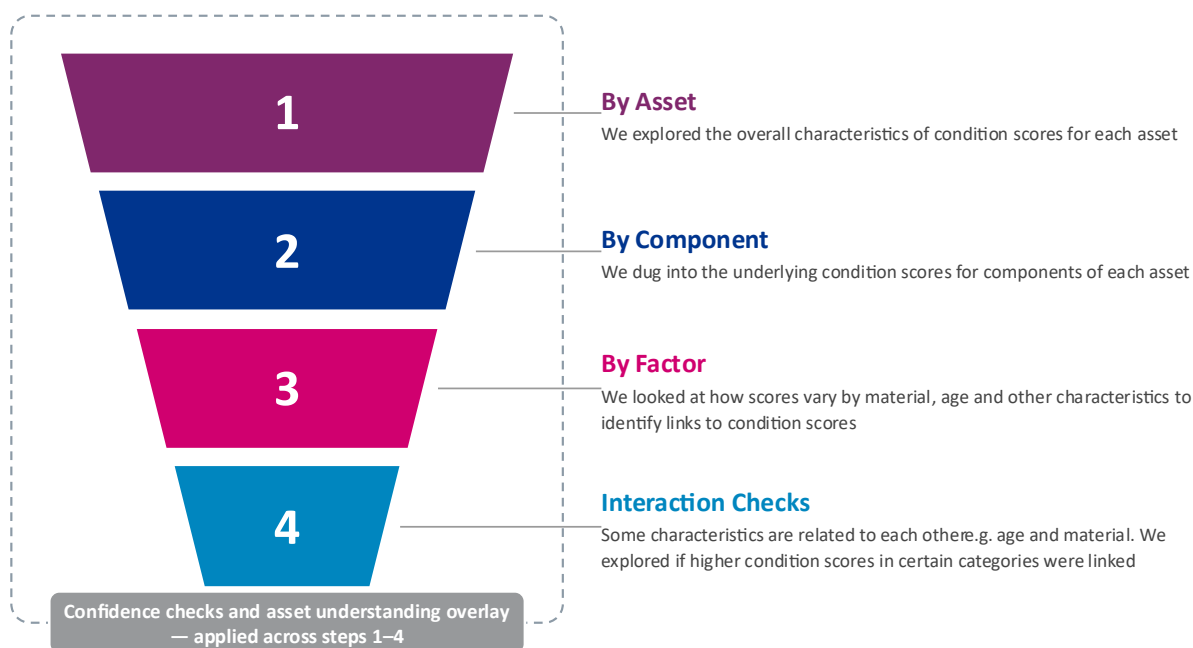
Baringa were asked to analyse the condition data that companies submitted for the representative sample of their asset classes for: trickle filters, settlement tanks, activated sludge plants, boreholes, network storage tanks and rapid gravity filters. The findings from the Baringa report are summarised below.

Overall, Baringa identified some evidence of asset health pressures across England and Wales for all priority asset classes they were asked to review, except for rapid gravity filters. For rapid gravity filters this is unexpected, as the priority asset classes were selected on the basis that companies considered a step change in capital maintenance investment was required to maintain asset health. The findings may however help explain the limited number of rapid gravity filter submissions received through the 2026 cost change process.⁸

Identifying sector-wide issues

The image below represents the stages of analysis undertaken by Baringa when forming their position on if there appears to be a sector wide issue for a particular asset class:

Figure 1: Baringa analysis stages



1. Analysis by asset

Baringa assessed the overall distribution of aggregate condition scores for each primary asset class to understand key central summary statistics (average and median scores) alongside the spread of scores (consideration distribution shape and standard deviations). Baringa applied this analysis at the company level to understand companies with higher and lower average condition scores. The analysis also considered the share of assets reporting

⁸ We received three submissions, from United Utilities, South West Water and Bristol Water

aggregate condition scores greater than three, to isolate those assets beyond the 'Adequate' as defined in the Binnies methodology documents.⁹

2. Analysis by component

Following aggregate condition score analysis, Baringa assessed the underlying distribution and key features of the individual component condition scores. This allowed them to understand if individual components were driving higher condition scores at the aggregate level, and where high shares of 'Poor' scoring assets were concentrated. As set out in the full report, for several assets, this analysis revealed materially different scoring distributions for components within a single asset. As with Baringa's initial aggregate score analysis, they also explored component scoring at a company level.

3. Analysis by Static factor

Static factor analysis was then undertaken to assess the extent to which observed variations in asset condition scores are associated with underlying asset characteristics. By segmenting assets into comparable cohorts (for example by construction period, material or asset type), Baringa identified the key features associated with poorer condition scores, and to what extent these features were present in the sample assets of individual companies.

4. Interaction Checks

Several static factors may be related to one another. For example, older assets may be more likely to be made from a particular material, or to be of a certain asset type as industry norms and best practice change over time. Where Baringa found significant differences in scores through their static factor analysis, they cross-checked to see how these factors overlapped to build a greater understanding of influences on poorer asset condition scores.

5. Confidence checks and asset understanding overlay

One of the challenges associated with Baringa's analysis is the limited sample size in certain cases where the sample is segmented by different variables. This can occur at the static factor level (for example, if a small number of companies report assets of a particular material) and individually at the company level (for example, if a company had most of its assets constructed in a single period, and a small number of observations in a different period). To avoid drawing spurious conclusions, where there is sufficient sample size (>30 observations, given the random nature of the sample of reported assets), Baringa have constructed Confidence Intervals at the 95% level. This allows them to:

- identify the ranges within which they would expect to find the true estimate of a given average, 95% of the time.

⁹ Ofwat, [Enhancing Asset Health Understanding Workstream - Ofwat](#)

- Compare confidence intervals between different estimates and draw conclusions. For example, if the 95% confidence interval for the average score of assets constructed 1901-1920 sits entirely above the equivalent interval for 1981-2000 assets, this is a strong indicator that 1901-1920 assets have worse condition scores on average.

Throughout their analysis, Baringa applied asset management knowledge to challenge their interpretations of the data in the context of how these assets operate in practice. This helped distinguish findings that were broadly expected, for example, where condition differences aligned with expected asset characteristics or deterioration mechanisms, from findings that were less expected and therefore warranted closer consideration. This engineering overlay was used to test whether observed patterns were meaningful, to avoid over-interpreting purely statistical differences, and to identify the findings most likely to be relevant for Ofwat's further assessment.

Baringa's assessment

Table 1 below shows a summary of Baringa's assessment of the asset condition data and if they consider this indicates the presence of a sector wide issue for each asset class.

Table 1 – Summary of Baringa's assessment

Asset Type	Average condition scores	Conclusion	Aggregate score	By company	By component score
Boreholes	Aggregate: 2.91 Borehole: 3.07 Headwork: 2.50	Evidence of higher scores across large parts of the sector, driven by borehole components.	Highest average score of all assets, with 95% confidence interval of 2.86 to 2.98. 37% of assets report an aggregate score >3.	5/17 companies reporting more than 50% of assets >3.	Borehole components score notably worse than Headworks (95% confidence interval of 2.99 to 3.15 vs 2.41 to 2.59), with this observed on average across 13/17 companies. At the sector level, this difference remains by construction year, water pH and material.
Trickle Filters	Aggregate: 2.76 Tank: 2.82 Chamber: 2.52	Some evidence of higher scores across the sector	95% confidence interval around mean of 2.70 to 2.83. 29% of assets report aggregate scores >3,	5 companies have notable higher shares (39% – 61%)	Tanks score worse than Distribution Chambers, with 95% confidence interval for Tanks (2.74 to 2.89) sitting entirely above the Distribution Chamber range (2.47 to 2.62). Difference is observed for 10/11 companies. 24% of Tanks score poor vs 12% of Distribution Chambers.
Water Network Storage	Aggregate: 2.52 Tank: 2.59 Membrane: 2.11	Little evidence of systematic poor quality assets across the sector	Tanks are typically in worse condition than membranes, with evidence of worse scores for older assets, certain material categories and Water Tower asset types. However, these are not large in sample size. 95% confidence interval around mean of 2.45 to 2.59. 19% of aggregate scores >3.	4 companies have notably higher shares (26% – 45%)	Tanks have worse condition scores than Membranes for 13/17 companies on average. 95% confidence interval for Tanks mean (2.52 to 2.66) is entirely above the Membrane 95% confidence interval (1.97 to 2.24). 48% of Tanks score 'Very Good' or 'Good' compared to 68% of Membranes.
Settlement Tanks	Aggregate: 2.49 Tank: 2.52	Some evidence of higher condition scores and shares of poor scores for	95% confidence interval around mean of 2.44 to 2.53.	3 companies are notable outliers: (20% – 37%)	Tank and Distribution Chambers follow similar distributions, with marginally higher Tank

	Chamber: 2.32	Tanks constructed in early years, concrete reinforced and tensioned and certain asset types	12% of assets report aggregate scores >3		scores on average observed at 9/11 companies. Both have similar shares of 'Poor' or 'Very Poor' scores (11% Tanks 7% Distribution Chambers).
Activated Sludge Plant	Aggregate: 2.41 Aeration: 2.50 Anoxic: 2.24 Chamber: 2.20	Limited evidence of sector wide poor scores.	Majority of assets score well, with 95% confidence interval of 2.34 to 2.48. 12% of assets report aggregate scores >3.	All companies are below 20% with the exception of one outlier at 40%.	Analysis shows a broadly similar distribution across all three components.
Rapid Gravity Filters	Aggregate: 2.29 Filter Tank: 2.31 Backwash: 2.20	No evidence of systematic poor quality assets across the sector	Lowest average scores across the six assets, with no significant difference by component or analysing by static factors. 95% confidence interval around mean of 2.23 to 2.39. 8% of aggregate scores >3.	7 companies making up 32% of the sample have no aggregate condition scores >3, whilst 4 have more than 20% of scores >3.	Filter and Backwash Tanks follow similar distribution. There is no evidence of universally higher Filter vs Backwash Tank scores on a company-by-company basis.

Ofwat considers that Baringa's analysis suggests that for two asset classes (boreholes and trickle filters) there is a clear sector wide issue, and for three asset classes (Network storage, settlement tanks, and activated sludge plants) there is some indication of there being a sector wide issue. For one asset class (rapid gravity filters) there is no indication of a sector wide issue based on the structural condition data available (though Baringa note this does not imply there are no sector wide issues for this asset class for other reasons).

2.3 Ofwat's approach

To qualify for additional in period funding, the relevant licence condition includes a requirement that: " Ofwat considers that, across England and Wales, the general condition of assets of the relevant description belonging to, or vested in, relevant undertakers is such that additional works, [...] to maintain, renew or replace those assets, is required to secure the resilience of water supply systems or sewerage systems". Ofwat took account of the Baringa findings when assessing individual business cases and to help inform our draft determinations as to whether there is a strategic need for additional investment. This resulted in three different scenarios:

- Based on Baringa's analysis, and where we consider there is a **sector wide issue** (boreholes and trickle filters) we reviewed the company's PR24 cost change submissions to confirm the need for sector wide strategic investment that Baringa identified.

- Based on Baringa's analysis, and where we consider there was **no indication of a sector wide issue** (rapid gravity filters), this implies there is not a strategic need to improve the health of this asset class more generally. As a result, we reviewed each business case to ensure that it included and outlined clear tactical needs based on individual site requirements only and did not include any unnamed programmes of work. Due to the absence of a strategic need for rapid gravity filters we only allow end of period funding for these assets.
- Based on Baringa's analysis, and where we consider there is a **potential, but not confirmed, sector wide issue** (network storage, and settlement tanks and activated sludge plants) we undertook further internal analysis as set out below to ensure that there is a need for additional investment.

Additional analysis for potential, but not confirmed, sector wide issues

As set out above, where the Baringa analysis indicated there to be a potential, but not confirmed, sector wide issue we undertook further data analysis to provide further confidence that for a step change in investment:

- The condition data provided by the sector was for a representative sample of the asset base. We extrapolated the condition scores to the wider asset base for each asset class to indicate the **total number of assets across the sector in need of potential intervention**. We assessed these volumes to determine if this supported a need for a step change.
- Based on the assessment of 'what base buys', coupled with indicative intervention costs, we assessed **how many long-term interventions companies could be expected to make** from their base allowances, compared to the total population of assets in need of intervention. We reviewed this ratio to assess if this was supportive of a need for a step change.
- We then reviewed the number of assets in need of intervention based on their condition, or extrapolated condition, and compared this to the percentage we might expect to be in each condition grade based on different assumptions around averaged expected service life. This identified where assets may be ageing faster than expected and funding may be necessary to maximise their operating lives.
- In addition to undertaking the sector wide analysis outlined above, where Baringa identified a potential but not confirmed sector wide issue, we reviewed individual company business cases to ensure that companies had clearly supported a need for strategic investment in each asset class.

For network storage, settlement tanks, and activated sludge plants, we determined that there was sufficient indication across the different lenses of analysis to **support a need for a step change in investment**, which was also supported based on company's business cases.

3. What Base Buys

3.1 What we said in our asset health assessment guidance

We set out in our PR24 Cost Change Process – Asset Health Investment Assessment Guidance that as part of the "Need for Investment" gate, companies were required to assess 'what base buys' for asset maintenance. This is to evidence the need for a step up in investment beyond what is already funded through existing base expenditure allowances.¹⁰ This adjustment avoids customers paying twice for investment: once through PR24 base allowances, and again through any additional allowances granted through the PR24 Cost Change Process.

To support this assessment, we stated in our asset health assessment guidance that historical expenditure was a sensible starting point for estimating what is implicitly funded through PR24 base allowances.¹¹ This reflects the fact that PR24 base expenditure allowances are derived from historical expenditure, adjusted for cost inefficiency, and that both Ofwat and the CMA have typically assumed that base allowances fund historical sector-average renewal rates at PR19 and PR24. This approach recognises that benchmarking models do not necessarily capture well differences in asset renewal rates between companies.

We also recommended that companies test and sense-check the outputs of different methods, triangulating between them where appropriate to arrive at a reasonable estimate of what base allowances fund. This included consideration of sector-average and company-specific expenditure rates (adjusted for company size), alongside companies' own 2025–30 capital maintenance plans for priority asset classes based on existing PR24 base expenditure allowances.

It is acknowledged amongst the sector that there are several ways to determine what base buys. We therefore allowed some flexibility on how companies estimated this, provided that the approach considered the following (non-exhaustive) principles:¹²

- Avoid the risk of customers paying twice for investment, once through existing base allowances and once through any additional adjustments;
- Have a clear rationale, and where possible, is consistent with the way allowances are set during the price review;
- Acknowledges that companies receive long-term base allowances, and that spend on an asset class across periods is likely to vary over time; and
- Is informed by good quality information, and where there are limits to this, is aware of data limitations.

¹⁰ Ofwat, '[Asset health investment assessment guidance](#)', December 2025.

¹¹ Ofwat, '[Asset health investment assessment guidance](#)', December 2025, p. 24

¹² Ofwat, '[Asset health investment assessment guidance](#)', December 2025, p. 21

Alongside the asset health investment guidance, we shared the complete workload and expenditure dataset with the sector to aid their assessment of what base buys.

Further detail on calculating what base buys for the PR24 Cost Change Process can be found in Chapter 4 of the Asset Health Investment Assessment Guidance.¹³

3.2 Company feedback

We received feedback from companies through their PR24 cost change process submissions and subsequent engagement. Most companies provided a clear explanation of their preferred methodology for estimating what base buys and, in many cases, also assessed the sensitivity of their conclusions to alternative approaches.

Companies largely applied the same methodology across water and wastewater assets, and in some cases applied a distinct methodology for gravity sewer rehabilitations. A summary of each company's approach is set out below.

- South West Water (of which Bristol Water is part) and SES Water took a company-specific approach, by scaling the company's historical expenditure per priority asset to their base allowance for the 2025–2030 period (AMP8).
- Northumbrian Water and Southern Water scaled industry-wide historical expenditure to current AMP8 allowances, by using the median proportion of base expenditure allocated to each asset across the sector and applied this to their AMP8 base allowance.
- United Utilities Water used a similar approach to that described above but triangulated with equal weighting between using the mean and median proportion of base spend allocated to each asset across the sector.
- Severn Trent Water triangulated between three approaches with equal weight: modifying econometric benchmarking models to estimate implicit allowances for priority assets, and scaling company-specific and industry-wide historical expenditure to current AMP8 allowances.
- Wessex Water used their AMP8 capital maintenance plan as a starting point to determine implicit base allowance and cross checked this with both an econometric approach, and a scaling of industry-wide historical expenditure to current AMP8 allowance approach, so that their estimate of an asset's implicit allowance was sensible.
- Yorkshire Water triangulated equally between an econometric approach and scaled industry-wide historical expenditure to current AMP8 allowances, by using an industry mean proportion.

¹³ Ofwat, '[Asset health investment assessment guidance](#)', December 2025.

- Only Northumbrian Water opted to apply a distinct methodology for gravity sewer rehabilitations, instead using a similar method to Ofwat's PR24 mains renewals what base buys calculation.¹⁴
- Most companies calculated the value of what base buys to be 0 for gravity sewer inspections, with the exceptions of Southern Water, Severn Trent Water and Hafren Dyfrdwy.

The key themes raised by companies included:

- Some companies were concerned that an approach based on historical expenditure could disadvantage companies that had invested more heavily than the sector average in the past, resulting in a higher what base buys adjustment and a lower level of additional funding.
- Some companies highlighted limitations with econometric approaches, noting that they can, in certain circumstances, generate counterintuitive results, including negative estimates of what base buys.
- Some companies raised concerns regarding the consistency and quality of the workload and expenditure dataset, including differences in how expenditure was allocated across intervention types. Companies stated that these factors could affect estimates of what base buys where the dataset is used as a primary source of evidence.

Water UK and Economic Insight what base buys report

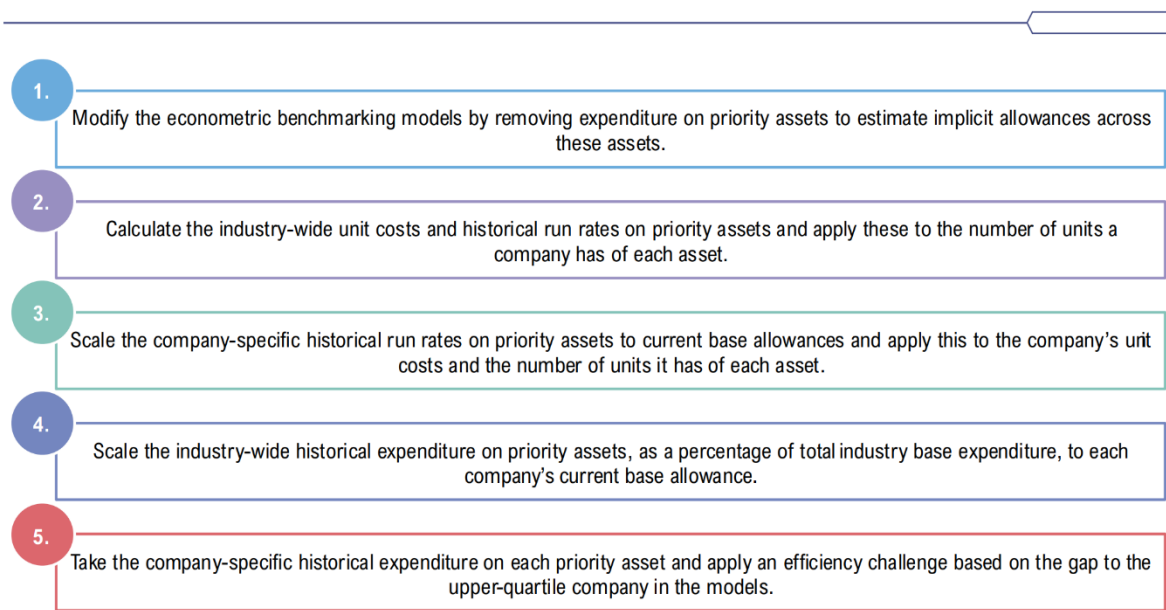
Water UK commissioned Economic Insight to undertake a review on behalf of companies of alternative approaches for estimating what base buys.¹⁵ Economic Insight assessed five potential methodologies against a set of guiding principles and concluded, in its view, that no single approach performed best across all assessment criteria. It therefore recommended that any assessment of what base buys should take account of the specific circumstances of individual companies and asset classes.

¹⁴ Ofwat, "[PR24 final determinations: Expenditure allowances](#)", pp. 34–35, February 2025

¹⁵ Practical approach to what base buys – Water UK

Figure 2 – Options assessed by Economic Insight for calculating 'what base buys'

Figure 2: Options we have assessed for calculating 'what base buys'



Source: Economic Insight analysis.

The methodologies assessed by Economic Insight are based on approaches that Ofwat either consulted on with the sector or has incorporated into its own assessment framework. In particular, Option 4 – scaling industry-wide historical expenditure on priority assets, expressed as a proportion of total industry base expenditure, to each company's current base allowance – performed relatively strongly against Economic Insight's assessment criteria. We have therefore used this approach as a key cross-check across asset classes to stress-test company estimates of what base buys and so that customers do not fund the same investment twice. This is broadly consistent with the principles that informed what base buys assessments at both PR19 and PR24.

We have also drawn on Option 3 – scaling company-specific historical expenditure on priority assets to current base allowances – in circumstances where company-specific factors are likely to be particularly important. This includes boreholes, where differences in source water strategies and asset portfolios are reflected to some extent within the underlying PR24 base cost models, making a more company-specific assessment appropriate.

For gravity sewer inspections, we recognise that there is limited overlap between activities funded through existing base allowances and the additional inspection activity proposed through the PR24 cost change process. We therefore consider it appropriate to assume that what base buys is zero for all companies in relation to this activity.

Overall, our approach reflects the findings of the Economic Insight review by recognising that no single methodology is appropriate in all circumstances. Instead, we have adopted a proportionate and evidence-led framework that combines sector-wide benchmarking with company-specific considerations where justified, taking account of the characteristics of different asset classes and the need to protect customers from the risk of double funding. We expect our approach to evolve as the evidence base for what base buys builds over time.

3.3 Our approach at draft determinations

Recognising that there is no single definitive method for assessing what base buys, we used each company's estimate as the starting point for our assessment. Companies adopted a range of approaches to estimating what base buys, reflecting differences in asset types, maintenance strategies and interpretation of the available evidence.

We stress-tested company estimates against alternative estimates of what base buys derived from historical capital maintenance expenditure uplifted to current AMP8 base expenditure allowances. These approaches align broadly with Options 3 and 4 assessed by Economic Insight for Water UK.¹⁶

We used the full historical period covered by the dataset (covering the 2015–20 and 2020–25 periods) to reflect the long-term nature of base expenditure allowances and to recognise that expenditure on individual asset classes can vary across investment cycles. This is consistent with the approach adopted by Ofwat at PR19 and PR24 when calculating what base buys, as well as the CMA in their subsequent redeterminations, when considering what is implicitly funded through base allowances. Sensitivity testing indicated that alternative time periods do not materially alter our estimates of what base buys.

Calculating our estimate of 'what base buys'

For this year's assessment we calculated 'what base buys' in four steps:

1. First, our assessment focused on refurbishment and replacement expenditure, as these activities most closely align with the investment proposed through the PR24 cost change process to improve long-term asset health and extend asset lives. Repair expenditure was therefore excluded in this assessment. For each priority asset class, we then took two sub-steps:
 - We calculated, for each company, the share of refurbishment and replacement expenditure relative to modelled base expenditure (ie total base expenditure included within the PR24 base cost models)

¹⁶ Practical approach to what base buys – Water UK

- We used these company-specific shares (%) to derive sector mean and sector median shares
2. Second, we derived three estimates of what base buys for each priority asset class: we multiplied the company-specific, sector mean and sector median proportions by each company's AMP8 modelled base expenditure allowance.
 3. Third, we used different combinations of these estimates for different asset classes to recognise that companies may legitimately allocate differing proportions of their PR24 base allowances across asset classes according to their specific circumstances and risk profiles.
 - For most asset classes, we based our estimate on the average of the sector mean and sector median estimates.
 - For boreholes, we additionally used the company-specific estimate in our triangulation, to reflect differences in source water strategies and asset portfolios, which are reflected to some extent within the PR24 base cost models.
 4. For gravity sewer inspections, we concluded that what base buys should be zero. This is because the representative inspection programmes funded through the PR24 cost change process are additional to business-as-usual inspection activities, such as the inspection of known high-risk sewers.
 5. Fourth, for each company, we summed up our asset-level estimates across all submitted asset classes and compared this with the sum of the company's submitted estimates of what base buys.
 - Where a company's estimate exceeded our assessment, or where the difference between the two was less than 5%, we propose to accept the company's estimate of 'what base buys'.
 6. Where a company's estimate was more than 5% below our assessment, we engaged with the company, and undertook further investigation to understand the reasons for the difference. This included consideration of condition evidence, workload and expenditure data, and supporting material submitted through the cost change process. This additional review was applied to Northumbrian Water, South West Water (of which Bristol Water is part) and SES Water.

Our objective was to adopt a proportionate, supervisory and risk-based approach to determining what base buys. This recognised that company-specific circumstances may justify deviations from sector-wide benchmarks while maintaining appropriate protections for customers. Where any residual uncertainty remained regarding the extent to which existing base allowances already fund the proposed investment, we considered whether any additional customer protections were appropriate to address the risk of double funding. We set out our draft decisions below.

3.4 What base buys draft decisions

Based on the approach set out above, we propose to accept most companies' estimates of what base buys.

The principal exceptions are Northumbrian Water, South West Water (of which Bristol Water is part) and SES Water, where further investigation was undertaken due to company estimates being materially lower (> 5%) than our assessment. In each case, we considered the wider evidence base, including company submissions, additional supporting information and subsequent engagement.

Additionally, as set out in the relevant deep dive, we proposed not to allow any funding to Anglian Water's network storage submission, and therefore set 'what base buys' to zero accordingly.¹⁷

Price control deliverables relating to 'what base buys' are set out in the Cost Change draft determinations 2026 – Price control deliverables Appendix.¹⁸

Northumbrian Water

Through our engagement with Northumbrian Water, we raised concerns that its estimate of what base buys may underestimate the level of investment already funded through existing PR24 base expenditure allowances, particularly in relation to gravity sewer rehabilitation. The company based its estimate on kilometres of gravity sewer rehabilitation activity, whereas most other companies adopted an expenditure-based approach.

Following discussions through the asset health working group, we concluded that an expenditure-based approach provides a more reliable basis for estimating what base buys. This reflects the fact that gravity sewer rehabilitation can be delivered through a range of interventions with differing costs and impacts. Focusing solely on kilometres relined or replaced risks understating the level of investment funded through existing allowances.

Accordingly, we have adjusted Northumbrian Water's estimate using a triangulation of the historical sector mean and sector median expenditure-based benchmarks.

In our further engagement, Northumbrian Water stated that it expects to significantly overspend its 2025-30 period base capital maintenance allowances because it considers existing PR24 base expenditure allowances are insufficient to address identified asset health needs. The company also indicated that it would be willing to return any aggregate underspend in base capital maintenance expenditure over the 2025-30 period to customers should an underspend occur.

¹⁷ Cost Change Draft Determinations 2026 – Anglian Water

¹⁸ 'Cost Change Draft Determinations 2026 – Price control deliverables appendix'

We welcome the intent behind this proposal. However, PR24 did not establish standalone capital maintenance allowances, which limits the practicality of implementing such an approach.

We are proposing to implement a general approach to protect customers from paying twice by recovering cost change allowances where existing base allowances are sufficient, and this is set out in section 4 of the 'Cost Change Draft Determinations 2026 – Price control deliverables appendix'. We consider that approach will sufficiently protect Northumbrian Water customers in the case that the estimate of 'what base buys' for Northumbrian's work is low. If we were to amend that general approach, we would look to implement a targeted customer protection for Northumbrian's allowance in light of the concern regarding 'what base buys'.

Pennon Group – South West Water, Bristol Water and SES Water

Through our review and engagement with Pennon Group, we identified that its estimates of what base buys were lower than would be expected under historical sector mean and median expenditure benchmarks.¹⁹ The approach was consistent across the relevant companies (South West Water (of which Bristol Water is part), and SES Water), and we engaged with them jointly, hence we refer below to Pennon Group rather than the constituent water companies.

The low estimates principally reflected Pennon Group's reliance on company-specific historical expenditure rates, which were generally below sector-average levels. In response, Pennon stated that company-specific historical expenditure provides the most robust basis for estimating implicit allowances because industry cost and workload datasets may be affected by differences in maintenance strategies, investment cycles, data quality and cost allocation practices between companies. Pennon Group also provided additional evidence on maintenance expenditure across its wider asset base and undertook a top-down cross-check comparing AMP8 planned capital maintenance expenditure against a range of implicit allowance estimates.

Pennon's analysis indicated that its planned 2025–30 period capital maintenance expenditure exceeds estimates of what base buys derived using company-specific, industry-average and econometric approaches. It therefore considers there to be limited risk of customers funding the same expenditure twice and states that the implicit allowance applicable to its asset health proposals should be zero. The Pennon Group also explained that lower sewer rehabilitation expenditure during the 2015–20 and 2020–25 periods reflected a deliberate shift towards investment in other sewerage assets and operational maintenance activities, while maintaining that increased sewer rehabilitation expenditure will be required over the longer term.

¹⁹ This assessment holds both when considering South West Water, Bristol Water, and SES Water jointly, as well as when SES Water is split out.

Having considered the totality of the evidence, we propose to accept Pennon's estimates of what base buys for South West Water (of which Bristol Water is part) and SES Water.

In line with our view noted above regarding Northumbrian Water, we consider that the general approach we are applying to protect customers from paying twice is sufficient to protect the customers of Pennon's companies. The general approach will recover cost change allowances where existing base allowances turn out to be sufficient, and is set out in section 4 of the 'Cost Change Draft Determinations 2026 – Price control deliverables appendix '. If we were to amend that general approach, we would look to implement a targeted customer protection for Pennon's companies' allowances in light of the concern regarding 'what base buys'.

Treatment of ancillary and short-life asset replacement costs

When assessing asset health submissions, we identified some cases where companies included ancillary or shorter-life asset replacement costs that were not formally within the scope of the PR24 asset health cost change process and would ordinarily be expected to be funded through existing PR24 base expenditure allowances.

Where a company's estimate of what base buys exceeded our assessment based on historical sector mean and sector median expenditure rates, we did not exclude these costs from the proposed investment package where their value was smaller than the excess what base buys adjustment. In these circumstances, we were sufficiently reassured that customers would not fund the same expenditure twice.

What base buys for draft determination

Table 2 below summarises what base buys across all submissions by company and asset class and compares company-submitted estimates with our draft determination assessments.

Table 2: company submissions for what base buys and our decisions

Company name	Asset	Company submission (£m)	Our decision (£m)	Difference (£m)
Anglian Water	Gravity sewers – inspect	-	-	-
Anglian Water	Gravity sewers – rehab	207.70	207.70	-
Anglian Water	Network storage	41.60	-	n/a ²⁰
Dŵr Cymru	Gravity sewers – inspect	0.03	-	(0.03)
Hafren Dyfrdwy	Gravity sewers – inspect	-	-	-
Northumbrian Water	Boreholes	1.82	1.82	-
Northumbrian Water	Gravity sewers – inspect	-	-	-

²⁰ We propose a 100% challenge to Anglian Water's network storage submission, and we therefore set 'what base buys' to zero accordingly

Northumbrian Water	Gravity sewers - rehab	37.66	77.32	39.65
Northumbrian Water	Settlement tanks	10.01	10.01	-
Northumbrian Water	Trickling Filters	1.74	1.74	-
Northumbrian Water	Network storage	16.50	16.50	-
Severn Trent Water	Boreholes	29.43	29.43	-
Severn Trent Water	Gravity sewers - inspect	-	-	-
Severn Trent Water	Gravity sewers - rehab	182.19	182.19	-
Severn Trent Water	Network storage	86.61	86.61	-
South West Water	Gravity sewers - inspect	-	-	-
South West Water	Gravity sewers - rehab	40.20	40.20	-
South West Water	Rapid Gravity Filters	10.30	10.30	-
South West Water	Settlement tanks	8.00	8.00	-
South West Water	Trickling Filters	10.30	10.30	-
South West Water	Network storage	4.00	4.00	-
Southern Water	Boreholes	4.00	4.00	-
Southern Water	Gravity sewers - inspect	0.85	-	(0.85)
Southern Water	Network storage	22.00	22.00	-
Thames Water	Gravity sewers - inspect	-	-	-
United Utilities	Boreholes	6.35	6.35	-
United Utilities	Gravity sewers - inspect	-	-	-
United Utilities	Gravity sewers - rehab	205.07	205.07	-
United Utilities	Rapid Gravity Filters	8.51	8.51	-
United Utilities	Trickling Filters	6.47	6.47	-
United Utilities	Network storage	55.66	55.66	-
Wessex Water	Boreholes	2.03	2.03	-
Wessex Water	Gravity sewers - inspect	-	-	-
Wessex Water	Gravity sewers - rehab	96.00	96.00	-
Yorkshire Water	Boreholes	5.76	5.76	-
Yorkshire Water	Trickling Filters	3.94	3.94	-
SES Water	Network storage	2.40	2.40	-

These asset classes were prioritised in part as they comprise long-life assets where an increase in asset interventions may be required to move towards a more long term sustainable rate that prevents asset condition deterioration.

The relatively low proportion of historical expenditure directed towards these asset classes raises broader questions about how companies allocate and prioritise expenditure within their PR24 base allowances. We therefore intend to explore this issue further through the asset health roadmap.²¹ As part of this work, we expect companies to report capital

²¹ Ofwat, '[Roadmap for enhancing asset health understanding in the water sector](#)', December 2024.

maintenance expenditure across the full common asset inventory recently developed collaboratively with the sector. This will improve transparency on how base allowances are being deployed across different asset classes and help support a more informed assessment of future capital maintenance needs and priorities.

4. Scope boundaries

A number of cost change process submissions requested funding for elements which we have defined as out of scope of the asset health reopener. In this section, we explain our rationale for any **out-of-scope exclusions** we have made. We have applied the same principles consistently across all submissions, noting both in this overview and in the deep dive write ups any exceptions we have made and the justifications for these exceptions.

In our Asset Health Investment guidance we stated that "investment cases submitted through the cost change process should be focused on capital maintenance interventions to improve the overall health of the asset. We therefore consider that refurbishment and replacement capital maintenance data is most relevant to determining what base buys for this type of investment".²² We also stated in our guidance that investment proposals may be required to: address a step-change in direct risks to assets from external factors; address a step change in risk because of higher-than-expected rates of deterioration; and/or address high consequence risks for assets that require infrequent but major investment.²³ Therefore, **activities where the primary driver is not improving asset health are considered out of scope** of the asset health reopener and their costs have been excluded.

4.1 Examples of activities considered out of scope

- **Decommissioning of assets (where it is not in association with recent wider site works).** Decommissioning activities associated with sites that are out of recent service, we consider are unlikely to pose a (loss of service) risk that would need addressing outside of standard price review submission windows
- **Strategic reviews/ Pre AMP9 (2030–2035) Investigatory work** We consider that these activities are not capital maintenance activities. Activities associated with; feasibility, surveys and outline design should be funded through existing base allowances, as we consider these are normal operational activities. Innovation based activities are also considered out of scope, as there are existing alternative workstreams for funding these activities which by nature are less certain in terms of costs vs benefits.
- **Asset Inspections (Except for Gravity Sewer Inspections).** Activities associated with inspections should be funded through existing base allowances, as we consider these are normal operational activities, and are therefore out of scope of the asset health reopener.
- **Adjacent and Ancillary Asset components (such as inlet works and storm tanks).** We have previously said that investment should be mainly related to the primary components of priority assets as identified in our Asset Health Condition Methodology we published with Binnies. These components largely reflect what are seen to be long

²² Ofwat, '[Asset-Health-Assessment-Guidance.pdf](#)', December 2022, p. 22. Whilst this statement is directed at 'what base buys', it demonstrates the types of interventions we consider capital maintenance and therefore what interventions should be included in the cost change process.

²³ Ofwat, '[Asset-Health-Assessment-Guidance.pdf](#)', December 2022, p. 6

life assets, which company's state current base costs are likely to be insufficient to cover. Non-priority assets, or components that are not listed should be addressed within a company's current base funding and therefore are out of scope of the Asset Health reopener.²⁴

- **Control and monitoring.** We provide a list of ancillary items that we consider as out of scope of this cost change process in our gravity sewer investment assessment guidance²⁵. We will continue to review the scope in the future.
- **Out of service assets.** In our assessment, we considered the primary driver for sites not currently in use and identified that returning them to service is primarily associated with increased resilience to supply and not asset health. This is because, if an asset has already failed, then there is limited likelihood of further direct consequence of deterioration on supply. This applies to sites that have been out of supply prior to October 2023. We have used a cut-off date of October 2023 for inclusions, as this was the initial Business Plan submission deadline for PR24. For assets that were out of supply before this deadline, the company had the opportunity to request funding for any respective work at PR24. As such if an asset has been out of supply prior to October 2023 then we classify this as out of scope of the Asset Health Reopener. Where an asset was taken out of service after October 2023, then there would not have been an opportunity to request funding for it as part of the PR24 business plan. We therefore consider this to be as restoring current asset health and classify this as within the scope of the Asset Health reopener. We have applied this principle across all submissions.

4.2 Exceptions

We set out below the exceptions where we have not applied the above principles and provide our reasoning for each case below.

- **Northumbrian Water – water network storage.** One reservoir (with 2 compartments) was listed as out of service in this submission. In other submissions under this asset health reopener, where an asset has been out of service since before October 2023, we consider these to be out of scope of the asset health claim. However, because Northumbrian Water included the site in its PR24 submission for additional funding under a cost adjustment claim, we consider the site as an exception.^{Error! Bookmark not defined.} We have therefore included it within scope of this assessment
- **Severn Trent Water – boreholes – decommissioning.** As per our criteria described above, any standalone decommissioning activities proposed (not associated with recent works at a site), are out of scope of the asset health reopener. However, we include the costs associated with, a site at Severn Trent as the proposed backfilling

²⁴ Binnies, 'Enhancing Asset Health Understanding Workstream – Ofwat', October 2025; Binnies, 'Report template (for digital use)', 'Report template (for digital use)', and 'Report template (for digital use)', October 2025

²⁵ Ofwat, 'Ofwat-gravity-sewers-assessment-guidance-final-1.pdf', February

2026 <https://www.ofwat.gov.uk/wp-content/uploads/2026/03/Ofwat-gravity-sewers-assessment-guidance-final-1.pdf>, p. 25

represents close out activities from works done in base allowances in the last investment planning period. We therefore consider this as an exception and include it within the cost change process.²⁶

- **Severn Trent Water – water network storage.** One service reservoir (with five cells total) 2 cells of which were listed as out of service in this submission. In other submissions under this asset health reopener, where an asset has been out of service since before October 2023, we would consider these to be out of scope of the asset health claim. However, as the company's proposed solution was a twin celled service reservoir replacing all 5 cells, we have therefore decided to include the cost associated with these out of service cells due to these forming part of a wider scheme.

²⁶ Severn Trent Water, Query Response 'OFW-SVE-CCP-015', July 2026

5. Gravity sewers

5.1 Gravity sewer inspections

To improve the understanding of the health of the gravity sewers asset base, we have issued a data request to all wastewater companies to provide visual inspection data on a random, representative sample of 0.5% of gravity sewers. Using visual inspections provides a detailed view of the health of these assets rather than relying on proxy data to infer their health.

To ensure the CCTV data is on a representative sample, and therefore the data received is reflective of the wider asset base, the sector agreed on key cohorts that need to be captured in the 0.5% sample: age, diameter, material, type, and if it was previously a private sewer.

Where companies considered existing base expenditure allowances insufficient to deliver these surveys, they were given the opportunity to submit an investment proposal through the cost change process. As set out in our assessment guidance, companies were required to submit to Ofwat:²⁷

- Their **sampling approach**: the overall lengths of gravity sewers split by the above mentioned cohorts, along with their proposed lengths of inspections by cohort²⁸
- **Costing**: the unit costs, and overall costs to undertake the CCTV inspections of the gravity sewers
- Evidence of **options considered**, e.g. CCTV survey or other technology
- Company view of '**what base buys**'

Sector summary

Ten companies²⁹ submitted investment proposals, with a total request of £42.55 million across the sector to deliver approximately 3,408km sampled length. Yorkshire Water did not submit an investment proposal for this data request. We required a minimum of 5km for any cohort in order to be able to infer the condition of the wider population. Key aspects of the approach included:

- **Additional surveys**: Where companies considered they had unique challenges, for example, specific material types, delivering the 5km minimum cohort lengths, or there were other benefits to increasing the random sample size, then we allowed companies to submit investment proposals to survey beyond the 0.5%.³⁰

²⁷ Ofwat, '[Ofwat-gravity-sewers-assessment-guidance-final-1.pdf](#)', February 2026

²⁸ This was also provided by Yorkshire Water, who have not submitted an investment proposal, but have indicated an intention to do so as part of the Cost Change Process 2027

²⁹ Anglian Water, Dŵr Cymru, Hafren Dyfrdwy, Northumbrian Water, Severn Trent Water, Southern Water, South West Water, Thames Water, United Utilities, and Wessex Water.

³⁰ This was requested by Dŵr Cymru and Severn Trent Water

- **Sampling approach:** In the gravity sewers investment assessment guidance, we stated that companies need to submit their overall cohort lengths and proposed sample lengths. We also required visibility of company methodologies so that the sample is representative of the wider gravity sewer asset base.³¹ We queried four of the ten company submissions related to their sampling sizes and methodologies, asking them to provide further details on their approach and that the corresponding results would be representative of the wider asset base.³² Following responses to our queries we were satisfied that all have an appropriate approach in place.
- **Unit Costs:** We received submissions for gravity sewer inspections from ten companies.³³ We calculated a unit cost in £/metre by dividing the request by the total submission length, including requests above the minimum sewer length. Costs ranged from £3.41/metre to £29.99/metre, with a median unit cost of £12.70/metre.
- **Cost breakdown:** Except for United Utilities, all companies specified the unit cost of the required inspections, including a description and a detailed breakdown of the components comprising the unit cost. We note that cleaning and/or silt removal is one of the key components in the 'direct cost'. Most companies were able to differentiate the cleaning cost from the overall unit cost, except Anglian Water and Southern Water. Other components of 'direct cost' include 'traffic management' and 'road permits'. Similarly, seven companies³⁴ were able to describe or specify the elements associated with the 'indirect costs' (for example corporate overhead, project overhead) in their unit cost breakdown.
- **Options considered:** We asked companies to evidence the options considered for inspecting the sewers. Multiple companies considered a mix of traditional methods such as CCTV inspection, man entry, acoustic/sonars techniques and innovative methods, including robotic and artificial intelligence (AI) inspections, laser profiling, digital monitoring (sensors and digital twins), drones (for large sewers) within their optioneering.

What Base Buys

As set out in section 3, we set 'what base buys' (implicit allowance) to zero for gravity sewer inspections. This is because the representative inspection programmes considered through the cost change process are additional to business-as-usual inspection activities, such as the inspection of known high-risk sewers.

Timings

³¹ Ofwat, '[Ofwat-gravity-sewers-assessment-guidance-final-1.pdf](#)', February 2026

³² Southern Water, Anglian Water, Wessex Water, Thames Water

³³ Anglian Water, Hafren Dyfrdwy, Northumbrian Water, Southern Water, Severn Trent Water, South West Water, Thames Water, United Utilities, Dŵr Cymru, and Wessex Water

³⁴ Dŵr Cymru, Hafren Dyfrdwy, Northumbrian Water, Severn Trent Water, South West Water, Thames Water, and Wessex Water.

In our data request to companies, we set out that the random sampling should be delivered by 28 July 2028 to inform the submission of the PR29 business cases. Five companies have proposed extending the delivery of the survey beyond 2028 in their submissions.³⁵

We propose to retain the 2028 target date for the delivery of gravity sewer inspection, given the importance of this data for informing the PR29 methodology, including the long term asset health investment approach. Companies must deliver the required gravity sewers inspection before **28th July 2028**.

Our decision at draft determination

Our decisions at draft determination can be found in the relevant company letters.³⁶

5.2 Gravity sewer rehabilitation Costs

Company data submission

In March of 2026, we shared a data request with the sector to gather sector-wide cost information on sewer rehabilitation. This asked companies to provide a range of forecast costs for different interventions and cost drivers. The scope was standard public gravity sewers (including privately transferred sewers), with a diameter of < 1500mm, and not including complex below-and-above-ground crossings, as per section 2.1.1 of the gravity sewers guidance.³⁷

- For each intervention type, companies were asked to provide a minimum, average, and maximum cost.
- We also asked for cost forecasts split by location and by pipe size, as these factors have been commonly identified by the sector as key cost drivers.

We allowed companies to report additional factors where there was a proven, material difference in costs that they expect to influence their AMP8 sewer rehabilitation programme.

We received submissions from ten water and sewerage companies (WASCs) in May 2026.³⁸ We made a number of assumptions and cleaned the data to get coherent and robust numbers.³⁹

³⁵ Anglian Water, Northumbrian Water, Thames Water, Wessex Water and United Utilities

³⁶ Cost change draft determinations 2026 for each company, which set out the impact of our decisions on the company's price controls, how we fund the company's expenditure allowances and our assessment of, and decision on the company's submitted claims.

³⁷ Ofwat, '[Ofwat-gravity-sewers-assessment-guidance-final-1.pdf](#)', February 2026

³⁸ We did not receive data from Hafren Dyfrdwy, but assume this was part of Severn Trent's data submission.

³⁹ For Thames water, we received a submission relating to "London" and one relating to "Provinces". We average the costs across the two submissions/provinces and use this new averaged figure as a more representative cost for Thames' analysis. We also omit location analysis for Thames, due to uncertainty in triangulating an accurate figure for an intervention from their cost ranges. Severn Trent provided a cost of £940/metre for relining merged across its location categories. We took this to mean that the cost is unaffected by location. South West Water has

Overall Costs

The data request asked for costs for five intervention types. Our draft determination assessment is based on unit costs for three of these intervention types: pipe rehabilitation by relining, pipe replacement by trenchless methods, and pipe replacement by excavation.⁴⁰

- For **pipe rehabilitation by relining**, the median of forecast average unit costs reported was £697 per metre.
- For **pipe replacement by trenchless methods**, the median of forecast average unit costs reported was £1,170 per metre.
- For **pipe replacement by excavation**, the median of forecast average unit costs reported was £1,910 per metre.

The wider dataset shows significant variation in reported costs across all three categories, by factors of x5 up to x10. Reported average unit costs for relining range from £249 per metre to £2,594 per metre (x10 times as high).

Diameter Size

Unit costs are affected by pipe diameter. Reported unit costs generally increase as pipe size increases for the main intervention types.

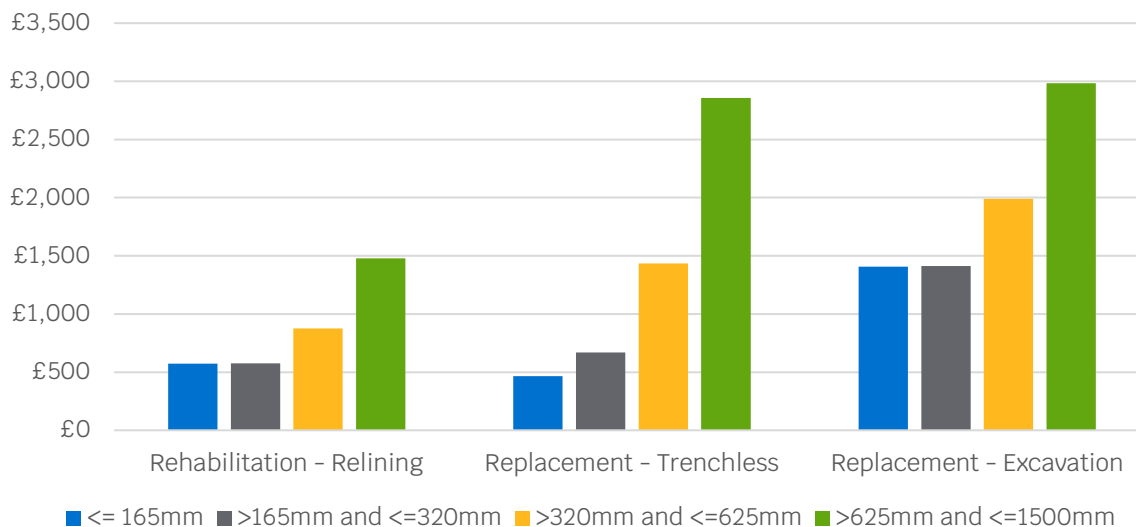
- For **pipe rehabilitation by relining**, the median of reported average unit cost rises from £574 per metre for sewers of 165mm or below to £1,479 per metre for sewers above 625mm.
- For **pipe replacement by trenchless methods**, the median rises from around £464 per metre to around £2,856 per metre.
- For **pipe replacement by excavation**, the median rises from £1,406 per metre to around £2,984 per metre across the same diameter range.

This provides a reasonable basis for recognising diameter as a cost driver in gravity sewer rehabilitation. The dataset shows that larger diameter sewers are more costly to intervene on than smaller diameter sewers, and this pattern is consistent across the main intervention categories.

provided both urban and rural costs, United Utilities has provided traffic management costs, Anglian Water has private land costs, Yorkshire Water has no reinstatement costs and Wessex water has private land costs which we all exclude due to uncertainty in categorising these costs into the respective categories. Yorkshire Water provided both "contractor only" and "including YW costs"; we have used the latter as we find this to be more representative of actual costs.

⁴⁰ We excluded data for the intervention types 'Pipe rehabilitation – rerounding/other', 'Localised repairs (manhole sealing, patch repair)', and 'Other – please specify'. While we had up to 8 data points for localised repairs (depending on the data cut), the costs were generally very high (median of reported average is £2,521/metre) and harder to interpret. We only received one data point each for rerounding and 'Other', and do not present this.

Figure 3: Median costs by diameter



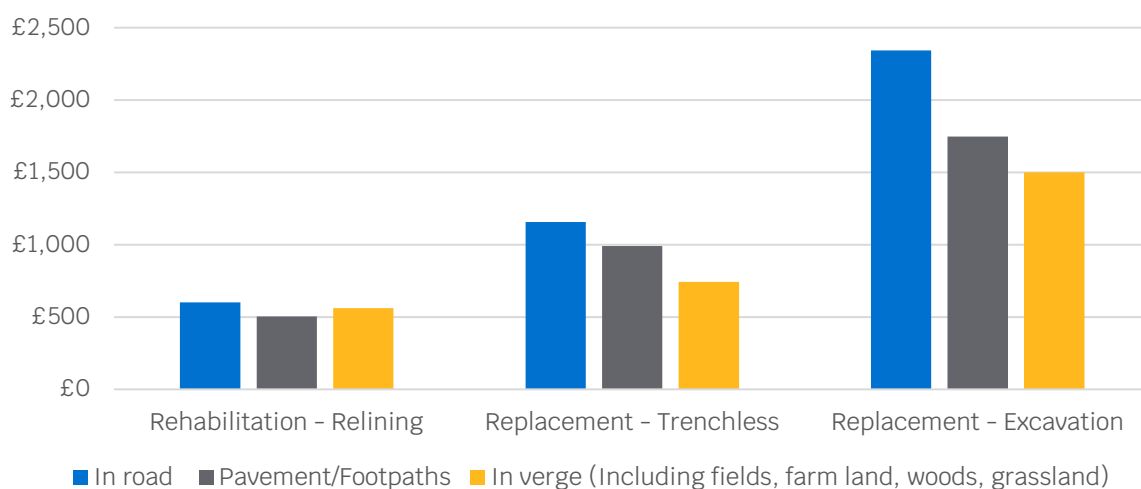
Note: Data cleaning steps are set out above

Location

The data request asked for forecast costs, by intervention type, for "in road" and "in verge", as well as allowing companies to specify additional locations. Companies provided ample additional data in this section. We grouped the locations as follows, to approximate the surface type, a key cost driver:

- In road
- Under pavement / footpaths
- In verge (including fields, farm land, woods, grassland)

Figure 4: Median costs by location



Note: Data cleaning steps are set out above

As we would expect, relining interventions are less sensitive to location, whereas excavation is more sensitive to it, with works in the road costing more than 50% more than in verges.

Informing our draft determinations

We received submissions from six companies.⁴¹ We assessed companies' unit costs using both the analysis presented above, as well as a simple median unit cost analysis.

- As set out above, the median of average costs in the cost submission was £697/metre for relining, £1,170/metre for trenchless replacement, and £1,910/metre for replacement by excavation.
- Additionally, we calculated unit costs across company submissions, which ranged from £268/metre to £2,304/metre, with a median cost of £604/metre.

We used this data to inform the deep dive assessments. The full assessments for these submissions can be read in the relevant company letters.⁴²

⁴¹ Anglian Water, Northumbrian Water, Severn Trent Water, South West Water, United Utilities, and Wessex Water

⁴² Cost change draft determinations 2026 for each company, which set out the impact of our decisions on the company's price controls, how we fund the company's expenditure allowances and our assessment of, and decision on the company's submitted claims

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