



Accelerating Investment

Cost Change Submission 2026

Draft Determination Representation

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Chief Executive Officer's Foreword

We are keen to accelerate the investments that will deliver improvements for our customers and the environment now.

We welcome Ofwat's draft determination on our cost change submission as it recognises the need for further investment in our region to improve the condition of our assets and respond to emerging growth.

Our submission represented a 'no regrets package', with projects that deliver benefit to customers now. We are pleased to see Ofwat substantially accept the need for investment set out in our submission, with the main exception being the proposed investment in cyber security.

We remain of the view that cyber security risks are increasing and that significant investment is required to protect our assets from future attacks. However, we recognise the points made within the Ofwat feedback that the sector is awaiting new legislation / guidance and there may be some benefit to aligning our investment plans to these. Therefore, we will work with Ofwat ahead of the 2027 cost change submission to explore this further. In the meantime, we will engage with the government in responding to this evolving challenge.

We provide further information and evidence regarding the remainder of our submission, responding to areas where Ofwat has sought further clarification and points of detail.

Our primary concern with the draft determination is the lack of in-period funding relating to the investment that must take place over the next three years. A key benefit of the cost change process was the acceleration of future costs and to smooth the bill impacts. Investing early and smoothing the bill effects helps mitigate future bill rises that are expected for the 2030-35 period. Our customers have consistently told us that they favour smooth bill profiles rather than sharp increases.

We are also concerned about the financeability of the investment absent any in-period funding. Additional investment now places greater demands on our cash flow. Without appropriate in-period funding, we may have to curtail our ambitions to accelerate investment, deferring spend to 2030-35. The draft determination could have a material adverse effect on our notional credit metrics if recovery is deferred to end of period, and this would compound with the further submissions we expect in 2027.

We are keen to engage with Ofwat ahead of its final determination. We have already started the process of developing our 2027 cost change submission to further build on our investment plans, delivering for the people who live and visit our region, and the places they love for generations to come.

An important factor for our response is my commitment to improve the delivery of our plans for customers and the environment. Since I joined, we have already made significant steps forward, including reshaping our asset delivery with responsibility under a Chief Asset Officer. Together with cost change, we are committed to deliver both our existing and these additional investments.

Keith Haslett
Chief Executive Officer, Pennon Group



Chair's Statement

The Board has provided oversight, direction and challenge throughout the development of Pennon's cost change submission and this response to Ofwat's draft determination.

The Board was briefed throughout the cost change process, including our consideration of the draft determination and Pennon's proposed response at the September 2026 Pennon Group Board Meeting. The Board has challenged the underlying investment cases, the approach to delivery and the implications of the draft determination for customers and the Group's financial resilience.

I can confirm that the Board is satisfied that:

- the response reflects Pennon's strategic priorities and its commitment to improving outcomes for customers and the environment;
- the investment proposals are supported by an appropriate evidence base and are capable of being delivered within the 2025–30 regulatory period;
- the response appropriately addresses the areas where Ofwat has requested further evidence or clarification; and
- the approach to affordability and financeability is consistent with the Board's responsibility to maintain the long-term resilience of the business.

Affordability remains a key priority for the Board. We support the use of the cost change process to bring forward necessary investment where this delivers earlier benefits for customers and the environment, while avoiding unnecessary volatility in customer bills.

The Board will continue to oversee the development and delivery of the investment programme and the further evidence required for the 2027 cost change process.

David Sproul
Chair, Pennon Group



“

I think they absolutely need to invest. We need the infrastructure.

Female, ABC1, SWW

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“

Better to 'get on with it now' as the later it's left the more work it will be.

Male, C2DE, SWW

”

Executive summary

We welcome Ofwat's cost change process.

The process enables water companies to more dynamically respond to emerging priority areas outside of the normal five-year cycle. We are pleased to see that Ofwat's draft determination recognises the need for further investment in our region to improve the condition of our assets and respond to emerging growth.

Our cost change submission covered three areas:

- **Asset health** – We were pleased to see that Ofwat accepted the vast majority of our asset health proposals. There were a few areas where Ofwat provided challenge and highlighted areas where we should provide further evidence. We set out in our response further evidence on investment needs, and the efficiency of our costs – for example, we commissioned Cumming Group to undertake an independent benchmarking assessment of proposed costs to provide further confidence that our cost estimates are appropriate.
- **Growth** – We were pleased to see that Ofwat accepted our growth proposal in its entirety. We note that Ofwat highlighted the need for us to provide further evidence that the full proposed investment is attributable to higher than expected demand growth. We provide further evidence in our response to support this.
- **Cyber** – We were disappointed to see Ofwat not support the need for investment into cyber security at this time. We remain of the view that cyber security risks are increasing and that significant investment is required to protect our assets from future attacks. However, we recognise the points made within the Ofwat feedback that the sector is awaiting new legislation / guidance and there may be some benefit to aligning our investment plans to these. Therefore, we will consider our cyber business case for next year, and in the meantime engage with the government in responding to this evolving challenge. We provide evidence of the need as part of this response to support that process.

Our primary concern with the draft determination is the lack of in-period funding. A key benefit of the cost change approach is that, by bringing forward investment, customer bills can be smoothed over time. Deferring cost recovery to AMP9 will lead to a material increase in bills in 2030. Our customers have consistently told us that they value smooth bill profiles.

We are concerned about the financeability of the cost change investment absent in-period funding. In its draft determination Ofwat recognised that we may face a financeability constraint, but argued that totex underspend would mitigate this risk. While there was some underspend in year one of our enhancement programme, this was materially offset by overspend on base. Our cost change submission is substantially base expenditure for asset health. We are not forecasting to underspend on base expenditure over the control period, and certainly not to the extent that would offset the need for in-period revenue allowances.

We are making good progress on the delivery of our investment programme. As highlighted in our delivery plan, there are zero programmes with high risks and insufficient mitigation plans. In some areas we have accelerated our plans and are forecasting to deliver early for eight PCDs. Where we saw some specific areas of underspend, this is due to increased design and planning. For areas such as metering and mains replacement highlighted by Ofwat, this was a timing difference and we have already committed to Ofwat to deliver additional smart meters during AMP8. Rather than investing in old technology, we are accelerating smart metering which will efficiently deliver more for customers for the long term.

We have continued to engage with our regulators and customers. We have met with the Environment Agency, who on 23 September provided a letter which confirmed its support for both the Newquay growth and Fowey foreshore sewer schemes. We acknowledge that additional engagement is required on both schemes, and we will continue to liaise with the Environment Agency ahead of the Final Determination. Equally, we have engaged with the Drinking Water Inspectorate, and on 14 September we received a letter stating that the 'Inspectorate commended these schemes for support'. We also held two engagement sessions with our WaterShare+ panel on 11 September and 18 September, which involves representatives from the Environment Agency and CCW, where we reiterated our original submission, provided an update on the outcome of Ofwat's draft determination, and our proposed representation approach. A letter from the WaterShare+ panel accompanies our response under Appendix 1.

The below table summarises our updated proposals.

Table 1: Cost change submission

2022/23 prices	Cost change investment £m	Revenue (AMP8)	RCV adjustment (2030)	Avg. bill increase p.a. 2027-2030	Avg. bill impact in 2030
SWW – Water	49.2	8.9	46.8	£7	£4
SWW – Wastewater	99.6	15.6	91.7	£10	£6
SES Water	10.3	1.1	9.9	£3	£2
Bristol Water	31.1	3.5	29.4	£3	£2
Total	190.2	29.1	177.8		

As signalled in our cost change submission, we intend to make a further submission in 2027 on other emerging areas, and will share with Ofwat in due course once we have further developed the supporting evidence base. This submission summarises a series of needs statements for discussion with Ofwat.

We are keen to continue engaging with Ofwat (and other key stakeholders) through the cost change process to further unlock investment that benefits our customers and the environment.

Summary of how we respond to Ofwat requests

Ofwat request by area/scheme	Summary of our response	Section in document
In-period funding Demonstrate that we are “not behind” on 2025/26 delivery and had underspent on year 1 PCD allowances – and that any reduction in financial ratios as a result of additional expenditure may be mitigated by this underspend.	Although enhancement expenditure in 2025/26 was below the allowance, this was largely offset by an overspend on base costs; as most of cost change is base expenditure for asset health, the total expenditure position in 2025/26 (rather than just PCDs or enhancement expenditure).	The need for in-period funding
Schemes that could impact protected environmental sites Confirm which proposed schemes could impact protect environmental sites.	Four sites sit adjacent to or within protected sites. Three of these will be completed within our existing site boundary, and the fourth will be completed with relevant mitigations in place to limit impact.	Further evidence on our cases – Asset Health
Needs – RGFs (Northcombe, Bratton Fleming, Littleton and Stowey); Water network storage (Littleton /Alderney) Formal evidence of support from DWI for the schemes, which was referenced in the submission but not supplied.	The DWI commended the water storage element for all of these schemes for support.	Engagement with the Drinking Water Inspectorate (DWI)
Needs – Carnon Downs WWTW (Settlement tanks and Trickle Filters) Justification and evidence that full relocation and rebuild of the works is the best value option for customers.	We acknowledge Ofwat's position regarding the treatment of wider site replacement costs as outside the scope of the 2026 process.	Cases where we are not providing further evidence at this time
Needs – BRL – Water network storage Littleton (£5.3m conditional) To achieve a Pass at final determination, the company should provide sufficient and convincing evidence that funding for Littleton Water Treatment Works water storage tank sits separate to any previously funded investment.	We have provided additional evidence that the new Treated Water Tank (under Cost Change) is completely independent of the existing treatment processes which are being upgraded under PR24 funding and the planned AMP8 base spend.	Further evidence on our cases – Asset Health
Need – SWW – Growth Newquay WwTW - Investment need has been agreed with the EA. - Investment need driven by higher demand growth.	- Details on our previous and ongoing engagement with the Environment Agency have been provided. - We provide further evidence that forecast residential, commercial, and peak tourist demand growth will exceed the design capacity of the WwTW. These demand pressures could not reasonably have been anticipated at the time the schemes were originally constructed or subsequently upgraded.	Growth – Need for investment at Newquay WwTW
Investment Delivery Plan – SWW – Water network storage – Alderney Evidence of quantified delivery risks at a scheme level to be provided in the company's response.	The principal delivery challenge is to replace or reconstruct large civil assets without compromising the operation of the associated treatment works, the integrity of the disinfection process, treated-water quality or continuity of supply.	Delivery risks
Investment Delivery Plan – SWW – Gravity Sewers – programme and Fowey - Evidence that specific risks associated with the delivery of the proposed schemes (both the gravity sewer and Fowey schemes) have been identified and mitigations put in place. - Evidence of engagement with the relevant bodies (the Environment Agency and local authorities) for the Fowey scheme in particular.	Material uncertainties, interfaces and constraints have been identified, reflected in the selected solutions, cost estimates and delivery programmes. These risks will be actively managed through design development, procurement, construction, commissioning and operational handover.	Delivery risks
Investment Delivery Plan – SES – Water network storage – Kenley Evidence of quantified delivery risks at a scheme level.	Detail available in our Delivery risks section on Kenley.	Delivery risks

Ofwat request by area/scheme	Summary of our response	Section in document
Cost efficiency – Carnon Downs WwTW and Helston WwTW - Evidence demonstrating that proposed costs are efficient, e.g. through independent benchmarking. - More information on cost breakdown proposed at Carnon Downs.	- Cumming Group undertook an independent benchmarking assessment of the total costs of our schemes and found them to be within the benchmark range. - We provided a detailed description of cost activities at Carnon Downs.	Further evidence on our cases – Asset health
Cost efficiency – Bristol’s water network storage (Littleton, Stowey, Barrow) - Value of costs not directly comparable with unit cost benchmarks (the main costs not directly comparable with our unit cost benchmarks are demolition costs, pipework/ allied works and survey and design costs). - Demonstration that these costs are efficient, e.g. through historical delivery evidence or comparable cost evidence.	- We provided a cost breakdown, taken from our May submission’s technical annexes. - We provided additional evidence demonstrating that our schemes are efficient. This includes: 1) Cumming Group’s independent benchmarking assessment of total scheme costs, which found that all three schemes are consistent with efficient delivery as they fall within Cumming Group’s benchmark ranges for comparable interventions; 2) an updated unit cost cross-checks excluding non-comparable cost elements, which found that Littleton’s unit costs fall within the benchmark range; 3) further evidence that the cost categories not directly comparable with unit cost benchmarks, including pipework and allied works and design costs, are efficient.	Further evidence on our cases – Asset health
Cost efficiency – SES’s network storage Evidence to justify the location uplift.	- In our May submission, we explained that our consultant Cumming Group considers appropriate to apply a location uplift as part of developing costs. - We are developing SES specific costing approaches to further evidence the need for an SES location uplift which we will consider for future submissions, and therefore recognise Ofwat’s position for 2026.	Cases where we are not providing further evidence at this time

Based on our response, the funding requested in our cost change submission is:

Region	Category	Site	Description	£m (22/23)
	Asset Health – Rapid Gravity Filter	Northcombe Water Treatment Works	The proposed funding will replace the ten primary treatment filter processes at Northcombe Water Treatment Works. This addresses the underlying risks of assets operating beyond design life with progressive structural deterioration, persistent base leakage and widespread corrosion/coating failure, where isolated repairs have not stopped deterioration and defects continue to recur.	17.6
	Asset Health – Wastewater Treatment Works	Carnon Downs Wastewater Treatment Works	The proposed funding will enable the targeted replacement of filters and associated treatment components within the existing site footprint.	8.8
		Helston Wastewater Treatment Works	The proposed funding will deliver a targeted asset replacement by demolishing and decommissioning trickle filters, and constructing a new modern equivalent treatment stream, with the existing trickle filters taken out of service and abandoned. This targeted replacement will deliver immediate benefits by restoring robust secondary treatment and strengthening confidence in stable permitted performance and water quality protection, while improving resilience to asset failure and reducing the likelihood of unplanned outages and operational risk events, it also improves health and safety outcomes and reduces ongoing operator intervention requirements.	6.6
	Asset Health – Sewers	Gravity sewer condition inspections – multiple sites	Delivering 120km of gravity sewer CCTV condition inspections that provides a representative sample of the wider gravity sewer network, in line with Ofwat's sewer condition data request. Delivery will be within AMP8 and reported as a defined output (km surveyed) to support Ofwat's sewer condition data request. The programme will provide a statistically robust, unbiased condition dataset that improves understanding of gravity sewer health, strengthens and validates deterioration modelling, and supports efficient targeting of future rehabilitation and capital maintenance.	1.5
		Gravity sewers refurbishment – multiple sites	The proposed funding will enable a step-change in gravity sewer rehabilitation during AMP8 to address deteriorating structural condition and increasing service risk that cannot be mitigated through existing PR24 base expenditure allowances. The rehabilitation programme will reduce the risk of pollution incidents, support delivery of storm overflow spill reductions, lower the likelihood of external flooding, and improve resilience to asset failure, thereby reducing operational risk events. Primarily, the investment moves us to a more long-term stable sewer rehabilitation level, which can run alongside our already increased investment in operational measures that manage service performance.	60.7
		Fowey estuary pipework	This solution encompasses a refurbishment of the Fowey foreshore gravity sewer collector system and associated lateral connections in a coastal, tidally influenced saline environment. The scope includes rehabilitation of c. 1,000m of foreshore gravity sewer pipework, primarily focused on the renewal of of the 76 lateral connections and submerged manholes. The refurbishment will reduce saline ingress and associated impacts on downstream pumping and treatment, improve operational resilience and storage effectiveness during high tide periods, and materially reduce the risk of uncontained failures (pollution, and environmental harm) in a sensitive coastal setting.	11.7
	Asset Health – Water network storage	Kenley Water Treatment Works	The proposed solution for the water network storage assets at Kenley Water Treatment Works is to replace the ageing contact tank and treated water tanks with new assets constructed in place. This forms part of a wider programme of asset replacement to address deteriorating asset condition, emerging compliance risk and resilience shortfalls funded from existing base allowances. This targeted replacement will deliver immediate benefits by strengthening drinking water quality risk control and resilience to asset failure, reducing the likelihood of unplanned outages and wider operational risk events that can arise from operating constrained or failing treatment assets.	10.3

Region	Category	Site	Description	£m (22/23)
	Asset Health – Water network storage	Littleton Water Treatment Works	The proposed funding includes water network storage assets covering raw water holding tanks upstream of treatment and the treated water tank downstream of disinfection, which are critical resilience points for buffering demand and maintaining continuous, stable supply and water quality protection prior to distribution. This forms part of a wider programme of asset replacement to address deteriorating asset condition, emerging compliance risk and resilience shortfalls funded from existing base allowances. This replaces assets where logs have recorded repeated short-term mitigations cannot address the underlying loss of structural integrity or long-term watertightness.	5.3
		Stowey Water Treatment Works	The proposed funding will deliver a targeted asset replacement to address evidenced deterioration and associated integrity risk with the site's clean water tanks. The new tanks will be constructed following demolition of the existing rapid gravity filter and storage assets and will be located within the same footprint. This targeted approach addresses the underlying causes of escalating reactive maintenance costs, which currently provide limited whole-life value. Delivering the new tanks in place of the redundant rapid gravity filter system ensures there is no increase in the overall site footprint.	3.2
		Barrow Water Treatment Works	Funding to replace the existing Barrow chlorine contact tank (compartments A & B) and associated inlet/outlet arrangements due to worsening inter-compartment leakage, defects in the combined outlet chamber, and corroded/leaking penstocks that prevent effective isolation. The solution reduces leakage/defect risks that could compromise disinfection/contact performance and lowers the likelihood of unplanned outages in a constrained system where extended outages are not feasible and resilience is limited.	18.2
	Asset Health – Water network storage	Alderney Reservoir	The proposed funding covers reconstruction of Alderney Reservoir 3, a covered treated-water service reservoir constructed in the early 1900s, to address deteriorating condition, water quality risk and resilience shortfalls. The scope includes demolition of the existing reservoir, construction of a new dual cell 40MI reservoir, construction of an intermediate pumping station, and associated pipework. The reconstruction will improve drinking water quality compliance by reducing contamination pathways associated with structural deterioration and ingress risk, and strengthen resilience of treated water storage supporting supply security.	36.0
	Growth	Newquay	The proposed solution involves the construction of a new oxidation ditch to provide permanent additional biological treatment capacity, alongside enhancements to the anoxic zones to improve process performance. Additional primary and final settlement capacity will be delivered to support increased flows and loading, supported by the replacement and upgrading of aeration blowers to ensure robust and energy-efficient operation. The scheme also includes replacement of the final effluent UV disinfection system to maintain environmental protection standards. Taken together, these interventions provide sufficient capacity and process stability to manage extreme seasonal and event driven peak loads within the design envelope, and protect sensitive coastal receiving waters.	10.3
Total 2026 Cost Change Draft Determination submission				190.2

The need for in-period funding

In-period funding is essential for smoothing customer bills and ensuring the investment is financeable

In the draft determination, Ofwat did not accept our proposals for in-period funding despite acknowledging that we may face a financeability constraint over the 2025-30 period on the basis of the notional capital structure. Ofwat said we failed to demonstrate that we are “not behind” on 2025/26 delivery and had underspent on year 1 Price Control Deliverable allowances – and that any reduction in financial ratios as a result of additional expenditure may be mitigated by this underspend.

We strongly believe that in-period recovery is supported by our AMP8 delivery, that it is essential to support financeability and investability, and consistent with customer preference for smoother bills and intergenerational equity.

The in-period revenues calculated by Ofwat in the 2026 Draft Determination cost change model total £20.9m for SWW incl BRL and £0.8m for SES. Including equity issuance costs (as outlined by Ofwat in the Draft Determinations for those companies that were granted in-period funding) of £7.1m for SWW incl BRL and £0.4m for SES would give a total in-period revenue adjustment of £28.0m for SWW (incl BRL) and £1.2m for SES.

Table 2: In-period revenue adjustment per Ofwat cost change draft determination model plus equity issuance allowances per Ofwat cost change financial model

2022/23 prices, £m	2027/28	2028/29	2029/30	Total
SWW incl BRL	4.6	6.6	16.6	28.0
SES Water	0.1	0.2	0.9	1.2
Total Pennon	4.7	6.8	17.5	29.1

We have used the Ofwat draft determination policy decisions in terms of categories of expenditure eligible for in-period funding (£177m of the £190m excluding Growth and Gravity Sewer surveys), the PR24 RCV additions run off, the PR24 equity funding assumption and the PR24 FD cost of capital relevant to Pennon. We then added Ofwat’s view of in-period equity issuance costs, as calculated in the cost change financial model.

The bill increase in AMP8 is modest. £29m of in-period revenue would increase SWW customer bills by just £10 in 2029/30 (reduced from £41m and a £13 bill increase in our original submission). The customer bill impact and the benefit of in-period funding to smoother bills is summarised in the table below:

Table 3: Impact of in-period recovery on revenue and bills

2022/23 prices	In-period revenue £m	Bill impact in 2029/30 if in-period	Bill impact in 2030/31 if end of period	Total additional cost 2030-35 if end of period
SWW – Water	8.9	£4	£5	£6
SWW – Wastewater	15.6	£6	£9	£14
SWW total	24.5	£10	£14	£20
Bristol Water	3.5	£2	£3	£3
SES Water	1.1	£2	£3	£3
Pennon total	29.1			

Totex delivery is on track

We disagree with Ofwat's suggestion that we are materially behind on delivery of our capital programme. Although enhancement expenditure in 2025/26 was below the allowance, this was largely offset by overspend on base costs. Because most of the proposed cost change is base expenditure for asset health, the total expenditure position in 2025/26, rather than just Price Control Deliverables or enhancement expenditure, is the relevant measure.

Moreover, as Ofwat acknowledges in the draft determination, we are on track to deliver our full totex programme over AMP8. The 2025/26 enhancement underspend reflects more time invested in up-front design and planning to ensure the programmes are delivered at lowest cost – to the benefit of customers – not a deferral of investment. We forecast that we will overspend in 2026/27 and 2027/28, and progress on enhancement efficiencies will determine the outcome over AMP8 overall. This is before considering the impact of reconciliation and uncertainty mechanisms, as these remain uncertain and do not affect revenue or RCV until PR29.

It would be inequitable to defer cost recovery to AMP9, putting our notional and actual financeability at risk, simply because individual totex elements have been phased differently than assumed at the final determinations.

We also disagree with Ofwat's argument in the draft determination that underspend on Price Control Deliverable water and wastewater allowances could mitigate reductions in financial ratios. Over AMP8 as a whole, the rephasing of totex will have no perceptible impact on key credit metrics.

In-period recovery is important to financeability

Investors and rating agencies value highly our ability to recover costs in a timely fashion. They are aware that, in comparable sectors like electricity transmission, in-period recovery of reopeners is now established practice. If our equity investors are required to fund these additional costs for five years, it will adversely affect the terms on which we are able to raise equity compared to peers.

It will also reduce our headroom to key credit rating thresholds. The PR24 final determination was calibrated to achieve an adjusted interest cover ratio of 1.72x for South West Water and 1.74x for SES Water on a notionally financed basis by the end of the period, providing very limited headroom to Moody's 1.6x threshold for the Baa1 rating. The PR24 determination also provided limited headroom to Ofwat's 10% threshold for FFO/debt.

This headroom will be eroded further if we are required to absorb the proposed costs during AMP8, and this would be compounded by the further submissions we expect in 2027. As shown in the figures below, based on the 2026 submission alone, AICR would fall to around 1.6x at both companies and FFO/debt to below the 10% threshold by 2030. Net debt/RCV would also rise to over 60%, absent further equity contributions.

Figure 1: Notional adjusted interest cover ratio, SWW incl BRL

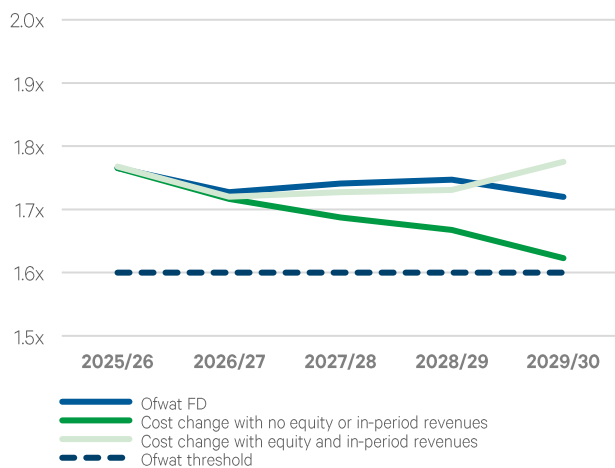


Figure 2: Notional adjusted interest cover ratio, SES

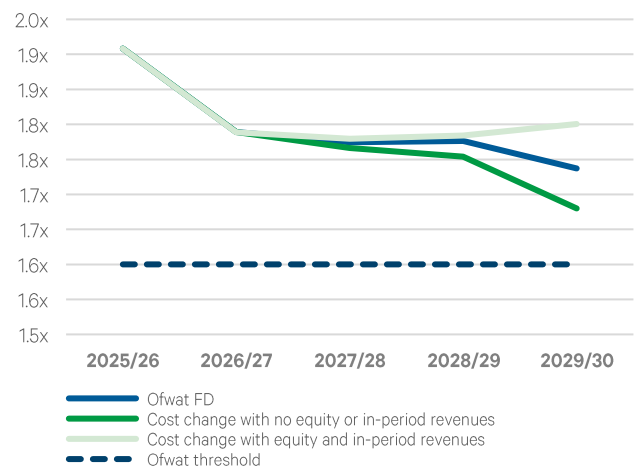


Figure 3: Notional FFO/ net debt ratio, SWW incl BRL

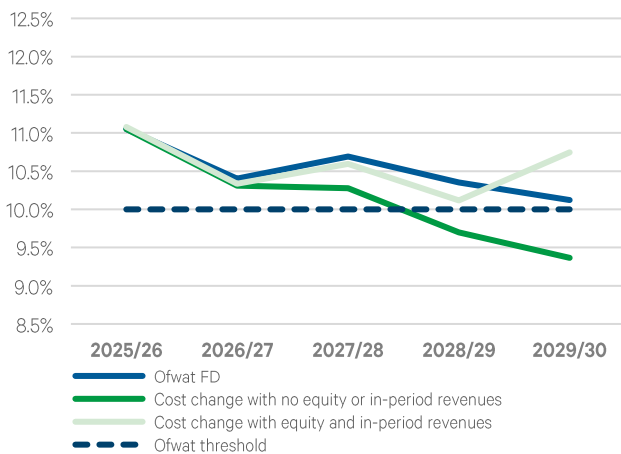


Figure 4: Notional FFO/ net debt ratio, SES

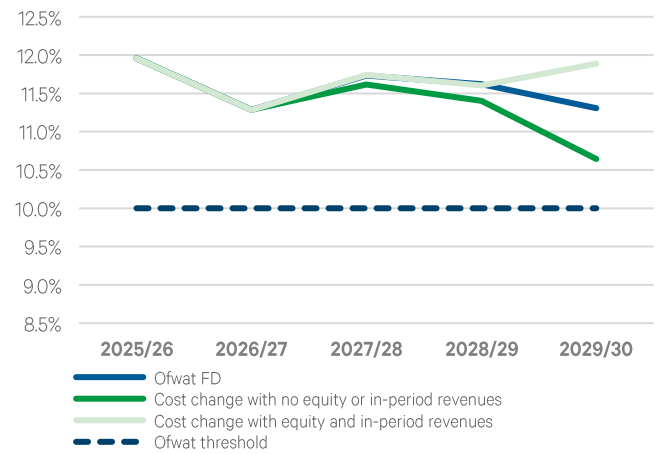


Figure 5: Notional gearing, SWW incl BRL

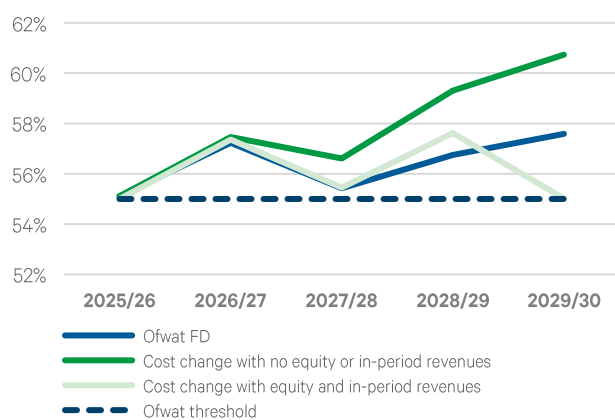
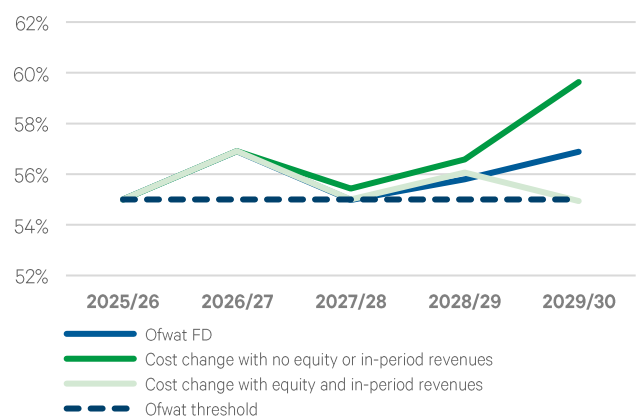


Figure 6: Notional gearing, SES



Weaker base-case credit metrics would leave us less able to respond flexibly to unforeseen risks and may ultimately require reactive or inefficient interventions. Such outcomes are unlikely to be in the long-term interests of customers, as they can increase costs, weaken financial resilience, and undermine our ability to deliver stable and sustainable services. In-period revenue recovery mitigates the extent of headroom erosion, resulting in better overall outcomes for customers.

Although we have assessed financeability on a notional basis, consistent with Ofwat's guidance, this is not a theoretical risk for us. Despite our conservative financial structure, our Baa1 rating from Moody's has a negative outlook, indicating elevated risk of a rating downgrade, largely due to weak interest coverage. Any adverse impact on cashflow or credit metrics could affect investors' willingness to fund projects and lead to materially higher financing costs.

In-period recovery provides smoother bills and intergenerational equity

We have continued to engage with our customers regarding our cost change submission; generally, customers acknowledge the need for timely intervention to address asset risk and future pressures, while also consistently emphasising the importance of affordability for all, bill smoothing, and clear justification for in-period funding.

Having in-period adjustments enables customers to pay for investment over the full life of the asset rather than requiring future customers effectively to cross-subsidise current customers.

The customer research undertaken at PR24 and confirmed in our additional research submitted with our 2026 cost change case emphasised that customers are willing to accept bill increases if the investment delivers improvements that matter to them and their local area. Affordability was supported by inter-generational equity as well as smoother changes in bills over time.

Since our original submission the expectation of a material step up in expenditure and bill levels in the 2030-35 period remains valid. In-period funding smooths bills and avoids a step change up, particularly with the expectation of further cost change requirements in 2027, including for growth, which Ofwat will need to consider the cumulative need for an element of in-period revenue.

We are also considering other potential levers to help smooth the bill profile into AMP9, including deferring the impact of ODIs. Smoothing bills and avoiding large step-ups is a key priority for us and our customers.

We recognise that there are a number of considerations for the timing of in-period revenue while still smoothing out bill changes. We welcome the opportunity to discuss this further with Ofwat although our response to the draft determination uses the output of the Ofwat cost change and bill model as that reflects the timing of expenditure.

“We remain satisfied that the proposed investment remains consistent with customer priorities and that the company has demonstrated an appropriate balance between affordability, service improvements and long-term resilience. We were supportive of the company's case on the basis of in-period revenue recovery as customers clearly prefer a smooth bill profile, with a preference for early investment.”

Lord Taylor of Goss Moor, Chair, WaterShare+ Group Panel

“

I would prefer for bill increases to be spread across longer periods and more gradually.

Female, ABC1, SES

”

Cases where we are not providing further evidence at this time

Rapid gravity filters – Bratton Fleming WTW (SWW) and Stowey and Littleton WTWs (BRL)

Ofwat did not provide funding for our requests for additional funding of £27.8m for Rapid Gravity Filters at Bratton Fleming WTW (SWW) and Stowey and Littleton WTWs (BRL) on the basis that the proposed investment had not been sufficiently demonstrated as additional to, and separable from, activities already envisaged through PR24 allowances and wider treatment works investment programmes. We understand why Ofwat needs to ensure customers are not paying twice, and whilst we do not believe this is the case, we are not in a position to provide additional evidence beyond our original business cases at this time.

These schemes remain important to progress and we will continue to develop both the schemes and supporting evidence. We expect to revisit these proposals as part of the 2027 cost change process and would welcome further discussion with Ofwat regarding the funding of these investments.

Water Network storage – Houndall Reservoir (SWW)

Ofwat adopted an industry wide policy position to consider the replacement of service reservoirs that were out of service before October 2023 as out of scope for the 2026 asset health cost change process. For us, this applied to £11.2m of funding requested for Houndall Reservoir. Whilst we accept Ofwat's position for the purposes of the 2026 process, we remain of the view that this investment will be required in the longer term to improve resilience within our network. There is currently sector-wide debate regarding the treatment of decommissioned assets, alongside wider work to develop resilience standards for the water sector. We would support Ofwat reinvigorating this discussion at its Operational Resilience Working Group to proactively consider these issues.

We also welcome the Cunliffe Review, which is supportive of outcome-based resilience standards at a system level rather than asset-specific standards. The DWI published [Guidance on Delivering Water Sufficiency using the Drinking Water Safety Planning \(DWSP\)](#) approach in August 2026, which establishes a framework for companies to assess future sufficiency and resilience risks, identify critical assets and pathways within supply systems, and prioritise investments. The guidance explicitly links sufficiency risk, asset criticality and future resilience planning. We have undertaken a similar criticality assessment for Houndall and consider the reservoir is key for improving resilience, storage headroom and security of supply in the Plymouth supply zone. We would welcome further discussion with Ofwat on this ahead of the 2027 cost change process and leading up to PR29.

Carnon Downs (SWW) WwTW site replacement (Settlement tanks and Trickling filters)

Ofwat did not provide funding for our request for full site replacement at Carnon Downs WwTW and instead limited funding to the replacement of the priority assets within the scope of the cost change process. We acknowledge Ofwat's position regarding the treatment of wider site replacement costs as outside the scope of the 2026 process. However, we are keen to progress investment at Carnon Downs as quickly as possible and therefore do not intend to challenge Ofwat's draft determination for Cost Change 2026. We welcome Ofwat's flexibility in providing funding for the in-scope priority asset classes whilst leaving the option open for us to use existing base allowances to progress the site relocation option.

Cyber Security at WwTW

Ofwat did not support our request for £12.5m of additional funding to strengthen cyber resilience across critical wastewater operational technology (OT) environments on the basis that the relevant legislative framework is not yet sufficiently developed and the future requirements remain uncertain. As explained later in our 'Look ahead to 2027' we anticipate bringing forward a targeted wastewater OT cyber resilience proposal in 2027 once the legislative and regulatory requirements have progressed further.

SES cost uplift for Kenley WTW

For Kenley WTW, Ofwat found our submission to have met the need for investment, best option for customers and customer protection criteria. On robust and efficient costs criterion, Ofwat applied an 11.5% challenge (£1.5m), effectively removing the regional uplift. We have reviewed the evidence and believe that there is evidence for an SES regional cost uplift. However, we recognise that, as Ofwat highlighted, we had based this scheme costing on SWW costs as there were no recent SES scheme data available to do the equivalent analysis. We will explore the SES cost data and differences in cost to other regions further for future submissions, but for this cost change process we do not consider we have sufficient costing information that would change Ofwat's draft decision position.

Further evidence on our cases

In this section, we provide further evidence to support our submission and respond to Ofwat queries related to the asset health and growth schemes in the table below.

Ofwat's draft determination accepted the majority of our need and cost evidence and did not raise material concerns with the overall approach to cost estimation or benchmarking. The remaining queries relate to a limited number of scheme-specific points where Ofwat requested additional supporting evidence or clarification.

Table 4 summarises the schemes for which Ofwat raised queries around cost or need and how we have addressed these by providing additional evidence. In the following sections, we address each of the points raised by Ofwat and provide further evidence demonstrating the investment need for our growth case and that our costs are efficient and appropriately benchmarked against relevant industry comparators for our asset health investments. The remainder of this section is structured as follows:

- Asset health – We provide additional evidence on cost efficiency at Carnon Downs WwTW, Helston WwTW, BRL's network storage schemes.
- Growth – We provide further evidence of higher population growth in the Newquay catchment area.

Table 4: Overview of Ofwat's assessment of selected schemes and additional evidence we provided

Scheme	Cost change request	Ofwat's assessment	Additional evidence provided
South West Water's WwTW (Carnon Downs and Helston)	We are proposing to invest £23.3m to wastewater treatment assets at Carnon Downs WwTW (£16.7m) and Helston WwTW (£6.6m).	Ofwat concluded our submission was adequate across all criteria except robust and efficient costs. Ofwat applied a 10% conditional cost challenge due to insufficient evidence on the efficiency of costs across the programme.	We do not represent on the out of scope assets but we seek to recover the 10% cost challenge by providing additional evidence from independent benchmarking to demonstrate cost efficiency of the two schemes.
Bristol Water's network storage schemes (Littleton, Stowey, Barrow)	We are proposing to invest £26.7m for network storage assets at WTWs. This includes investment for final water tanks at Littleton WTW (£5.3m) and Stowey WTW (£3.2m), and contact tanks at Barrow WTW (£18.2m)	Ofwat found our submission to be sufficient for the best option for customers, customer protection and investment delivery plan criteria. In judging the need for investment and efficient costs, Ofwat applied a conditional challenge as follows: £5.3m on the Littleton scheme under the needs for investment criterion on the grounds that more clarity is needed on how this investment is different from a previously funded activity at this scheme. 10% applied to the proportion of costs for which we have not applied a unit cost cross-check (e.g. pipeworks, design costs)	We explain how the final water storage point is independent of the AMP8 enhancement upgrade at Littleton and does not include any AMP8 base funding. We have provided additional evidence to demonstrate the cost efficiency of our three water network storage schemes. This includes independent benchmarking, updated unit cost cross-checks focused on costs that are more directly comparable to the unit cost benchmarks, and further evidence demonstrating that non-comparable cost elements, such as pipework and design costs, are efficient.
South West Water's Growth (Newquay)	We are proposing to invest £10.3m to address growth related issues at the WwTW.	On most assessment criteria, Ofwat assessed the submission as adequate and did not identify any material concerns. On need, Ofwat applied a 20% conditional challenge to our claim on the basis that additional evidence was required to demonstrate that the need for investment is attributable to higher population growth.	We have provided further evidence to address Ofwat's investment challenge, demonstrating that forecast residential, commercial, and peak tourist growth will exceed the design capacity of the WwTWs. As a result, additional investment is required to maintain sufficient capacity and accommodate future demand.

Asset health

Benchmarking – Carnon Downs WwTW and Helston WwTW

Wastewater treatment works are critical, integrated assets within the wider sewerage system, combining long-life civil structures with mechanical, electrical and process systems to deliver reliable treatment performance and protect the environment.

Our original cost change submission related to the deterioration of the core civil components that are fundamental to reliable treatment performance. These assets are at or beyond serviceable life, with issues that cannot be efficiently or sustainably mitigated through minor reports or temporary measures. Whilst in some cases isolated repairs have been attempted, we set out that more substantive intervention is required.

We welcome Ofwat's conclusion that additional investment at both Carnon Downs WwTW and Helston WwTW is required to address asset health needs. In its draft determination, Ofwat recognised that we had provided sufficient and convincing evidence that the proposed costs were developed using a robust costing methodology.¹

To support its final determination, Ofwat requested further evidence demonstrating that the proposed costs are efficient and consistent with the efficient delivery of comparable interventions, including through independent benchmarking. Ofwat also requested additional detail on the cost breakdown for the Carnon Downs scheme² which we included in our technical annex.³

To address these requirements, we commissioned Cumming Group to undertake an independent benchmarking assessment of the total proposed costs for both Carnon Downs and Helston WwTW.⁴

Cumming Group compared the costs of our schemes with costs of comparable schemes from its extensive proprietary Cost Intelligence Database and found that the proposed costs are consistent with the efficient delivery of comparable interventions and efficient, as they fall within a range of benchmarks and they are below the Cumming Group's central benchmark. Therefore, we consider that the evidential requirements associated with Ofwat's conditional assessment have been satisfied and requests that no cost challenge is applied at final determinations.

The sections below provide more detail of Cumming Group's analysis and findings, and further details on Carnon Downs' cost breakdown.

Summary of Cumming Group's independent benchmarking of Carnon Downs and Helston

Cumming Group is an established provider of cost intelligence and benchmarking services within the UK water sector and maintains a proprietary Cost Intelligence Database comprising more than 20,000 capital expenditure models. Using this database, Cumming Group independently assessed the costs of delivering schemes with comparable scope to the Carnon Downs and Helston interventions.

“

Asset health is going to save a hell of a lot over the long term.

Male, ABC1, SWW

”

¹ Ofwat, August 2026, Notification of the PR24 cost change process draft determination for South West Water, pp. 50 and 58.

² Ofwat, August 2026, Notification of the PR24 cost change process draft determination for South West Water, pp. 52 and 60.

³ See Pennon's L3 – Cost Change Submission 2026 – Technical Business Case – Carnon Downs WwTW, pp. 15.

⁴ Cumming Group, 21 September 2026, Ofwat Cost Change Support, Estimate benchmarking completion report.

The benchmarking covered direct construction costs, contractor indirect costs, and on-costs.⁵ Cumming Group developed the benchmarks using a suite of high-confidence cost data sources and established cost models aligned to the scope requirements of the Carnon Downs and Helston schemes. Where a single data source did not fully capture the required scope, multiple data sources were combined, and adjustments were applied to ensure like-for-like comparisons. Cumming Group has prioritised benchmarking data for the last 10 years and applied adjustments to account for changes in construction costs within the industry over time.

Finally, the benchmarks underwent several stages of refinement and assurance, including review by senior and peer estimators to verify that scope had been consistently interpreted and assessed on a like-for-like basis. As a further cross-check, the benchmark outputs were compared against similar asset costs, existing benchmarks, and other industry cost models. Recognising the inherent uncertainty associated with cost benchmarking, Cumming Group developed both a central estimate and an associated benchmark range.

Table 11 in Appendix 2 compares our submitted costs with Cumming Group's benchmark estimates. The results demonstrate that both schemes are efficient and fall within the benchmark ranges. Specifically:

- Carnon Downs WwTW: Pennon's total cost for the scheme is within Cumming Group's benchmark range and below the central estimate.
- Helston WwTW: Pennon's total cost for the scheme is within the Cumming Group's benchmark range, and below the central estimate.

The benchmarking therefore provides independent evidence that the proposed costs are efficient and consistent with the costs of delivering comparable interventions. We consider that this study directly addresses the evidential requirements identified by Ofwat in its draft determination.



Helston Wastewater Treatment Works

⁵ These costs include construction costs related to sludge holding tanks, sewage and sludge pumps, interworks pipework, operational building, as well as site costs, risk, design, overhead, and optimism bias.

Detailed description of Carnon Downs' cost breakdown

We have updated the original cost breakdown table included in our submission⁶ to provide further details on the activities we are planning to undertake at Carnon Downs. This is in line with the approach used for Helston, which Ofwat stated “provide sufficient visibility of the proposed activities and associated costs”.⁷

Table 5: Updated cost breakdown at Carnon Downs WwTW (£m, 2022/23 prices)

	Cost estimate (£m)	Notes
Development & assurance	0.58	Early design and planning has been partially completed by our concept team to ensure feasibility and deliverability.
Enabling & temporary work	1.33	Recognising that work will include upfront planning applications.
New MBBR process	4.63	New process on the new proposed site.
Pumping Chambers & treatment	0.88	Pumping associated with the new WwTW.
Storm tanks & EO	1.30	Construction of stormwater storage, return systems and associated emergency overflow infrastructure, including tanks, chambers, pumps, screens, flow controls and monitoring, telemetry.
Dewatering & sludge holding	0.67	New dewatering and sludge holding facilities at the new WwTW which include: collection, temporary storage, conditioning and dewatering of sludge generated by the treatment processes.
FE and Inter-process pipework	0.88	All element of pipework systems that transfer liquids, sludge, air and chemicals between treatment stages and convey treated final effluent to the permitted discharge point.
Operational buildings, kiosks & MCC	0.44	All buildings and kiosks necessary to house treatment and control facilities, i.e. PLC, instrumentation, chemical storage, etc.
Site specifics	4.06	New MCC, site security, emergency generator and telemetry. Includes the removal of contaminated materials from site.
Demolition	1.79	All cost associated with demolition of the existing WwTW to return the site to its original use.
Commissioning & handover	0.17	Training, documentation and acceptance of the new installations.
Risk/contingency	-	Optimism bias is included in the above to reflect the early-stage design of the processes outlined above.
Total	16.67	

Source: Pennon cost change submission, L3 – Cost Change Submission 2026 – Technical Business Case – Carnon Downs WwTW, pp.15.

⁶ See Pennon's L3 – Cost Change Submission 2026 – Technical Business Cases – Carnon Downs WwTW, pp. 15.

⁷ Ofwat, August 2026, Cost Change draft determination 2026 – South West Water_Redacted, pp.29.

Benchmarking – Barrow, Littleton, Stowey

Water network storage is a broad asset class that can encompass many individual assets vital for providing quality end service to customers. For the purposes of our original submission, we focused on contact and storage tanks and service reservoirs. Our proposals targeted a small number of strategically important storage assets where deterioration and consequence mean that major renewal provides the most economic whole-life outcome in AMP8.

We welcome Ofwat's view that we have provided sufficient and convincing evidence that the proposed costs for our three water network storage schemes have been developed using a robust costing methodology.

For its final determination, Ofwat requested additional evidence on the value of costs non-directly comparable with the unit cost benchmarks and demonstration that these costs are consistent with efficient delivery assumptions, for example through independent benchmarking, historical delivery evidence or comparable cost evidence. For Barrow, the most material costs excluded were demolition cost (35%), pipework/allied works (21%) and survey and design (10%). In the May submission's unit cost cross-check, we have not excluded pipework/allied works and survey design costs from Littleton and Stowey's unit costs.

To address these requirements, we commissioned Cumming Group to undertake an independent benchmarking assessment of the total proposed costs for Barrow, Stowey, and Littleton.⁸ Consistent with the approach used for Carnon Downs and Helston, Cumming Group benchmarked our schemes against comparable projects in its extensive proprietary Cost Intelligence Database. The assessment found that the proposed total costs for the three storage schemes are consistent with efficient delivery, with all three schemes' total costs falling within the benchmark range for comparable interventions.

As a further cross-check, we have also updated our unit cost analysis by removing some non-comparable costs at Littleton (and Stowey) and found that Littleton's unit costs fall within the benchmark unit cost range. The Cumming Group's PR24 benchmarking report also found that costs of those non-comparable components are efficient.

The table below summarises the additional evidence we provided, which complements the evidence set out in our May submission (summarised in the next section). As can be seen from the table we have benchmarked 100% of our schemes' costs. Therefore, we consider that the evidential requirements associated with Ofwat's conditional assessment have been satisfied and request that no cost challenge is applied at final determination.

The following sections include additional details on the additional evidence provided.

Table 6 – Summary of additional efficiency evidence beyond cost methodology and Ofwat's PR24 assessment

Cost component	Additional assessment of efficiency	Barrow contact tank (2022-23 £m)	Littleton final water tanks (2022-23 £m)	Stowey final water tank (2022-23 £m)
Total	Cumming Group independent benchmarking report demonstrated that the total costs of the three schemes are within a benchmark range of comparable interventions.	18.19	5.29	3.16
Construction costs of final water tanks and contact tank	We updated our unit cost cross-check against Cumming Group's PR24 benchmarks by excluding survey, design, and commissioning costs from the Littleton and Stowey schemes, with no changes required for Barrow. Following these adjustments, the unit costs for Littleton (and Barrow) fall within the benchmark range, while Stowey remains above it. Stowey's unit costs include pipework/allied work costs which are not directly comparable with the benchmark. We asked Cumming Group to undertake a separate independent assessment of Stowey's total costs and these were found to be efficient (see above).	6.19 (34%)	4.05 (76%)	2.60 (82%)

⁸ Cumming Group, September 2026, Ofwat Cost Change Support, Estimate benchmarking completion report.

Cost component	Additional assessment of efficiency	Barrow contact tank (2022-23 £m)	Littleton final water tanks (2022-23 £m)	Stowey final water tank (2022-23 £m)
	Furthermore, Cumming Group's PR24 assessment found the relevant pipework and design cost components to be efficient (see below), providing additional evidence that the scheme represents an efficient level of expenditure.			
Pipeworks and allied works	At PR24, Cumming Group's independent benchmarking assessment found that South West Water's costs for inter-process pumping, MMC, and operational buildings and kiosks were efficient. These interventions form part of the broader pipeworks and allied works category.	3.83 (21%)	Included in construction costs	Included in construction costs
Demolition costs	Cumming Group independently benchmarked this component and other cost component and found that total costs at Barrow and Stowey are efficient.	6.34 (35%)	No demolition costs included	No demolition costs included
Survey and design	Cumming Group on-cost report demonstrated that costs have been stable or have increased in line with prevailing market conditions. Also, these costs are relatively small compared to the cost claim.	1.82 (10%)	0.80 (15%)	0.57 (18%)
Commissioning	No additional/separate assessment undertaken given low materiality.	Included in construction costs	0.45 (8%)	Included in construction costs

Source: Pennon's analysis. The cost breakdown is taken from the "L3 – Cost Change Submission 2026 – Technical Business Cases" for Littleton, Stowey and Barrow submitted in May.

Note: the table shows the value of the cost category in £m and as a proportion of the total scheme costs. Total may not be equal to sum of parts due to rounding.

Summary of Cumming Group's independent benchmarking of Barrow, Stowey, and Littleton

Cumming Group undertook an independent benchmarking assessment of the total costs at Barrow, Stowey, and Littleton, using the same methodology used for Carnon Downs and Helston. Refer to the Carnon Downs and Helston section for more details on the approach and data used.

Table 11 in Appendix 2 compares Pennon's submitted costs with Cumming Group's benchmark estimates. The results demonstrate that the costs of the three storage schemes are efficient as they fall within the benchmark ranges. Specifically:

- Barrow contact tank: Pennon's total cost of the scheme is within the Cumming Group's benchmark rate and below its central estimate.
- Stowey final water tank: Pennon's total cost of the scheme is within the Cumming Group's benchmark rate and below its central estimate.
- Littleton final water tank: Pennon's total cost of the scheme is within the Cumming Group's benchmark rate and above its central estimate.

We note that while the total scheme cost for Littleton is above Cumming Group's central benchmark, it remains within Cumming Group's benchmark range for comparable interventions. We also note that our updated unit cost cross-check, which excludes non-comparable survey, design and commissioning costs, found that Littleton's unit costs fall within the unit cost benchmark range. In addition, Cumming Group's PR24 benchmarking assessment found these excluded cost categories to be efficient. The sections below provide further detail on these additional assessments.

Hence, this evidence together with the evidence provided in the May submission provides evidence that the proposed costs at Barrow, Stowey, and Littleton are efficient and consistent with the costs of delivering comparable interventions.

The section below provides more details of our updated unit cost cross-check and efficiency of costs not directly comparable with the unit cost benchmarks.

Updated unit cost cross-check and efficiency of not comparable costs at Littleton and Stowey

As set out in our May submission, the costs included in our unit cost cross-check are consistent with efficient delivery assumptions because:

- They have been developed using a robust methodology based on a large sample of historical delivery data and are representative of costs actually incurred.
- The methodology is consistent with the approach used to develop our PR24 Business Plan cost estimates. At PR24, Ofwat concluded that our base costs are efficient.
- As indicated in our May submission, Cumming Group independently benchmarked the direct costs of key water infrastructure and non-infrastructure activities undertaken and concluded that these costs were efficient.⁹ These activities include pipeworks and other costs relevant for these schemes. Cumming Group also reviewed our on-costs and found that changes since PR19 were consistent with prevailing market conditions and increased cost volatility.¹⁰

To provide further confidence in the efficiency of our schemes, this representation includes:

- Updated unit cost cross-checks by excluding some non-comparable costs at Littleton and Stowey. For Littleton, this analysis shows that unit costs are within benchmark range once survey and design, and commissioning costs are excluded from the assessment.
- Additional evidence on the efficiency of two of the most material cost categories that are not directly comparable with the unit cost benchmarks: survey and design costs, and pipework and allied works. This evidence includes:
 - Evidence from Cumming Group PR24 independent benchmarking report that interventions that we undertook to deliver pipeworks and allied works similar to those planned at Littleton, Stowey, and Barrow are efficient.
 - Evidence from Cumming Group's on-cost report that survey and design costs have moved in line with prevailing market conditions.

Updated unit cost cross-check for Littleton and Stowey

For Barrow, the unit cost cross-check in our submission already provides additional confidence in the efficiency of our direct costs. At the draft determination, Ofwat agreed with our assessment.

For Littleton and Stowey, we have updated our unit cost cross-check on the smaller proportion of costs that is more directly related to the construction of the final water tanks by excluding survey and design costs and commissioning costs. Table 12 in Appendix 2 summarises our updated unit cost analysis.

This assessment shows that Littleton's costs are within the benchmark range. While Stowey's costs are above the range, excluding pipeworks and allied works which are not included in the industry benchmarks would result in a unit cost closer to the benchmark. Cumming Group has also undertaken a separate independent assessment of Stowey's total costs and found them to be efficient (see section above). In addition, in the following section we provide evidence that both pipeworks and allied works, and survey and design costs are efficient.

Efficiency of pipeworks and allied works

As indicated in our submission, Cumming Group's PR24 benchmarking assessment¹¹ compared a sample of our process-level costs related to water non-infrastructure activities against costs from WRc TR61 and Cumming Group's proprietary database. The assessment found that our costs were, in aggregate, 4-6% below the benchmark comparators.¹²

The same benchmarking assessment includes disaggregated benchmarking of several activities that are classified as 'pumping and allied works', including inter-process pumping, operational buildings and kiosks, and motor control centres. Cumming Group found our costs for those activities to be lower than their benchmarks: 74% lower for inter-process pumping, at least 18% lower for operational building and kiosk, and 41% lower for motor control centre.

⁹ See Pennon's L3 – Cost Change Submission 2026 – Cost Methodology and Efficiency, pp. 7-8.

¹⁰ Ibid, p. 7.

¹¹ Chandler KBS (2023), South West Water PR24 Cost Model Benchmarking . ChandlerKBS joined Cumming Group in 2022.

¹² See Pennon's L3 – Cost Change Submission 2026 – Cost Methodology and Efficiency, pp. 7-8, Table 1.

As the pipework and allied works costs at Barrow, Littleton and Stowey were derived from the same process-level costs benchmarked by Cumming Group, these findings provide further independent evidence that the costs associated with these schemes are efficient.

Efficiency of survey and design costs

We note that costs associated with survey and design are a relatively small proportion of the cost claim: only 10% for Barrow and less than 18% for Littleton and Stowey.

As explained in our submission,¹³ we have developed indirect and on-cost costs using a robust methodology supported by an empirical dataset of a large number of schemes, which has been tested and validated by Cumming Group and used to inform our PR19 and PR24 base costs. These costs were deemed to be efficient by Ofwat (SWB was fast-tracked at PR19, and SWB and BRL's base costs were deemed efficient at PR24).

In our submission, we have also explained that Cumming Group has also undertaken a review and assessment of the on-cost used to estimate our costs and how they have varied.¹⁴ This review included on-costs for water infrastructure and non-infrastructure activities. Cumming Group found that costs associated with these activities have been stable since PR19 or have increased slightly in line with changes observed in the sector.

Therefore, there is evidence that design and survey costs are efficient as these costs have been informed by the same methodology used at PR24 which was deemed efficient, with changes in line with changes in the sector.

Need case – Littleton

Ofwat has requested additional evidence demonstrating that the proposed Treated Water Tank replacement is distinct from investments funded through either AMP8 enhancement or base funding. We provide additional evidence below to show that our cost change claim does not overlap with either category of funding.

No overlap with AMP8 enhancement funding

Our submission to the DWI¹⁵ and the original PR24 enhancement business case¹⁶ demonstrate that the scope of works at Littleton WTW does not include a new Treated Water Tank.

Both documents describe the replacement of the existing treatment processes through solutions identified during an initial technology evaluation phase, which is currently being completed. Following this assessment, two potential treatment configurations were identified, both of which include a new chlorine contact tank but neither of which includes a new Treated Water Tank:

- Option 1: DAF > RGF > Ozone > GAC > UV > Chlorine contact tank
- Option 2: ILCA or clarification > Ceramic membrane > ozone > GAC > Chlorine contact tank

To demonstrate that the chlorine contact tank and treated water storage tank are separate assets, an aerial view of the site showing the location of both structures is available in the technical business case provided alongside our original submission¹⁷. As shown in the aerial view, the proposed Treated Water Tank replacement covered by this cost change claim is entirely separate from the treatment assets being renewed through PR24 enhancement funding.

¹³ See Pennon's L3 – Cost Change Submission 2026 – Cost Methodology and Efficiency, pp. 6-7.

¹⁴ Ibid, p. 7.

¹⁵ See Littleton DWI Annex B

¹⁶ See Littleton section of our PR24 enhancement business case: www.southwestwater.co.uk/siteassets/documents/about-us/business-plans/2025-30/enhancement_case_strategic_water_treatment_works.pdf

¹⁷ See Pennon's L3 – Cost Change Submission 2026 – Technical Business Case – Littleton Water Treatment Works, p. 15.

No overlap with AMP8 base funding

Our base maintenance funding in AMP8 supports routine interventions aimed at managing short-term service risk. These activities typically include inspections, cleaning, sealing works and localised repairs. In contrast, the cost change claim relates to the full replacement of an end-of-life asset and represents a step change in expenditure compared with our planned routine maintenance activity at the site. As explained in our May submission, this significant and discreet investment sits outside our AMP8 implicit allowance. In our May submission we proposed to bring forward a major asset renewal that was not funded through either the AMP8 base or enhancement settlement by accelerating "base maintenance contributions from AMP9 into AMP8 for the renewal of the filtration processes and water storage assets at the site". This statement refers primarily to the 50:50 base maintenance contribution intended to support delivery of the enhancement scheme at Littleton WTW, which, as described above, does not include replacement of the Treated Water Tank. While the statement also recognised future renewal of the site's water storage assets, this reflected an anticipated future investment requirement after AMP8, based on the condition and risk profile of the existing structures as identified in our original business case. It was not funding allocated for the replacement of the Treated Water Tank during AMP8.

Engagement with the Drinking Water Inspectorate

Through the cost change process, we have engaged with the Drinking Water Inspectorate to seek their support for the following schemes:

- Northcombe WTW Rapid Gravity Filters
- Kenley WTW Contact and Treated Water Tanks
- Barrow WTW Contact Tank
- Alderney WTW Treated Water Tank
- Stowey WTW Treated Water Tank
- Littleton WTW Treated Water Tank

On 14 September, the Drinking Water Inspectorate wrote to us commending these schemes for support with the inspectorate intending to monitor delivery of these schemes. This letter of support can be found in Appendix 3.

"The Inspectorate has completed its detailed assessment of the schemes proposed by South West Water to secure resilience and mitigate the risks of drinking water quality manifesting, with asset health improvements at 6 water treatment works...the Inspectorate commends the schemes for support."

Drinking Water Inspectorate

Schemes that could impact protected environmental sites

In its draft determination, Ofwat has requested that we confirm which proposed schemes could impact Sites of Special Scientific Interest or land in National Parks or Areas of Outstanding Natural Beauty. We have reviewed the relevant projects identified as being within or adjacent to protected areas.

Our schemes at Alderney, Helston and Kenley have been identified as near protected areas however, as the work will be completed entirely within the existing operational sites, we do not anticipate that there will be any impact on the nearby Sites of Special Scientific Interest.

Our Fowey foreshore sewer scheme will be completed within an Area of Outstanding Natural Beauty; however, the project will be delivered in accordance with relevant environmental requirements and mitigation measures to ensure that no adverse impacts arise from the proposed works.

Growth – need for investment at Newquay Wastewater Treatment Works

The town of Newquay in Cornwall represents many strategic challenges in one location; significant seasonal tourism, continued growth, environmentally sensitive bathing waters and increasing climate pressures. Ensuring water and wastewater infrastructure keeps pace with these demands is therefore critical.

Our original submission outlined that sustained residential development and significant seasonal population increases linked to tourism and major events are materially exceeding PR24 assumptions. The level of growth experienced at Newquay has been very high in recent years due to both summer tourism, principally linked to the Boardmasters festival, as well as an increasing year-round population. Recent evidence shows that peak organic loads now exceed the works' original design capacity, with summer 2025 peak loadings reaching approximately 1.5 times design Population Equivalent.

We previously considered that these seasonal peaks could be managed through the use of additional temporary process units, however these units are increasingly being required for longer periods, which is impractical and unsustainable in the long term. Existing temporary and operational mitigations are no longer sufficient or sustainable, creating an increasing risk to operational resilience and environmentally sensitive receiving waters if permanent additional capacity is not delivered.

Our proposed investment would provide a proportionate, low regrets expansion of biological and hydraulic capacity to accommodate growth beyond PR24 forecasts, manage peak seasonal demand within the asset's design envelope, and protect customers from escalating operational risk and cost. Bringing forward this investment now enables us to smooth customer bill impacts, reduce delivery and operability risks, and avoid more disruptive and costly growth interventions in future years.

“Newquay is absolutely massive now. I mean, there’s just houses as far as you could see. And if they’re going to make more, they really do need investment because it’s utterly unrecognisable already.”

South West Water customer view on growth investment in Newquay

We welcome Ofwat's conclusion that there is a demonstrable need for additional investment at Newquay Wastewater Treatment Works to address growth-related capacity pressures. As stated in the Draft Determination: *“The company provides sufficient and convincing evidence that additional investment is needed at Newquay WTW to address growth-related capacity pressures”*.¹⁸

For the final determination, Ofwat requested further evidence that the investment need has been agreed with the Environment Agency and is attributable to higher population growth.

This section provides additional evidence in response to that request. The evidence presented in our original submission around the totality of pressures at Newquay WwTW, including from Boardmasters, still stands. However, we are providing more evidence as requested around the substantial population growth, i.e. specifically through residential, commercial and peak tourist demand. In summary:

- The Environment Agency has agreed that a growth need exists and welcomes the potential investment, however further engagement is needed on the population equivalent increase. We will continue this conversation and provide further evidence to Ofwat ahead of the final determination.
- The capacity of Newquay WwTW is no longer sufficient to accommodate the growth in residential, commercial, and peak tourist demand which is expected to continue increasing over the next decades (by 68%¹⁹ and 10%²⁰ for residential and tourist peak demand respectively).

¹⁸ Ofwat, August 2026, Cost Change draft determination 2026 – South West Water_Redacted, pp. 80.

¹⁹ We expect residential demand to be 50,000 PE by 2050-55, which is 70% higher than current demand of c. 30,000 PE.

²⁰ Tourist PE is forecasted to be 27,230 by 2040-2045, which is 10% higher than the current demand of 24,850 PE.

- In particular, residential demand is accelerating, increasing by more than could have been expected.
- At the same time, commercial and tourist peak growth in the Newquay catchment area is continuing to increase driven by strategic development, rising visitor numbers, and major seasonal events. The combination of these factors and seasonal event is already exceeding the current design capacity.

The proposed 2026 scheme will future proof the works to meet expected demand to 2050 and represents the most efficient long-term solution for maintaining resilience and compliance while avoiding the need for a series of incremental upgrades.

The sections below provide further details of our engagement with the EA, our design capacity, and our assessment of future demand pressures.



Newquay Wastewater Treatment Works

Engagement with the Environment Agency

To achieve a pass at final determination, Ofwat has requested sufficient and convincing evidence of engagement with the Environment Agency, particularly that the proposed PE increase has been agreed and is attributable to higher population growth.

The need for investment at Newquay Wastewater Treatment Works has been jointly recognised by South West Water and the Environment Agency for a number of years. In April 2025, we held a collaboratively developed full day workshop with the Environment Agency at which Newquay, and specifically the impacts of forecast population growth, was a key area of discussion.

During the development of our cost change submission, we undertook proactive engagement with the Environment Agency to discuss both our proposed approach and the supporting evidence for the scheme. While our understanding was that the Environment Agency was not providing formal endorsements for individual company submissions, the discussions reinforced a shared understanding of the growth pressures affecting Newquay and the need for investment to accommodate forecast increases in population.

Since publication of the draft determination, we have continued our engagement with the Environment Agency regarding our response strategy, including the forecast PE increase and its attribution to population growth. This has included direct meetings with the Environment Agency, as well as their participation in our WaterShare+ panel sessions on 11 and 18 September.

To further support this engagement, we provided the Environment Agency with the technical evidence contained within this submission, demonstrating that the forecast PE increase is driven by higher population growth and that the proposed investment is necessary to accommodate this growth while maintaining compliance and service performance. In a letter received 23 September, the Environment Agency confirmed it supports investment at Newquay in principle, recognising the substantial residential, commercial and seasonal growth pressures experienced across the catchment. Further engagement is however required to validate the detailed population equivalent assumptions and inform future permitting. We continue to work closely with the Environment Agency and will provide Ofwat with further relevant evidence ahead of final determination.

Evidence of our engagement with the Environment Agency is provided in Appendix 4.

Design capacity at Newquay

Newquay WwTW was commissioned in 2000 with a capacity of 53,000²¹ population equivalent (PE), under the design assumptions of 29,000 residents and 24,000 peak commercial and tourist flows.

The site has had some modifications since first being built, with the addition of chemical assisted treatment and more recently in 2022 installation of HYBACS units to elevate the biological processes following a trial period. The treatment works can now manage short duration loading of up to c. 111,000 PE. However, these flows cannot be sustained and serve the purpose of managing high variability in flows associated with peak tourism events only, i.e., Boardmasters.

Drivers of future demand

Demand in the Newquay catchment area is expected to increase beyond previous forecasts, driven by accelerated residential development, higher seasonal tourism demand, and associated growth in commercial activities. These pressures are further compounded by the impact of Boardmasters as mentioned in our original submission.

The table below summarises forecast residential and peak tourist demand, expressed in PE. While commercial activity is also expected to place increasing pressure on Newquay WwTW, commercial flows are more difficult to express on a PE basis and to separate from peak tourist demand (which is the primary element of commercial flows in Newquay). As a result, we have not included a commercial demand forecast in the table. However, we provide supporting evidence on expected commercial growth and its impact on wastewater demand in the sections below.

We provide further details on residential, peak tourist, and commercial demand forecasts in the following sections.

²¹ Please note, we incorrectly referenced 69,000PE as the design capacity in the executive summary of our original Newquay business case. This figure is the design capacity had a second Activate Sludge lane been installed. The correct design capacity of the WwTW is 53,000PE as referenced in other places of our business case.

Table 7: Expected residential and peak tourist demand at Newquay (PE)

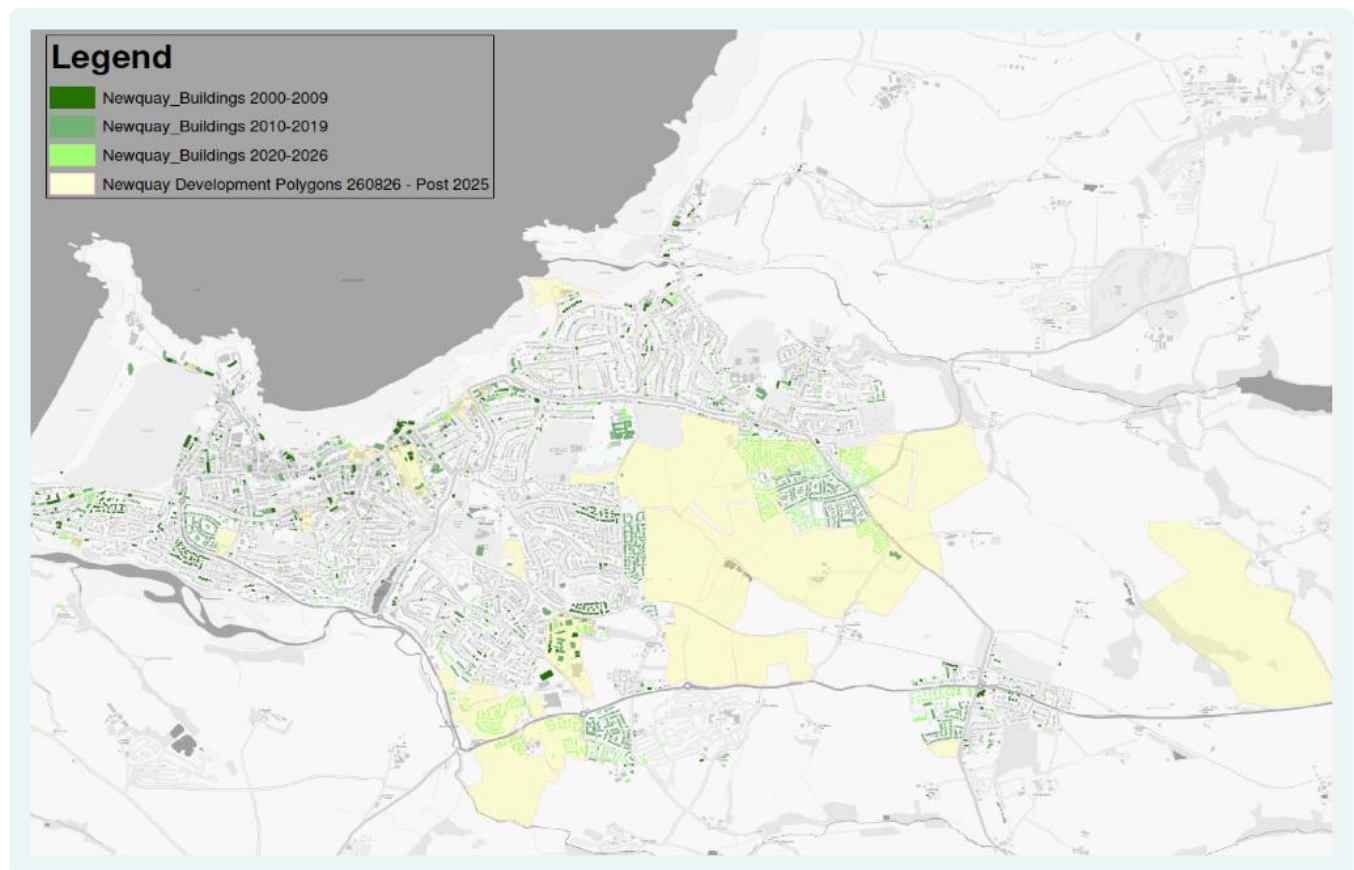
Demand driver	2026-30	2030-45	2045-50	2050-55	Increase in demand between 2026-30 and 2050-55
Resident	30,000	35,000	46,500	50,000	68%
Peak Tourist	24,900	25,200	27,200	27,200*	>10%
Total Demand	54,900	60,200	73,700	77,200*	
Current Capacity	53,000				

Source: Pennon's estimate based on number of household and non-household properties, assuming 2.22 PE per property. Resident demand is based on estimate of properties from the Local and Neighbourhood Plans, planning applications, and direct engagement with developers. Peak tourist demand is based on an analysis of our customer database and local plans.

Note: Figures have been rounded.

*We do not have forecast of peak tourist demand in 2050-55. A conservative estimate is that this figure is at least equal to the 2045-50 figure.

To illustrate the scale of the growth within the catchment, the map below shows the Newquay catchment area and highlights with different colours both recent and planned development. Areas shown in bright green represent development delivered over the last five years, while areas shown in yellow represent future development expected beyond 2025. As the figure demonstrates, significant development has already occurred across the catchment, with an even larger volume of development planned for the coming years, placing further pressure on Newquay.



Newquay catchment area growth map

Residential demand growth

Residential demand forecasts

Our residential demand forecast is based on the current housing stock (c. 13,000 properties) plus forecast growth in dwellings, derived from Local and Neighbourhood Plans and planning applications. We convert forecast dwellings into population using an average household occupancy rate of approximately 2.22 people per dwelling, which is consistent with the Newquay catchment.

Our forecast growth in dwellings comprise two categories:

- Known growth: developments identified through Local and Neighbourhood Plans, planning applications, and direct engagement with developers; and
- Expected growth: an allowance for future housing allocations anticipated through the emerging 2030-2050 Cornwall Local Plan.

Table 8 summarises the composition of our growth forecast. Based on adopted Local and Neighbourhood Plans and current planning applications, we forecast that approximately 8,800 dwellings will be delivered within the Newquay catchment by 2055, of which c. 2,700 could be allocated through future updates to the Cornwall Local Plan over the same period. This means that demand could increase by c. 20,000 PE²² by 2050-55, resulting in c. 70%²³ increase in total demand.

While these future allocations are not yet confirmed and will evolve as the Local Plan progresses, we consider this estimate to be prudent and conservative. Consequently, the forecasts presented represent a reasonable assessment of future growth pressures and are likely to understate, rather than overstate, the long-term demand that will be placed on Newquay WwTW. We provide a case study below to illustrate the scale of known long-term growth.

Table 8: Known and expected number of dwellings in the Newquay catchment area

	2026-2030	2030-2035	2035-2040	2040-2045	2045-2050	2050-2055
Known growth: developments identified through Local and Neighbourhood Plans, planning applications, and direct engagement with developers	2,045	3,833	5,324	5,704	5,974	6,075
Expected growth: allowance for future housing allocations anticipated through the emerging 2030-2050 Cornwall Local Plan	0	153	709	1,379	2,159	2,708
Total stock of dwellings	2,045	3,986	6,033	7,083	8,133	8,783
Total PE	4,540	8,849	13,393	15,724	18,055	19,498

Source: Pennon's forecast based on local and neighbourhood plans, planning applications, engagement with developers, and Cornwall Local plan.

Historical and forecast residential demand growth

The chart below compares the current residential design capacity of 29,000 PE with historical residential demand and our conservative forecasts.

As can be seen from the below chart:

- **Residential demand growth has accelerated significantly in recent years.** Historically, Newquay's residential population grew by around 200 PE per year (blue line in the chart). Between 2020 and 2026, however, growth increased to 1,109 PE per year, representing more than a fivefold increase on the long-term historical rate and almost three times the rate experienced during the preceding decade. As a result, Newquay's resident population increased by more than 10%²⁴ in just six years.
- This level of growth could not reasonably have been anticipated when previous forecasts were prepared. For example, based on growth rates observed in 2010-19, a reasonable forecast would have projected a residential population of approximately 26,000 PE by 2030/25 (see the pink line in chart), marginally below the design capacity of Newquay WwTW. In reality, in 2026 residential demand was already higher than the works' design capacity of 29,000 (compare the blue dashed line in the chart with the green bar for 2026).

²² 20,000 = 8,800 * 2.22.

²³ 70% = 50,000/30,000-1

²⁴ Resident PE increased from c.23,000 in 2020 to c.30,000 in 2025, equivalent to approximately 29% growth ((30,000 - 23,000) ÷ 23,000), and therefore exceeds 10% over the period.

²⁵ We estimated a resident PE of approximately 26,000 in 2030 by applying the average property growth observed between 2010 and 2019 (c.170 properties per year) over the period 2020-2030. This results in an additional c.1,800 properties above the 2019 property stock of 10,390, giving c.12,000 properties in 2030. Applying an occupancy rate of 2.2 persons per property yields an estimated resident PE of approximately 26,000.

- This **higher-than-average growth is expected to continue over the next 25 years**, with population reaching 50,000 PE by 2050-55 (green bar in the chart). This figure includes a recent revision included in the emerging 2030-2050 Cornwall Local Plans, which show a further increase in dwellings which is equivalent to c. 6,000 PE.²⁶ See Table 8 and the section below for further details. We expect local plans to continue evolving.

The following sections provide further detail on our residential growth forecast, including a case study that demonstrates why a long-term capacity solution is required. We then examine seasonal tourism demand and commercial growth, showing how these factors, alongside residential growth, are driving sustained increases in demand at Newquay WwTW.

Figure 7: Comparison of residential design capacity in Newquay catchment area with historical and forecast growth in population equivalent



Source: Pennon's analysis. Historical data is based on ONS property data. We have validated those estimates with our billing data. Forecast data is based on estimate of properties from the local plans as explained above. We have assumed 2.22 PE per property.

Note: the average annual PE increase has been calculated as the difference in total PE (green bar) divided by the number of years covered. For example, the increase in 2020-25 is derived as the difference in total PE between 2020-25 and 2010-19 divided by 6 (which is the number of years between 2020 and 2025), i.e. $1,109 = (29,735 - 23,084) / 6$.

Nansledan case study

Nansledan is a major urban extension to Newquay being delivered by the Duchy of Cornwall. The development is designed as a sustainable, mixed-use community and is already home to approximately 1,800 residents and more than 40 businesses. On completion, Nansledan is expected to comprise around 4,000 homes alongside a wide range of commercial, community and public-service facilities, including retail, hospitality, office, health and leisure uses.

The scale of Nansledan provides further evidence of the sustained growth pressures facing the Newquay catchment. Based on typical household occupancy rates of 2.2 to 2.4 persons per home, the completed development could accommodate approximately 9,000 to 9,600 residents, in addition to the wastewater demand associated with its commercial and community facilities.

²⁶ The total number of dwellings in the Newquay catchment area could increase by c. 8,800 by 2050-55, which is 2,700 more than the 6,100 dwellings already included in Local and Neighbourhood plans. This is equivalent to c. 6,000 PE additional PE based on 2.22 PE per property ($6,000 = 2,700 \times 2.22$).

The Duchy's phasing strategy involves small sub phases, delivering 70–115 homes per year on average. Active and upcoming phases include:

- Phases 5.1 and 5.2 – fully residential expansion
- Phase 6A – mixed-use including commercial frontages
- Phases 7 and 8A – further residential and commercial growth
- Market Street – the emerging commercial centre with a supermarket, market hall, retail, and offices, with first buildings due in 2026 and further units by 2028.

These phases will progressively increase the domestic, commercial, and trade waste contributions into the Newquay WwTW catchment.



Nansleden New Town

Commercial demand growth

The Newquay WwTW catchment has experienced a sustained increase in commercial activity and corresponding increase in commercial sewerage flows. The two figures below provide evidence of this trend:

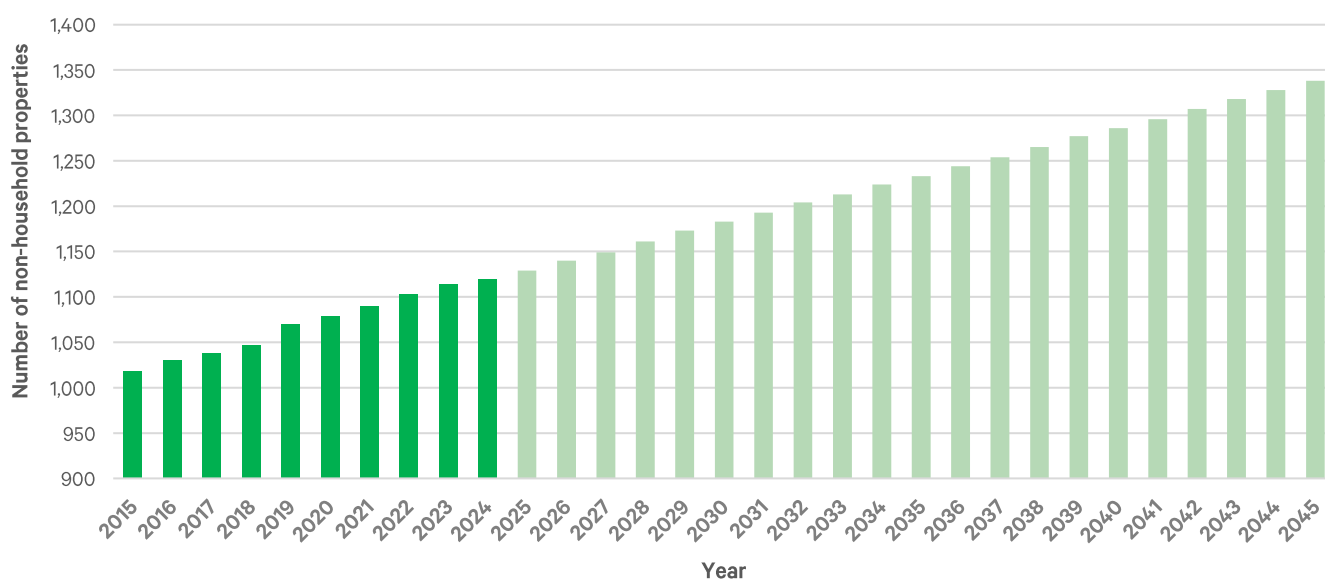
- Figure 8 below shows the increase in number of non-household properties over the same period, as well as forecasts to 2045 based on our internal billing records and an uplift reflecting observed historical growth rates. These properties are predominantly retail, tourism-related businesses and small trading estates.
- Figure 9 shows the increase in commercial annual sewerage flows expressed as population equivalent²⁷ over the same historical period.

As can be seen from the first figure, between 2016 to 2025 the number of non-household properties rose by c. 10%.²⁸ This increase contributed to a 47% increase in commercial sewerage flows, which were c. 17,000 PE in 2015 and reached 25,000 PE in 2025 (with a peak of 27,000 PE in 2023), exceeding the peak tourist design capacity of the scheme of 24,000 PE. This is illustrated in the second figure.

Looking forward, as Newquay town continues to expand, further growth in commercial premises is expected to support new housing and population growth across the catchment. Therefore, we expect that commercial demand will also continue increasing. We project that by 2045, there will be c. 1,340 non-household properties based on historical property data from our internal billing records and an uplift reflecting observed historical growth rates to project future property numbers.

As mentioned above, commercial and tourism growth is harder to compare on a population equivalent basis and varies year to year (unlike residential growth). Despite this, it is clear that Newquay WwTW is at the tipping point from a capacity perspective due to both residential and commercial demand pressures.

Figure 8: Historical and forecast of non-household properties in Newquay catchment area

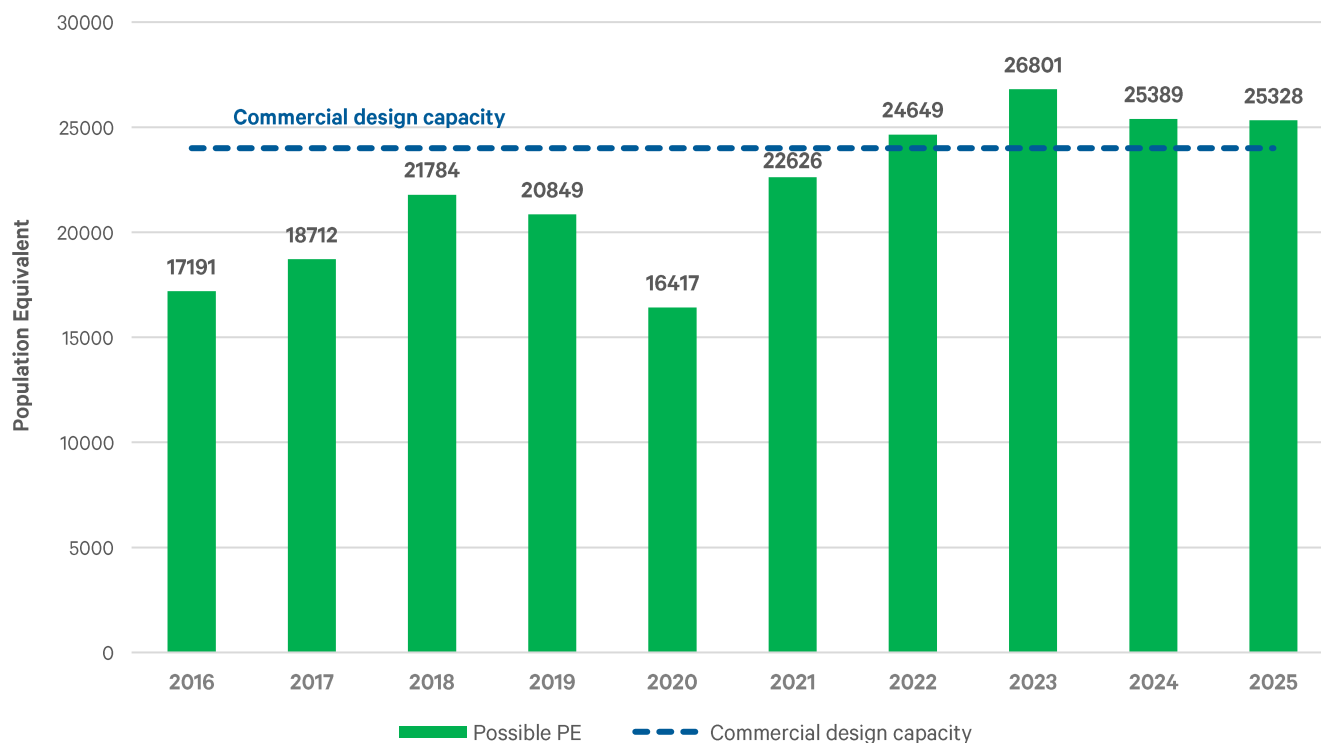


Source: South West Water non-household customer billing database for historic figures plus a percentage uplift based on historic growth rates for future property forecasts

²⁷ This was estimated using the commonly applied conversion of 200 litres of sewerage flow per day per PE.

²⁸ 10% = 1,120/1,030-1.

Figure 9: Historical commercial sewerage flows (expressed as PE)



Source: Pennon's estimation based on sewerage flows. Population equivalent is calculated using consumption data divided by a 200 litre per person per day allowance.

Peak tourist growth

Tourism remains an important contributor to wastewater demand and it is the primary component of commercial flows in Newquay. Based on our customer database (where we use consumption levels to inform the current tourism levels) and local plans (used to forecast tourism growth), tourist peak demand is already estimated to exceed the original tourist peak design capacity by approximately 1,000 PE in 2026, and is forecast to accelerate over the planning horizon after 2030. Specifically, the peak overnight tourist population is projected to grow by approximately 10%²⁹ over the next 30 years, supported by the expansion of existing visitor accommodation and the development of new tourist facilities, including a large new holiday park.

As a result, peak tourist demand is forecast to reach approximately 27,200 PE by 2045, around 3,000 PE above the original tourist design capacity. The impact of tourism is particularly evident during peak summer periods when other events are also taking place, such as Boardmasters. This growth contributes to increasingly high peak loadings at the works and reinforces the need for investment to ensure the site can continue to operate reliably while supporting Newquay's ongoing residential, commercial and visitor growth.

²⁹ Tourist PE is forecast to increase from the current demand of 24,850 PE to 27,230 PE by 2040-2045, equivalent to growth of approximately 10%.

Figure 10: Peak overnight tourist population within Newquay catchment



Source: Pennon's estimate based on our customer database and local plans.



Boardmasters Festival, Newquay

Real Price Effects and Frontier Shift

As a pragmatic approach, we consider that no real price effects or frontier shift adjustment should be applied to the 2026 cost change claims, given the short delivery timeframe for these schemes and the additional complexity that such adjustments would introduce, particularly in combination with Ofwat's proposed PCD mechanisms. In our view, this would add complexity without materially improving the outcome for Pennon and its customers. Therefore, we agree with Ofwat's approach on these issues.



Barrow Water Treatment Works

Price control deliverables and implicit allowances

Changes are required to enable suitable flexibility and maintain appropriate incentives

Price control deliverables and clawbacks

Ofwat's draft determination includes an extensive set of PCDs and other forms of clawback mechanisms.

While we are not expecting any of these mechanisms to apply to us, given we are forecasting to deliver our programme without underspending, we are concerned about the direction of this regulatory policy and the potential precedent it could set for future controls.

The aggregate base clawback mechanism (where cost allowances are clawed back up to the value of the cost change should a company outperform on base costs) largely removes the incentive for companies to seek base cost efficiencies. This runs counter to established regulatory practice of companies being given an incentive to outperform ex ante allowances, with benefits being shared with customers through cost sharing rates and longer term re-basing of costs to new production frontiers.

This key principle ('RPI-X regulation') has served multiple sectors well, with major productivity gains being realised relative to other forms of regulation (e.g., rate of return regulation).

The change to regulatory incentives may also have an impact on the expected risk profile of water companies. Water companies are still exposed to overspend risk. Without there being a credible possibility of outperformance, the expenditure allowances represent a skewed risk position. This may impact how investors view the sector, pushing up the required cost of capital, and consequently, customer bills.

Following from query response CCP26-SBB-IBQ-002, we understand that Ofwat will be considering its PCD / clawback policy for the final determination. The approach in the draft determination of different categories of PCDs (including spend related PCDs which reflect the implicit allowance) and then the separate clawback on base if outperforming appeared overly complex, and because the PCDs change the cost change allowance will be very complex to apply in practice.

Alternative Proposal

In simple terms the draft determination in effect can be summarised as:

- There is no outperformance on cost change allowed.
- On asset health, the amount of cost change also restricts base cost outperformance.

Therefore, we consider there is a simpler alternative that Ofwat should consider for the final determination:

- The cost change allowed expenditure should be compared in aggregate to the cost change actual expenditure, after adjusting for PCDs that have delivery drivers, and for any non-delivered schemes.
- Where there is any flexibility for delivery into AMP9, the forecast total variance should be accepted.
- Where base costs are underspent, no benefit of cost sharing will apply to the value of the implicit allowance calculated for the asset health schemes in cost change (as set out in the spend based PCD cost change in the draft determination). This avoids the unlikely scenario of double counting outperformance on base cost and cost change, alongside the simpler aggregate PCD approach we propose.
- Underperformance cost incentive rates would remain at 50% for both base expenditure and base elements of cost change, after adjusting allowances for scheme specific PCDs.

This achieves the policy intention and by using the implicit allowance as the limitation on base cost outperformance for asset health elements of cost change, achieves the customer protection objective while also maintaining incentive properties to outperform. Simplifying the cost change PCDs for the purpose of sharing underperformance not outperformance also maintains incentive properties and accurate delivery forecasting, given the additional scrutiny that Ofwat has made to cost change proposals.

Implicit allowances

In its draft determination, Ofwat recognised that there is no single definitive method for assessing implicit allowances and used each company's estimate as the starting point for its assessment. We support this conclusion and assessment approach, as it avoids a mechanistic determination of implicit allowances and allows companies' specific circumstances to be appropriately reflected. We also support the outcome of Ofwat's assessment for the 2026 cost change process, which recognises that PR24 base cost allowances do not provide sufficient funding to cover the costs of our asset health cost change schemes.

Ofwat found that our estimate of implicit allowance was lower than an alternative estimate based on historical mean/median sector expenditures, which Ofwat used to stress-test companies' estimates. As explained in our submission, we consider our approach, which draws on our own historical capital maintenance expenditure, to be more robust than industry-wide benchmarks. This is because it better reflects efficient investment decisions made in response to our specific asset mix and operating environment. Efficient companies may also legitimately incur expenditure levels below the industry average or median. In addition, our approach mitigates the risk of estimates being driven by data limitations and modelling assumptions rather than underlying asset needs. Therefore, a sector-wide benchmark may not accurately represent the implicit funding available to Pennon's companies.

We note that other companies have similarly based their implicit allowance estimates on their own historical expenditure and have raised concerns regarding the use of sector-wide benchmarks. For example, Wessex Water explained that a median-based approach could produce counterintuitive results that do not reflect company-specific circumstances.³⁰ Hence, we do not consider the mean/median approach used by Ofwat to stress-test our estimate to be an appropriate comparator.

To provide further assurance that our approach is robust and proportionate for this submission, we have provided through the query process³¹ a top-down comparison of our total AMP8 planned capital maintenance expenditure against a range of implicit allowance estimated across all relevant asset classes. This analysis demonstrates that our planned expenditure exceeds our estimated implicit allowance and therefore confirms that there is no risk of double counting. Ofwat has considered this evidence and accepted Pennon's estimates.

For Ofwat's final determination and future cost change assessments:

- We do not consider a sector mean or median expenditure benchmark to be an appropriate comparator in all cases. While sector-wide benchmarks may provide a useful cross-check, their relevance depends on the nature of the assets, the company's operating environment, and its historical investment profile. As a result, such benchmarks cannot be applied consistently across all companies and asset classes without assessing their relevance.
- We would welcome Ofwat continuing its company-specific approach, including engagement with companies to understand the basis of their implicit allowance assessments and the circumstances underpinning them.

Further details of our assessment of other companies' submissions and our analysis and implications on how the implicit allowance could be estimated can be found in Appendix 5.

Specific PCD proposals

Fowey gravity sewer foreshore PCD

We support a clear and auditable PCD for the £11.7 million Fowey scheme but consider Ofwat's proposed measure, based on sewer length, diameter and location, insufficiently flexible given the uncertainty of asset condition and intervention requirements.

³⁰ Wessex Water PR24 cost change submission – Executive summary, page 40.

³¹ See additional information documents 202606 and 202612.

We therefore propose measuring delivery through the investigation and appropriate rehabilitation of up to 76 segments (which include lateral connections and main sewer), combined with an underspend clawback. This would support customer protection while targeting the specific assets driving delivery risk and saline ingress and enable the most efficient engineering solution to be selected based on condition evidence.

Pennon May 2026 cost change Fowey sewer PCD proposal

We welcome Ofwat's cost change draft determination to allow funding for the Fowey Foreshore Sewer Rehabilitation scheme. We agree that customers need to be protected through an appropriate PCD mechanism and understand the desire for deliverables that enable independent verification of delivery.

In our 2026 cost change submission, we proposed a non-delivery PCD for the Fowey Foreshore Sewer Rehabilitation scheme with underspend against the scheme level allowance resulting in a revenue adjustment during the PR24 end-of period reconciliation in the amount of the difference between the allowance and the outturn for the Fowey scheme.

Table 9: Initial proposal – SWB Fowey Foreshore sewer rehabilitation PCD

PCD Number	PCD-CC08
Description and scope of PCD	This proposed investment focuses on a specific subset of the gravity sewer portfolio located in Fowey, Cornwall in which the coastal, estuarine and tidal location influences the gravity sewer. The saline exposure, restricted access and constrained maintenance windows materially accelerate deterioration and elevates environmental and service risks.
PCD Output unit and measurement	Scheme level allowance (£m) – if we underspend against the scheme allowance, we will have our allowed revenue adjusted down by the difference between the scheme allowance and scheme outturn in the PR24 end-of-period reconciliation.
PCD payment rate (£m)	Fowey – £11.7m.
Monitoring, reporting and assurance	To be reported within the Delivery Plan progress report quarterly and assured annually. Evidence will include as-built drawings, GIS updates and commissioning and site handover evidence.
Definition of delivered	The scheme level allowance has been spent on the rehabilitated sewer that has been commissioned, in operation and in permanent use.
Delivery date	31/03/2030.

We initially proposed the above PCD for the Fowey scheme because we needed to retain a degree of flexibility in the scope of interventions and it was difficult to ascertain a singular cost driver for the scheme.

Ofwat draft determination

Ofwat has proposed a PCD based on the length of gravity sewer rehabilitated, in kilometres (km) consistent with its approach for other gravity sewer rehabilitation programmes. Whilst we understand and support the principles of the PCD, we do not consider that it provides sufficient flexibility for a scheme as unique and challenging as Fowey.

This is because:

- A fixed rehabilitation of sewer length output may incentivise imprudent or inefficient expenditure replacement where repair, sealing or retention would be the more efficient engineering response.
- Sewer length (km) as a PCD output does not adequately reflect the scheme-specific uncertainty associated with lateral connections and connections which are submerged within the foreshore.
- The sewer is located in a highly constrained tidal environment, and asset condition cannot be fully verified until detailed surveys and excavation have been undertaken.
- We need to retain a degree of flexibility to adapt the scope and select the most appropriate interventions as the project progresses.

Pennon's proposal

We support the principle of defining a clear and auditable PCD output that provides sufficient protection for customers. We propose to apply a two-stage PCD for the Fowey Foreshore sewer rehabilitation scheme. This aligns with Ofwat's draft determination approach for gravity sewer rehabilitation in the PCD appendix. Whereby, we are held to:

- Rehabilitating a defined, measurable output; and
- Spending the additional allowed expenditure.

We considered length and diameter of gravity sewer rehabilitated as the defined measurable output however, number of lateral connections directly reflects the delivery risks and has been identified as the most significant cost driver. Therefore, our proposal for the Fowey scheme PCD is as follows:

Investigation and rehabilitation of up to 76 lateral connections associated with the Fowey Foreshore Sewer system, including renewal where condition assessment demonstrates replacement is required.

AND

Outturn expenditure underspend against allowances will result in the difference being returned to customers.

Proposed Fowey scheme PCD wording

We will assess the number of lateral connections investigated, condition-assessed and appropriately rehabilitated with an under-delivery claw-back applied at a rate of £0.15m per lateral connection. Full replacement may not be required in every case with the appropriate response being based on the condition assessment of the foreshore sewer.

We will also assess outturn expenditure against the Fowey scheme allowance with claw-back applied to any underspend at the end of AMP8. Our proposal to use the number of lateral connections is justified because of the following factors:

- The primary uncertainty around scope and cost of the project does not relate to the principal foreshore collector sewer, but to the condition, constructability and intervention requirements of approximately 76 property lateral connections and their associated interfaces.
- Previous investigations identified laterals connections as material contributors to saline ingress.
- The intervention required at each connection can only be fully determined when on-site through investigative activities.
- A lateral connection related PCD targets the assets driving uncertainty, saline ingress and operational risk, while retaining flexibility to select the most efficient intervention.

This approach avoids incentivising unnecessary replacement where a lateral remains serviceable or can be effectively repaired or sealed.

Table 10: Proposal SWB Fowey foreshore sewer rehabilitation PCD

PCD Number	PCD-CC08
PCD Output unit and measurement	(1) Number of lateral connections rehabilitated (Nr). (2) Scheme level allowance - if we underspend against the scheme allowance, we will have our allowed revenue adjusted down by the difference between the scheme allowance and scheme outturn in the PR24 end-of-period reconciliation.
PCD payment rate (£m)	(1) Fowey – £0.15m per connection. (2) Fowey scheme allowance – £11.7m.
Monitoring, reporting and assurance	To be reported within the Delivery Plan progress report quarterly and assured annually. Evidence will include as-built drawings, GIS updates and commissioning and site handover evidence.
Definition of delivered	(1) Sum the number of lateral connections rehabilitated that have been commissioned, in operation and in permanent use (2) The scheme level allowance has been spent on the rehabilitated laterals that has been commissioned, in operation and in permanent use.
Delivery date	31/03/2030.

We will evidence delivery of the Fowey foreshore rehabilitation scheme through asset records and scheme mapping including:

- CCTV surveys;
- Inspections and site photographs;
- Engineering assessments and intervention decision logs;
- Construction records and completion certificates;
- Annual delivery reporting; and
- Audit trail available for regulatory review.

We consider that this approach provides clear regulatory assurance while aligning customer protection with efficient delivery. It remains measurable and auditable, focuses expenditure on the locations where intervention provides the greatest asset health and environmental benefit, and allows evidence-led engineering decisions as condition information emerges.

Delivery risks

We are on track to deliver our investment programme and have undertaken further assessments of the key schemes in our cost change submission

This section responds to Ofwat's request for further evidence on the delivery risks associated with three elements of our asset health cost change submission. It explains the nature and materiality of those risks, how they have informed scope, cost and programme assumptions, and the controls that will be applied through delivery:

1. the Fowey foreshore sewer scheme;
2. the gravity sewer rehabilitation programme; and
3. the replacement of deteriorated storage points, e.g., Alderney Service Reservoir.

The assessment draws on the relevant technical business cases, estimating procedures and project risk registers. The proposed investments do not assume risk-free delivery. Material uncertainties, interfaces and constraints have been identified, reflected in the selected solutions, cost estimates and delivery programmes. These risks will be actively managed through design development, procurement, construction, commissioning and operational handover.

The three investments have materially different risk profiles:

- **Fowey** is a discrete, location-specific marine and intertidal construction scheme, where delivery is governed by tides, weather, access, environmental controls and incomplete information about submerged assets.
- **Gravity sewer rehabilitation** is a geographically dispersed programme of repeatable interventions, where the primary risks concern asset selection, condition information, access, intervention choice, productivity, supply-chain capacity and programme mobilisation.
- **Service reservoir replacement** is a major civil engineering intervention at an operational water supply site, where delivery risk centres on maintaining supply continuity, demolishing ageing structures, confirming interfaces and safely commissioning new treated-water storage.

Overall approach to delivery risk

The purpose of this assessment is to demonstrate that the material uncertainties affecting scope, cost, programme and delivery have been identified, that proportionate controls are in place, and that residual risks will continue to be actively managed as the schemes develop.

Overall our approach is governed by our established estimating and commercial-control procedures:

- PR-ENG-110, *Producing the Client Target Cost*;
- PR-ENG-120, *Estimating Methodology*; and
- PR-ENG-190, *On-Cost Calculation*.

These procedures require appropriate scope definition, site-specific consideration of delivery conditions, explicit treatment of risk and uncertainty, and controlled approval and amendment of estimates. This provides a consistent and auditable basis for developing scheme costs and reduces the risk that estimates are influenced by inconsistent or subjective treatment of uncertainty.

Where a risk has been priced, allowed for through scope, productivity or programme assumptions, or remains subject to further quantification, the relevant treatment is stated explicitly. No additional allowance should be inferred unless it is evidenced within the submitted cost baseline or supporting estimate.

The following principles apply.

Evidence-led identification

Risks are identified from condition information, operational experience, previous interventions, delivery partner input, site-specific investigations, historical work orders and project risk reviews. They are not limited to generic construction risks.

The resulting cost and programme assumptions are more closely aligned with the expected delivery conditions. This supports efficient cost assessment by reducing the likelihood of both underestimating foreseeable constraints and applying excessive generic contingency. It also provides an evidence trail through which the basis of each material risk can be tested.

Progressive reduction of uncertainty

Where design or survey information remains incomplete, this is treated transparently as a pre-construction risk. Early Contractor Involvement, surveys, trial holes, CCTV, detailed design, temporary works planning and operational reviews will progressively convert assumptions into verified scope.

Listing these items named pre-construction risks ensures that further work is undertaken during design and planning to mitigate these risks where possible.

Allocation to the party best able to manage the risk

Risks associated with contractor productivity, plant selection and workmanship will generally sit with the delivery partner. Risks dependent on company information, operational decisions, land rights, statutory approvals or the condition of retained assets will remain under our control unless expressly transferred.

This approach places accountability, cost exposure and decision-making with the organisation that has the greatest ability to influence the outcome. It also ensures our delivery partners are not pricing additional contingency for risks that are better managed by us.

Explicit cost and programme treatment

Risk will be managed through a combination of:

- defined scope allowances;
- quantified risk allowances;
- provisional items where scope cannot yet be fixed;
- risk-adjusted programming;
- transparent exclusions and assumptions; and
- controlled change arrangements.

This ensures that early-stage estimates are not misrepresented as fully developed fixed prices and that residual uncertainty remains visible, controlled and capable of regulatory scrutiny.

Early Contractor Involvement

We will use Early Contractor Involvement to test scope, methodology, productivity, temporary works, market capacity and commercial assumptions with suitably experienced delivery partners. This engagement will inform solution development and risk retirement; it will not replace our accountability for scope, assurance or value for customers.

Continued governance

Risk registers will remain live through design and construction. Key risks will be linked to named owners, mitigation actions, decision dates and commercial treatment, with escalation through the relevant investment and delivery governance.

Fowey foreshore sewer scheme

To demonstrate how we are actively managing risks at Fowey foreshore sewer, we set out the nature of the material risks and the mitigations below.

Nature of the delivery challenge

The Fowey proposal is not comparable with conventional inland sewer rehabilitation. It involves the planned renewal of foreshore gravity sewer pipework, submerged connection structures, manholes and property laterals within an operational estuary and harbour environment.



Fowey foreshore sewer

The current delivery-risk assessment is based on the scope and cost baseline submitted to Ofwat. Detailed quantities, asset interfaces and the associated estimate will be confirmed through survey, design development and commercial assurance before the main works commitment. Any change to the submitted baseline will be controlled, evidenced and reported through the relevant governance route.

The business case included delivery risks associated with restricted tidal windows, weather sensitivity, access constraints and uncertain interfaces at bespoke connections. It also explains that the work must be phased over three years because of the tidal and other delivery constraints.

Our initial risk register (Appendix 6) provides further evidence that these uncertainties have been examined individually rather than captured as an undifferentiated percentage contingency.

It identifies 48 risks across information and scope, design, ground conditions, tidal productivity, temporary flow management, environmental protection, consents, marine methodology, logistics, public interface, live sewer working, procurement, inflation, commissioning and MEICA interfaces.

Scope definition and design maturity

Risk – The Fowey foreshore scheme is a bespoke intervention within a submerged estuarine environment. Access constraints and incomplete records mean that intrusive inspection and targeted survey work are required to confirm the final scope and construction methodology.

Mitigation – The planned mitigation is therefore to use the pre-construction and early contraction involvement phase to:

- confirm the alignment, levels and lengths of pipework;
- verify the number and form of lateral connections;
- survey manholes and chambers;
- complete bathymetric, utility and obstruction surveys;
- undertake trial holes and ground investigation;
- confirm the anti-flotation and buoyancy design;
- develop temporary works to an appropriate level; and
- prepare a controlled basis of design and assumptions schedule.

The purpose of ECI is not simply to commence construction early. It is to retire scope uncertainty before the main works commitment and establish a more reliable target or contract price. In a working environment where time will be of the essence in relation to productivity, the precontract surveying and planning will be critical to the efficient delivery of the scheme.

Additionally, Ofwat has proposed a PCD based on the length of gravity sewer rehabilitated, in kilometres (km) consistent with its approach for other gravity sewer rehabilitation programmes. Whilst we understand and support the principles of the PCD, we do not consider that it provides sufficient flexibility for a scheme as unique and challenging as Fowey. Instead, we propose a PCD to investigate and rehabilitate up to 76 lateral connections associated with the Fowey Foreshore Sewer system, including renewal where condition assessment demonstrates replacement is required.

We covered this in more detail within our PCD section.

Tidal access and productivity

Risk – Tidal working is a fundamental programme constraint, not a general weather allowance. The technical business case includes a representative assessment of 182 potential shifts, of which 85 were classified as accessible, 16 as borderline, 64 as inaccessible because of tide or embargo and 17 as required for compound set-up. Only approximately 47% of the assessed shifts were therefore classified as accessible.

This affects delivery through:

- irregular and out-of-hours working;
- repeated mobilisation and demobilisation;
- limited time to excavate, install and secure pipework;
- the need to leave incomplete works safe between tides;
- reduced productivity compared with inland work;
- tidal damage to temporary works or plant; and
- potential re-excavation where trenches deteriorate or scour between tides.

The project risk register separately identifies tidal productivity, adverse marine weather and trench deterioration between tides as high-impact risks. It records the possibility that excavation, trimming and pipe installation may not be completed in the same tidal window, leading to re-excavation, additional trench support and programme extension.

Mitigation – this will include a section-by-section tidal calendar, realistic production rates, a defined safe-stop point for each shift, short-term weather and tide planning, recovery procedures and risk-adjusted programme logic. Productivity assumptions will be validated during ECI rather than extrapolated uniformly along the route.

Ground, structural and submerged conditions

Risk – Ground conditions, foreshore bearing capacity and trench stability remain key uncertainties. The risk register identifies the need for additional geotechnical, bathymetric and trial-hole information, including the potential need for additional trench support, specialist plant or a change in marine methodology. It also identifies submerged obstructions such as mooring chains, anchors, piles, jetties and harbour infrastructure.

Existing quay walls, retaining walls, slipways and waterfront structures may constrain plant access or require monitoring and protection. Existing services and recorded asset information may also be incomplete or inaccurate, potentially affecting alignment, excavation and tie-ins.

Mitigation – These risks will be reduced through intrusive investigation, structural surveys, PAS 128 utility surveys, GPR, bathymetry, obstruction surveys and temporary works design. Where residual uncertainty remains, it will be recorded explicitly in the commercial baseline rather than assumed to have been priced out.

Temporary flow management and environmental protection

Risk – The sewer must continue to serve waterfront properties during construction. The risk register identifies uncertainty over live flows, peak flows, infiltration, isolation arrangements and available over-pumping capacity. Failure of temporary arrangements could cause pollution, service interruption or require tankering and emergency response.

The technical business case further explains that opportunities for over-pumping are constrained and temporary diversions must be sealed against tidal ingress. It also notes that lateral connections may need to be disconnected and reinstated within the same working window.

Mitigation – A project-specific temporary flow management strategy will be developed during design work to, include:

- verified hydraulic and peak-flow assumptions;
- section-specific isolation and bypass arrangements;
- duty and standby pumping where practicable;
- tidal sealing details;
- emergency storage or tankering triggers;
- pollution response and recovery arrangements;
- telemetry and monitoring requirements; and
- joint acceptance by the project team and Operations.

Environmental controls will also address wastewater, fuel, hydraulic oil, cement washout and sediment release into sensitive tidal waters. Our project risk register identifies the need for a construction environmental management plan, spill controls, silt controls, water quality monitoring and a pollution response plan.

Consents, harbour operations and stakeholders

Risk – The scheme may require approvals or agreements involving the MMO, Harbour Authority, Crown Estate, environmental regulators, local authorities, landowners and statutory undertakers.

The register identifies the risk that consent conditions could restrict working methods or delay mobilisation. It also recognises navigation, ferry routes, moorings, private access, traffic management, tourism, public safety and business interfaces.

Mitigation – These risks will be managed through an early consents register, stakeholder constraints schedule, navigation management plan, land and access review, seasonal working strategy and coordinated communications plan.

Stakeholder and regulatory engagement

The need for intervention within the wider catchment has been recognised by both South West Water and the Environment Agency for several years. The catchment is characterised by high levels of infiltration, and the need to identify and remove sources of infiltration where practicable has been a longstanding focus of ongoing engagement.

Our cost change submission sits within a much broader and longer-running programme of work and engagement already underway to address compliance and environmental risks within the catchment. This includes AMP8 storm overflow improvements, surveys to better understand network performance, and upgrades at the sewage treatment works. These activities have been developed through ongoing engagement with the Environment Agency and reflect a shared understanding of the challenges affecting the catchment.

There has also been previous engagement with the Environment Agency on wider interventions aimed at reducing pollution risk, including foreshore-related activities and the Town Quay rising main rehabilitation scheme. The proposed Cost Change investment should therefore be viewed within the context of this broader and well-established programme of work, rather than as a new issue identified solely through the submission process.

During the development of our Cost Change submission, we undertook proactive engagement with the Environment Agency to discuss both our proposed approach and the supporting evidence for the scheme. While our understanding was that the Environment Agency was not providing formal endorsements for individual company submissions, the discussions reinforced a shared understanding of the challenge in Fowey and the need for investment.

We also hosted a joint site visit with Defra and Ofwat, showing representatives from both organisations our sites at Newquay and Fowey to show them the challenges of working within coastal and marine environments first hand. The visit was a useful opportunity to discuss the operational realities of serving a geographically dispersed peninsula, characterised by significant seasonal population growth, alongside the condition and resilience of our assets, and the case for the proposed investments.

Since publication of the Draft Determination, we have continued our engagement with the Environment Agency regarding our response strategy. This has included direct meetings with the Environment Agency, as well as their participation in our WaterShare+ panel sessions on 11 and 18 September. On 23 September, the Environment Agency confirmed that it supports the Fowey foreshore sewer scheme in principle, recognising the opportunity to reduce saline ingress, improve asset resilience and provide long-term protection for the catchment. We will continue to engage with the Environment Agency to clarify how this new investment and our existing programmes will be coordinated and delivered. The letter from the Environment Agency is provided under Appendix 4.

We are also currently undertaking engagement with local MPs and other local authorities regarding our proposed interventions, and we are beginning to engage with the Marine Management Organisation on these schemes. We will provide Ofwat with any further relevant evidence ahead of Final Determination.

“The Environment Agency supports both of these proposals in principle, as the investment aligns with our objectives to protect and improve the environment, to support sustainable growth and to provide long term asset resilience.”

Environment Agency regarding our Newquay growth and Fowey foreshore sewer schemes



Fowey

Gravity sewer rehabilitation programme

To demonstrate how we are actively managing risks for the gravity sewer rehabilitation programme, we set out the nature of the material risks and the mitigations below.

Delivery model

The gravity sewer rehabilitation proposal is a portfolio programme rather than a single project. The submitted programme provides for £60.7 million of investment to deliver an additional 124 km of rehabilitation through a mix of open-cut replacement and trenchless structural relining over three years.

Its delivery risk is principally associated with selecting the right assets, confirming condition and constructability, choosing the appropriate intervention, batching works efficiently and maintaining sufficient delivery capacity across a dispersed programme.

Asset information and intervention selection

The programme is informed by deterioration and service-risk modelling, work-order evidence and condition information. However, the technical business case explicitly recognises low confidence in inferred condition across parts of the network because much of the asset base has not been directly observed through CCTV – this is especially true for the transferred private sewer network.

This creates three related delivery risks:

1. a modelled candidate may not require the assumed intervention once inspected;
2. a sewer selected for relining may require replacement because of deformation, loss of section, access or connection complexity; and
3. inspection may identify additional high-risk assets that should take priority.

The programme therefore includes additional CCTV support and proposes a sequence of preliminary scope confirmation, CCTV-informed constructability assessment, selection between relining and replacement, batching and delivery.

The programme will retain programme level flexibility to allow substitutions of assets where investigation demonstrates that another intervention or location provides better risk reduction. Such substitutions will be governed by a programme steering group.

Programme mobilisation

Risks – The region-wide programme requires sustained mobilisation across our wastewater operating area, creating principal delivery risks around:

- delays in statutory notices, access or traffic management;
- local shortages in lining, CCTV or excavation capacity;
- inefficient mobilisation to dispersed small schemes;
- variation in sewer diameter, depth, material and connection density.

Mitigations – We are establishing a dedicated delivery programme manager so that batches of work can be identified, programmed and delivered. This will achieve efficiency and allow for more upfront planning where batches of work require statutory notices or traffic management.

To strengthen assurance, the programme will be managed through a rolling delivery programme containing more investigated candidate work than the minimum annual construction requirement. This will enable work to be re-sequenced if a site is delayed without undermining annual output.

Unit-cost and quantity risk

Risk – The business case costs are built from intervention unit rates by diameter and intervention type. It recognises that replacement currently appears more frequently in the model because it is assumed to remove 100% of failure risk, compared with 75% for relining, but that the delivered mix may contain more relining where site circumstances support it.

Consequently, the primary cost risk needs to consider:

- relining versus replacement;
- excavation depth;
- traffic management;
- lateral reconnections;
- manhole intervention;
- cleaning and pre-lining preparation;
- bypass pumping; and
- reinstatement.

Mitigation – we will operate cost control at both programme and work-package level. Individual schemes will be priced after inspection and constructability review, while programme forecasting will monitor the actual unit-cost mix against the business-case assumptions.

Supply chain and quality risk

Risks – Trenchless rehabilitation can deliver significant productivity benefits but requires specialist design, installation and curing controls.

Mitigation – We will utilise our experience and specialist sewer lining delivery contractors to ensure adequate cleaning, liner fit, curing, connection installations and post-installation verification CCTV.

Work packages will therefore include defined quality plans, installation records, material certification, pre- and post-work CCTV, and controlled handover information.

Service reservoir replacements

To demonstrate how we are actively managing risks across our storage point replacement programme, we set out the nature of the material risks and the mitigations below.

Nature of the delivery risk

Service reservoir replacement has characteristics of both a repeatable asset class and a site-specific major project. Common engineering and water-quality controls can be standardised, but each intervention requires a bespoke hydraulic, operational, construction and commissioning strategy.

It is a major site-specific civil intervention involving treated-water hygiene, structural demolition, live network interfaces, temporary supply arrangements and controlled commissioning.

The treated-water storage proposals comprise different interventions, but all are based within our water treatment works and are primarily based on the construction of a new storage asset:

- reconstruction of Alderney Reservoir;
- replacement of the Barrow Chlorine Contact Tank and associated inlet and outlet arrangements; and
- replacement of deteriorated water storage assets at Littleton, Stowey and Kenley as part of the wider WTW enhancement programmes.

Risks – Although these investments share common risks concerning structural condition, water quality, operational interfaces and commissioning, they are not being treated as a standardised replacement programme. Each site has a different hydraulic function, process configuration, construction interface and dependency on existing assets.

Across the portfolio, the principal delivery challenge is to replace or reconstruct large civil assets without compromising the operation of the associated treatment works, the integrity of the disinfection process, treated-water quality or continuity of supply.

Mitigations – To mitigate risks our delivery approach is based on:

- early confirmation of the hydraulic and process design basis;
- construction sequencing that protects treatment and supply continuity;
- investigation of existing structures, buried assets and interfaces;
- early identification of enabling works, demolition, pumping and pipework;
- project-specific outage and contingency planning;
- water-quality-controlled construction and commissioning; and
- transparent treatment of residual cost and programme uncertainty.

In addition to site-specific operational risks, each project will control foreseeable engineering and construction hazards, including:

- tolerances required on water retaining structures;
- temporary works for deep excavations;
- environmental constraints;
- confined spaces;
- contaminated/hazardous material on a potable water site; and
- heavy lifting and restricted access.

Further scheme specific risks and mitigations are provided overleaf.

Alderney Reservoir

The Alderney business case seeks £35.998 million for reconstruction of Reservoir 3, with the cost change proposal describing a replacement reservoir of 40 Ml. The existing reservoir is a covered treated-water structure originally constructed in the early 1900s. The proposed investment responds to deteriorating structural condition, emerging water-quality risk and reduced storage resilience.

The preferred solution is to demolish the existing reservoir and replace it on the existing site. Constructing at an alternative location was assessed as more costly because it would require land acquisition, additional pipework and connectivity, and planning requirements while providing equivalent benefits.

Replacement on the existing footprint avoids those off-site costs but creates a concentrated set of delivery risks associated with:

- demolition of a large, ageing structure;
- confirmation of the condition and arrangement of buried foundations and services;
- maintaining sufficient treated-water storage during the works;
- constructing new hydraulic connections within an operational treatment site;
- providing the required intermediate pumping arrangements; and
- commissioning the replacement reservoir into an interconnected storage system.

“

**We need more
reservoirs because
2,000 new homes pop
up.
We're still drinking out
of the same supply.**

Female, ABC1, SES

”



Alderney Service Reservoir

Storage and hydraulic interfaces

Risk – The delivery strategy recognises that Alderney Reservoir forms part of an integrated storage system at Alderney WTW. Removing it from service, alongside wider works, may require the remaining reservoirs to operate at lower levels to balance diurnal and peak flows. This would reduce available storage and increase exposure to supply interruption if treatment output is constrained.

Mitigation – Prior to design freeze the following delivery requirement will be confirmed:

- the interaction between the new reservoir and the remaining storage;
- the operating levels required to balance treatment output and distribution demand;
- the capacity and duty of the proposed intermediate pumping station;
- the routing, sizing and isolation of new pipework;
- the operational effect of individual cells being unavailable;
- the required storage position during construction and commissioning; and
- the sequence for connection to the live treated-water system.

Hydraulic modelling and operational review will be treated as design inputs rather than post-design verification. The critical operating assumptions will be recorded in the basis of design and tested at formal design reviews.

Demolition and latent-condition risk

Risk – The preferred solution requires demolition of the existing reservoir before construction of its replacement. The available records cannot remove all uncertainty regarding the original structure, reinforcement, foundations, buried pipework and interfaces created through subsequent modifications.

Mitigation – The pre-construction phase must therefore include proportionate intrusive investigation, service detection, structural verification and a detailed demolition methodology. The demolition plan should address sequencing, stability, isolations, temporary works, management of demolition materials and protection of adjacent operational assets.

Any remaining uncertainty should be recorded in the project risk register and commercial baseline. It should not be assumed that the age or visible condition of the reservoir provides sufficient information to support an unqualified fixed-price transfer of all latent-condition risk.

Construction and commissioning

The new two-cell arrangement must allow individual cells to be isolated, drained, inspected and returned to service without removing all storage from operation. The design must therefore integrate structural, hydraulic, valve, instrumentation, access and water-quality requirements.

Commissioning will be managed as a distinct delivery stage and must include:

- structural and watertightness verification;
- cleaning and disinfection;
- water-quality sampling and acceptance;
- testing of inlet, outlet, overflow and drainage arrangements;
- pumping-station and control-system testing;
- proving of cell isolation arrangements;
- verification of hydraulic performance; and
- formal operational handover.

The replacement will not be treated as complete solely when civil construction ends. Completion will require evidence that the reservoir and associated pumping and pipework can operate safely within the wider Alderney system.

Barrow Chlorine Contact Tank

Scope and delivery context

The Barrow proposal seeks £18.2 million to replace the existing chlorine contact tank compartments A and B and the associated inlet and outlet arrangements. The existing assets exhibit worsening inter-compartment leakage, defects in the combined outlet chamber and corroded or leaking penstocks that prevent effective isolation.

Process continuity and temporary disinfection

The principal delivery risk at Barrow is maintaining an effective and verifiable disinfection process while the replacement asset is constructed and commissioned. The works cannot be taken offline for a prolonged period to permit conventional refurbishment, and refurbishment of the existing compartments would require significant outage time or complex temporary arrangements.

Our delivery strategy is based around:

- construction while the existing contact tank remains operational;
- the permissible duration and conditions for planned outages;
- the operating constraints applying during cutover.

These requirements will be jointly considered and planned for our designers, operators and water-quality specialists.

Existing outlet and isolation interfaces

Risk – The existing cell outlet penstocks do not seal, meaning the compartments cannot be reliably isolated. The outlet chamber connects to a segmental 60-inch cast-iron pipe, and the need for a pumping station remains subject to hydraulic review.

Mitigation – The following uncertainties will be investigated, confirmed and planned for prior to main construction commitment:

- the condition, configuration and load capacity of the outlet arrangements;
- the practical isolation points for construction;
- the condition and remaining suitability of retained pipework;
- the hydraulic effect of the new tank levels and connections;
- whether pumping is required;
- the temporary works needed for safe connection; and
- the contingency response if an existing valve, penstock or pipework component cannot be relied upon.

The combined outlet chamber should be treated as a critical cutover interface rather than a minor ancillary item.

Littleton and Stowey WTW storage assets

Littleton WTW and Stowey WTW storage point replacement face similar challenges and are described together.

Scope and operational context

Littleton WTW contains major civil and mechanical assets dating from the early 1960s. Stowey WTW is similar with assets dating back to the 1950s.

Our original cost change submission included for replacement of rapid gravity filters and water storage points to address deterioration and strengthen resilience. However, the scope of our cost change submission has been reduced to storage points only which reduces some of the delivery complexities.

Integrated site sequencing

Risks – The storage interventions cannot be planned independently of the wider treatment-process work.

Mitigation – Construction sequencing has considered the interaction between storage availability, filter availability, treatment throughput and seasonal reliance on the works.

Scope maturity and existing-asset interfaces

Risk – At both WTWs, deterioration affects several interconnected civil and mechanical assets. The delivery risk is that investigation or detailed design identifies additional interface work necessary to connect the funded replacement assets to retained process units.

Mitigation – Our scope now excludes RGF replacement, therefore the connection to the final storage point has less interfaces which reduces this risk.

Maintaining output and completing commissioning

Because Littleton supports the regional water balance when in operation, commissioning must be coordinated with the operational need for the site.



Stowey Water Treatment Works

Kenley WTW contact tank and treated-water tank

Scope and delivery context

Kenley WTW is a borehole water treatment site with a maximum throughput of 45 Ml/d. The asset-health proposal provides for replacement of the ageing contact tank and treated-water tank with new structures constructed in place, including new pipework connections to the high-lift pumps.

The principal delivery risks concern:

- maintaining compliant disinfection while replacing the contact tank;
- preserving sufficient treated-water storage and site output during construction;
- connecting the replacement structures to the existing process and high-lift pumping arrangements;
- managing demolition and latent-condition uncertainty associated with ageing civil structures;
- coordinating asset-health work with the wider AMP8 enhancement scheme; and
- cleaning, disinfecting, testing and commissioning the new assets before operational use.

Disinfection and supply continuity

Risk – The contact tank is an integral part of the treatment process, receiving chlorinated water after filtration. Treated water is subsequently held in the final-water tanks before being supplied to the distribution network.

Mitigation – Replacement will be sequenced around the sufficient contact-time, storage and site-output requirements necessary to maintain compliant operation. Before final construction commitment, the design phase will verify:

- the treatment and storage assets available during each construction phase;
- how compliant disinfection contact time will be maintained;
- the temporary hydraulic arrangement during isolation and connection;
- the maximum permissible reduction in site output;
- the operational conditions under which planned outages can occur;
- contingency arrangements if a connection cannot be completed as planned; and
- water-quality hold points before each replacement asset enters service.

Existing structures, demolition and buried interfaces

Risk – Constructing the new tanks in place requires controlled removal of ageing structures and reconnection to the existing treatment process and high-lift pumping system. The available documents identify replacement in place and new pipework connections to the high-lift pumps as elements of the preferred solution.

Mitigation – Our design work will confirm:

- structural configuration and demolition sequencing;
- foundations and ground conditions;
- existing buried pipework and services;
- available isolation points;
- retained inlet, outlet, overflow and drainage arrangements;
- the condition and suitability of interfaces with the high-lift pumps;
- material handling and disposal requirements; and
- access, lifting and temporary works constraints.

Where these matters cannot be fully verified before intrusive work begins, they will remain visible within the project risk register, estimate assumptions and commercial allocation.

Summary

The evidence demonstrates that we have identified the principal delivery risks associated with the three cost change investment types and has reflected them in scope development, estimating, programme assumptions, procurement planning and governance. The risk profiles differ materially, but each will be managed through defined ownership, progressive risk retirement, proportionate commercial treatment and formal assurance.

For schemes delivered at operational treatment sites, continuity of service, drinking-water quality, safe operation and commissioning constraints have been treated as integral option-selection and design criteria, not as matters to be addressed after construction planning has commenced.

Delivery will be supported by early supply-chain engagement, framework procurement, portfolio sequencing, design governance, controlled change and ongoing assurance. Risks will be recorded against named owners, mitigation actions, decision dates and commercial treatment, with clear escalation to executive oversight where tolerance is exceeded.

Taken together, these arrangements provide a credible and auditable basis for concluding that the investments are deliverable within AMP8, subject to the identified controls and the transparent management of residual uncertainty. They also provide the oversight and evidential trail necessary to support Ofwat's monitoring of delivery and customer protection.

Look ahead to 2027

We welcome Ofwat's cost change process, and will be considering a further submission in 2027

As signalled in our cost change submission, we intend to make a further submission in 2027 on other emerging areas, and will share with Ofwat in due course once we have further developed the supporting evidence base.

A strength of our 2026 cost change submission is to look at the whole site change and we propose considering this further for 2027. This is likely to include both growth and asset types, and we would like to explore using company bespoke assets further in order to achieve this. We are likely to focus on a few significant areas of expenditure

The main areas we are considering include:

- Biobeads – potentially a bespoke asset class as set out in our original submission;
- Communications pipes – potentially a bespoke asset class to provide a longer-term leakage benefit;
- Cyber security – we reiterate our needs statement from our 2026 submission below;
- Foreshore sewers – we reiterate our needs statement from our 2026 submission below;
- Water network storage – targeting additional service reservoirs in the Bristol-region;
- Wastewater treatment works – targeting replacement of additional settlement tanks and trickle filters;
- Trunk mains and Rising mains are priority asset categories for 2027 which are areas where asset condition and performance information would support our case. Trunk main replacement would specifically support areas of network resilience and rising main replacement would reduce pollution risk;
- Growth – areas we identified previously such as Plymouth and East Devon for wastewater, along with some other point sources where this can be combined with priority asset health categories. For water, data centres are an emerging area of consideration;
- New water resource schemes (either growth driven or for major projects); and
- Power resilience remains an appropriate response to both growth pressures and asset health and resilience challenges.

Building on the areas we highlighted in our submission, we set out below a series of needs statements for discussion with Ofwat.

Needs statements

Cyber Resilience Wastewater

In our cost change submission, we set out the case for additional funding to strengthen cyber resilience across critical wastewater operational technology (OT) environments. This reflected the increasing cyber threat facing UK Critical National Infrastructure and the growing expectation that operators take proactive steps to strengthen resilience against high-consequence cyber events. The proposal was also informed by the direction of travel in national policy, with wastewater expected to be brought within the scope of the Network and Information Systems (NIS) Regulations following implementation of the Cyber Security and Resilience Bill.

While we recognise Ofwat's decision not to provide funding at this stage, given that the legislative framework is not yet in force, the underlying need has not diminished. Wastewater is not currently included as an essential service under the NIS Regulations. The cyber threat landscape continues to evolve, and the future regulatory environment is expected to place greater requirements on the resilience of wastewater operational systems. A significant cyber incident affecting wastewater OT systems could disrupt treatment processes, impact service delivery, increase the risk of pollution incidents, and compromise customer data.

However, it is recognised that the general cyber threat has increased and therefore accelerating delivery of Schemes 1-3 of our submission would provide accelerated resilience to our critical wastewater sites. On the back of the cyber attacks on water and waste companies across more than 10 states in the US, guidance we believe Defra are expecting the water sector to accelerate cyber resilience and use the cost change process to enable that.

As a result, we anticipate bringing forward a targeted wastewater OT cyber resilience proposal in 2027 once the legislation is further developed. The proposed investment would focus on practical, risk-based controls that reduce both the likelihood and consequences of high-impact events, while building on capabilities already being deployed across our drinking water operations.

Our response to the questions raised in the draft determinations are included under Appendix 7.

“Building true systems resilience demands investment at the right time. With cyber threats evolving, climate pressures intensifying and drought risk increasing, it is no surprise that the UK Government has recently upgraded *“water infrastructure failure or loss of drinking water”* to a catastrophic impact level. The only responsible thing to do is to act prudently and at pace. Delaying essential action only compounds future vulnerability for future customers.

As Co-Chairs of the SES Water Customer & Environmental Scrutiny Panel, we support Pennon’s commitment to proactive resilience planning in its cost change submission. Strengthening digital, operational and environmental systems today is fundamental to protecting customers, safeguarding the environment and ensuring the long-term security of water supplies. The risks are rising and so must our collective ambition.”

Alison Thompon and Steve Crabb, Co-Chairs of SES Water Customer & Environmental Scrutiny Panel

Foreshore Gravity Sewers

We welcome Ofwat’s recognition of the challenges associated with foreshore gravity sewers, reflected in the funding provided for the Fowey Foreshore Sewer scheme. The successful progression of this project reinforces the need for targeted investment in ageing wastewater assets operating in complex tidal environments. Building on this precedent, we continue to identify other foreshore locations for 2027 proposals (as previously signalled).

Newton Ferrers Gravity Sewer

In our cost change submission, we set out the case for a potential future step-change in renewal of gravity sewers within coast and tidally influences environments, through the full refurbishment of Newton Ferrers foreshore gravity sewer collector system and associated lateral connections. We set out to preposition the business case, recognising further planning, delivery scheduling and cost refinements required before a formal submission could be made.

The Newton Ferrers foreshore sewer system is subject to accelerated deterioration driven by tidal exposure, saline ingress, corrosion and constrained access for inspection and maintenance. These factors create a risk profile that differs significantly from conventional gravity sewers and cannot be sustainably managed through routine maintenance or isolated repairs alone.

We anticipate submitting a targeted investment proposal to rehabilitate critical sections of the foreshore network. This would improve asset resilience, reduce the risk of pollutions, and reduce the likelihood of structural failure in an environmental sensitive location. The investment would also support long-term asset health in the face of increasing climate pressures, including sea level rise and more frequent tidal influences on wastewater infrastructure.

The future claim pre-position enables early engagement on the need and delivery challenges associated with major foreshore sewer rehabilitation projects. Further development work is underway to improve cost certainty and ensure any future proposal is efficient, deliverable and supported by robust evidence.

Salcombe Gravity Sewer

We also set out the case for a future step-change in investment to renew the Salcombe Gravity Sewer, a critical foreshore wastewater asset operating within a highly constrained tidal and saline environment. The submission was intended to pre-position a future funding request, recognising that additional planning, design development and engagement with delivery partners were required to refine costs and delivery arrangements before a formal claim could be made.

The existing foreshore sewer system is subject to chronic saline ingress, ongoing asset deterioration and increasing operational pressures associated with its location within a tidally influenced estuary. Whilst targeted maintenance and localised repairs have helped manage risks to date, they do not address the underlying failure mechanisms affecting the foreshore sewer, associated connection points and submerged structures.

We therefore anticipate a targeted investment proposal in 2027 to rehabilitate and renew critical sections of the Salcombe foreshore sewer network. The investment would reduce saline infiltration, improve downstream treatment performance, reduce pumping and treatment of unnecessary flows, and lower the likelihood of pollution incidents, flooding and storm overflow spills. It would also improve resilience in an environmentally sensitive and high-profile coastal location where asset failure could have significant environmental and customer impacts.

Further development work is currently underway to improve cost certainty and refine delivery methodologies for this complex scheme. This will ensure that any future proposal is supported by robust evidence and reflects an efficient and deliverable long-term solution that addresses the risks associated with ageing foreshore infrastructure and future pressures, including sea level rise and increasing tidal influence.

