

Affinity Water: PR24 Business Plan Submission - Commentary

LS1: Forecast outcomes & LS2: Forecast outcomes from base expenditure

The process we used for the performance commitments in the LS tables was the same as for the OUT tables, maintaining consistency between our short and long-term approaches:

- Reviewing our existing performance levels and sector position. Reviewing sector data to understand this
- Reviewing PCLs set at PR19 (where relevant)
- Developing detailed performance improvement plans led by 'business owners' alongside the 'strategy owner' for each PC understanding activities that we will undertake to improve performance linking together Totex Business Cases with Outcomes
- Identified enhancement benefits are split from the total performance levels

Detailed methodologies for each PC were completed for the OUT table reviews.

Additionally, we have set out how we have met the final methodology tests in Appendix AFW17 – Outcomes for each of the performance commitments. This demonstrates how we have taken account of Ofwat's approach to forecasting performance.

Data

We have used the published Ofwat data to complete historic data, where available, to inform our long-term glide paths.

Significant deviations

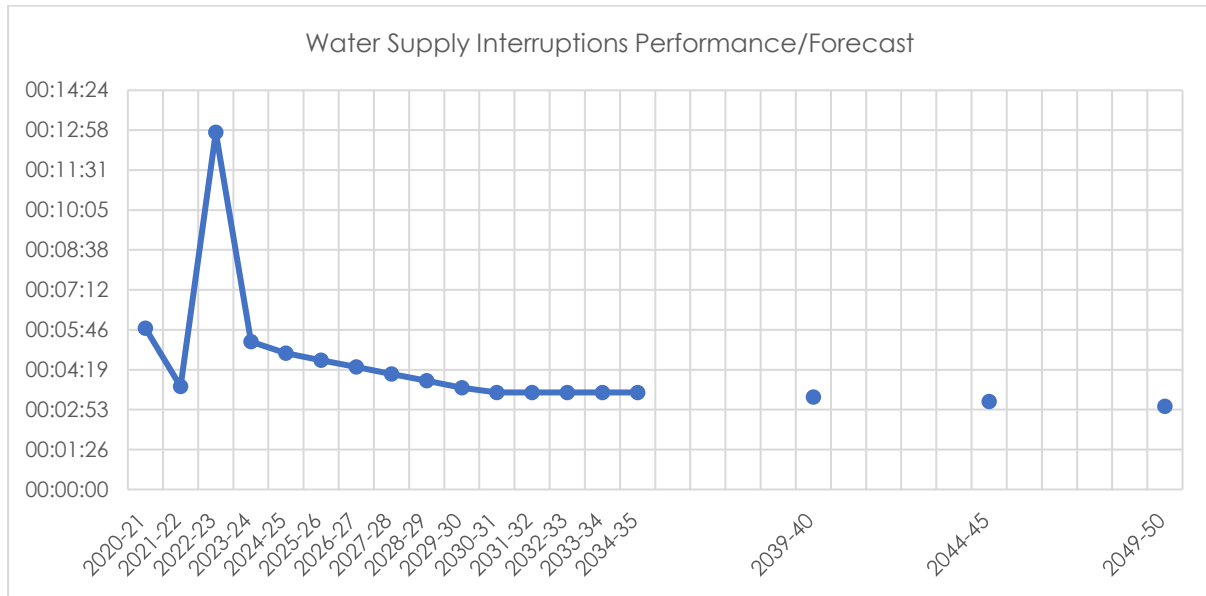
N/A

Water Supply Interruptions

Policy: We have forecast a long-term improving trend to 3 minutes (to 2049-2050) for Water Supply Interruptions with a 10 second improvement per 5-year period. We are delivering the majority of performance from base expenditure in line with final methodology expectations. We target to achieve and maintain an upper quartile industry position.

This has been set using a top-down methodology, assessing our progress made to date and to ensure a continuing downward trend. Given our historic performance, the underlying baseline of interruptions to supply and a review of industry data, 3 minutes is a stretching and ambitious target in the long-term especially given the likelihood of an increasing frequency of extreme weather events.

We have identified our Single Points of Failure programme as delivering benefits for water supply interruptions, the benefit of this programme was developed through the business case process and is estimated at 34 seconds. The remaining performance is delivered through base.



Compliance Risk Index

Policy: Our long-term forecast will be to maintain our 2030 score of 0.9. Explanation is as given in the Outcome Commentary file. All performance following 2030 will be from base investment.

Our forecast is challenging given upward pressure that our WRMP applies through the need to move water further around our network and reduce local abstraction. We will continue to invest in our network, treatment works and storage to maintain this level of performance.

We will continue to set a target of 0 for CRI in the long-term.

Customer Contacts about Water Quality

Policy: Our long-term target will be to maintain our 2030 score of 0.67. All performance will be from base investment.

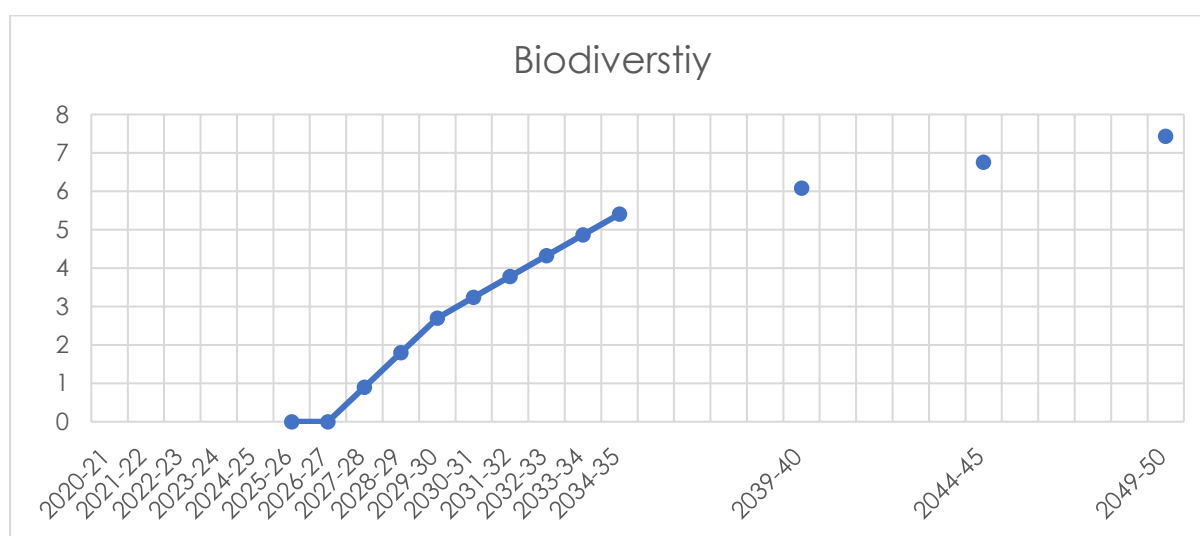
This is a challenging target given upward pressure of our WRMP and the need to move water further around our network as described in the Outcomes Commentary. We will continue to invest in our network, treatment works and storage to maintain this level of performance. All performance will be from base investment.

Biodiversity

Policy: Given this uncertainty of our underlying data for this PC, long-term forecasting is challenging. We assume by 2035 we will have achieved the most biodiversity potential on our company owned land. We will therefore look for third party land to develop for biodiversity yield. From 2035, we estimate we can deliver 25% of the

2030 – 2035 run rate – this estimation is highly uncertain due to the relative immaturity of the metric, we will look to develop more detailed long-term plans once the PC becomes active and we build experience in managing biodiversity. With no industry comparison available at this stage, we anticipate being a mid-table performer.

Biodiversity is a new PC and there is significant uncertainty in the delivery of our programme, given the lack of baseline data. We have displayed our increase in biodiversity units per 100km² of supply area with a baseline of zero whilst we complete initial surveys of sites. Our initial performance until 2035 will be delivered through enhancement investment. Following this period, we will move to a 50:50 split between base and enhancement.



Our long-term investment plans include improvements above and beyond the specific requirements of the biodiversity performance commitment for this reason, whilst our investment will be maintained, the benefit delivered will be relatively small. The requirement to ensure no deterioration of biodiversity on our land means investment will be required to maintain a level rather than deliver improvements.

We have identified a number of improvements which will have biodiversity value that will require investment but not deliver PC benefit:

- Invasive non-native species (INNS) management
- Eel and fish screens
- Management to third party land

Operational GHG Emissions – Water

Policy: We have used our Net Zero 2045 and 2050 targets to inform our performance for this PC. With no industry comparison available at this stage, we anticipate being a mid-table performer.

We have used our long-term forecasts for GHG emissions, using the same forecasts as our Net Zero planning. As the grid will be decarbonising throughout this time

period, it will change our decision making on emissions, therefore we have used the predicted emissions factor from 2030-31 onwards.

We will deliver our Electric Vehicles and nature-based solution via enhancement investment; all other performance will be delivered through base investment.

Leakage, PCC and Business Demand

Policy: We have followed guidance and maintained consistency between our WRMP and our Business Plan to continue our glide path to our long-term water demand commitments.

Numbers included in LS tables are taken from our WRMP, which includes details of how estimations were developed and the supporting assumptions and evidence.

For base/enhancement split, we have used the final methodology guidance to stretch performance from base. For this reason, we have used the following assumptions:

- Leakage: continuing base/enhancement split from 2025 – 2030. Base: 77%, Enhancement: 23%
- PCC and Business demand: 43% benefit from base, 57% from enhancement investment.

Serious Pollution Incidents

Policy: In the long-term we will maintain our forecast of 0, in line with our target in line with final methodology requirements. All performance will come from base investment.

Discharge Permit Compliance

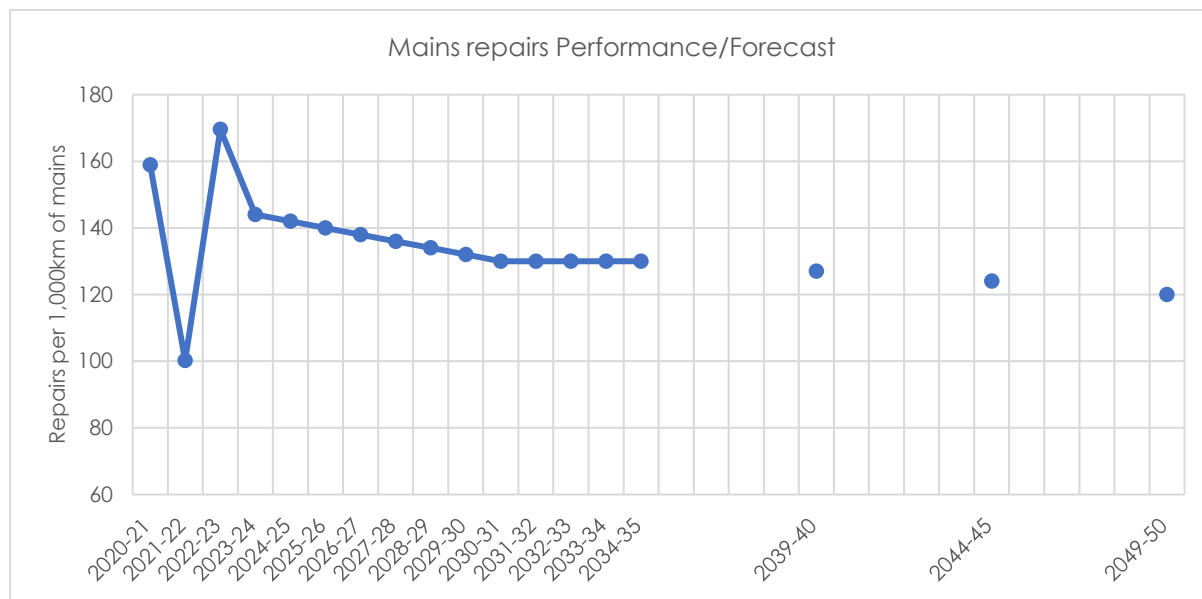
Policy: We will maintain our 100% compliance forecast in the long-term in line with final methodology requirements. All performance will come from base investment.

Mains Repairs

Policy: We will continue to deliver a declining (improving) trend in mains repairs from base investment. We expect to remain an upper quartile performer in the industry in the long-term.

We will implement significant measures in our mains repairs approach in 2025 – 2030 which will deliver a step change in performance. In the longer term, we expect improvements to be derived from mains renewals in conjunction with further network calming. We expect a 14% reduction from 2025 over the long-term taking repairs per 1,000km of mains to 120.

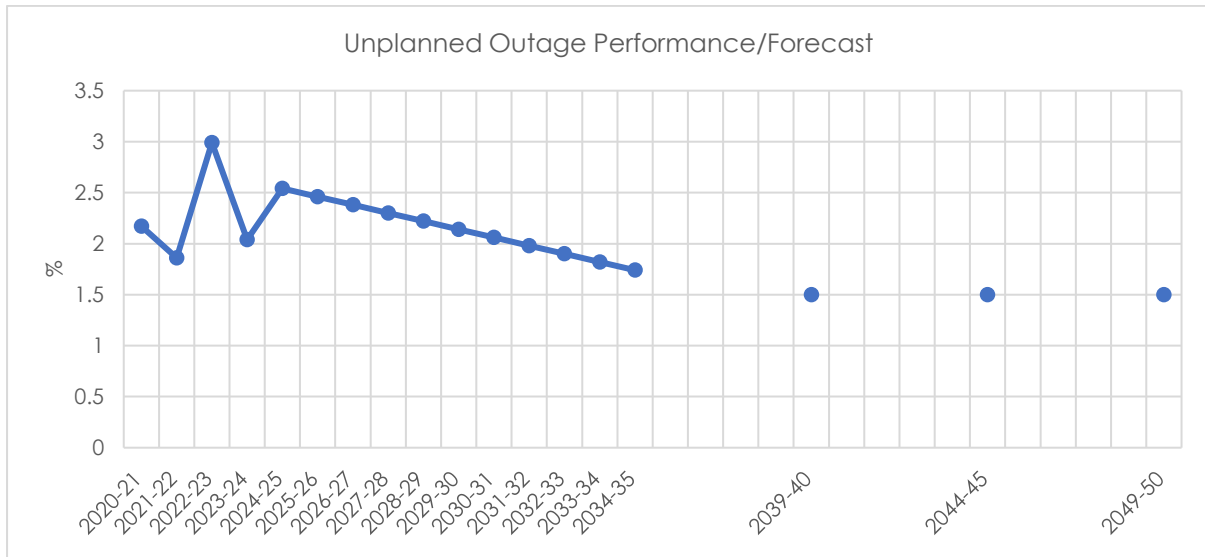
We will continue to build on our Network Calming programme, which we expect to deliver further enhancement funded benefits in the long-term. All other performance will be delivered from base investment.



Unplanned Outage

Policy: We estimate to improve our performance over the next 15 years, before reaching a floor at 1.5%. We have set ourselves a stretching target from base investment, however we recognise that other companies have a lower baseline and are less impacted by the removal of raw water exclusion (as discussed in Appendix AFW17 – Outcomes) than us meaning achieving a high industry ranking is very challenging.

We will plan to make continuous improvement to reduce unplanned outage from our treatment works. We have limited data for Unplanned Outage, especially against the PR24 definition. The removal of the exclusions process for raw water leaves a significant risk to this measure. If we experience new or emerging external factors that influence raw water that we cannot quickly resolve, then we will experience upward pressure on our overall score. Given this risk, we will look to maintain stable performance at 1.5% in the long-term. All performance will be delivered through base.



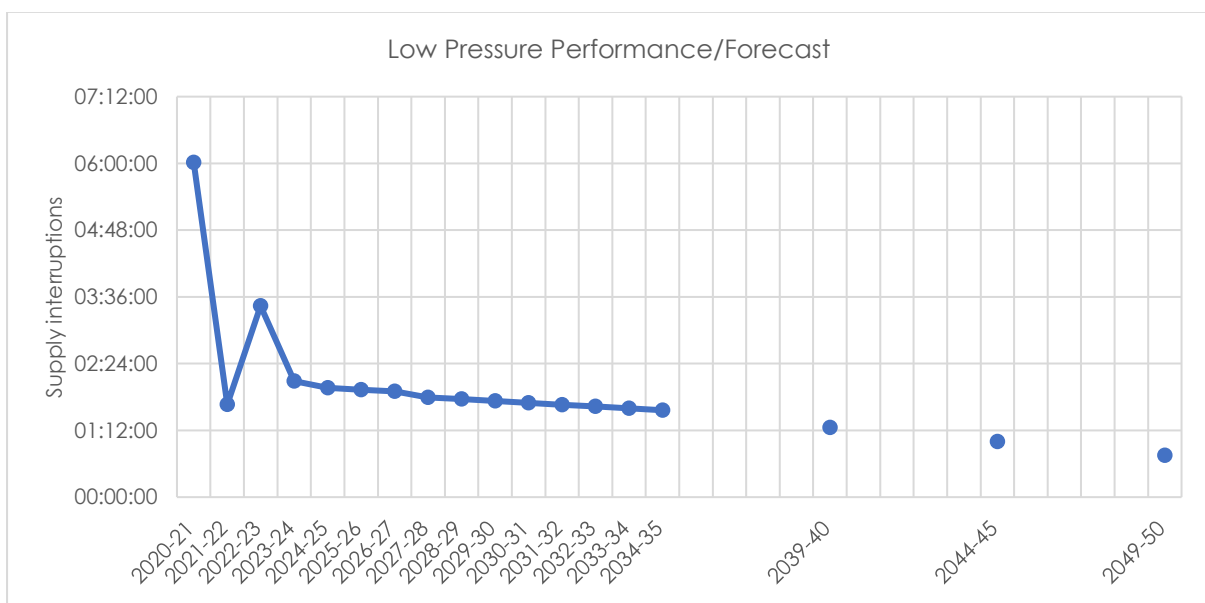
Abstraction Incentive Mechanism

Our target will continue to be zero. By the nature of AIM, we are reliant on triggers being active to reduce abstraction. Therefore, with trigger flows out of our control, the target will need to be set at 0.

Average Time Customers Experience Low Pressure

Policy: We will continue an improving trend of low pressure. Forecast for performance has been made using a top down methodology, reviewing our 10 year plan to 2035.

We plan on making greater than 60% improvement in performance in the long-term. We will look to make significant inroads into low pressure in 2025 – 2030 and then look to make continued progress in the longer term. We will target c. 15minute reduction in each 5-year period. All performance will be delivered through base.



Supply Side Scheme Benefits

During the assurance process, it was noted whether row 50 in the LS1 and 2 data tables should be showing a cumulative figure or where the benefit comes online. We are taking the latter approach.

LS3-LS3i: Wholesale water totex enhancement expenditure by purpose, core and alternative pathways

Alternative pathways requiring expenditure in the 2025 – 2030 period

There is additional expenditure in the 2025 – 2030 period within the demand (£22m) and WRMP Reported Pathway (£20k) alternative pathways in the WRMP investment strategy.

The expenditure difference between the core and alternative pathways is within the core pathway, where we elected to build the GUC Option 3 (50ml/d) rather than the smaller supply schemes, which are present in the alternative pathways. This is due to the low regret nature of the core pathway. Further details on this can be found within the WRMP investment strategy within the main LTDS submission.

Costs incurred by the DPC element are not present in the LS3 tables, therefore the costs for the alternative pathways only appear greater than those in the core pathway.

Costs that have been proportionally allocated between expenditure categories in tables LS3-LS3i

We created the Connect 2050 programme as an integrated solution to addressing resilience supplies and capacity issues across our network over the next 25 years. We then allocated each individual scheme to the appropriate enhancement driver based on specific needs. This constitutes of the following activities:

- Supply-side improvements
- Resilience (i.e. storage under the Connect 2050 scheme)

The only single scheme cost to be proportionally allocated across multiple drivers is the Hadham Mill service reservoir. 50% of this is allocated to the Resilience enhancement driver line and 50% has been allocated to the WINEP Water Framework Directive enhancement driver line. For more information, please refer to the PR24 Business Plan Appendix AFW13.

The cost breakdown by enhancement driver line from the LS tables is shown below.

Connect 2050 (£m)

	DP	AMP8	AMP9	AMP10	AMP11	AMP12
Supply Side improvements	3	74,850	116.357	8.629	98.577	16.524
Resilience	3	13.722	-	-	-	-
Total		88.572	116.357	8.629	98.577	16.524
Grand total						328.659

Explanation of the reasons for using the additional lines

We have not used any of the additional lines.

Explanation of how the alternative pathways presented in the LTDS aligns with pathways a-i if different labelling has been used

This is not applicable. A summary of a-f is shown below:

- a: Climate Change
- b: Technology
- c: Demand
- d: Abstraction Reductions
- e: Catchment Care (wider, bespoke scenario)
- f: WRMP Reported Pathway

LS5: Wholesale water totex enhancement expenditure under scenarios

We have developed alternative adaptive pathways for each of the following common reference scenarios, our wider bespoke scenario (Catchment Care) and the best value plan from our WRMP24 submission.

This has been split out below by the corresponding pathway in our main LTDS submission.

Further information about all of this can be found in our main LTDS submission within the details of our seven investment strategies (sub-section 2.1 of the relevant pathway).

Climate Change

- Water Network Resilience to Climate Change
- Raw Water Deterioration
- WRMP

Technology

- WRMP
- Net Zero

Demand

- WRMP

Abstraction Reduction

- WRMP
- WINEP (Water Framework Directive)

Catchment Care*

- Raw Water Deterioration

WRMP Reported Pathway**

- WRMP

* Details on how the Catchment Care scenario was identified and what it addresses can also be found in the Summary of our rationale chapter of our main LTDS submission.

** Details on what this means is found in the WRMP sub-section of the Details of our seven investment strategies chapter of our main LTDS submission.

LS7: Average total water, wastewater and combined bills under core and alternative pathways

We have used a simplified financial model to project the levels and changes in average residential bills for the LTDS core pathway. Our model takes as inputs, the totex expenditure and asset information for each strategy/pathway. It also requires financial information (e.g. cost of capital) and projections of the charging base (customer numbers) over which revenue is recovered. It works by calculating the amount of additional allowed revenue required to finance and operate the investments that form the core pathway, apportioning that revenue between household and non-household customers, and finally dividing the revenue attributable to households by the expected number of household customers to yield average household bill effects.

The key financial modelling assumptions used in our bill projection model are:

- Weighted average cost of capital 3.23%, real
- Cost of equity 4.14% real
- Allowed Retail margin 1%
- Notional regulatory gearing 55%

- Marginal rate of corporation tax – 25% from 1st April 2023 onwards
- Proportion of revenue accounted for by non-households in the range 19.4 - 20.0%
- Drawdown charges are based on the weighted average engineering asset lives of the assets being delivered in each year
- CPIH inflation – as table PD1.30

As outputs, our model produces a projection of average residential bills in the format required for table LS7. The procedure worksheet contains step by step instructions about how to complete the sheet, links to data sources and describes the underlying logic and reasoning for the processes used. The control sheet records the change log through successive versions and records management approvals.

Please refer to Appendix AWF35 from the PR24 Business Plan for further details.

Long-term bill impact associated with DPC schemes as well as documenting key assumptions.

Below is the long-term bill impact associated with DPC schemes. Further detail is found in the Bill Impact & Customer protections section of the main LTDS submission.

		AMP8	AMP9	AMP10	AMP11	AMP12
DPC Costs						
WRMP	Bill Profile	£1.59	£14.72	£8.11	-£3.29	£1.71

Indicative DPC bill impacts, total additional residential bill across 5 years of each AMP (£m)

When calculating bill effects for DPC schemes, we used the same financial modelling assumptions set out above and we modelled draw down charges assuming that DPC schemes have the same weighted average asset lives as the overall LTDS portfolio of investments. We have used our bill calculation model to calculate DPC bill impacts, accounting for costs in the year they are incurred.

Additional information

LS1 and LS2

It was noted when transposing figures in to the LS1 and LS2 data tables that there were formatting errors. The correct figures can be found below (tables do not include pink cells or where errors did not occur).

LS1

PC name	Unit	DPs	2030-31	2031-32	2032-33	2033-34	2034-35	2039-40	2044-45	2049-50	PR24 BP ref
Water Supply Interruptions	Time	0	00:03:30	00:03:30	00:03:30	00:03:30	00:03:30	00:03:20	00:03:10	00:03:00	LS1.1

PC name	Unit	DPs	2030-31	2031-32	2032-33	2033-34	2034-35	2039-40	2044-45	2049-50	PR24 BP ref
Compliance risk index (CRI)	Numerical Score	2	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	LS1.2
Leakage	%	1	32.7%	34.3%	35.9%	37.2%	38.4%	44.5%	48.8%	51.7%	LS1.9
Per capita consumption	%	1	16.9%	17.5%	18.2%	18.8%	19.5%	25.8%	32.1%	36.3%	LS1.10
Business demand	%	1	11.2%	11.6%	12.1%	12.6%	13.2%	16.1%	16.8%	17.0%	LS1.11
Discharge permit compliance	%	2	100.00%	100.00%	100.00%	100.00%	100.00%				LS1.14
Low pressure	Time	0	01:41:43	01:39:43	01:37:43	01:35:43	01:33:43	01:15:00	01:00:00	00:45:00	LS1.30
Supply-side scheme benefit	MI/d	1	10.0								LS1.33

LS2

PC name	Unit	DPs	2039-40	2044-45	2049-50	PR24 BP reference
Water Supply Interruptions	Time	0	00:04:09	00:04:04	00:03:58	LS2.1
Leakage	%	1	38.6%	41.9%	44.1%	LS2.9
Per capita consumption	%	1	3.1%	6.3%	8.4%	LS2.10
Business demand	%	1	6.8%	7.2%	7.3%	LS2.11
Discharge permit compliance	%	2	100.00%	100.00%	100.00%	LS2.14
Low pressure	Time	0	01:15:00	01:00:00	00:45:00	LS2.30

LS3, LS3a-f

Accelerated transitional costs included in year one of the 2025 – 2030 period. All costs shown are frontier shifts and real price effects, aligning to the CW11 data table.

As per CW3 data table, the internal interconnectors expenditure has been merged into the Supply Side Improvements driver line. Please refer to the CW3 commentary for further information.

It was noted when transposing figures into the LS3 and LS3a-f data tables that the totals were based on rounded figures to three significant figures (2030 – 2035) and two significant figures (2035 – 2050). The correct figures without rounding applied can be found below.

It was noted when transposing figures into the LS3a-f data tables that there was a comma in the Decision year and Most likely trigger year cells. It was also noted that the % relative likelihood for LS3f rounded up from 12.5% to 13% when transposing into the data tables. Correct figures for all the above can be found below.

LS3

Line description	Unit	DPs	2020-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Total water enhancement totex – core pathway	£	3	286.248	122.183	125.383	136.612	114.102	89.871	137.621	158.178	173.118	162.894	129.817	484.067	539.643	476.769	LS3.45

LS3a

Line description	Unit	DPs	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Decision year	year	0	2027													LS3a.1
Most likely trigger year	year	0	2030													LS3a.2
Total water enhancement totex – alternative pathway 1	£	3	-2.178	-0.797	-0.828	-0.797	-2.200	15.950	17.039	19.919	21.233	20.775	129.231	44.295	173.986	LS3a.48

LS3b

Line description	Unit	DPs	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Decision year	year	0	2025													LS3b.1
Most likely trigger year	year	0	2025													LS3b.2
Total water enhancement totex – alternative pathway 2	£	3	-19.942	-5.677	-2.453	-0.851	-1.682	-27.501	-23.070	-14.534	-13.297	-29.867	178.057	117.397	7.412	LS3b.48

LS3c

Line description	Unit	DPs	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Decision year	year	0	2025													LS3c.1
Most likely trigger year	year	0	2033													LS3c.2
Total water enhancement totex – alternative pathway 3	£	3	0.517	4.294	8.700	8.728	0.004	3.064	3.290	0.416	0.428	0.440	2.856	3.896	39.686	LS3c.48

LS3d

Line description	Unit	DPs	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Decision year	year	0	2028													LS3d.1
Most likely trigger year	year	0	2030													LS3d.2
Total water enhancement totex – alternative pathway 4	£	3	-2.754	-1.550	-2.158	-2.444	-3.163	8.331	6.708	8.409	9.450	9.149	65.979	44.035	240.084	LS3d.48

LS3e

Line description	Unit	DPs	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Decision year	year	0	2030													LS3e.1
Most likely trigger year	year	0	2030													LS3e.2
Total water enhancement totex – alternative pathway 5	£	3													597.190	LS3e.48

LS3f

Line description	Unit	DPs	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-40	2040-45	2045-50	PR24 BP reference
Decision year	year	0	2030													LS3f.1
Most likely trigger year	year	0	2030													LS3f.2
Likelihood	%	0	12.5													
Total water enhancement totex – alternative pathway 5	£	3						-26.692	-25.242	-31.599	-30.054	-31.779	162.633	11.753	92.009	LS3f.48