

AffinityWater

AMP7 Enhancement Spend Action Plan

March 2023



Introduction

The start of the current regulatory period in 2020 coincided with the exceptional circumstances created by the COVID 19 pandemic. As a result, we have incurred some delays to our AMP7 programmes. We are working hard to recover this and deliver against our commitments.

Despite the challenges from the pandemic, and the resulting restrictions that caused all non-essential work to be effectively halted for six months, we are still on track to deliver the outcomes of the regulatory requirements by the end of the period in 2025.

The following document sets out our action plan to ensure delivery of all enhancement schemes, including our Water Industry National Environment Programme (WINEP) and all statutory requirements. In preparing this action plan, we have completed a thorough review of each enhancement item, with progress to date, the factors affecting our original delivery plans, and our action plans to get our programmes back on track where required.

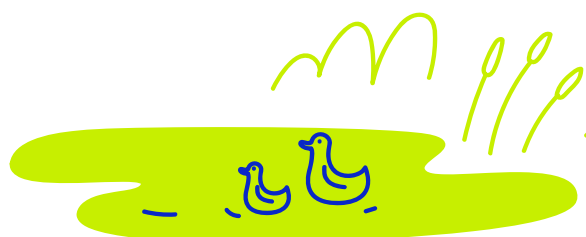


Context to our enhancement programme delivery

The COVID-19 pandemic was unforeseen at the time we prepared our PR19 Business Plan. When we received our Final Determination in December 2019, the world was only distantly aware of the emergence of a **new coronavirus**. The UK Government imposed a **nationwide lockdown** in March 2020, days before the start of the new regulatory period. At that time, the duration of the lockdown was unknown, and the consequential impacts have been significant and wide ranging. In particular, changes in working habits, notably the move to hybrid working, have continued to affect **how and when people use water**. Pre-pandemic, many of our customers would commute to their places of work outside our operating region. The consequential increase in water use by more customers staying at home, and our ability to affect how much water customers use remains a challenge we are committed to improving.

Government-mandated lockdowns affected our **supply chain**. As we paused all non-essential work for the protection of our customers, employees and delivery partners, and staff in our supply chain were furloughed. Our delivery partners who continued to provide essential services could not work in the same way, as there were restrictions on teams working together. Support services critical to delivering major schemes, such as **planning authorities**, also shut down operations, causing delays in our ability to secure permission to carry out work. When lockdowns were eased, we experienced **significant delays** in manufacture of goods such as water mains, and shipping prevented us from delivering to our original plans.

More recently, global events have driven up prices in energy and materials costs with rising **inflation**. Labour costs have also increased. We have reduced the impact of these price rises by continuing to find efficiencies, innovating our approaches, and deploying value engineering approaches.



Delivery of our Enhancement Programme

Our **Water Industry National Environment Programme** (WINEP) accounts for a large part of our enhancement programme to improve the environment for our customers and communities. It is a **step change** in terms of scale and ambition compared to previous regulatory periods. Despite the delays caused by the pandemic, we are on track to deliver the requirements and associated AMP7 performance commitments for abstraction reductions and river restoration.

We have worked with the Environment Agency (EA) to reduce the impact of delays, such as those caused by securing land access and planning permission, as well as ongoing improvements to the EA's groundwater models utilising data we have collected. As a result, **the EA has updated the WINEP completion dates** for some Water Framework Directive schemes from 31st March 2022 to 31st March 2023 for surface water schemes, and 31st March 2025 for groundwater investigations. The changes to delivery dates have consequently resulted in changes to our expenditure profile over the five-year period.

Stewards of our local environment: We have been working with landowners, farmers, and stakeholders for many years to deliver water quality benefits through our **Catchment Management** initiatives. In 2022, we ran a reverse auction across the Upper Colne, Mimmshall brook and Lea catchments for farmers to bid to protect water from pesticide losses. During the high-risk months for water quality, there were 598.5ha of arable land across eight farm businesses under the scheme, with soils either protected by cover crops, companion crops in with oilseed rape and year-long cover crops.



Our **sustainability reductions programme for 2025-30**, as included in our draft Water Resources Management Plan 2024 and our PR24 WINEP submission (November 2022), are not affected by the extended delivery dates. Investment requirements for the implementation of abstraction reductions in AMP8 have already been determined through our work with the EA on our Environmental Destination strategy and assessments undertaken during our 2015-20 WINEP investigations, combined with Water Framework Directive no deterioration licence capping requirements.

We have undertaken extensive network modelling to ensure schemes proposed for 2025-30 take into account the location of anticipated future reductions to ensure we are proposing optimal solutions. We have welcomed the flexibility in the regulatory approach to accommodate this.

Our **River Restoration** programme provides river restoration and habitat improvements on 13 rivers and is well advanced. We have already delivered 20 project units in the first two years against our five-year target of 36 units for the associated performance commitment. Work is progressing well, and we are track to deliver our AMP7 commitments.

Improving our local rivers: We continue to work with landowners and the EA to restore our chalk streams and improve habitat. So far this AMP, we have delivered river restoration projects on the Gade, Misbourne, Upper Lea and Beane, improving fish passage, channel morphology and habitat.



Under the **Water Framework Directive**, we have significant sustainability reductions requiring a large programme comprising 21 discrete infrastructure projects. These construction projects have been impacted by **COVID-19** delays, along with **supply chain disruptions** caused by Government-mandated lockdowns and **higher materials costs** due to inflationary pressure. Of the four large trunk mains projects which make up a significant proportion of the enhancement allowance, two are due to complete in the current year (2022/23), and the remaining two by 2025.

Reducing abstraction for the benefit of the environment: We will reduce our groundwater abstractions in our Central region by 33.71Ml/d by December 2024. We have already completed delivery of sustainability reductions in the Upper Chess, leaving more water in the environment. Work is progressing well on the infrastructure and asset modifications required to deliver our AMP7 abstraction reductions.



A small number of projects to deliver our AMP7 sustainability reductions are at **risk of later completion** due to a later construction start caused by supply chain and planning issues during the COVID-19 pandemic. We continue to press the planning

authorities for rapid decisions and continue to work with our supply chain on the assumption that planning will be granted so we can commence delivery at the earliest opportunity. We do not anticipate the risk of later delivery of a small number of schemes affecting the delivery of our AMP7 abstraction reductions commitment.

In terms of **demand side activity**, as with many other water companies, we have seen a **substantial shift in household water consumption** caused by much of the working population transitioning to home working during COVID-19 lockdowns. We recognise the importance of reducing the high levels of per capita consumption (PCC) in our region and took significant steps to ensure that we achieved as much PCC reduction as we could during the pandemic. Although the Government lockdown guidance **restricted our ability** to carry out our face-to-face programme of Home Water Efficiency Checks (HWECs) between March and August 2020, our customers told us they wanted us to continue as much activity in this area as possible, recognising that water demand increased due to lockdowns. We were one of the few water companies to provide a telephone-based offering during the first government lockdown. As the longer-term impact of COVID-19 became apparent, we rapidly implemented a programme of **virtual** HWECs using video calls to improve the experience for our customers and maintain water savings.

Alongside direct customer contact through HWECs, we also developed our innovative **Save Our Streams** (SOS) campaign and community programmes to help our customers change their behaviour. Following the first year's success, we recently launched My Water Footprint, a new bespoke water saving calculator, and an integrated campaign featuring advertising, social media, a high-profile environmental campaigner, and customer communications. While we were unable to deliver the PCC target during the pandemic as **general water consumption went up**, we still achieved substantial reductions in the number of litres households use, albeit from a higher starting point than expected in the PR19 Final Determination.

Innovating to help customers reduce

consumption: We launched our ground-breaking SOS campaign to help customers use less water. We have won awards for our creative approach, that focuses on daily changes that are easiest to do but have highest impact.



We are pleased that our **innovative approach** to water saving campaigns has delivered some of the water industry's highest household consumption percentage reductions in the last two years. We continue to focus on reducing water demand as a priority to deliver the current and long-term resource needs for our region.

Metering is also key element to support demand reductions and we have seen delays to our installation programme due to significant **supply chain constraints**. We delivered over 50,000 meters in 2021/22 and are on track for another 45,000 in 2022/23. We have engaged our supply chain to increase meter installations by a further 10,000 per year in 2023/24 and 2024/25 to recover the shortfall to our original plan. While there is a risk we will fall slightly short of our original 2020-25 plan to install 239,152 meters by 2025, we remain committed to exploring all options to deliver the target.

Optant meter requests in 2020/21 reduced to around half our expectations in our business plan, as **customers had concerns about moving to a metered bill when required to stay at home**. Optant meter requests in 2021/22 increased beyond our original forecast and we are seeing a similar pattern in 2022/23, so we expect to increase our installation rate for the remaining years to 2025 to reach our original target.

Advancing our smart metering proposals: our PR24 WRMP includes plans to install 400,000 AMI smart meters in AMP8 to better support our customer to reduce demand. We are looking to be even more ambitious by delivering an additional 20,000 of these in the next two years to provide benefits to our customers earlier.



For our **resilience** investments, **planning and land purchase delays** mean that one service reservoir and a nitrates treatment scheme are likely to be completed later than planned, as both remain in the planning stage. We own the land for building the other reservoir, and we have placed contracts with our delivery partner, selected by competitive tender. We are exploring every option to accelerate delivery; however, our pragmatic forecast is that both projects will likely complete in the early part of the next regulatory period.

We also have statutory enhancement obligations which were **not confirmed until after the PR19 Final Determination (FD) allowances** were agreed. We have additional Drinking Water Inspectorate obligations for surface works resilience at our largest treatment works, Iver and Egham, which were not included in the regulatory enhancement expenditure allowances. We are delivering these projects using the efficiencies generated across the enhancement programme. Value engineering and innovative thinking in design has reduced the initial cost estimate from over £25m to £15m. We continue to challenge costs, as we do on all projects whether enhancement or base, to deliver best value for customers.

Finally, our **Strategic Regional Water Resource Programme** includes six strategic resource options (SRO) and is governed by the Regulators' Alliance for Progressing Infrastructure Development (RAPID) gated process. The PR19 Final Determination profile does not match the expected profile for RAPID delivery, with most of the activity required in the final two years of the regulatory period. We have delivered all of our obligations on time to the required quality and have successfully passed through the gated process for all live projects. Any **underspend of our SRO allowance will be returned to customers** in accordance with Ofwat's PR19 FD Strategic Water Resource Solutions appendix.

Executive oversight and assurance

Our Executive Management Team (EMT) and Board are committed to delivering our PR19 obligations. We report progress regularly to our EMT and Board to monitor our performance. We submit to internal and external assurance in delivering our plans, which includes audit of our Annual Performance Report prior to submission to our regulators. As required, we also meet with Ofwat to report progress.



Affinity Water action plan on enhancement expenditure

Enhancement category	Programmes / projects	Year 3 Milestones	Year 4 Milestones	Year 5 Milestones	Comment
Ecological improvements at abstractions	<i>River Restoration</i>	Delivery of >21 project units (31/03/2023)	Delivery of 7 project units (cumulative target 28) plus works on two other rivers (31/03/2024)	Delivery of 8 project units (cumulative target 36) plus works on five other rivers (31/03/2025)	Aligned to our PR19 River Restoration PC.
	<i>Biodiversity (excl. non-native invasive species)</i>	Enhancement works on key strategic biodiversity sites including woodland and hedgerow planting (31/03/2023)	Enhancement works on key strategic biodiversity sites including woodland and hedgerow planting (31/03/2024)	Enhancement works on key strategic biodiversity sites. End of AMP7 Report (31/03/2025)	Our Biodiversity programme remains on track to deliver our regulatory obligations and commitments in our Business Plan.
Invasive Non-Native Species	<i>Biodiversity (invasive non-native species)</i>	Annual INNS management at 65 sites to address presence of 13 INNS species. Continuation of community fund	Annual INNS management at 65 sites to address presence of 13 INNS species. Continuation of community fund	Annual INNS management at 65 sites to address presence of 13 INNS species. Continuation of community fund. End of AMP7 Report (31/03/2025)	
Water Framework Directive measure	<i>Sustainability reductions</i>	<ul style="list-style-type: none"> Nomansland works completed St Albans Trunk Main Commence Commissioning (Y3Q4) Welwyn Garden City Trunk Main Site Mobilisation (Y3Q4) Heronsgate to Bovingdon Network reconfiguration Contract Completion (Y3Q4) Stonecross GAC Commissioning & Contract Completion (Y3Q4) Cholesbury Chlorination Contract Completion (Y3Q4) 	<ul style="list-style-type: none"> St Albans Trunk Main Contract Completion (Y4Q1) Harefield to Oxhey Woods Trunk Main Commissioning (Y4Q4) St Albans Trunk Main Contract Completion (Y4Q1) Welwyn Garden City Trunk Main Commissioning (Y4Q1), Contract Completion (Y4Q2) Letchworth to Royston Trunk Main Contract Award (Y4Q1), Site Mobilisation (Y4Q2) Ashley Green to Kingshill Trunk Main Contract Award (Y4Q2) Site Mobilisation (Y4Q3) Oxhey & Harefield Boosters 	<ul style="list-style-type: none"> Harefield to Oxhey Woods Trunk Main Contract Completion (Y5Q1) Letchworth to Royston Trunk Main Contract Completion (Y5Q3) Ashley Green to Kingshill Trunk Main Completion (Y5Q3) Oxhey Woods & Harefield Boosters Contract Completion (Y5Q1) Hunton Bridge treatment Commissioning (Y5Q3/4) Digswell Treatment Commissioning (Y5Q2) Contract Completion (Y5Q3) 	<p>Aligned to our Sustainability reduction PC with delivery of 27.33Ml/d in December 2024.</p> <p>Oxhey/Harefield Boosters planning submitted and awaiting decision.</p>

Enhancement category	Programmes / projects	Year 3 Milestones	Year 4 Milestones	Year 5 Milestones	Comment
		<ul style="list-style-type: none"> Oxhey & Harefield Boosters in Contract, Start on Site (Y3Q4) Hunton Bridge treatment in tender (Y3Q4). 	<ul style="list-style-type: none"> Commissioning (Y4Q4) Hunton Bridge treatment Contract Award (Y4Q2), Start on Site (Y4Q4) Uttlesford Bridge Treatment Contract Completion (Y4Q1) 	<ul style="list-style-type: none"> Beech Road reconfiguration Commissioning (Y5Q3) Contract Completion (Y5Q3) 	
	<i>Catchment mgmt. (excl. investigations)</i>	Pesticide reduction schemes for North Mymms/Clay Lane/River Thames abstractions implemented in upstream catchments (31/03/23) Nitrate mitigation projects for nitrate affected groundwater sources inc. EnTrade cover crop scheme and LENS trade (31/03/23) Annual WINEP progress report to be submitted to EA (31/03/23)	Pesticide reduction schemes for North Mymms/Clay Lane/River Thames abstractions implemented in upstream catchments (Y4Q4) Nitrate mitigation projects for nitrate affected groundwater sources inc. EnTrade cover crop scheme and LENS trade (Y4Q4) Annual WINEP progress report to be submitted to EA (Y4Q4)	Completion of 14 Catchment Schemes and submission of associated scheme completion reports (31/12/2024)	Delivery in line with AMP7 WINEP.
Investigations	<i>Abstraction Impact Assessments</i>	Submission of 6 reports to the EA relating to delivery of 21 WINEP lines (31/03/2023)	Upper Cam field data collection and investigation to contribute to the Cam Bedford Ouse model update (Y4Q3) Commence bespoke Environmental flow targets investigation for the Chalk Streams catchments in Central region (Y4Q1) Further data collection and field investigations to contribute to the EA Herts Chalk Model update (Y4Q4)	Bespoke Environmental Flow targets for the Chalk Streams catchments in Central region finalised (Y5Q3) Delivery of End of AMP7 Report (31/03/2025)	We are on track to deliver all planned investigations as per WINEP (as amended by agreement with the Environment Agency).
	<i>Catchment mgmt. investigations</i>	N/A	N/A	N/A	All investigations completed Year 2 as per AMP7 WINEP.

Enhancement category	Programmes / projects	Year 3 Milestones	Year 4 Milestones	Year 5 Milestones	Comment
Supply-side improvements delivering benefits in 2020-2025	Runleywood Greensands	Commence on site Y3Q4	Construction on going	Completion (Y5Q1)	Anticipated completion Y5Q1 due to delays in securing planning permission.
Demand-side improvements delivering benefits in 2020-2025 (excl. leakage and metering)	Behaviour change / demand management	Commence Home Water Efficiency Checks in partnership with Groundworks (Y3Q2) Commence trialling of extra communication with customers about their consumption through meter reads (Y3 Q1) Commence Installation of additional meters to super high usage areas (Y3Q1) Commence installation of flow restrictors (Y3Q1) Launch of Save Our Stream 2.0 October 2022 Behavioural change insights (31/03/2023)	Year 4 programme including: Delivery of Home Water Efficiency Checks, Installation of additional meters to super high usage areas, Installation of flow restrictors, Continuation of Behaviour Change campaigns, including SOS Internal repairs of leaks identified by HWECs (31/03/2024)	Year 5 programme building on Year 4 achievements	Our demand management plan over AMP7 continues to be to meet the PR19 FD target for PCC, net of the impact of the change in household working patterns following the COVID-19 pandemic.
Supply demand balance improvements delivering benefits starting from 2026	Sundon conditioning	Commence on site (Y3Q3) January 2023 - payment completed for purchase of Sundon reservoir	Continuation of construction. Commence commissioning (Y4Q3)	Contract Completion (Y5Q1)	Completion of Sundon conditioning by December 2024.
	S2040 ST1 Egham to Iver booster	Commence land acquisition	Commencing planning permission following land acquisition Contract Award (Y4Q4)	Site mobilisation (Y5Q2), Contract completion (Y5Q4)	Completion of the Egham to Iver booster subject to land acquisition and planning by the end of March 2025.

Enhancement category	Programmes / projects	Year 3 Milestones	Year 4 Milestones	Year 5 Milestones	Comment
	<i>S2040 ST2 Blackford to Ickenham trunk main</i>	Completion of the Blackford to Ickenham trunk main (Y3Q4)	Commence commissioning of trunk main (Y4Q1) , Contract Completion (Y4Q2)	N/A	
Strategic regional water resources	<i>6 x SRO schemes</i>	Delivery of Gate 2 reports and final costing for the revised dWRMP24 delivered (Y3Q3)	For GUC/Minworth & T2AT - completion of studies and engineering design to inform Gate 3 submissions and prepare DCO pre consultation (Y4Q4) . Development of draft operational and commercial arrangements to support initial market testing. (Y4Q4) For SESRO – complete options studies incl. environmental input (Y4Q3) . Obtain land access and start site investigations (Y4Q4)	To continue to produce high quality submissions, on time, that meet RAPID's requirements	Submissions in accordance with the gated process as defined by RAPID.
Metering	<i>Universal & optant metering</i>	We forecast to achieve 45,000 universal meter installations and 4,500 optant meter installations (dependent on customer requests) in 2022/23	Universal meter programme - installation of 50,000 meters. Optant meter installations 3,500 (dependent on customer requests) 31/03/2024	Universal meter programme – installation of 50,000 meters. Optant meter installations 3,000 (dependent on customer requests). 31/03/2025	Given the current supply chain market, there remains a risk of not delivering the 239,152 universal meters in our PR19 FD.
Lead communication pipe replacement	<i>Lead</i>	Ad-hoc replacements as required from our water quality sampling regime – forecast c. 500 replacements in 2022/23	Ad-hoc replacements as required from our water quality sampling regime – forecast c. 500 replacements in 2023/24	Ad-hoc replacements as required from our water quality sampling regime – forecast c. 500 replacements in 2024/25	
Addressing raw water deterioration	<i>Oughton Head nitrate</i>	Planning permission secured	Contract Award (Y4Q2) Site mobilisation (Y5Q4)	Continuation of works on site	Completion of Oughton Head by March 2026.

Enhancement category	Programmes / projects	Year 3 Milestones	Year 4 Milestones	Year 5 Milestones	Comment
	<i>Pesticide river monitor</i>	N/A project completed	N/A project completed	N/A project completed	We completed the pesticide river monitor work as part of our Iver & Egham surface works resilience projects.
	<i>Iver & Egham surface works resilience</i>	Contract award (Y3Q1)	Construction completion (Y4Q3)	Outline design for AMP8 works (Y5Q3)	Works in response to DWI notice received in December 2020
Improvements to river flow	<i>River Ivel support scheme</i>	Augmentation borehole drilling and testing (Y3Q4)	Augmentation infrastructure construction (Y4Q4)	Completion of the River Ivel augmentation project by December 2024	Associated works under River Restoration Programme (Y4Q2-Q3).
Enhancing resilience to low probability high consequence events	Horsley Cross	Phase 1 completed (Y3Q4)	Commence Phase 2 (Y4Q1)	Completion (Y5Q1)	Completion of Horsley Cross resilience by June 2024.
	Supply 2040 2 x boosters (ST9 & ST10), Chaul End (ST13), Preston (ST14)	Chaul End Contract Award (Y3Q4) Preston Contract Award (Y3Q4)	Chaul End Start on site (Y4Q2) (subject to securing planning permission) Preston Start on site (Y4Q2)	Completion of Preston by (Y5Q4)	Completion of Chaul End by March 2027.

Our enhancement expenditure forecast till 2025

We have set out below our expected forecast for expenditure on our enhancement programme for 2022/23, 2023/24 and 2024/25.

Expenditure purpose code	2022/23	2023/24	2024/25	Later completion ¹
P01.EA. Ecological improvements at abstractions	1.5m	5.0m	6.0m	0.0m
P07.EA. Invasive non-native species	0.1m	0.1m	0.1m	0.0m
P13.EA. Water Framework Directive measures ²	10.7m	15.7m	18.0m	3.0m
P16.EA. Investigations	1.2m	1.1m	0.5m	0.0m
P20.SD. Supply-side improvements delivering benefits in 2020-2025	0.8m	4.3m	0.6m	0.0m
P23.SD. Demand-side improvements delivering benefits in 2020-2025 (excluding leakage and metering)	5.3m	5.8m	4.1m	0.0m
P32.SD. Supply demand balance improvements delivering benefits starting from 2026	4.8m	6.3m	1.0m	3.3m
P35.SD. Strategic regional water resources ³	4.1m	~	~	0.0m
P39.MR. New meters requested by existing customers (optants)	1.1m	0.6m	0.6m	0.0m
P42.MR. New meters introduced by companies for existing customers	12.3m	14.5m	15.4m	0.0m
P52.OT. Meeting lead standards	2.1m	1.9m	1.5m	0.0m
P55.OT. Addressing raw water deterioration	7.5m	6.8m	4.6m	3.5m
P58.OT. Improvements to river flows	0.3m	0.3m	0.0m	0.0m
P61.OT. Enhancing resilience to low probability high consequence events	1.0m	13.1m	7.2m	0.0m
Total enhancement	52.7m	75.5m	59.6m	9.8m

The forecasts represent the most up to date and accurate position as of March 2023, however, may be subject to minor changes over the remaining years. We will provide updated forecasts as part of our regulatory reporting requirements.

¹ We have previously advised Ofwat of the risk to delivery of a small number of projects because of planning and land purchase delays. We continue to explore every option to accelerate delivery into AMP7.

² WFD opex is excluded from our forecast as it is highly dependent on weather and associated customer demand.

³ Future spend on Strategic Regional Water Resource schemes is governed by RAPID. All projects are currently awaiting the outcome of the Gate 2 process. Any underspend to our allowance will be returned to customers in accordance with Ofwat's PR19 Strategic Regional Water Resource Solutions appendix.

