Affinity Water

Benefits Report -Environmental Innovation Projects (3A.7 EIP)

AMP7 bespoke performance commitment

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1. Purpose

Environmental Innovation Projects (EIPs) is a bespoke Performance Commitment (PC) in AMP7 to deliver a programme of eight environmental innovation projects in AMP7 to improve its customers' knowledge, evidence of water use, and need for water efficiency. The goal of the programme is to bring together sector experts, charities, community and environmental groups and other stakeholders to trial the delivery of a range of innovative multi-party projects, linked to different environmental themes and water use behaviours. This report outlines and assesses the benefits resulting from delivery of this performance commitment as part of the assurance agreed in final determination for AMP7 published by the Ofwat in December 2019- 'PR19 final determinations: Affinity Water – Outcomes performance commitment appendix'.

2. Executive summary

Innovation and collaboration are at the heart of how we are building a more resilient and sustainable future. It is one of the ways we are addressing water sector challenges such as climate change, population growth and rising expectations of our customers.

In our Business Plan 2020-2025, we committed to completing eight environmentally focussed, innovative projects in our communities for a Performance Commitment, enabling us to improve the knowledge and evidence of water use within our catchments to bring wider benefits in the future. We have delivered **12 out of 14 project units** for the programme in AMP7.We brought together sector experts, charities, community and environmental groups and other stakeholders to trial the delivery of a range of innovative multi-party projects linked to different environmental themes and water use behaviours. We have learnt how to improve what we do for the communities in our region having enabled, developed and tested methodologies and approaches that can be replicated in AMP8.

The benefits of all the projects have been assured externally by an independent third party and by the Independent Challenge Group (ICG) (in the past known as Customer Challenge Group) which represents the voice of the customer, to make sure we put customers' views and their priorities at the forefront of our decisions.

3. Background

The process for agreeing our Business Plan for 2020-2025 with Ofwat provided an opportunity for us to better support a culture and capability for innovation. We have acted and listened to our stakeholders and partners. We have developed a structured approach to drive forward 'fast follower' and innovation, which incorporates industry best practice, to deliver for our customers.

Altogether six projects have been completed- Lea Catchment project worth 7 project units and five smaller projects each worth 1 project unit, bringing it to total of **12 project units.** Two projects discontinued due to activities that moved to BAU or were funded through other innovation streams.

Project Name	Number of Units	Internal delivery target
1. **Lee catchment project**	7	31/03/2025
2. **Affordable housing (Colne)**	1	31/03/2022
3. **Targeted campaign (Brett)**	1	31/03/2023
4. **Targeted campaign (Wey)**	1	31/03/2023
5. **Faith groups – Grey Water Recycling (Pinn)**	0	Project discontinued
6. **Education methods (Misbourne)**	1	31/03/2022
7. **Education smart meters in schools (Dour)**	0	Project discontinued
8. **New Developments (Stort)**	1	31/03/2022
TOTAL	**12**	

In the past five years, we have extensively engaged with the ICG group, whose primary role was to represent customers' interests in relation to realising benefits from the projects. Caroline Warner, Chair for the Independent Challenge Group for Affinity Water said:

"Over 5 years ago, the Independent Customer Challenge Group for Affinity Water asked the company to consider how they might improve their approach to innovation and suggested considering a set of pilot projects that would allow them to test new ideas. This conversation led to the company committing to an ambitious set of work programmes that has led to learnings that could not have been imagined at the start. From the outset, the team at Affinity Water showed real determination to test new thinking and develop new learning that could benefit their customers and the environment but could also provide insight to the

entire water industry. ICG members are really pleased to have been part of this process throughout and have enjoyed challenging the company to think deeply and go further over the years. The team at the company have worked really hard on this set of projects and the commitment to innovation and learning that this required has had a positive influence on the overall company culture and practice. I am really proud to recommend this report and delighted that the legacy of these projects will be positive for customers and for the environment for years to come.

4. Benefits assessment

The table below summarises objectives, learnings and benefits realised through the delivery of the six projects over the past five years of AMP7, as far as possible based on primary evidence.

Projects Name	**Objective**	**Learning**	**Benefits evaluation**
Lea catchment project- The project has been divided into seven 'work packages' to test different approaches to holistic catchment management. To investigate a new delivery model using a catchment-based approach to deliver positive outcomes for customers and environment at a catchment scale. Develop an investment planning approach and associated delivery model, using a catchment-based approach that can be replicated in subsequent AMPs and applied to different catchments and communities, The seven work packages will support development of a decision-making process and mechanisms to engage with stakeholders, customers and communities and forming partnerships to reduce PCC, support meeting environmental outcomes and creating more sustainable and resilient catchments.			
Work Package 1: Chalk stream health assessment (1 unit)	To undertake a baseline assessment of the health of a chalk stream within the River Lea operational catchment exploring different approaches	The 'Chalk River BioBank' approach has significantly increased the understanding of the health of two important chalk streams in the River Lea Catchment.	• It will Inform future catchment strategies by providing an understanding of resource requirements for data collection and condition assessment, and successful partnership working approaches. • Has provided an understanding of requirements for development of a biobank, which has the potential to accelerate

	to assess how this could be achieved.		environmental investment within catchments. • Has enabled the Catchment Partnership host for the Lea catchment to test the methodology they developed and make the case for future investment in replicating the assessment for all chalk streams in the Lea catchment and beyond
Work Package 2. Catchment opportunity mapping to protect water resources (1 unit)	Develop an evidence-led, catchment-scale approach to delivering nature-based solutions for increased resilience of water resources in the Upper Lea	Integrated mapping approach using a GIS system to identify current catchment dynamics and condition, issues, risks, and identify opportunities where nature-based solutions (NbS) could be implemented to promote resilient ecosystems, which would help protect water resources, as well as promote biodiversity. Utilises and further refines an approach developed by South East Rivers Trust (SERT) through the EU funded ProWater project	• Partnership project with outputs available for all to use: e.g. Informing Local Development Plans, Biodiversity Net Gain opportunities, SFI targeting, Environmental Land Management Schemes (ELMS) • Methodology used to support development of PR24 Water Industry National Environment Programme schemes with positive feedback from EA and Ofwat • Identification of "opportunity areas" across the Lea to target further investigations and measures for NbS to support resilient water resources • Will form the basis of pilot schemes with detailed monitoring to validate the approach • Enables us to work with catchment partners, landowners, farmers and other to identify appropriate NbS and target future measures more effectively
Work Package 3: Catchment Systems	Development of citizen science (CS), connecting local communities to their	Funded the River Beane as a 'Demo' catchment as part of the national CaSTCO. Project. A Volunteer Coordinator role was funded through	• A benefits evaluation 'StoryMap' has been developed and can be viewed via: StoryMap

Thinking Cooperative (1 unit)	local river and exploring the opportunities associated with open data, stimulating innovation and collaboration.	the Herts and Middlesex Wildlife Trust to develop the volunteer and monitoring plan for the River Beane. Significant experience has been gained through connecting with the other 'Demo's' and the method audits that have been undertaken for the different citizen science monitoring techniques. This role has now been funded for a further year (2025/26) by the EA to roll out this to all rivers across the Lea catchment.	• 14 initial volunteers recruited was extended over 40 volunteers in the 16 months of this WP.
			• It has already been extended to several other rivers with plans to incorporate the whole River Lea catchment.
			• CS monitoring has identified several pollution sources and building a robust dataset of evidence of key issues impacting the River.
			• A survey carried out of the benefits identified benefits for volunteers including:
			  ○ Being outside more
			  ○ Meeting new people
			  ○ Feeling valued and as part of a team
			  ○ Making a difference
			  ○ Improved mental health

Work Package 4. Catchment trading of ecosystem services and nature-based solutions (2 units)	Test and evaluate different approaches to creating a market for trading environmental (ecosystem) services with farmers and land managers in the Upper Lea	• The collaborative and coordinated nature of the approach meant that other private funding sources were unlocked enabling more interventions to be delivered than through a single funding body, such as Affinity Water acting on its own, maximising actual change on the ground. • The NC evaluation showed significant benefits across a range of ecosystem services and a minimum cost/benefit ratio of 6:1	The development of market trading is a new approach to the funding of NbS and environmental improvements. Trading platforms are in early stages of development, and funding streams for measures are in flux / or being gradually rolled out by government due to changes in national policies. We will be working to develop and make use of environmetal markets further in AMP8.

		or higher representing good value for customers. • Outcomes showed a range of societal benefits, such as natural flood management, benefitting our customers. • Monetised results through an NC approach enables us to demonstrate value to our customers.	
Work Package 5. Natural Capital (NC) Evaluation of Affinity Water investments in environmental schemes in a targeted sub-catchment of the Lee	Develop an evaluation process of implemented schemes to determine the Natural Capital value of our investments to protect and enhance the River Beane, and inform future investment decisions.	• Enabled us to link together discrete projects and schemes and use the NC methodology to • showcase quantitative values for selected ecosystem services that creates a powerful and illustrative body of evidence for Affinity Water investments in environmental schemes. • Monetisation of the benefits enabled us to assess which projects delivered greatest cost/ • benefit and insight how to deliver greater cost and environmental benefits for future environmental schemes.	• Has supported the development of our Water Industry National Environment Programme (WINEP) submission for our 2025-2030 (PR24) business plan with positive feedback from regulators. • Will help ensure that future investments in environmental measures deliver the greatest benefit for our customers, wider society and the environment with a mechanism to demonstrate these benefits. • Develop future NbS options that consider recreation, education and well-being needs of customers and communities.
Work Package 6: 'Rooting for Wildlife' environment fund pilot (1 unit)	Develop delivery model for a community-focused fund to empower local groups and communities to	• A StoryBook has been created capturing all lessons learned from this work package Examples include:	• The pilot received 48 applications across the Lea catchment. 17 applications were successfully awarded funding. • Winning projects included; pond creation and enhancement works, protected species re-introduction, river restoration, wetland

	deliver innovative projects to protect, improve and enhance chalk streams and the wider environment	• Strategies for internal/external communications required • Improvements to website 'user friendliness' • Incorporate a longer review period for applications • Legal requirements for running such a scheme	rewilding, woodland management and school outreach and education. • Significant lessons learnt by AW through this pilot which have been documented in the StoryBook • Rooting for Wildlife will now be funded as as an AMP8 scheme (2025-2030) through our WINEP programme and will be expanded to cover our whole supply area. • Lessons learned will enable the WINEP scheme to 'hit the ground running' in year one.
Affordable Housing project (Colne)	Partnering with social housing providers to help vulnerable customers reduce their water use and bills.	We wanted to help customers in vulnerable circumstances by working in partnership with their social housing providers to make them more water efficient. We also wanted to improve our understanding of how to meet the needs of social housing tenants, to support our ambition to create widespread, sustainable water savings in social housing stock.We conducted pilots in 2021/22 to investigate and trial water-efficiency activity with social housing customers, using a blend of water-efficiency methods. We built strong, collaborative working relationships with several social housing providers and established a consitent and unified approach for delivering water efficiency in social housing- access, identify, engage, deliver,	• Some of our social housing partners are now routinely incorporating water-efficiency upgrades. This process change supports policy change to enable sustainable practices. The following benefits were realised: • Data and insight into social housing stock and water efficiency issues • Input and feedback for development of guidance on retrofitting for water efficiency • Closer working relationships with social housing providers established to improve access to support for customer in vulnerable circumstances. • Baseline of social housing stock with water efficiency devises to monitor impact on consumption • Partially met wider policy adoption within social housing sector. • Improved awareness of water efficiency

		evaluate&inform. This enabled us to develop and pilot water-efficiency engagement and installation processes, including partner-led water-efficiency activity. The project enabled us to reach out to our more vulnerable customers living in social housing. We learned that more than half were in the 'feeling the strain' group, struggling financially – many welcomed the opportunity to reduce their water use and bills.	
Targeted Campaign (Brett) **Targeted Campaign (Wey)**	Trailing innovative ways to change customers attitudes towards water usage by providing them with motivation, opportunity and tools to help waste less water through a targeted behaviour change programme in Brett and Wey - two of our highest usage areas.	The aim of these projects was to trial innovative ways to change customers attitudes towards water usage by providing them motivation, opportunity and tools to help waste less water through a targeted behaviour change programme in two water resource zones also referred as communities -Brett and Wey. Over one year of running the campaign we observed a positive water saving shift and exceeded the level of Mld savings projected: Brett- 1.15Mld v a target of 0.3Mld Wey- 3.18 Mld v target of 0.9Mld Research also showed that 49% of households have taken awareness led water saving action.	We continue delivering water saving behaviour campaign to engage with customers. We have gathered insights that will guide the way we refine the engagement. Our media outreach will be targeted across our supply area. Experiential, community events and hyper-local targeting will help to upweight the water saving message in defined regions. We will be focusing our campaigns on five priority behaviours: 1. fixing leaking loos & taps (fixing a leaking loo saves 400 litres a day) 2. taking shorter showers (reduce by 2mins save 30 litres) 3. using washing machines/dishwashers on eco mode and full (30litres / 8litres saving)

		The campaign has helped people to understand the links between the high consumption of water the effects on the local environment.	4. storing and recycling water in the garden (water butt and watering can use avoids an hour of hose use, saving ~1,000litres per hour) 5. using a washing up bowl rather than running the tap (36 litres a day saved)
Education methods (Misbourne)	Using a game-based learning platform to help children learn about water efficiency.	Children today use many sources to learn about the environment. All too often, water efficiency either doesn't appear in their search results or is overshadowed by topics like recycling and climate change. Minecraft is a child-friendly, trusted digital platform. We were keen to explore how we could use it, to blend gaming and water-efficiency learning in a dynamic, fun and exciting way for children aged between 7 and 11. We built a platform to deliver a Minecraft Water World for child-led or teacher-led learning. This is a first for the water industry. The assumption was that it it would help children develop their water knowledge online, so they can apply their learnings in real life. Local children tested the new platform provided feedback to further develop, refine and improve it. Since, we encountered Data Protection and safeguarding issues and were unable to scale it any further.	We continue to investigate the best ways of scaling up the solution. So far our SOS: Save Our Streams campaign delivers water saving message to schools. We have launched a school programme across the Affinity Water region called 'Water Smart' as part of our water-saving mission. We're working with educational specialists 'We Are Futures and the National Schools Partnership to provide primary schools with water-saving education materials including lesson plans, assemblies and take-home kits. This will help pupils understand the importance of saving water and inspire them to make everyday changes to leave more in the local environment.

New Developments (Stort)	Using a NAVs delivery model to support competitive markets to deliver water efficiency in new developements	Competition in markets can deliver benefits for customers and the wider water sector by incentivising cost efficiencies and delivering improved service and innovation. However, Ofwat's RISE report (August 2020) stated that water companies weren't doing enough to help new entrants shake up the market, to give customers more choice. Working collaboratively over a six-month period, we developed a framework which makes it easier for NAVs to work with their water company at a new development site. The framework is being implemented at a selected new development. The partnership encompassed legal, regulative and operational aspects of working. We learned that: • stimulating environmental innovation can be possible by using our innovative delivery model • significantly improved our relationship with our NAV providers – we now have a better understanding of these businessesand the site-specific challenges they face	The water neutrality OFWAT Innovation fund project was developed based on the framework and we continue to work with NAVs to establish if the total amount of water used in the community can be the same as before the new homes were built, called water neutrality. By working with different industry stakeholders, technology manufacturers and housebuilders we created a water-neutrality blueprint, to help us future-proof the local water network against population growth. The approach includes: • installing water-saving devices in homes as well as in commercial buildings like schools and leisure centres • running a behaviour change campaign for residents to reduce water use. The first trial was completed at a site called Bidwell in Houghton Regis, Bedfordshire, which became a first water positive site. The project has positively impacted 382 households and 45 non-household customers including 29 schools, the local council, and local businesses. The combination of reductions from customers has resulted in current annual savings of more than 80 million litres, which has enabled the new housing development to effectively become "water neutral". In addition to the reduction in water consumption, the project also generated savings across customers of approximately £240,000 on their water bills.

		• developed an Ofwat Innovation bid (Water Neutrality at NAV sites) with our NAV partners.	As of March 2024 we have created the world's first water-positive NAV site, with the water reductions from the behaviour change campaign (delivered by Grapeviners Ltd) and the off-setting savings (delivered by H2OiQ) cancelling out the total water use of the site. The future savings from this site will be monitored by smart meters to better understand the degradation in savings once campaigning stops. From 1 April 2025 water efficient development credit was replaced by Environmental Incentives Common Framework. In line with our commitment to supporting local communities and the environment, we now offer an ambitious bespoke Water Neutral tier to incentivise water neutrality in new developments. Instead of charging infrastructure charge we now reward the most efficient developers to i.e. meet the requirement of 80 litres or less per person per day in new builds and retrofitting water-saving devices in existing properties effectively offsetting the demand of the new property.