Water Environment Improvements
Project Evidence Form

Scope & Purpose

This form is to be used by the external Water Environment Governance Group (WEGG), to review, validate and formally approve the length of bluespaces improved for the Water Environment Improvements ODI. The form will be completed by the Water Environment Team with support from project partners and presented to the WEGG. After formal approval, the km of water environment improved will be recorded against the ODI and projects will be marked as completed on the Water Environment Scorecard and illustrated as delivered in the Bluespaces Mapping Portals.

Project Name

Stockton Becks Restoration

Project Lead

Company/ Organisation	Named Lead	Position
Tees Rivers Trust	Ben Lamb	Manager

Bluespaces Improved

Year	Claimed	Proposed	Reason For Any Change
Year 5	13.5 km	13.5 km	N/A

Water Environment Assurance

This project has been reviewed internally to ensure it has delivered benefits above and beyond our baseline and regulatory obligations to improve the water environment accessible to customers across at least two out of three aspects. Following our assurance process, the project was approved by both our internal and external groups for review before delivery. This form presents evidence of project completion and the outputs achieved, to request project sign off.

Level	Project Acceptance Date	Project Approval Date	Completed Project Sign Off Date
Project Team	March 2023	N/A	N/A
Water Environment Steering Group (Internal)	April 2023	April 2023	N/A
Water Environment Governance Group (External)	April 2023	May 2023	June 2025

Project Timescales

Candidate Project Approved	Project Initiated	Project Completed
May 2023	June 2023	March 2025*

*The baseline water quality elements of this project were achieved through phosphorus removal schemes at Sedgefield and Carlton & Redmarshall sewage treatment works, which were managed by NWG separately to the Bluespaces programme elements and signed off by the Environment Agency in December 2024.

Project Summary and Highlights

Summary

The Stockton Becks Restoration Project has delivered water environment improvements to 13.5 km of bluespaces through collaboration between Tees Rivers Trust, NWG and other partners. Bluespaces funding has built on NWG investments in water quality through WINEP projects to remove phosphorus from final effluent at two sewage treatment works in the Billingham Beck catchment, contributing to improvements towards Good status for two waterbodies (both currently at Moderate status). It has also contributed to wider investment in habitat management and flood risk reduction, with match funding issued through the Environment Agency's Water Environment Improvement Fund 'Tees Tidelands' project and Flood and Coastal Erosion Risk Grant-in-Aid.

The Bluespaces project has delivered biodiversity improvements to both aquatic and surrounding terrestrial habitats and supported education and citizen science provision for the benefit of NWG's customers. The project has worked across eight sites within Stockton-on-Tees, including at Billingham Beck Valley Country Park, Elmtree Beck, Greens Beck, and Grangefield Park.

The Bluespaces contribution to the project supported community engagement and educational elements. Volunteers helped Tees Rivers Trust with electrofishing around the weir site and also carried out invertebrate kick samples. A part-time Riverlabs project officer led school visits and education days. This blend of science and art taught children up to Key Stage 3 about human interactions with water and the aquatic environment, activities also supported by the River of Hope scheme.

Working with partners, Tees Rivers Trust began delivery of on-the-ground improvements to Billingham Beck water environment in May 2024 following several rounds of community engagement and consultation. Despite high rainfall which created high flow and wet ground, the contractors managed to complete the work in and around Billingham Beck just a couple of weeks behind schedule. The high flow conditions tested the new flood plain reconnections almost immediately and enabled the contractors to make some tweaks to design whilst they were on site which saved costly potential remobilisation. In October, work began on the landscaping elements. New footpaths and gates were installed as well as fence-lines, hedges and trees. The decision was taken by the council not to install interpretation boards, as originally planned, as the site has experienced higher than normal levels of anti-social behaviour. After significant delays due to issues with the designers and Environment Agency (EA) permitting team, delivery of Phase 2 activity for the Lustrum Beck commenced in March 2025 and is on track for completion by the end of May.

Highlights

- 1.8km of footpath improved
- 380 tonnes of gravel used to enhance riparian habitat and diversify instream water flows
- 4000 native trees planted, creating 700m of hedging
- Weir in Billingham Beck removed, enabling free passage of fish and tidal interchange for the first time in over 300 years
- Riverlabs project delivered to 16 schools.

Maps

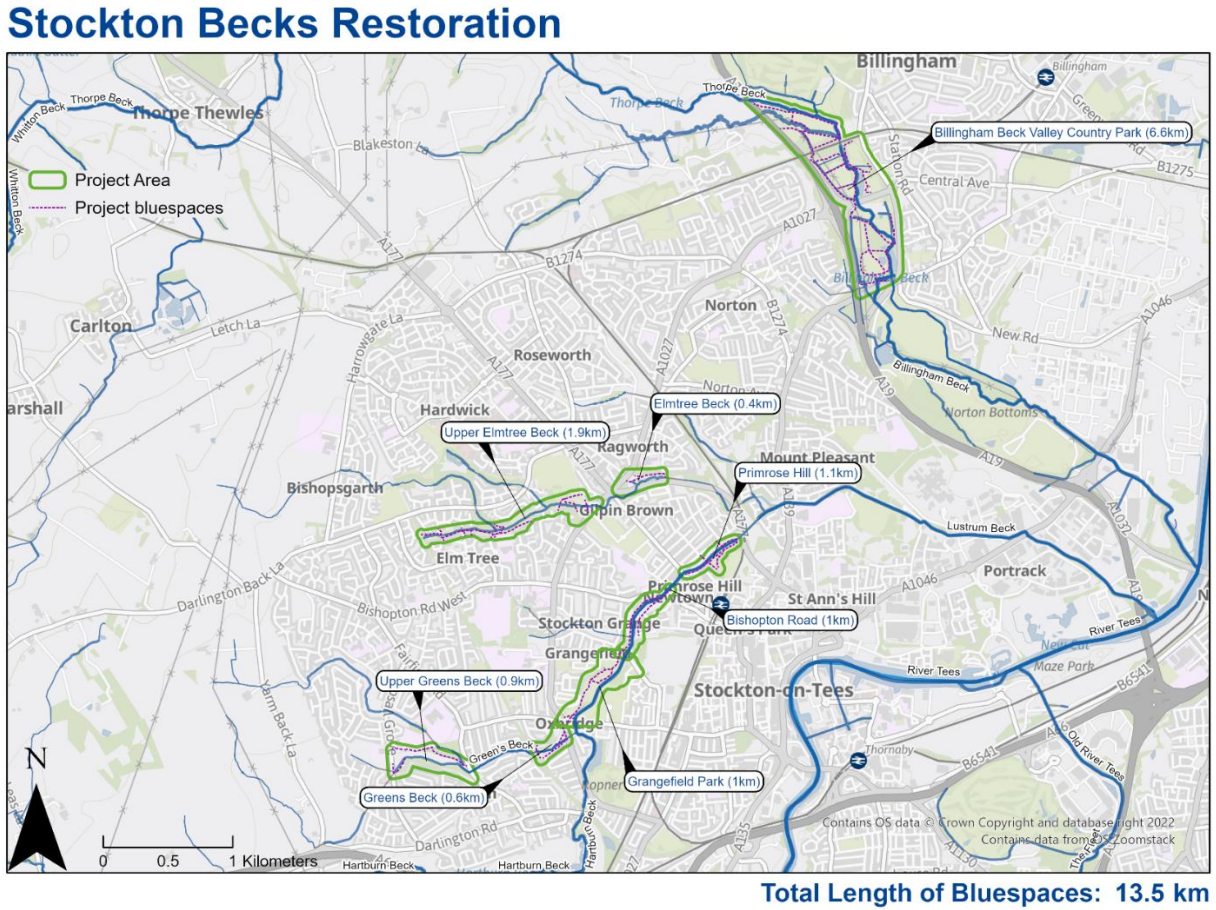
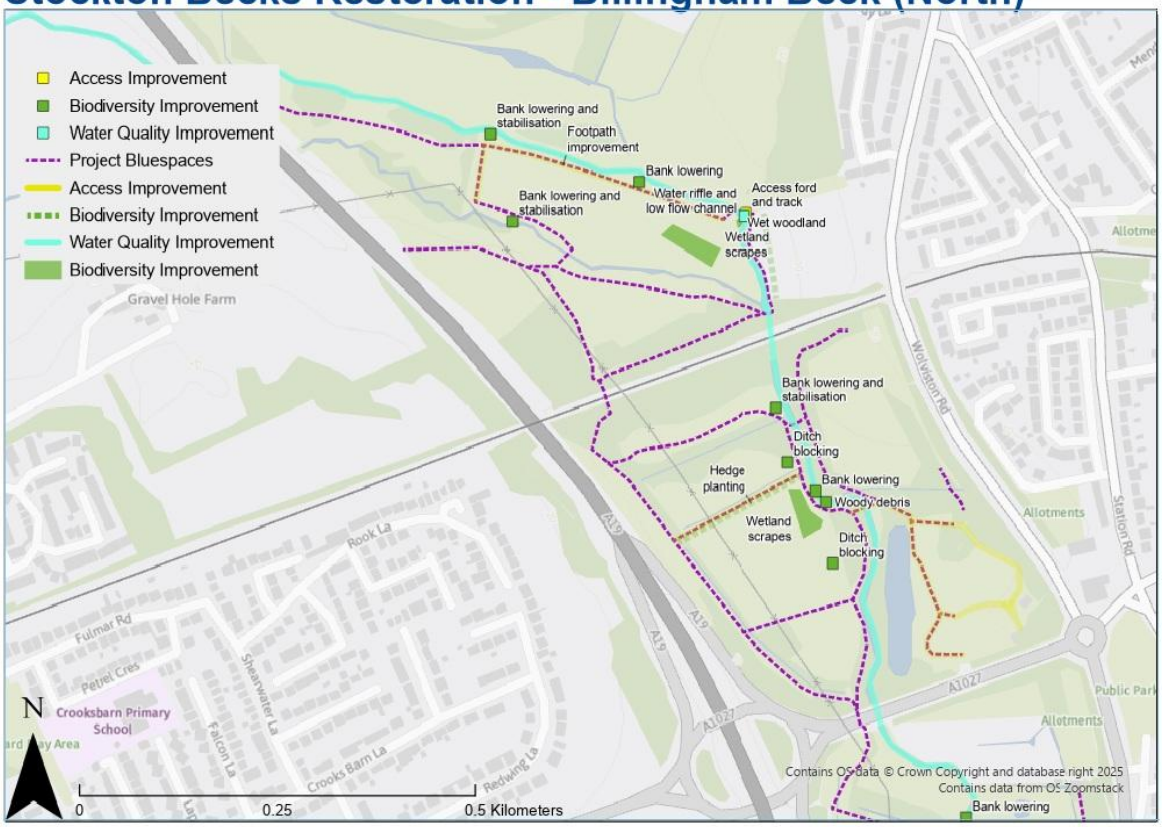
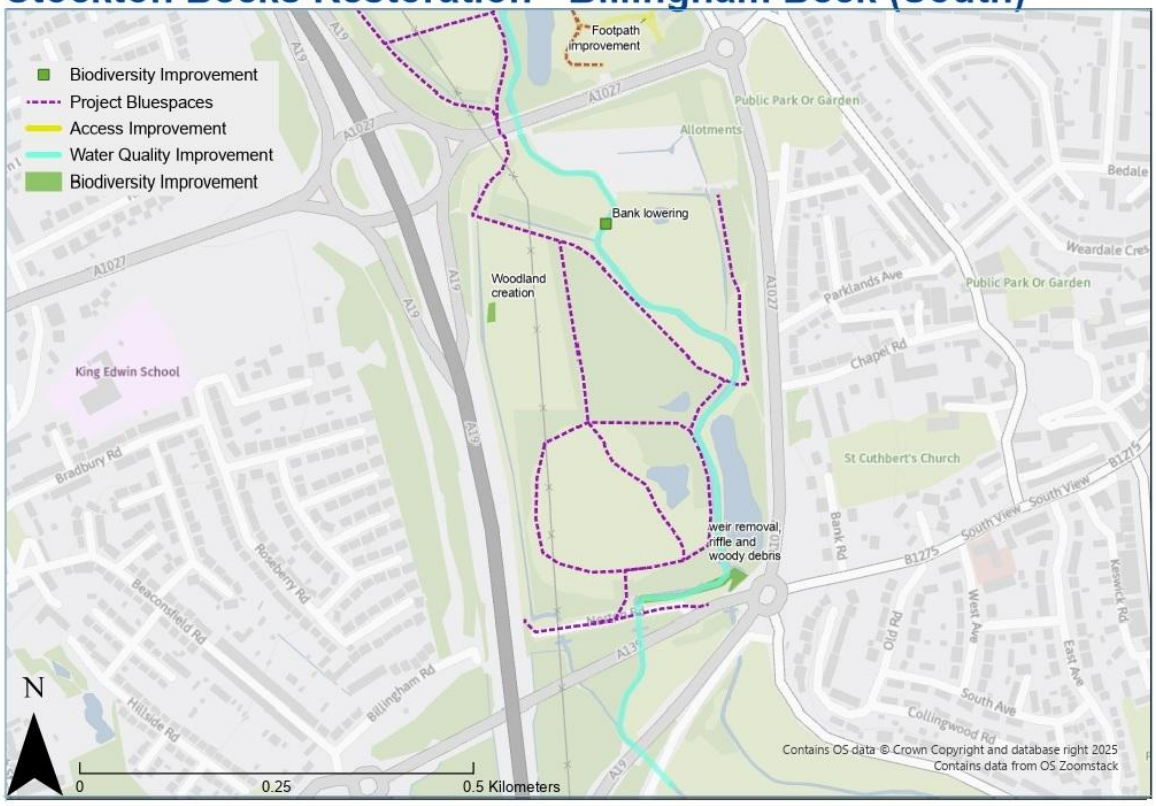


Figure 1: Stockton Becks Restoration project area, showing 8 project sites

Stockton Becks Restoration - Billingham Beck (North)



Stockton Becks Restoration - Billingham Beck (South)



Total length of Bluespaces: 6.6 km

Figure 2: Improvements delivered at Billingham Beck Valley Country Park

Project Outputs, Benefits & Evidence Against Criteria

Access, Facilities & Recreation	
Expected Project Outcomes	**Benefits**
1. Improvements to 8 sites around the Stockton Becks will increase access to, engagement with and enjoyment of the water environment 2. Engagement of volunteers and the local community in protecting and enjoying the environment in these areas will increase the time spent in nature and benefit mental and physical wellbeing. 3. The use of improved interpretation and information posts with QR codes will allow rapid update of information and sharing of engagement materials and help create more positive environmental behaviours	➢ A1: Increases access to, engagement with and enjoyment of the water environment ➢ A2: Benefits health and wellbeing through: ➢ A3: Influences positive environmental behaviors

Outputs

1. Works have been completed at 22 locations across 8 sites.1800m of footpath was restored or created at Billingham Beck Valley Country Park, with all works completed by November 2024. Lustrum Beck works have been delayed slightly due to weather, designers and the EA permitting team but are in delivery and expected to be completed by the end of May 2025.

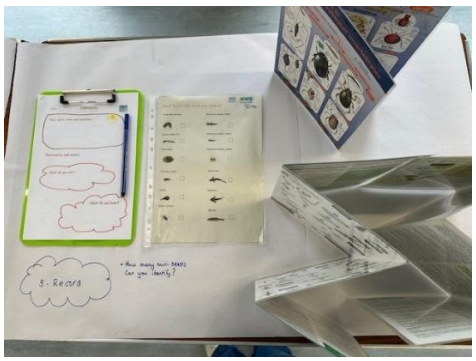
2. The Riverlabs Project delivered activities in 16 schools, engaging with 985 pupils and 110 adults. Each Riverlab day used the river habitat as an outdoor classroom with fully curriculum-linked science, art and geography, engaging local children and adults with river habitats, historic sites and local watercourses. 8 Riverlab events were held at Billingham Beck and a further 5 volunteer days planting trees took place in the winter. 2 electrofishing and riverfly monitoring days with volunteers took place in June 2024. Full Riverlabs presentation is available on request.

3. Although this improvement was planned, higher than normal anti-social behaviour activity at Billingham Beck meant that interpretation boards were not installed as part of this project. Instead, Stockton Borough Council have posted information on their website (Billingham Beck Valley Country Park - Stockton-on-Tees Borough Council). Once works have been completed at Lustrum Beck, additional content about the river habitat at both sites will be created to be hosted on both Tees Rivers Trust's and Stockton Borough Council's websites.

Evidence

Footpath restoration (resurfacing and vegetation matting), and river bank restoration


Riverlabs and invertebrate monitoring



Riverlabs teaching material

Billingham Beck Habitat Restoration Project

Stockton-on-Tees Borough Council are working in partnership with the Environment Agency and Nature Based Solutions to deliver an ambitious wetland restoration project on site at Billingham Beck Valley Country Park. The project will be delivered in two phases including Engineering Work and Landscaping Work, commencing in March 2024.

Some of the key elements of the project are the following.

Engineering work

1. Embankment lowering
Traditional wetland meadows are great for biodiversity and rely on seasonal flooding. Billingham Beck has previously been made deeper that can prevent the natural connection to the flood plain. In certain areas this link will be recreated by removing certain sections of embankment.

2. Replacement Ford
The management of traditional meadows requires annual cutting and removal of the hay in order to allow for more species of wildflowers to grow alongside the grass. Replacing the old ford will allow for better management of the field north of the railway embankment in the future.

3. Pond Creation
Retaining water on the land in certain areas is good for all kinds of wildlife including birds, amphibians and insects. Keeping water on the land in certain areas when the beck retreats after flooding the meadows is another part of connecting the beck back to the floodplain.

4. Partial Removal of the weir
Weirs present a real problem for fish and some species need to travel up and down stream in order to feed and lay eggs. A large section of the weir will be removed and woody debris will be allowed to accumulate in the channel to slow the water in a much more natural way.

5. Bund creation
In the southern section of the park the A19 has been shown previously to stop some of the natural springs that would flow into the beck from the west so the valley is not actually as 'wet' as it once was. In order to keep water on the land a bund will be created using the soil from the embankment lowering to compensate for this.

Landscaping work

6. Hedge and woodland planting
The wetland restoration project is not just about the plants and animals that rely on the wetland areas being re-connected to the beck channel. Some woodland planting is planned for the northern section of the park as well as hedge planting along the field boundaries.

7. Footpath improvements
Some improvements to existing footpaths, as well as the creation of a new one in the central section of the park, will allow visitors to visit the whole site and enjoy the improvements for biodiversity that the project will bring.

Community engagement event prior to works at Lustrum Beck, and screen-shot of project information on Stockton Borough Council web page

Wildlife & Biodiversity

Expected Project Outcomes	Benefits
1. Promotion of a long-term management approach of amenity grasslands to increase species diversity and structure will support biodiversity across the project area 2. Instream and bankside improvement works across the project area will help to restore riparian habitats, and help connect the watercourse with its floodplain 3. At Billingham Beck Country Park the removal of a weir presenting a major obstruction to fish movement will contribute to increased distribution and abundance of vulnerable species such as Eel, Brown Trout, and Salmon	➢ B1: Improves the quantity, quality and connectivity of habitats ➢ B2: Improves the conservation status and or abundance or distribution of species ➢ B3: Reduces risk or impact of invasive non-native species (INNS)

Outputs

1. Future management of the Billingham Beck and Lustrum Beck sites has been agreed. Management of grassland and meadow spaces at Lustrum Beck sites will be undertaken as part of Stockton Borough Council's scheduled maintenance programme, while infrastructure (footpaths, fences etc.) at all sites will be maintained in line with other Stockton Borough Council assets. In-channel works will not have any active management, instead being left to natural processes, as set out in the EA's agreed business case.
2. Instream and bankside improvements works at Billingham Beck Valley Country Park included the installation of 380 tonnes of river gravel to enhance riparian habitats and diversify flows, lowering of banks to reconnect flood plains, woody debris inserted into the stream, and seeded embankment mats installed at various locations. Over 4000 native hedge trees were planted creating 700m of double hedgerow. In total, once work has been completed along 3 km of Lustrum Beck and Greens Beck, there will be 25 new woody debris features, 17 new coir berms and 3 bank-lowering breaches re-connecting around 0.2ha of flood plain.
3. Removal of the weir at Billingham Beck County Park was undertaken in May 2024 and this has allowed for increased movement and distribution of species up the watercourse. Electrofishing has already confirmed the presence of eel.

Evidence

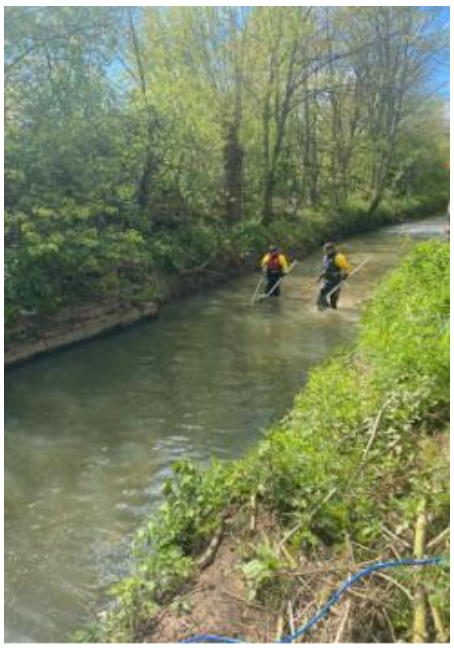
New hedges planted

New footpath beside lowered bank, and installation of embankment mats

In-stream woody debris

Ripple effect from installed river gravel

Watercourse before and after removal of weir



Electrofishing with volunteers at Billingham Beck weir removal site, and endangered European eel found during that survey

Water Quality

Expected Project Outcomes	Benefits
1. WINEP schemes to remove phosphorus from 2 STWs in the Billingham Beck and Lustrum Beck waterbodies will improve river water quality and ecological status in the Brierley Beck - Billingham Beck – Tees waterbody; additional physical habitat improvements delivered by partners will facilitate improvement of WFD ecological supporting elements 2. The creation of wider vegetated buffers along watercourses will provide a buffer/ filter strip and help reduce pollutants entering the water	➢ C1: Reduces pollutants entering waters from point or diffuse sources ➢ C2: Contributes towards improved status or no deterioration of rivers or bathing waters or protecting drinking water ➢ C3: Improves state and function of water, including naturalisation, visual appearance, litter and odour

Outputs

1. Under the AMP7 WINEP, Sedgefield STW, which discharges to Billingham Beck, required improved treatment to meet a new phosphorus permit of 0.25 mg/l. Carlton & Redmarshall STW, which discharges to the Whitton Beck, a tributary of Billingham Beck, required improved treatment to meet a new permit of 0.4 mg/l. To achieve these consents, the scope of works at both sites included permanent installation of chemical dosing and tertiary solids removal equipment to remove phosphorus from final effluent, with these schemes delivered and signed-off by the Environment Agency in December 2024. Bluespaces funding has delivered additional improvements over and above this baseline investment.

2. Installation of embankment matting at various locations in Billingham Beck Country Park will facilitate the establishment of vegetated buffer strips which will help to reduce run-off into the water course from the adjacent paths and fields.

Evidence

Sedgefield STW chemical dosing equipment and mecana (tertiary solids removal)

Carlton & Redmarshall STW chemical dosing equipment and mecana (tertiary solids removal)

Embankment matting installed in Billingham Beck Country Park along watercourses, with newly establishing vegetation preventing erosion

Additional & Secondary Benefits

Expected Project Outcomes	Benefits
1. The ecological restoration aims of this project will help reduce flooding through natural flood management and flood risk funding is used to support the core project. benefits to reduce flooding. The proposals included promote improved utilisation of the floodplain and use 'slow the flow' principles. 2. The improved ecology of the parks and water courses and extended education & engagement provision will directly benefit the local community 3. Benefits delivered through this project are proposed to be used by partners to support trading of Biodiversity Net Gain (BNG) units, which will help fund wider improvements and additional projects in the local area	➢ D1: Provides resilience and adaptation to climate change and/or reduces the risk of flooding ➢ D2: Provides benefits to local communities, the local economy or NWG ➢ D3: Supports strategic project or investment into strategic partnership or landscape/regional activity

Outputs

1. The floodplain through Billingham Beck Country Park is now more fully connected with the beck than it was prior to this project, contributing to reduced flood risk downstream. The completed works offer a good opportunity to help demonstrate and understand Natural Flood Risk Management (NFM) in practice as this concept continues to grow in the UK.

2. By removing the weir in Billingham Beck, there is now a safe area for school groups and volunteers to access the beck and carry out education and River fly monitoring activities. Use of the area by visitors has already been observed.

3. The BNG uplift value of this work enabled Highways England, the Environment Agency and Stockton Borough Council to fund the work in Billingham Beck. The Lustrum Beck work will create BNG units that are understood to be owned ultimately by Stockton Borough Council who will either use them to offset their own developments or sell them to developers. The maintenance burden of both areas will fall to Stockton Borough Council as the owners of the BNG assets and the revenue created by them will fund the maintenance.

Evidence

High flows now connecting the river with the flood plain in Billingham Beck

Customer Testimonies & Media

Quotes from schools who have participated in Riverlabs events:

"The Children have loved it!"
"The visit exceeded expectation, the volunteers and Jackie were amazing!"
"Such an amazing and enriching experience that was thoroughly engaging for all!"
"A very Hands on experience with lots of opportunities to learn new things."
"Staff were fantastic and ensured learning was fun despite the weather!"
"The children loved being in nature and took inspiration from their surroundings."
"Amazing time-children learned and laughed so much!"
Very well organised and well run. Lots of fun finds and lots learnt."
"Kids had the freedom to explore"
"Every aspect was very well organised and fully inclusive."
"Excellent, very informative and well organised. Excellent links to our geography topic. Very friendly and knowledgeable staff. Thank you!"
Really engaging even outside in the cold and rain the pupils were totally engrossed."
"Led by a really engaging and obviously passionate and enthusiastic person so the pupils were grabbed."
"Brilliant practical session to motivate the children. 'Being a scientist brought to life".
"Strengths: Interactive, knowledge of organisers, Tasks, Environment, Resources, Expertise of the facilitators and the connections to the local environment."

Quotes from pupils who have participated in Riverlabs events:

"I have learnt that you can make memories everywhere you go."
"I have loved this because we learnt a lot about animals and eggs. I loved looking at the hills"
"Today I learned how to understand animals in the world. Never give up on your dreams."
"I enjoyed when we caught a fish."
"Today I leant about how the environment works and I had a great time!"
"The trip has been wonderful. I have learnt so much."
“Best bits... Lunch, getting water in my wellies, being with people, going in the river, seeing my friends.”

Link to Stockton Borough Council website, with information on improvements delivered on Billingham Beck:

Billingham Beck Valley Country Park - Stockton-on-Tees Borough Council

BBC coverage at start of Billingham Beck phase of project:

Work starts on restoring country park wetlands

IMAGE SOURCE,STOCKTON COUNCIL

Image caption,
Billingham Beck Valley Country Park will see £1m of improvements

Ian Wood
BBC News, North East and Cumbria

- Published

5 March 2024

Work starts this week on a £1m project which will open up 55km (35 miles) of river for fish.

The Billingham Beck Valley Country Park habitat restoration project will see wetland restored and better community access to the attraction.

It is part of the £30m Tees Tidelands Programme, a set of projects to bring improvements to the River Tees Estuary.

Project manager for the Environment Agency, Paul Eckersley, says the scheme "will bring a much needed boost to biodiversity and water quality".

National Highways funding

National Highways approved most of the £1m funding for the project, which is aligned with its scheme to improve the A19 between Norton and Wynyard.

Measures to improve wildlife habitats and support water quality improvements at Billingham Beck and Thorpe Beck include:

Partly removing a weir to open up more of the water courses for migrating fish from the River Tees
Adding woody debris dams and shallow ditches to reconnect Billingham Beck to floodplains, restoring areas of wetland
Upgrading footpaths and improving landscaping
Improving vehicle access to allow for easier maintenance of the new wetlands

Image caption,
Years of modifications to watercourses have led to the loss of wetland habitat
Over the years, watercourses have been altered, with channels straightened and deepened, and culverts and a weir introduced.

Mr Eckersley calls the new project "exciting", after "decades of modification saw precious habitat lost".

Stockton Council's cabinet member for environment and transport, councillor Clare Gamble, said: "Billingham Beck Valley has long been known as an area rich in wildlife and we're delighted to be involved in this project."

The restoration, led by the Environment Agency in partnership with Stockton Council and National Highways, will be complete by the autumn.

Press Release at end of BBCP phase:

'*Wetland restored and 55km of river opened at Billingham Beck*

A £1m habitat restoration project designed to boost both wildlife and water quality in Stockton-on-Tees has been finalised.

From: Environment Agency

Date: 19 December 2024

Work on a project to restore wetland habitat, open up 55km of river for fish and introcue natural flood management measures at Billingham Beck has completed.

Delivered in partnership between the Environment Agency, Stockton-on-Tees Borough Council, Tees Rivers Trust and National Highways, the project aimed to restore ecological connectivity between the beck and its floodplain after decades of modification.

As well as the removal of a historical weir to enhance fish passage and migration, the first phase of the project created scrapes, or dips in the ground that can fill with water.

All of these features allow the river to reconnect to its natural floodplain and will encourage species of plants, insects and animals that thrive in wetland habitats to return.

The second phase of the works involved landscaping to enhance Billingham Beck country park for both visitors and wildlife.

The upgrades included improved drainage systems, newly installed pathways, stairs, benches and gates, as well as the planting of 5,000 trees to enrich the local ecosystem.

Natural flood management measures have also been installed including the construction of two 'woody debris' dams. These innovative structures consist of trees or logs that are placed into a rivers channel. They are often designed to replicate naturally fallen trees and create a good habitat for wildlife without impacting on the movement of fish.

Environment Agency Project Manager, Phoebe Wreford-Glanvill, said:

We are immensely proud of the project at Billingham Beck which will bring a much-needed boost to both the local community and nature.

This has been a fantastic example of partnerships working in action to deliver multiple benefits and our thanks go to Tees Rivers Trust, Stockton-on-Tees Borough Council and National Highways for their invaluable support and contributions.

I look forward to delivering many more restoration projects in Stockton-on-Tees in the coming year as part of the Tees Tidelands Programme.

Councillor Clare Besford, Stockton-on-Tees Borough Council's Cabinet Member for Environment and Transport, said:

Billingham Beck Valley has long been known as an area rich in wildlife and we're delighted to have been involved in this project, which has seen the wetland at the Country Park restored, improving habitats for all species.

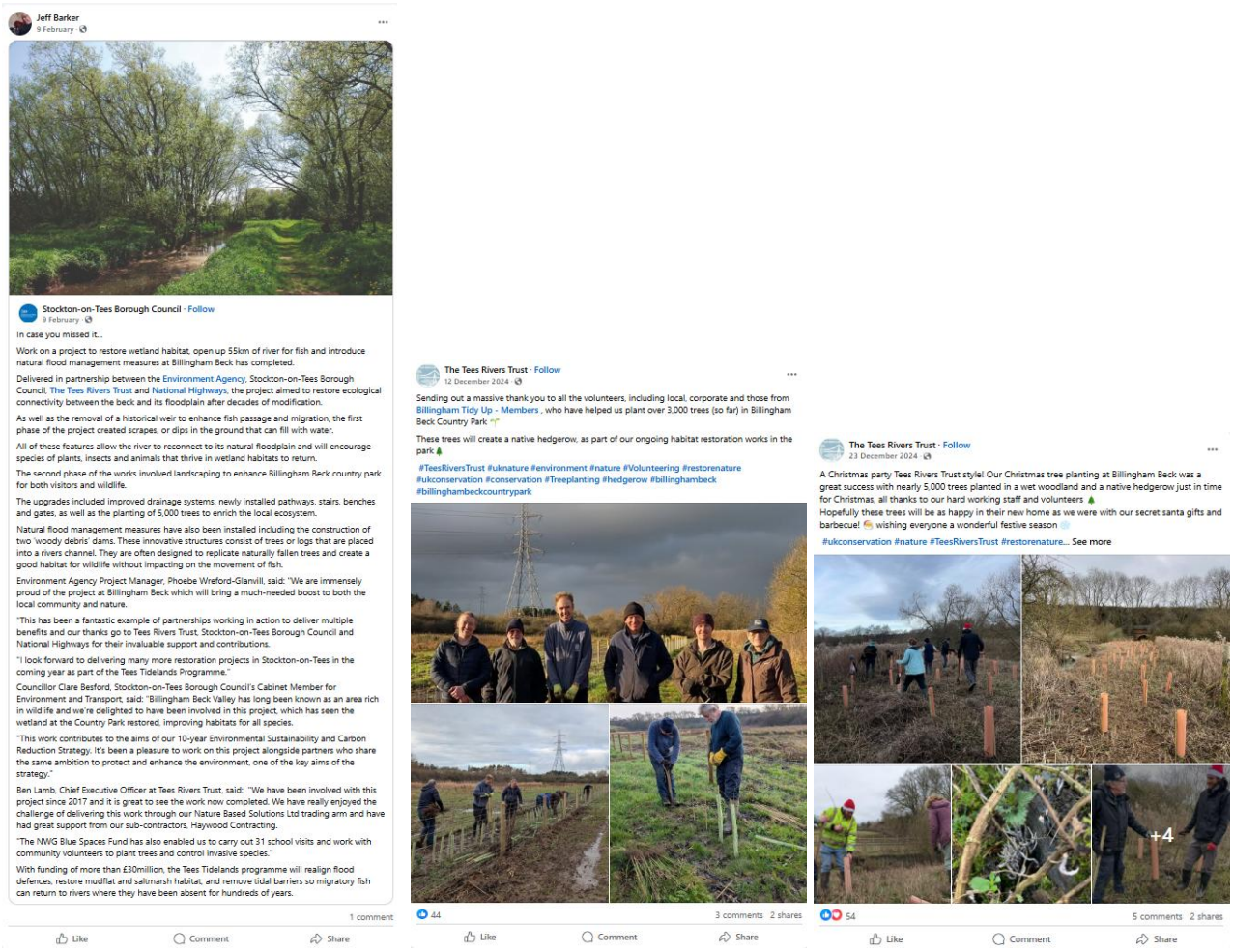
This work contributes to the aims of our 10-year Environmental Sustainability and Carbon Reduction Strategy. It's been a pleasure to work on this project alongside partners who share the same ambition to protect and enhance the environment, one of the key aims of the strategy.

Ben Lamb, Chief Executive Officer at Tees Rivers Trust, said:

We have been involved with this project since 2017 and it is great to see the work now completed. We have really enjoyed the challenge of delivering this work through our Nature Based Solutions Ltd trading arm and have had great support from our sub-contractors, Haywood Contracting.

The NWG Blue Spaces Fund has also enabled us to carry out 31 school visits and work with community volunteers to plant trees and control invasive species'

Social media:



Social media and news coverage of start of Lustrum Beck phase of work:

Brilliant sunny visit down to Lustrum Beck today to see work progressing at the Primrose Hill and Grangefield Park areas of site. Really good to see the changes in water flow already.

#teestidelands

Tees Rivers Trust Turner & Townsend JBA Consulting Stockton-on-Tees Borough Council AtkinsRéalis Environment Agency

https://www.bbc.co.uk/news/articles/c5y66dkex0qo

Stockton river work aims to boost wildlife

Lustrum Beck is undergoing work which hopes to attract creatures including water voles and otters.

www.bbc.co.uk

Lead Partner Quotes & Testimonials

'I am immensely proud to share the great success of the Stockton Becks Project, made possible through a collaborative funding package including support of Northumbrian Water's Blue Spaces funding. This initiative is improving several urban watercourses within the Stockton-on-Tees area, revitalising their ecological health and enhancing the well-being of the communities that surround them.

The Stockton Becks Project is a good example of what can be achieved through collaboration, dedication, and a shared vision for healthier rivers and a more sustainable future. Urban watercourses often suffer from neglect, pollution, and habitat degradation, but through this project, we have demonstrated that with the right approach, even the most challenged environments can be restored to support both people and wildlife.

A Vision for Healthier Becks - When we embarked on this journey, we had a clear goal: to restore and enhance the natural function of the becks flowing through Stockton, ensuring they could support biodiversity while mitigating flood risks and improving water quality. Through the project, we were able to implement a range of nature-based solutions, from removing barriers to fish passage and re-naturalizing banksides to planting native vegetation and engaging communities in conservation efforts.

Engaging the Community - One of the most inspiring aspects of this project has been the level of community involvement which has been made possible by NW Blue Spaces Funding. The Stockton Becks Project was not just about improving the physical environment but also about reconnecting local people with their waterways. Through educational programs, volunteer events, and citizen science initiatives, we have empowered individuals to take an active role in the stewardship of their local becks.

From school children learning about the importance of clean water and biodiversity to local residents participating in tree planting, surveying and habitat restoration days, the enthusiasm we have witnessed has been truly heartening. This level of engagement ensures that the improvements we have made are not just temporary but are embedded in the consciousness of the community, fostering long-term care and advocacy for these precious watercourses.

Tangible Environmental Benefits - The ecological gains achieved through the Stockton Becks Project have been substantial. In partnership with experts and local volunteers, we have successfully improved water quality, increased habitat availability for aquatic species, and helped address the challenges of urban run-off and pollution. Monitoring data has already shown an improvement in fish biodiversity, and over time we expect sightings of species such as kingfishers and otters to increase and a resurgence of aquatic invertebrates that indicate a healthier ecosystem to occur.

Additionally, the project has contributed to natural flood management. By creating buffer zones, installing leaky dams, and improving the connectivity of watercourses, we have enhanced the landscape's ability to absorb and slow water flow, reducing the risk of flooding downstream. This work aligns with our broader mission to promote climate resilience in the Tees catchment area, ensuring that our rivers and communities are better equipped to face the challenges posed by climate change.

A Model for Future Projects - The success of the Stockton Becks Project serves as a powerful testament to the impact that strategic investment in blue-green infrastructure can have. Northumbrian Water's Blue Spaces funding has provided a model for how water companies, environmental organizations, and local communities can work together to drive meaningful environmental change.

This project has reinforced our belief that urban watercourses should not be seen as lost causes, but rather as opportunities for restoration, reconnection, and renewal. By integrating nature-based solutions with community involvement, we have created a template that can be replicated in other areas facing similar challenges.

Looking Ahead - While we celebrate the achievements of this project, we recognize that our work is far from over. The restoration of Stockton's becks is an ongoing commitment, and Tees Rivers Trust remains dedicated to monitoring progress, addressing emerging challenges, and advocating for continued investment in our local waterways.

We are deeply grateful to Northumbrian Water for their vision and support in making this project a reality. Their commitment to improving blue spaces has set a precedent for how corporate entities can play a pivotal role in environmental stewardship. I also extend my heartfelt thanks to our dedicated team, our partners, and the local communities who have embraced this initiative with such passion and commitment.

The Stockton Becks Project has shown that by working together, we can restore nature, enhance our urban spaces, and create a legacy of clean, healthy rivers for generations to come. It is my hope that this project will inspire further action, not only within the Tees catchment but across the UK, as we continue our collective journey towards healthier rivers and thriving communities.'

Ben Lamb, CEO, Tees Rivers Trust

Other Supporting Evidence

Available on request

Full Riverlabs presentation