

Water Environment Improvements

Project Evidence Form

Scope & Purpose

This form is to be used by the Water Environment External Governance Group (WEGG) to review, validate and formally approve the length of water environment improved for each project. The form has been completed by the Water Environment Team with support from project partners for presentation to the WEGG. After formal WEGG approval, the km water environment improved will be recorded against the ODI and projects marked as completed on the Water Environment Scorecard and Mapping Portals.

Project Name

Derwent Reservoir: Biodiversity and Leisure

Project Lead

Company/ Organisation	Named Lead	Position	
Northumbrian Water Durham Wildlife Trust	Andrew Rogers Stuart Pudney Laura Tedstone	Events Planning and Investment Co-ordinator Conservation & Land Manager Heart of Durham Project Officer	

Water Environment Improved

Year	Claimed	Proposed	Reason For Any Change
Year 2	5.8	5.8	NA

Project 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 the evidence of project completion and the outputs achieved to request project sign-off by the WEGG.

Level	Project Acceptance Date	Project Approval Date	Completed Project Sign Off Date
Project Team	June 2021	NA	NA
Water Environment Steering Group (Internal)	July 2021	July 2021	NA
Water Environment Governance Group (External)	July 2021	July 2021	May 2022

Water Environment Project Timescales

Candidate Project Approved	Project Initiated	Project Completed
July 2021	2020/21*	March 2022

*Some habitat creation was completed in the 2020/21 financial year

Project Summary and Highlights

This project, delivered in partnership with Durham Wildlife Trust, has improved 5.8 km of bluespaces at Derwent Reservoir and Waterside Park in the Tyne Catchment. Improvements have taken place to accessible water environments between the Pow Hill and Millshield car parks and picnic areas, which act as hubs for customers and visitors to the site.

This project has enhanced access provision and biodiversity by delivering improvements to the multi-user waterside path, providing seating, installing new information boards along the trail, and creating and improving wildlife habitats. This project has engaged volunteers in helping to protect and enhance the environment and has delivered improvements which will give people a greater opportunity to engage with and learn about the natural environment at Derwent Reservoir.

Highlights include:

- Repair and improvements delivered to the multi-user path, allowing wheelchair users and customers with small children to access the countryside in a safe, easy and comfortable manner
- Design and installation of 6 new information boards, which are an attractive addition to the site and will help engage and inspire customers
- 3.3 ha of additional wetland, meadow and hedgerow habitat have been created, increasing the biodiversity value of land around the reservoir.
- Over 20 volunteers have been engaged in over 46 conservation task days at the site



Maps

Derwent Reservoir: Biodiversity and Leisure

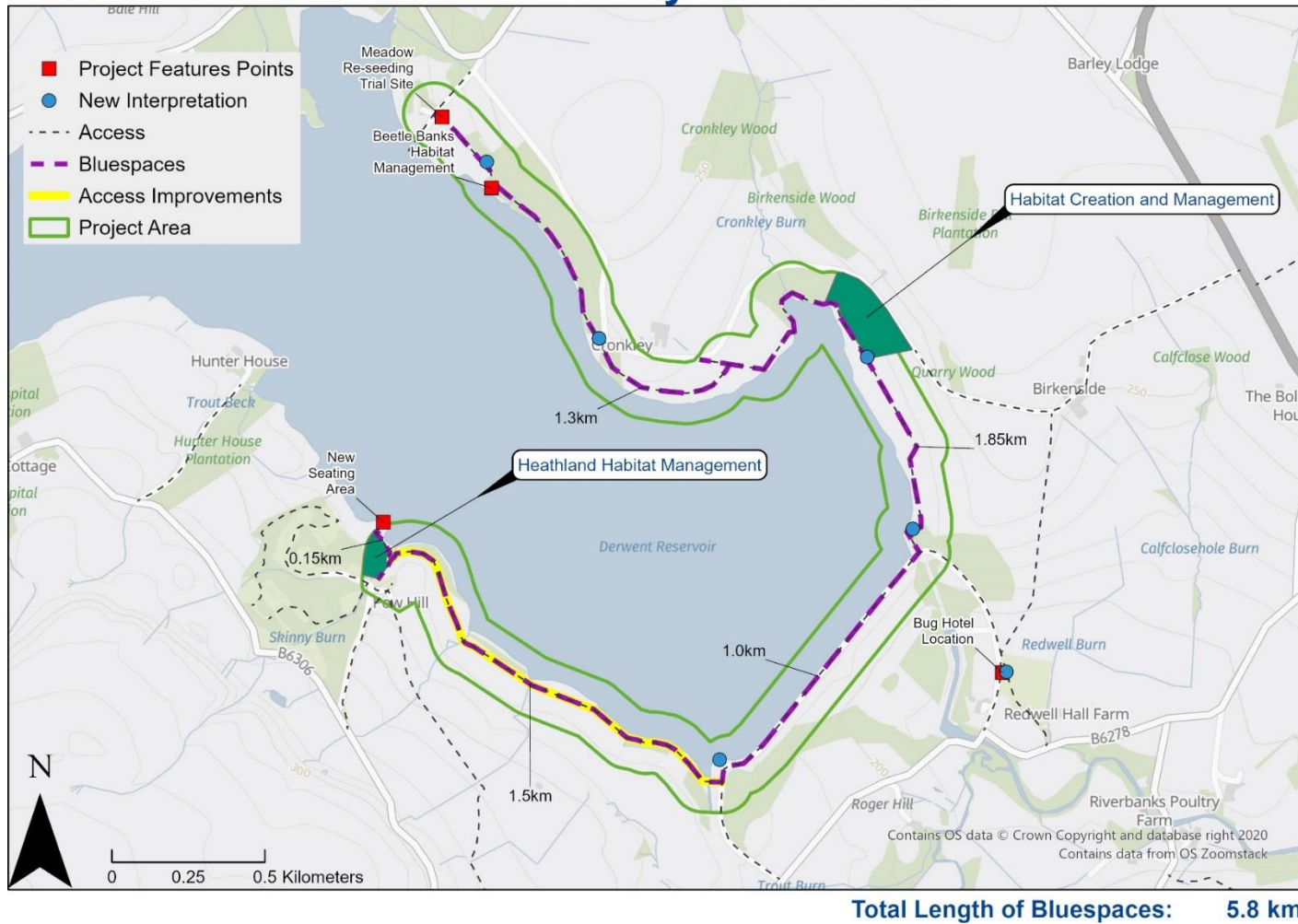


Figure 1: Map of bluespaces improvements delivered

Project Outputs, Benefits & Evidence Against Criteria

Access, Facilities & Recreation	
Expected Project Outcomes	Benefits
<ol style="list-style-type: none"> Up to 20 new interpretation (information) boards to be installed including site specific and generalised information materials, linked to digital QR codes and updated graphics providing an immersive interpretive experience for customers and enhancing engagement and education opportunities Path works and surface improvements on the multi-user path between Pow Hill and the dam wall Creation of a new seating area for visitors at Pow Hill peninsula to facilitate enjoyment of the site Bug hotel to be created, potentially 'the UK's largest' (6m x 6m x 2m approx.) providing additional continuing visitor and volunteer engagement and education facilities along with wildlife habitat 	<ul style="list-style-type: none"> ➤ A1: Increases access to, engagement with and enjoyment of the water environment ➤ A2: Benefits health and wellbeing ➤ A3: Influences positive environmental behaviours
Outputs	
<ol style="list-style-type: none"> 6 new information boards have been delivered and will be installed by May 2022 across the project area covering a range of topics related to the site such as Angling and Fisheries and Red Squirrels. The Derwent All-access multi-user path provides the opportunity for customers with disabilities or pushchairs to enjoy the enhanced natural environment and visitor facilities. 650m of footpath has been resurfaced to provide a smooth and consistent surface for wheelchair users, as well as buggy's/ prams/ bikes. The rest of the path in this area has been rolled to compact. 7 bench seating areas across the project area have also been resurfaced. Several drains cleared and regraded to encourage water shedding, and 350m of new V ditch has been dug to ensure newly resurfaced path remains clear of waterlogging and excessive erosion. The path between Pow Hill Heath and Pow Hill country park is now no longer in use (see Wildlife and Biodiversity Section). Access to the peninsula overlooking the reservoir has been retained and extra seating has been installed to enable customers to take in the views and enjoy a picnic. 3m x 1m x 1m bug hotel constructed near to the Derwent Fishing Lodge and play park. The hotel has been 50% filled to allow for future filling by members of the public. Bug hotel given a felt roof to ensure dry conditions inside. A small area of connective habitat has also been created (see Wildlife and Biodiversity Section) <p>Total number of volunteer days around Derwent Reservoir April 21- April 22 = 276 over 46 tasks</p>	
Evidence	
<p>Angling and Fisheries</p> <p>Derwent Reservoir is one of the most popular Waterside Park Fisheries in the North East and is regularly stocked with trout from our fish farm at Lartington, in Teesdale. Most of the fish are Rainbow trout, with a few Blue and Brown trout caught on occasion. Coarse angling for Roach and Perch is also popular on Derwent.</p> <p>Roach <i>Rutilus rutilus</i></p> <p>Perch <i>Perca fluviatilis</i></p> <p>Rainbow Trout <i>Oncorhynchus mykiss</i></p> <p>Our trout are ethically raised and released into our fisheries under guidelines outlined by the Centre for Environment, Fisheries and Aquaculture (CEFAS). We encourage respect of the environment and its users when enjoying one of the best fishing experiences in the North East.</p> <p>WATERSIDE NORTH-UMBRIAN WATER LEAVING WATER</p>	
<p>Example of information panels</p>	<p>Bug hotel, showing half-filled hotel and fencing</p>



New seating area at Pow Hill



Volunteers enjoying a well-earned rest after installing the new seating



Path works before improvements:
(Left) Typical pothole in footpath, showing wear beneath the membrane. (Right) Hump and incorrectly placed drain crossing the footpath



Path works after improvements:
Drain relocated and path levelled out. New V ditch to effectively drain ground running towards the path

Wildlife & Biodiversity	
Expected Project Outcomes	Benefits
<ol style="list-style-type: none"> 1. 3.3 ha new habitat to be created including: woodland and shrub planting, digging scrapes and new ponds, along with the rerouting of stream to provide wetland areas. 2. New habitat will benefit wading birds and amphibians 3. Creation of a trial meadow plot for eventual 2.8 ha meadow creation - acid grassland habitat 4. Bug hotel will improve the deadwood resource on site 5. Clearing of vegetation from beetle banks will improve habitat for solitary bees 6. Woodland management at Cronkley Bank, a former plantation, involving haloing oak trees, removing sycamore and beech, supporting understory regeneration, leaving standing deadwood, and creating log piles and dead hedges 7. Heathland management at Cronkley Bank for gorse control to protect heathland species 8. Protection of sensitive heathland habitat at Pow Hill by redirecting paths and creating a new seating area for visitors 	<ul style="list-style-type: none"> ➤ B1: Improves the quantity, quality and connectivity of habitats ➤ B2: Improves the conservation status and or abundance or distribution of species
Outputs	
<ol style="list-style-type: none"> 1. Works were completed by contractors in 2021, 1433 trees and shrubs covering approx. 1.35ha (including Alder, Rowan, Hazel, Silver Birch and Holly) were planted, 3 scrapes/ ponds have been created and bedded in successfully and appropriate maintenance is in place. Wetland areas have been left to naturally colonise to help reduce the risk of introducing unwanted species. 2. The muddy margins of the new ponds and scrapes have shown evidence of wading birds probing and investigating. Work to retain open areas around the water features has also made this new area more appealing for feeding. As the wetland areas are naturally colonised it is expected that amphibians and Odonata may use these habitat features 3. Several volunteer tasks were led in October 2021 to clear, rotavate, and seed an area of amenity grassland with acidic herb species. Plans to monitor the seeded area for growth and reseed if required in Sept/Oct 2022. If the area has increased in species and species diversity, then additional areas for meadow creation will be considered in the area opposite. 4. 3m x 1m x 1m bug hotel constructed near to the Derwent Fishing Lodge and play park. The hotel has been 50% filled to allow for future filling by members of the public. An area around the hotel has fenced off from the surrounding amenity areas to stop access and allow regrowth. Within this area an area of hedge was planted to connect the bug hotel to the existing hedge, creating a corridor for non-flying insects and animals to access the hotel. Additionally, a new scrape pond was dug to encourage diverse wildlife and wildflower seed has been sown to provide food and cover. 5. Two volunteer tasks were led in January and February 2022 to manage gorse along Millshield multi-user path and open-up beetle banks by removing vegetation 6. No woodland management could take place due to weather and with delays to volunteer chainsaw training due to covid 7. Several volunteer tasks were led in January 2022 to begin to control the gorse in this area to retain and restore a mosaic of open grassland habitat. Additional gorse management to clear a space between woodland and grassland to plant a shrub layer to soften the woodland edge. Planting of trees and shrubs of local provenance planned for 2022/23. 8. The path between Pow Hill Heath and Pow Hill country park is now no longer in use. Fencing has been installed in November 2021 to restrict access to the heathland habitat, but extra seating has been installed to enable customers to take in the views and enjoy a picnic. Several days of scrub control on the heath (one joint task with Northumberland Wildlife Trust). Removed birch and dead hedged alongside new fence as a wind break and new corridor for wildlife. An additional 6 days of bracken control on the heathland with contractor, pony and roller. 	

Evidence



Site of habitat creation before works



Site of habitat creation following creation of new pond/ wetland areas and tree planting (June 2021)



Trial meadow plot creation- rotavating and seeding



Bug Hotel rear view, showing scrape pond, hedge planting and area prepared to receive wildflower seeds



DWT Heart of Durham Volunteers removing and burning gorse at Cronkely Bank



New fencing at Powhill and deadhedging using birch removed from heathland



Bracken Rolling

Heart of Durham Volunteers at Pow Hill

Additional & Secondary Benefits

Expected Project Outcomes	Benefits
<ol style="list-style-type: none"> 1. New wetland areas will capture and store carbon 2. Improved amenity value and natural resource of the reservoir provides a benefit for the local community 3. Enhancement of the reservoir as a visitor destination will boost the local economy e.g., shops, pub, hotels etc. 	<ul style="list-style-type: none"> ➤ 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

Outputs

<ol style="list-style-type: none"> 1. 3.3 ha of habitat has been created which helps capture and store carbon in wetland and woodland areas 2. Improved amenity value through enhancements delivered in this project is expected to attract more visitors to the site and benefit existing users The multi-user path is an important feature, allowing wheelchair users and customers with small children to access the countryside in a safe, easy and comfortable manner, and the improvements undertaken through the project will keep the path in better condition for longer The new information boards installed around the reservoir are designed to engage and inspire younger customers, providing opportunities to punctuate long walks with points of interest, as well as giving customers clues as to what they can be "on the lookout" for as they walk the footpath 3. The enhancements made through this project at key visitor destinations around the reservoir and on the multi-user path aim to encourage visitors to visit and spend time at the site and will impact on the local economy - the Derwent Fishing Lodge Shop and The Boat Shack Café at Pow Hill will benefit directly from the improved access connections around the reservoir, and visitors are also expected to make use of the existing facilities in the nearby village of Edmundbyers including a campsite, hostel, B&Bs, shop, and pub

Evidence

See p. 4-8



Visitors enjoying the recreational amenities offered through the Derwent Reservoir Sailing Club

Customer Testimonies & Media

See: [Heart of Durham Task Day Blog](#)

Comment on Heart of Durham Volunteers from Laura Tedstone, Heart of Durham Project Officer, Durham Wildlife Trust:

Millshield Trial Meadow – *The volunteers enjoyed the challenge of the trial meadow, they hadn't used a rotavator before. Liked idea of being at start of a project and see the outcome. They worked our area and how much seed to buy and spread.*

Pow Hill Heath – *Volunteers could see difference contractor and horse made and once we could have more than 6 on site the larger team made light work of the remaining bracken. Made big impact on scrub and very tidy dead hedge line. Can see where they have been which is rewarding. Hoping fencing will make a difference as no foot fall and dogs running free will protect habitat.*

Lead Partner Quotes & Testimonials

Andrew Rogers, Events Planning and Investment Co-ordinator, Northumbrian Water

“The project will bring several benefits to customers visiting Derwent Waterside Park. I have met several wheelchair users during the planning stages of the footpath work that expressed their approval at plans to resurface the path. The multi-user path is an important feature, allowing wheelchair users and customers with small children to access the countryside in a safe, easy and comfortable manner. The drainage works associated with the project will keep the path in better condition for longer, the previous drains were clogged or shallow and ineffective, with water spilling over onto the path and washing away the top dressing.

The bug hotel area provides food, shelter and access corridors to the hotel itself. We need to design some information signs for the area to explain this to guests, but the benefits for wildlife should take shape over the summer as the area flowers and flourishes.

The new information boards installed around the reservoir are of a good quality and will hopefully engage and inspire younger customers. They will provide opportunities to punctuate long walks with points of interest, as well as giving customers clues as to what they can be “on the lookout” for as they walk the footpaths.”