

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

Embleton Quarry Bluespaces

Project Lead

Company/ Organisation	Named Lead	Position
Embleton Parish Council (Embleton Quarry Nature Reserve)	Gary Woodburn	

Bluespaces Improved

Year	Claimed	Proposed	Reason For Any Change
Year 4	1.4 km	1.4 km	NA

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	NA	N/A
Water Environment Steering Group (Internal)	March 2023	March 2023	N/A
Water Environment Governance Group (External)	March 2023	March 2023	May 2024

Project Timescales

Candidate Project Approved	Project Initiated	Project Completed
March 2023	March 2023	April 2024

Project Summary and Highlights

Summary

Embleton Parish Council and NWG have improved 1.4 km of bluespaces at Embleton Quarry Nature Reserve, near Embleton on the Northumberland coast. The project has helped create a better visitor experience to this local water environment, through improved access, better interpretation, and enhanced biodiversity.

Highlights

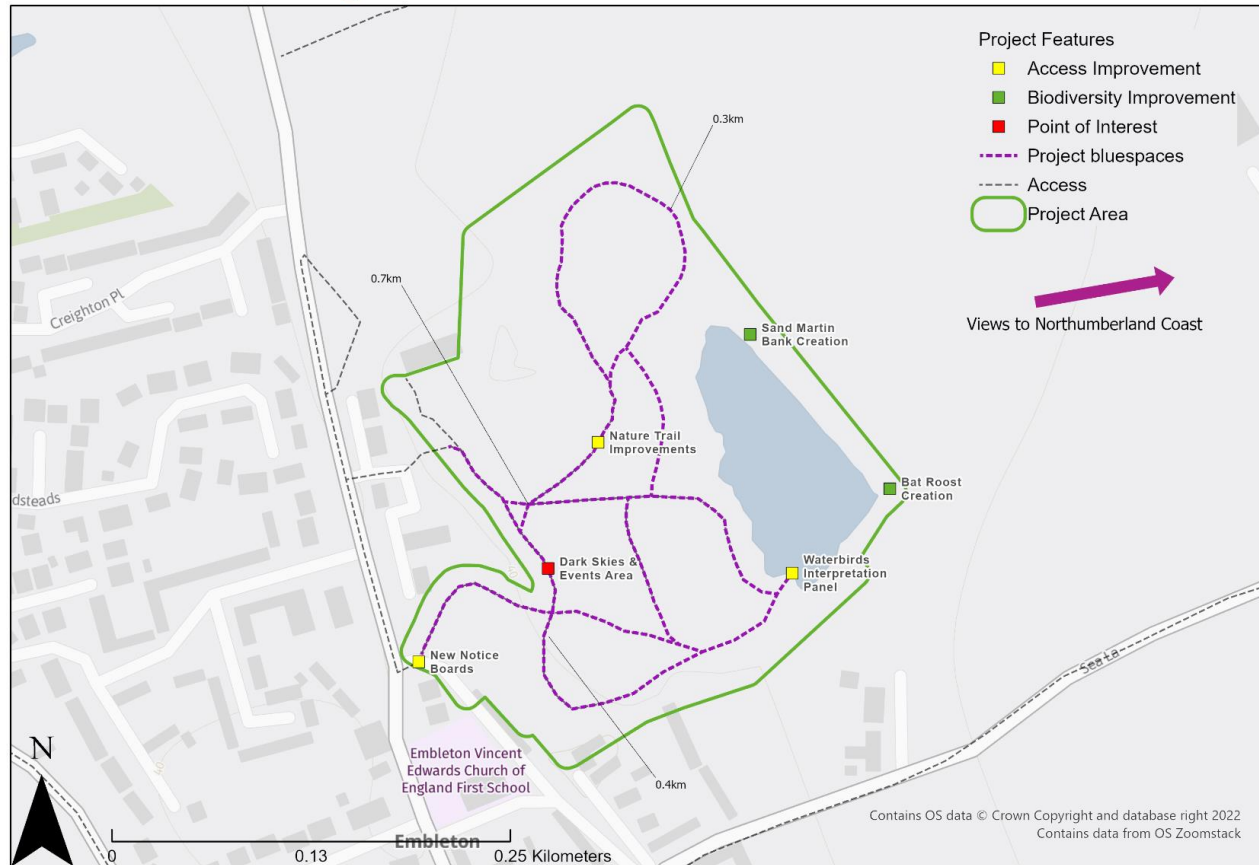
- Footpath surface improvements, increasing accessibility for wheelchairs/ strollers/ pushchairs on site.
- New interpretation and noticeboards for Embleton Quarry.
- Installation of a specially designed Daubenton's bat roost at the pond, as well as standard bat boxes installed on the site.
- Creation of a sand martin bank along the pond edge, in clear view of the public from the opposite bankside.
- Increased ecological monitoring through trail cameras, eDNA sampling, water quality testing and monitoring of new habitat features by volunteers/ community.
- Successful events programme engaging the local community, including local school children, with the wildlife on site.



This site has been visited by the Bluespaces Delivery Manager to validate the improvements made on 30/04/24.

Maps


Embleton Quarry Nature Reserve



Total Length of Bluespaces: 1.4 km

Bluespaces improved at Embleton Quarry

Project Outputs, Benefits & Evidence Against Criteria

Access, Facilities & Recreation	
Expected Project Outcomes	Benefits
<ol style="list-style-type: none"> 1. Improvements to the (often muddy) nature trail will provide better access to the waterside and views over water, particularly helping those visitors' using wheelchairs, other mobility aids or prams. 2. New waterside habitat features and a new interpretation panel will help people enjoy and identify wetland wildlife at the site 3. Project activities will be undertaken through volunteers and the local community, enabling people to be active and involved in the management of the site and contributing to their health and wellbeing 4. Species surveying (camera trap and eDNA) through the community will engage people in the environment and promote the importance of wetland areas 5. Events, notice boards and interpretation will promote greater awareness of the local water environment and the importance of nature conservation 	<ul style="list-style-type: none"> ➤ A1: Increases access to, engagement with and enjoyment of the water environment ➤ A2: Benefits health and wellbeing through: ➤ A3: Influences positive environmental behaviors
Outputs	
<ol style="list-style-type: none"> 1. Accessible paths have been improved by laying whinstone. This has helped to stabilise the ground and provide secure paths which are sensitive to, and dynamic with, the adjacent grassland. Improvements to paths have also created easier access for wheelchairs, buggies, strollers etc. 2. A new interpretation panel on the jetty helps people identify a range of wildfowl and wetland birds seen in the wetland area. See Wildlife & Biodiversity section for evidence of new habitat features. 3. A volunteer group of community members works at least once a week to manage the site and maintain visitor infrastructure. New volunteers have been recruited during the project, and other groups and organisations such as CoastCare and Campaign to Protect Rural England (CPRE) are involved to help develop awareness of the reserve and encourage participation of volunteers from further afield. Local school children and the local Squirrels group have also been involved in project activities. 4. Species monitoring will start in Spring 2024 – this will include camera trap monitoring to enable identification of species, eDNA water sampling to enhance understanding of amphibians and invertebrates in the water, and monitoring the new habitat features such as bat boxes and the sand martin bank. All species records will be added to the existing database for the reserve. Through the project links have been developed with ADAS who is supporting the group as part of its community links program. 5. The noticeboard on the Embleton village bus shelter attracts the attention of local people, school students and visitors to the area, with an additional portable noticeboard now in use for community events. Additionally, events have been organized and run by the group, including a bat and moth night, pond dipping and wildflower walks. 	
Evidence	
	
<p>Volunteers undertaking drainage improvements, meadow raking, path cutting and improving surface paths</p>	



Stroller and wheelchair users on improved paths New noticeboard at local bus stop promoting the site and events



New interpretation panel on the jetty Community events: Bat & Moths night / Wildlife walk



Schools pond dipping and bat/ bird box surveying

Wildlife & Biodiversity

Expected Project Outcomes	Benefits
<ol style="list-style-type: none"> 1. New habitat will be created through bare ground/vertical earth banks for Sand Martins and invertebrates and insects (including solitary bees) 2. Creation of a new waterside bat roost in an outflow culvert aims to improve the status of this Daubenton's Bat species locally (this species has been recorded around the wetland/pond area on site) 	<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

1. A Sand Martin bank has been created adjacent to the pond. The area was cleared of scrub by volunteers and a dead hedge created to help deter predators and disturbance. Initial holes have been bored into the bank to provide potential nesting sites.
2. A bat roost designed for Daubenton's bat has been designed, built and installed by volunteers in the overflow sluice. New bat boxes were also purchased and installed around the site which will be monitored by volunteers and school children.

Additionally, the sides of the paths have been mown and raked for better habitat management for flower-rich sward, alongside creating easier access.

Evidence



Holes being created in the bank for potential nest sites



Volunteers clearing the new sand martin bank Sand martins investigating the new nest site – early May 2024



Preparing installation of bat roost



Sluice location



3 tier cavity bat roost for Daubenton's bat in sluice



Newly installed bat boxes on site

Water Quality

Expected Project Outcomes

NA

Benefits

NA

Outputs

1. Although no original plans were made around water quality, the work in this project is contributing to increased knowledge of any water quality issues present on site. Water samples have been collected on site and analysed by an external company (Envirolabs) for signs of agricultural run-off or landfill impacts (the site was previously a landfill). Water samples will be taken twice during 2024/ 2025 at different times of year, and mitigation actions would be considered, depending on the findings.
2. Village school children (KS2) will also use water sampling sticks to develop their understanding of water and its importance in the environment in the summer months.

Evidence



Water quality testing in April 2024

Additional & Secondary Benefits

Expected Project Outcomes	Benefits
<p>1. Environmental events and improvements to nature trails will allow better access to the Embleton Quarry Nature Reserve for the local community and attract an increasing number of tourists to visit the area, helping to support the local economy</p>	<p>➤ D2: Provides benefits to local communities, the local economy or NWG</p>

Outputs

1. Environmental events (including a Wildflower Walk and Bath and Moth Evening) and improvements to nature trails evidenced above have allowed better access to the Embleton Quarry Nature Reserve for the local community. Community involvement has been further improved by higher level publicity through noticeboards – these have provided a higher profile of the site within the community, and therefore increased engagement with the community at events and visitors in general. The noticeboard provides information about how to contact the volunteers group, social media links, what to look for each month and upcoming events.

Evidence



“Thank you so much for a fantastic evening last night. So welcoming and very informative - our first visit but definitely not our last 😊”

From a Bat & Moth Evening attendee

Customer Testimonies & Media



“Lovely place, we always have a walk round when we stay in Embleton 😊”
Facebook user

“We have been there and it’s really good to see it being turned into this. A few years time it will be stunning.”
Facebook user

So good to be able to watch and hear birds close to us, particularly Tree Sparrows, Bullfinch and of course the magic of Waxwing this year.

From a regular visitor

A huge amount of work by volunteers – how do they do it? It’s a fantastic place and there’s always something to see

From a local couple who walk their dogs in the reserve

Thank goodness for the path improvements. I can walk right round the path now without getting bogged down! It must take hours of hard work to keep the paths passable, especially in the wet weather.

From a village resident who uses a stroller for walking

The children really enjoy having such a lovely resource on the school’s doorstep.

From the staff of Vincent Edwards Primary School, Embleton

I love being able to highlight the quarry to my visitors. Not only can they walk dogs there, but there’s loads of wildlife for them to see. And it’s wonderful at any time of year. Well done, quarry team, and thank you for all your hard work!

From a holiday cottage owner

We just love the accessibility of this place. You can’t imagine having such a wild place so close to the village.

From a weekend visitor

Great to see abundant water birds, and the jetty is a real bonus. To have a volunteer there explaining the difference between Gadwall and Mallard was so helpful, as was the new board showing types of bird to look out for.

From a visitor staying in the village hotel

It’s so peaceful and a massive asset to the village. I’d come back just to visit the reserve again!

From a holidaymaker

We had no idea that this place was here until we walked past the gate. What an absolute gem!

From a visitor on holiday from Leicester

Over Easter I had one of my grandchildren and his wife with one of my great grandchildren here. They went to the quarry a couple of times and were most impressed. My GGC (aged 2) loved the birds on the pond and learnt to recognise some breeds and to copy the noises they make. Great early learning experience.

From a village resident

Lead Partner Quotes & Testimonials

Having support from Bluespaces has enabled us to do so much that we hoped to do but couldn't afford. As we're a volunteer group, our sources of funding are really limited.

The interpretation board on the jetty helps visitors identify birds they're likely to see and is great for the schoolchildren when they visit their outdoor classroom here. When we hold open days and BioBlitzes, we'll be able to use the new USB microscope to improve identification of pondlife. Again, children love to see this and we look forward to more work with our village school.

For some time, we've wondered about the quality of water in the pond. Is there an influence from the underlying landfill? What levels of methane are there and are there metals present? Is the run-off from the agricultural land on the NE boundary having an influence? Having professional sampling and analysis will answer some of these questions. We also hope to involve the children from the school in some basic citizen science, using simple dipsticks to look at pH values, for example.

eDNA analysis may well help us find out more about what's living in and on the pond, and what to look out for. This will help us in our site management.

We hope that our Sand Martin bank and additional bat boxes, plus the innovative bat roost we've been able to build in the sluice, will provide better habitats in the reserve. The trail camera, too, will help in identifying animals on site and in advising our habitat and management plans.

There's never enough gravel and stone for our path maintenance, and without it, accessibility is compromised. Even in this very wet winter and spring, we've had enough material to create French drains in boggy sections and improve the worst areas of the paths whilst keeping the reserve looking and feeling natural.

Our new noticeboard on the bus shelter is already proving popular with locals and visitors alike, and the new A frame board will be a great asset for our open days.

So thank you, Bluespaces! We put in over 160 hours of work as volunteers, but with your funding, we've achieved many of our aims for this year.

Margaret, Embleton Quarry Volunteer Group

Other Supporting Evidence

https://northumberlandparishes.uk/sites/default/files/parish-councils/documents/2021/April/Embleton-Quarry-Nature-Reserve_0.pdf

Moth event species list:**A quick summary of catch at Embleton Quarry 12/08/23**

Common Rustic agg. (*Mesapamea secalis* agg.) 15
 03.001 Orange Swift (*Triodia sylvina*) 2
 18.001 Diamond-back Moth (*Plutella xylostella*) 1
 32.030 a moth (*Agonopterix nervosa*) 1
 49.026 Dark Fruit-tree Tortrix (*Pandemis heparana*) 1
 49.038 a moth (*Clepsis consimilana*) 1
 49.039 Light Brown Apple Moth (*Epiphyas postvittana*) 1
 49.057 a moth (*Cnephasia longana*) 1
 49.062 a moth (*Acleris forsskaleana*) 1
 49.109 a moth (*Agapeta hamana*) 3
 49.161 a moth (*Celypha striana*) 1
 49.166 a moth (*Celypha lacunana*) 1
 49.183 a moth (*Lobesia abscisana*) 1
 62.035 a moth (*Acrobasis advenella*) 2
 63.038 Mother of Pearl (*Patania ruralis*) 3
 63.067 a moth (*Eudonia lacustrata*) 1
 63.093 a moth (*Agriphila straminella*) 8
 66.010 Drinker (*Euthrix potatoria*) 4
 70.011 Single-dotted Wave (*Idaea dimidiata*) 1
 70.013 Small Fan-footed Wave (*Idaea biselata*) 2
 70.016 Riband Wave [non-banded form] (*Idaea aversata* ab. *remutata*) 3
 70.049 Garden Carpet (*Xanthorhoe fluctuata*) 1
 70.061 Common Carpet (*Epirrhoe alternata*) 4
 70.089 Phoenix (*Eulithis prunata*) 1
 70.094 Small Phoenix (*Ecliptopera silaceata*) 1
 70.131 Twin-spot Carpet (*Mesotype didymata*) 1
 70.133 Small Rivulet (*Perizoma alchemillata*) 1
 70.138 Sandy Carpet (*Perizoma flavofasciata*) 1
 70.161 Golden-rod Pug (*Eupithecia virgaureata*) 1
 70.187 Tawny Speckled Pug (*Eupithecia icterata subfulvata*) 2
 72.013 Yellow-tail (*Euproctis similis*) 1
 72.044 Dingy Footman (*Eilema griseola*) 8
 72.044 Dingy Footman [pale form] (*Eilema griseola* ab. *stramineola*) 2
 72.045 Common Footman (*Eilema lurideola*) 20
 73.015 Silver Y (*Autographa gamma*) 1
 73.162 Dark Arches (*Apamea monoglypha*) 3
 73.293 Smoky Wainscot (*Mythimna impura*) 2
 73.325 Shuttle-shaped Dart (*Agrotis puta*) 1
 73.334 Small Square-spot (*Diarsia rubi*) 1
 73.342 Large Yellow Underwing (*Noctua pronuba*) 8
 73.345 Lesser Yellow Underwing (*Noctua comes*) 2
 73.346 Least Yellow Underwing (*Noctua interjecta caliginosa*) 1
 73.348 Lesser Broad-bordered Yellow Underwing (*Noctua janthe*) 6
 73.357 Square-spot Rustic (*Xestia xanthographa*) 10
 73.358 Six-striped Rustic (*Xestia sexstrigata*) 3