

# 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	Contact Details
Embleton Parish Council (Embleton Quarry Nature Reserve)	Gary Woodburn		07854 612744 embletonquarry@gmail.com

# **Bluespaces Improved**

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

#### **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	

## **Project Timescales**

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



# **Project Summary and Highlights**

#### **Summary**

With the support of Bluespaces funding, Embleton Quarry Nature Reserve aimed to deliver improvements to 1.4 km of bluespaces. Our wish was to create a better visitor experience, with increased biodiversity, better interpretation, and an improved waterside experience overall. The funding has provided a boost for all of these site improvements.

## **Highlights:**

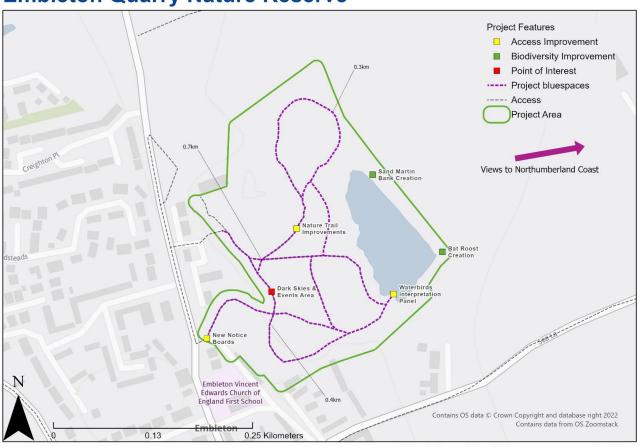
- Installation of a specially designed Daubenton's bat roost at the pond, as well as standard bat boxes installed on the site.
- Creation of a sand martin bank along the pond edge, in clear view of the public from the opposite bankside.
- Footpath surface improvements, increasing accessibility for wheelchairs/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





# Maps

# **Embleton Quarry Nature Reserve**



Total Length of Bluespaces: 1.4 km

Figure 1: Bluespaces improved at Embleton Quarry



# **Project Value, NWG Investment & Impact**

Total Project Value: £5,750

		NWG In	vestment		Amount to be Reinvested
Year	Bluespaces Improved	Baseline	Above & Beyond	ODI Reward (£7676/km)	in New Projects (Subject to Subtraction of Programme Costs)
Year 4 2023/24	1.4 km	-	£3,300	£10,746 *	TBC – Reviewed at programme level after subtraction of programme costs



# **Project Outputs, Benefits & Evidence Against Criteria**

	Access, Facilitie	s & Recreation
	Expected Project Outcomes	Benefits
provide bet water, parti wheelchair	ents to the (often muddy) nature trail will tter access to the waterside and views over icularly helping those visitors' using s, other mobility aids or prams.	
panel will h at the site	side habitat features and a new interpretation elp people enjoy and identify wetland wildlife	A1: Increases access to, engagement with and enjoyment of the water environment
and the loc and involve	ivities will be undertaken through volunteers all community, enabling people to be active and in the management of the site and	> A2: Benefits health and wellbeing through:
Species su community	g to their health and wellbeing rveying (camera trap and eDNA) through the will engage people in the environment and e importance of wetland areas	A3: Influences positive environmental behaviors
5. Events, not greater awa	tice boards and interpretation will promote areness of the local water environment and ance of nature conservation	
	Outn	uts

#### Outputs

- 1. Accessible paths have been improved by laying whinstone. This has helped to stabilize the ground and provide secure paths which are sensitive to, and dynamic with, the adjacent grassland.
- 2. A new interpretation panel on the jetty helps people identify a range of wildfowl seen in the wetland area.
- 3. The volunteer group consisting of community members works regularly (at least once a week) on site to manage the site and maintain/ create visitor infrastructure. New volunteers have been recruited during the project period, 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. Plans have been established for species monitoring starting in Spring 2024 this will include camera trap monitoring, eDNA water sampling, as well as monitoring newly installed/ created habitat features such as bat boxes and the sand martin bank. The camera trap will enable identification of species, especially mammals, helping to inform habitat management plans. eDNA testing will enhance understanding of amphibians and invertebrates in the water and enable appropriate management and maintenance of the wetland. All species records will be added to the existing database for the reserve. Volunteer expertise will be developed in taking eDNA samples, and through the project links have been developed with ADAS who are supporting us as part of their community links program.
- 5. The noticeboard on the 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 ran by the group, including a bat and moth night, pond dipping and wildflower walks.



# Evidence



Volunteers dressing and wacking paths to improve accessibility.





Stroller and wheelchair users enjoying the improved footpaths.





New interpretation panel on the jetty to help visitors identify wetland bird species



Various volunteer tasks - drainage improvements, meadow raking, path cutting





School visits - pond dipping and bat/ bird box surveying





Community events: Bat & Moths night / Wildlife walk



New noticeboard at local bus stop promoting the site and events



## Wildlife & Biodiversity

#### **Expected Project Outcomes**

#### Benefits

- New habitat will be created through bare ground/vertical earth banks for Sand Martins and invertebrates and insects (including solitary bees)
- 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)
- B1: Improves the quantity, quality and connectivity of habitats
- B2: Improves the conservation status and or abundance or distribution of species

#### **Outputs**

- 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.

#### **Evidence**



Volunteers clearing the new sand martin bank





Holes being created in the bank for potential nest sites



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 Qu	ıality
Expected Project Outcomes	Benefits

#### **Outputs**

Although no original plans were made around water quality, the project has/ 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 can be sought depending on the findings.

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**

See evidence pack for water sampling results



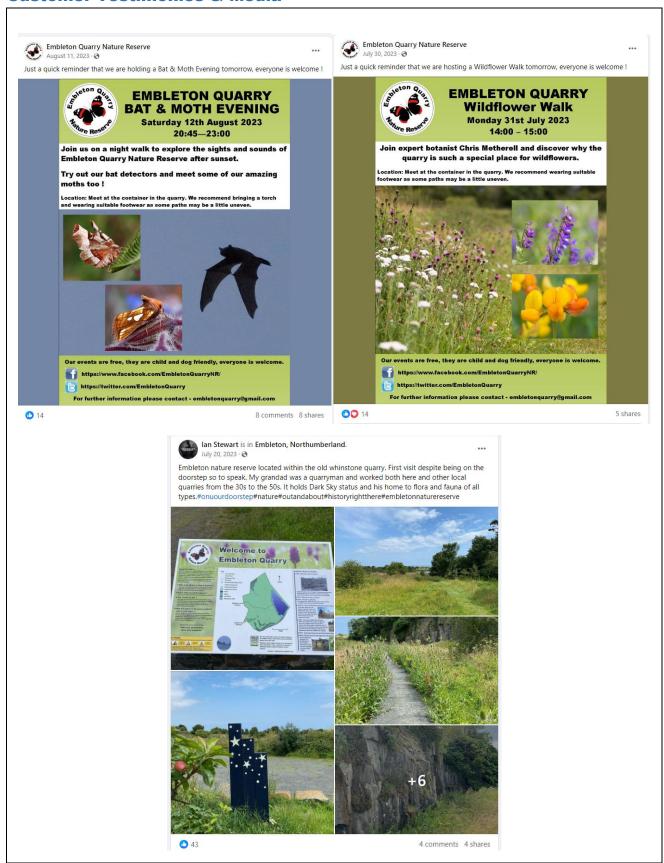
Water quality testing in April 2024



Benefits  Provides benefits to local communities, the local phonomy or NWG  The relevel publicity through noticeboards — the community, and therefore increased in general. The noticeboard provides , social media links, what to looks for each as also created easier access for what and raked to create easier access and
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#### **Customer Testimonies & Media**





From the staff of Vincent Edwards Primary School, Embleton

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

From a regular visitor

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 holidaymaker

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 village resident who uses a stroller for walking

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 volunteer

I've seen all sorts of wheelchair, Zimmer and stick users able to negotiate the south paddock paths.

From a weekend visitor

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

From a holiday cottage owner

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 wodnerful at any time of year. Well done, quarry team, and thank you for all your hard work!



From a visitor on holiday from Leicester

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

From a local couple who walk their dogs in the reserve

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 village resident

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. She also met the ponies and learnt they could live outside in all weathers and where they came from and why we had them.

"Thank you so much for a fantastic evening last night. So welcoming and very informative - our first visit but definitely not our last  $\stackrel{\square}{=}$ "

- Bat & Moth evening attendee

"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



#### **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 nd 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**

Embleton-Quarry-Nature-Reserve 0.pdf (northumberlandparishes.uk)

#### Moth event species list:

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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
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