

## 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

Newcastle Quayside Floating Ecosystem

### Project Lead

Company/ Organisation	Named Lead	Position Contact Details	
Groundwork North East (Tyne Estuary Partnership)	Hellen Hornby	Programme Development Manager	<a href="mailto:Hellen.Hornby@groundwork.org.uk">Hellen.Hornby@groundwork.org.uk</a>

### Water Environment Improved (NWG use only)

Year	Claimed	Proposed	Reason For Any Change
Year 3	0.8km	0.8km	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	October 2021	N/A	N/A
Water Environment Steering Group (Internal)	January 2022/ March 2022	March 2022	N/A
Water Environment Governance Group (External)	March 2022	March 2022	May 2023

### Project Timescales

Candidate Project Approved	Project Initiated	Project Completed
March 2022	March 2022	March 2023

## Project Summary and Highlights

### Summary:

Bluespaces along the Newcastle Quayside have been improved through a project led by Groundwork NE & Cumbria, to install a floating ecosystem was installed on the River Tyne at Newcastle Quayside. Through its flagship Revitalising our Estuaries programme, this community and environmental charity has spearheaded the development of this first of its kind 'floating nature island' with support from NE1 Ltd, the Environment Agency, Newcastle City Council and Northumbrian Water. The new 1,000 sq ft ecosystem, which equates to approximately 8 car parking spaces, is designed by Biomatrix Water, and recreates habitat lost in industrialisation and urban development, contributes to improved water quality, and helps to green this section of the riverbank, fighting the dual climate and biodiversity crisis. Its innovative design accommodates the huge tidal and flow variations of the River Tyne. As a beautiful addition to the Quayside, it provides interest and an environmental engagement experience for visitors, and improves biodiversity in a highly urbanised estuarine area of central Newcastle.

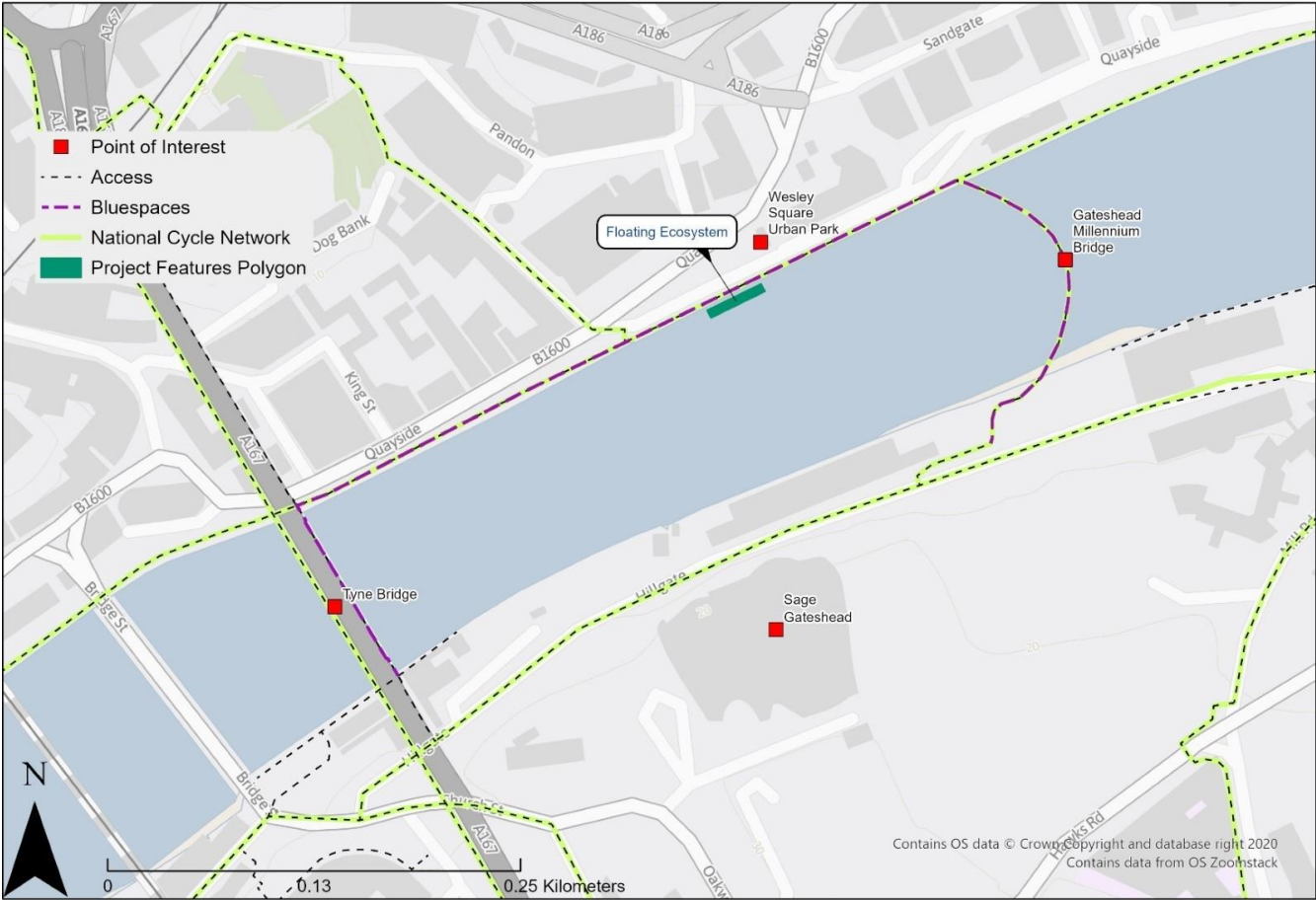
### Project Highlights:

- 10 volunteers and trainees were involved in the planting process
- 37,000 'impressions' were logged on Groundwork and the Revitalising our Estuaries project socials
- Biodiversity has increased simply as a result of installing this feature on a barren artificial river wall. This is being monitored by Groundwork staff and trainees including recording of plants, invertebrates and aquatic life.
- A monitoring protocol has been established with University of Newcastle and implemented by Revitalising our Estuaries (RoE) project staff
- The project has featured in the Newcastle Chronicle (newspaper and online), ITV news (TV and online), BBC news (Online), Daily Mail (newspaper) as well as Groundwork, Revitalising our Estuaries, NE1, Environment Agency Swiftwater Solutions Ltd and Northumbrian Water social media accounts. It is still one of NE1's most positively engaged posts of the year.



Maps



### Newcastle Quayside Floating Ecosystem



**Total Length of Bluespaces: 0.8km**

Figure 1: Bluespaces improved at Newcastle Quaysid

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

Access, Facilities & Recreation	
Expected Project Outcomes	Benefits
<p>1. The installation of the floating ecosystem will provide a new connection to the environment for local inner-city residents, workers and visitors and an opportunity to experience wildlife</p> <p>2. Interpretation next to the ecosystem will be utilised to highlight and explain the purpose of the floating ecosystem. A pontoon camera will be installed to record video footage of wildlife using the ecosystem both above and below water which will then be relayed to a website for all to enjoy. This will increase customer engagement with the estuary environment</p> <p>3. Volunteer opportunities provided for local residents, businesses, corporate sponsors and NW employees (Covid-19 restrictions permitting) to assist in the planting of the floating ecosystem and photographic monitoring of the site, benefitting health and wellbeing</p>	<ul style="list-style-type: none"> <li>➤ A1: Increases access to, engagement with and enjoyment of the water environment</li> <li>➤ A2: Benefits health and wellbeing through:</li> </ul>
Outputs	
<ol style="list-style-type: none"> <li>1. Floating ecosystem was installed in July 2022. Volunteers from Northern Directions and the University of Newcastle were involved in the planting process. <a href="https://youtu.be/RlIRsb8wkak">https://youtu.be/RlIRsb8wkak</a>. Over 5 events were held including a press launch, corporate launch, public events at Newcastle Quayside Market and a community event at Urban Garden.</li> <li>2. Interpretation has been installed along the quayside to explain the floating ecosystem to visitors. A pontoon camera has been installed in 2023 after significant technical issues with power supply. The project has purchased a solar powered mini generator which will supply the camera with electric and power the router to connect to WIFI. Video will be viewable via Groundwork North East's YouTube account. Underwater Go Pro footage has also been captured during ecosystem monitoring.</li> <li>3. 18 Volunteers were engaged directly in the project, and large numbers of the public, businesses and visitors were engaged through events and social media.</li> </ol>	
Evidence	
<div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Volunteers and RoE trainees help plant the floating ecosystem, Press interviews</p>	





Project publicity on the Quayside, Floating Ecosystem Panel (1060 x 695mm)



Ecosystem arrives in the city, Interpretation panel in situ above floating ecosystem

**Wildlife & Biodiversity**

**Expected Project Outcomes**

1. 1000 sq ft of new habitat will be installed on the estuary edge at Newcastle Quayside
2. Floating ecosystem will offer multiple biodiversity, including developing plant communities and providing benefits for pollinators. Habitat for marine invertebrates and molluscs. Fish refugia for migrating / transitional fish species including herring, sprat, salmon, trout.

**Benefits**

- B1: Improves the quantity, quality and connectivity of habitats
- B2: Improves the conservation status and or abundance or distribution of species

**Outputs**

1. Floating ecosystem installed to provide natural habitat to the estuary
2. Ecosystem has been planted with a mixture of freshwater and saltwater tolerant plants (full species list below)

Monitoring has been implemented: Bladderwrack colonization has been noted under the ecosystem, but fish species not yet observed during spot check due to high turbidity.

**Evidence**




Floating ecosystem launch and floating up the Tyne



Floating ecosystem arrives in the city, Floating ecosystem in position on the Tyne, Mallard on the ecosystem in March 2023



Water Quality	
Expected Project Outcomes	Benefits
<p>1. The mussels and other bivalves/sponges and marine invertebrates that colonise the subsurface structures filter water and improve water quality by removing potentially harmful substances and suspended sediments from the water.</p>	<p>➤ C3: Improves state and function of water, including naturalisation, visual appearance, litter and odour</p>
Outputs	
<p>1. Monitoring for the colonisation of mussels and other bivalves/sponges and marine invertebrates on the platform is ongoing.</p>	
Evidence	
	
<p>Underwater footage of seaweed</p>	

**Additional & Secondary Benefits**

Expected Project Outcomes	Benefits
<ol style="list-style-type: none"> <li>1. Project will raise awareness of the environment with local residents, businesses, and visitors, with lead partners aiming to receive evidence of support for and appreciation of the floating ecosystem</li> <li>2. Improvements expected to drive an increase in footfall to the Quayside, benefiting local businesses</li> <li>3. This project will help revitalise Newcastle Quayside and is part of a wider vision for habitat connectivity and estuarine improvements to be delivered through the strategic Tyne Estuary Partnership</li> <li>4. Project links to NE1 strategic priorities to reconnect the river at Newcastle Quayside with NE1's new urban park at Wesley Square, recognizing the importance that people understand and value biodiversity and the benefits it brings to urban environments</li> <li>5. Additional financial support beyond this project will aim to be secured to enable the habitat area to expand along the full 1km stretch of the Quayside in Newcastle over the next 5 years</li> </ol>	<ul style="list-style-type: none"> <li>➤ D2: Provides benefits to local communities, the local economy or NWG</li> <li>➤ D3: Supports strategic project or investment into strategic partnership or landscape/regional activity</li> </ul>

**Outputs**

1. Members of public, businesses and visitors have ben engaged through events and social media. Volunteers from Northern Directions and The University of Newcastle were involved in the planting process. <https://youtu.be/RlIRsb8wkak>. Over 5 events were held including a press launch, corporate launch, public events at Newcastle Quayside Market and a community event at Urban Garden.
2. Approx. footfall at Newcastle Quayside is 8,000 per day (NE1 Ltd) future monitoring may show an increase. Press, social media and 5 events held at the quayside focused on the ecosystem may have attracted visitors to the area
3. The project has added interest to Newcastle Quayside, and further projects are in delivery and development as follow on from this - as part of the Tyne Estuary Partnership and the Revitalising our Estuaries programme Groundwork NE & Cumbria other successful enhancement projects have been delivered at Hebburn and are in development at other estuarine sites on the Tyne e.g., Ryton Willows
4. There is potential for investment in further floating ecosystems in the Newcastle Quayside, with opportunities already linked to the Environment Agency's FCERM programme.

**Evidence**



NWG visit March 2023



**Customer Testimonies & Media**

Project featured in Newcastle Chronicle (newspaper and online) , ITV news (TV and online), BBC news (Online), Daily Mail (newspaper) as well as Groundwork, Revitalising our Estuaries, NE1, Environment Agency Swiftwater Solutions Ltd and Northumbrian Water social media accounts.

Articles on Groundwork website, NE1 website and Biomatrix Water websites

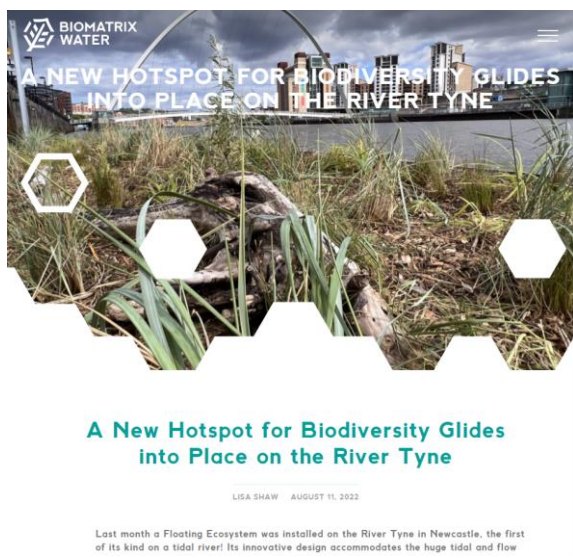
Promotional videos produced by [Groundwork](#), and Northumbrian Water

[Tyne Estuary Partnership - Groundwork](#)

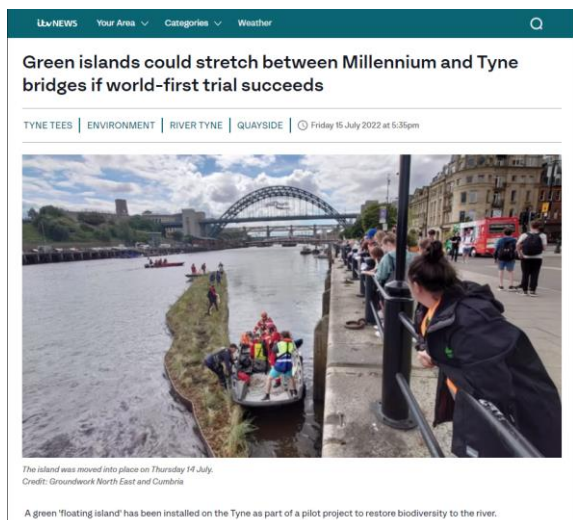
[Groundwork NE & Cumbria | Twitter, Instagram, Facebook | Linktree](#)

[Tyne Estuary Partnership - YouTube](#)

 [Floating ecosystem - Hellen Hornby video.mp4](#)



Biomatrix Water. [A New Hotspot for Biodiversity Glides into Place on the River Tyne - Biomatrix \(biomatrixwater.com\)](#)



<https://www.itv.com/news/tyne-tees/2022-07-15/green-islands-could-stretch-between-millennium-and-tyne-bridges-if-pilot-works>

☰ NewcastleWorld


**BREAKING** 2 minutes ago  
Rishi Sunak's letter to Dominic Raab after he resigns as deputy PM

News

### New floating garden arrives on Newcastle Quayside for three-year stay

The regeneration of the Quayside has begun with the grassy installation

By Toby Bryant  
Published 15th Jul 2022, 13:29 BST



Passers-by on the Newcastle Quayside may have noticed a new arrival bobbing along The Tyne.

<https://www.newcastleworld.com/news/new-floating-garden-arrives-on-newcastle-quayside-for-three-year-stay-3769829>

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☰ ChronicleLive

### Chicago-inspired 'Great Geordie Reef' launched on River Tyne in green 'world first'

The £120,000 project is hoped to be a forerunner for rivers and estuaries across the UK and beyond

By **Jeremy Armstrong & Tom Beattie** Breaking News Reporter  
13.08. 15 JUL 2022

Bookmark | SHARE | Comments 17



The new 'Great Geordie Reef' has been launched on the River Tyne in a pioneering scheme (Image: Jeremy Armstrong/Mirror)

<https://www.chroniclelive.co.uk/news/north-east-news/great-geordie-reef-launches-tyne-24499749>

## Lead Partner Quotes & Testimonials

*“The floating ecosystem was installed in July 2022 and has been a big attraction for visitors to the quayside.*

*We have had mallard ducks roosting on it amongst the flowering thrift. Underneath it is starting to get colonised by seaweeds which will provide a habitat for small marine animals and fish. We are installing a solar powered underwater camera which we hope to film and fish that use the floating ecosystem as a shelter, the footage will be available on our Groundwork YouTube account. “*

**Hellen Hornby, Programme Development Manager, Groundwork NE/ Tyne Estuary Partnership**

## Other Supporting Evidence

SPECIES	QTY
Ammophila arenaria (SA) - Marram Grass 110cc	154
Anthyllis vulneraria (SA) 65cc - Kidney Vetch	168
Armeria maritima (SA) 65cc - Sea Thrift	84
Armeria maritima Splendens P9	250
Bolboschoenus maritimus (SA) 110cc - Sea Club-Rush	77
CAREX ACUTIFORMIS MAR 9CM	120
CAREX PENDULA MAR 9CM	120
CAREX PSEUDOCYPERUS MAR 9CM	120
Cytisus scoparius 1.5L	20
Eryngium maritimum (SA) 65cc - Sea Holly	84
Eryngium maritimum P9	150
Hippophae rhamnoides 60-80cm 4L	2
JUNCUS INFLEXUS MAR 9CM	250
Juncus maritimus (SA) 110cc - Sea Rush	77
Leymus arenarius (SA) - Lyme Grass 110cc	77
Leymus arenarius 2L	225
Plantago maritima (SA) 110cc - Sea Plantain	77
Plantago maritima (SA) 65cc - Sea Plantain	84
Puccinellia distans (SA) 110cc - Reflexed Salt Marsh Grass	77
Puccinellia maritima (SA) 110cc - Saltmarsh Grass	77
Rosa canina 30-40cm 2L	6
Rosa rubiginosa 60-80cm 2L	6
Rosa rugosa 40-60cm 2L	6
Silene maritima P9	75
Triglochin maritima (SA) 110cc - Sea Arrowgrass	77
Tripolium pannonicum (SA) 110cc - Sea Aster	154
Newcastle Quayside Plant List	



> FACEBOOK

Revitalising our Estuaries

Number of Posts & Stories	Reach	Total Engagements
19 5th - 26th July	8,297	936

Engagement breakdown

Likes and Reactions	Link Clicks	Comments	Shares
252	621	21	42

Top performing posts

**Revitalising our Estuaries**  
Published by Stacey Groundwork · 14 July at 13:43 · 🌐

It's here!  
Our floating ecosystem is finally installed and ready to become home to lots of wonderful river wildlife!

Biomatrix Water  
Environment Agency  
NECCo  
Northumbrian Water  
Get into Newcastle - Visit Newcastle City Centre, NE1  
Newcastle University  
Newcastle City Council  
Department for Environment, Food and Rural Affairs (Defra)  
National Lottery Heritage Fund  
#GreenRecoveryChallengeFund  
#tyneofourlives #revitalisingourestuaries #Newcastle #RiverTyne #floatingecosystem #wildlifeconservation #riverwildlife



6,193 people reached  
653 engagements

Social Media Report in relation to the Floating Ecosystem build, installation and engagement event social media posts between 8th and 16th July 2022 (available on request)

- NE1 hosted a number of events at the urban park adjacent to ecosystem: <https://www.urbangardennc1.co.uk/> in summer 2022, this will continue into 2023 where visitors will be informed about the biodiversity of the ecosystem via the interpretation panel.
- Groundwork have also commissioned Biomatrix Water to investigate the potential for extending floating ecosystems and allowing access to the river by people. Linking to NE1's strategic priorities here. This report will be available in summer 2023.