



LIFE Wader

**Water and
Disturbance
Environmental
Restoration**

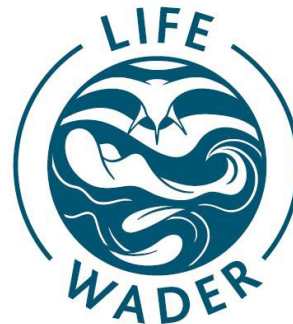
LIFE20 NAT/UK/000277



LIFE WADER (LIFE20 NAT/UK/000277) is financially supported by LIFE, a financial instrument of the European Commission.



**Environment
Agency**



**Project Overview
December 2022**

Liz Humphreys, Project Manager
liz.humphreys@naturalengland.org.uk

LIFE WADER

(Water and Disturbance
Environmental Restoration)

A five-year project that will improve river, intertidal and marine habitats and the species that depend on them. The project area covers the Northumberland Coast and the cross-border Tweed catchment (England and Scotland)



<https://tweedforum.org//our-work/life-wader/>
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€6.8 million
October 2021-December 2026

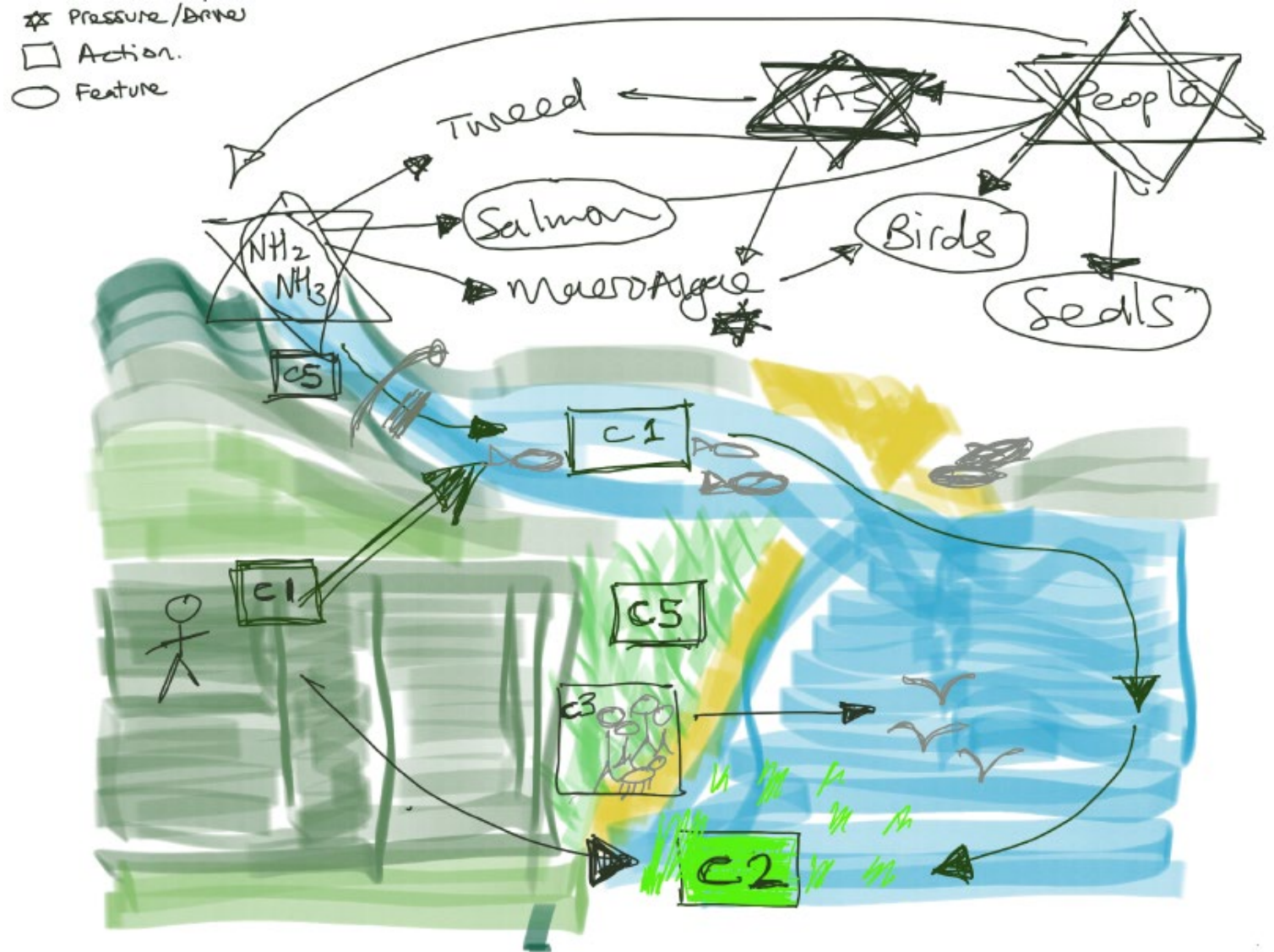
Project Area

- River Tweed SAC
- Tweed Estuary SAC
- N. Northumberland Dunes SAC,
- Berwickshire & N
Northumberland Coast SAC
- Lindisfarne SPA
- N Northumberland SPA



Conservation Actions

- C1: Addressing water quality
- C2: Removing opportunistic macro algae
- C3: Creating coastal/intertidal refuges
- C4: Reviewing byelaws/codes of conduct
- C5: Controlling terrestrial/marine invasive non-native species



C1: Addressing Water Quality

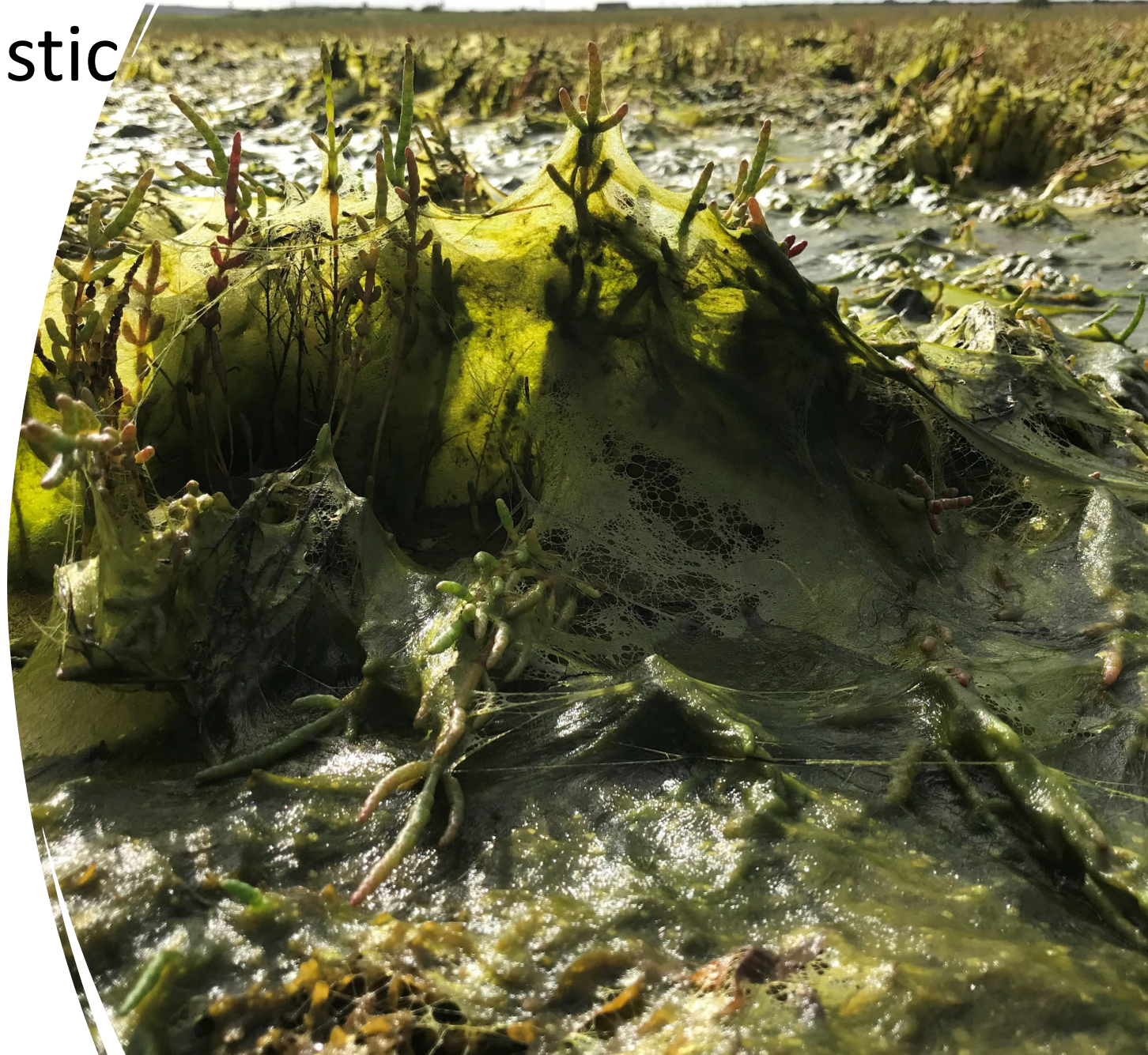
- River Restoration at Harehope
 - *restoration modelling completed, draft designs under review, WQ monitoring underway*
- Habitat Creation (woodland)
 - *identified first scheme 20ha native riparian woodland, upper Teviot*
- Habitat Creation (Reedbeds)
 - *nutrient load concentration maps created, site selection in progress*
- Habitat Creation (Sustainable Land Management)
 - *hotspot mapping completed, identification of opportunities for demonstration activities in progress*



C2: Removing Opportunistic Macro-algae

Understanding causes, impacts and ecological function of macro algae blooms at Budle Bay

- Model framework developed to understand process of enrichment at Budle Bay.
- Research project under development to model spatial variability in Nitrogen and Carbon isotope uptake in *Ulva* across Budle Bay
- Test and trial of macro-algae removal techniques – work to come
- Explore innovative ways to use removed macro-algae – work to come
- Seagrass habitat restoration if necessary



C3: Creating coastal / intertidal refuges

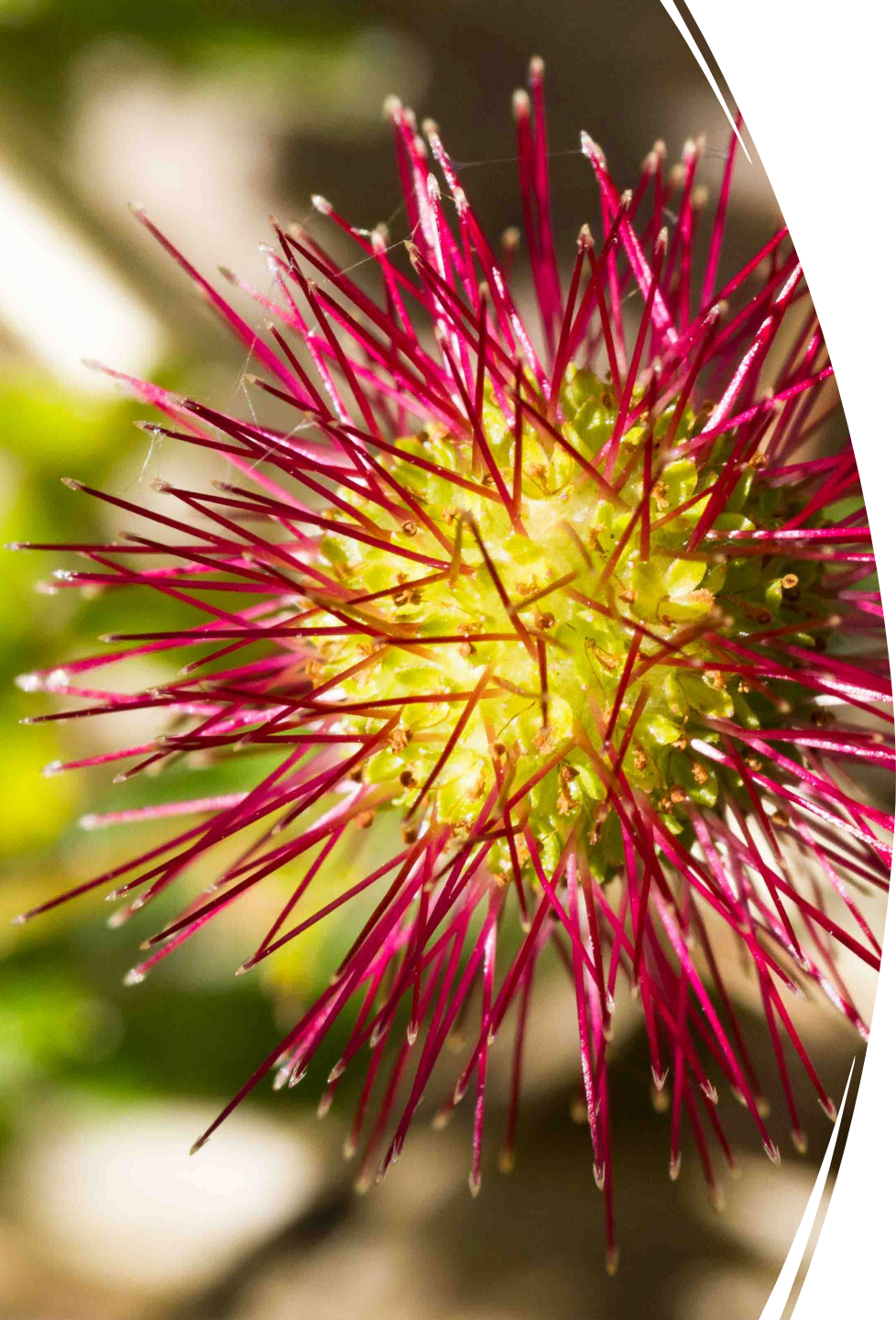
Year 1 (summer 2022)

- 5 protection areas created in the LNNR, including a new breeding site for Little Terns. Observed increased productivity in both Little Tern, and Ringed Plover

A 50% increase on last season in the number of Ringed Plovers successfully fledging.

- A good year recorded across partners LNNR, NT and Space for Shorebirds
- Large increase in recorded visitor engagement
- Increased human disturbance from microlights and small aircraft
- Facilitated by 5 additional seasonal wardens





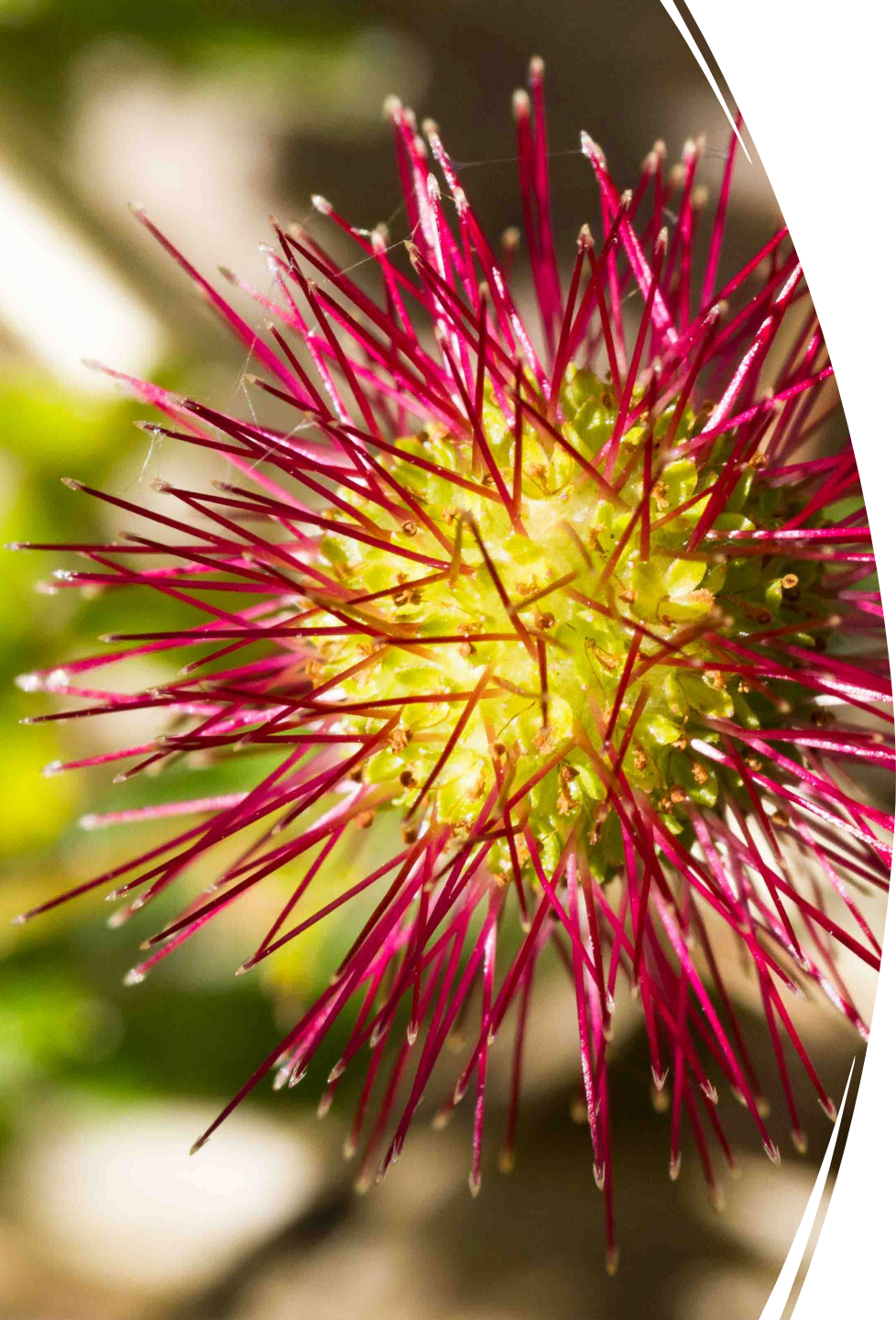
C5: Controlling Terrestrial /Marine Invasives

Dune Invasives (NE)

- Detailed audit/baseline survey of invasive non-native plant species across 6 dune sites completed
- Development of work programme to control known areas of invasives e.g. pirri pirri Japanese rose and cotoneaster without chemicals e.g. Rootwave Pro machine demonstration

Freshwater (TF)

- Control contractors addressing Giant Hogweed, American Skunk Cabbage and Japanese Knotweed across Tweed catchment
- Volunteer removal trials on Pirri Pirri, Himalayan Balsam on the Tweed
- Botanical surveys completed at 6 sites
- Sites identified for biological control



C5: Controlling Terrestrial /Marine Invasives

Marine (UNEW)

- Review of invasive species present across the area
- Undertake risk/pathways analysis, vectors of transportation
- Identify focus species
 - Research project underway Nov22 to identify species present
- Develop an eDNA toolkit for monitoring

All

- Develop a monitoring regime to support ongoing management, share best practice
- Raise profile and awareness / public understanding of dune systems
- Collaborations outside NNR with National Trust, Northumberland Coast AONB and Northumberland Wildlife Trust

Public Awareness & Dissemination of Results

Dissemination

- website, media, interpretation materials, engagement events

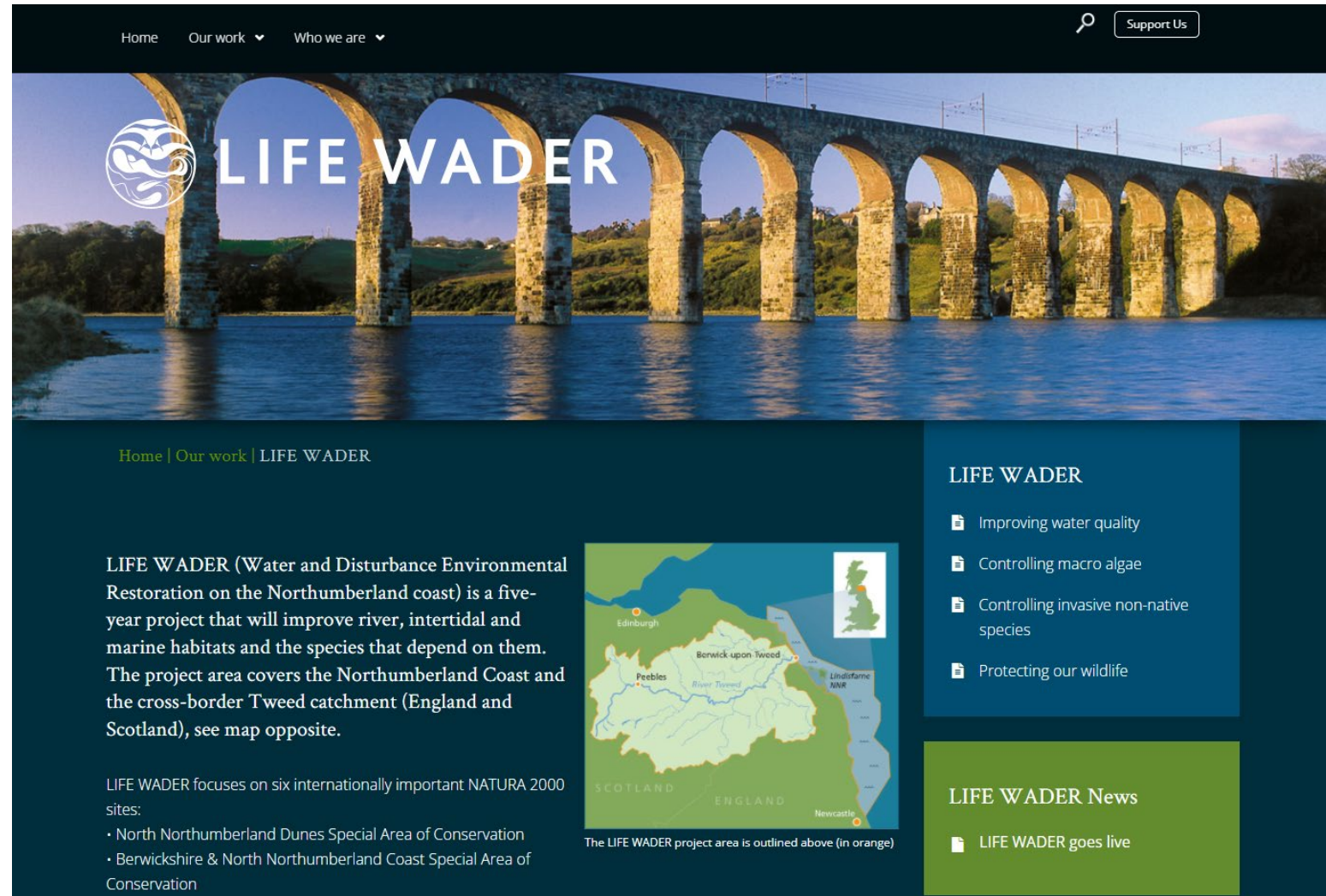
Networking

- Local, regional, national communities and other EU projects

Replication & Transfer

- Sharing best practice

<https://tweedforum.org//our-work/life-wader/>



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