Lancashire Local Nature Recovery Strategy

A view from the coal face.

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WYRE RIVERS TRUST

"from Bowland to Bay"

Introduction

We are an Environmental Charity whose aims are to improve the river Wyre and each of its tributaries.

Formed in 2001 the trust now has 16 members of staff and is beginning to deliver at a catchment wide scale.

We also host the Wyre Waters Catchment Partnership which was formed in September 2013 under the Catchment Based Approach Initiative.

The Wyre Catchment

- ~450km^2 - Mixture of land use including pastoral and arable agriculture, forestry, residential and industrial.
- Home to a wide range of priority species and habitats including Atlantic Salmon, European Smelt, Curlew, SSSI Saltmarshes, Peatlands and Hay Meadows.
- Heavily modified, quick response catchment with a variety of river forms.

Local Nature Recovery Strategies & Lancashire

- **New system of locally led, transparent and collaboratively produced spatial strategies for nature recovery covering the whole of England.**
- **Sets out how and where we should prioritise nature recovery in Lancashire.**

  - Agreed priorities for nature's recovery
  - Map the most valuable existing habitat for nature;

  - and map opportunity areas for nature recovery.

- **Locally-led, co-produced and evidence-based.**
- **Collectively they will form a National Nature Recovery Network.**
- **Lancashire County Counci will need to report on progress on the strategy every 3 - 10 years.**

Coast, Estuaries, and Marine Thematic Habitat Group

- Wyre RT were contracted to lead the coasts, estuaries and marine THG.
- Working from Feb 2024 until November 2024 delivering a range of tasks.
- Initial aims
  - Engagement of local stakeholders and Identification of;
    - Strategy area, habitats and biodiversity.
    - Current and future threats
    - Opportunities and constraints
- Long term aims
  - Identification of a longlist and then shortlist of priorities and potential measures
  - Production of final report for thematic habitat.

Priorities and Measures

- **Coastal habitats connected with wider ecosystems particularly transitional habitats.**
    - Create and restore coastal habitats to reverse fragmentation such as sand dunes, dune slacks and saltmarshes.
    - Remove or create pathways through barriers such as small weirs, road culverts and other riverbed modifications, to improve connectivity for species dispersal by focussing on barriers within main rivers at, or close to the tidal limit.
    - Create and enhance habitat corridors to support species migration including connectivity between coastal and freshwater ecosystems.

- **Naturally functioning coastal systems with dynamic processes forming embryonic and transitional habitat.**
    - Restore natural processes in coastal waters, estuaries, dune slacks, sand dunes and salt marsh habitats.
    - Restore, create and actively manage dune slacks.
    - Allow natural formation of embryonic habitats such as sand dunes, salt marshes and dune slacks.
- **Expanded, enhanced and preserved coastal and estuarine habitat important to Lancashire.**
    - Create undisturbed coastal high tide roost sites for waders and coastal lagoons and islands for nesting sites.
    - Creation of estuarine, and lower river (i.e., between tidal limit and 1-2 miles upstream) riffle habitats to support key fish species
    - Creation and restoration of naturally functioning saltmarsh habitat.
    - Creation of coastal habitats, including brackish reedbeds, coastal grasslands and wetlands within their former extent

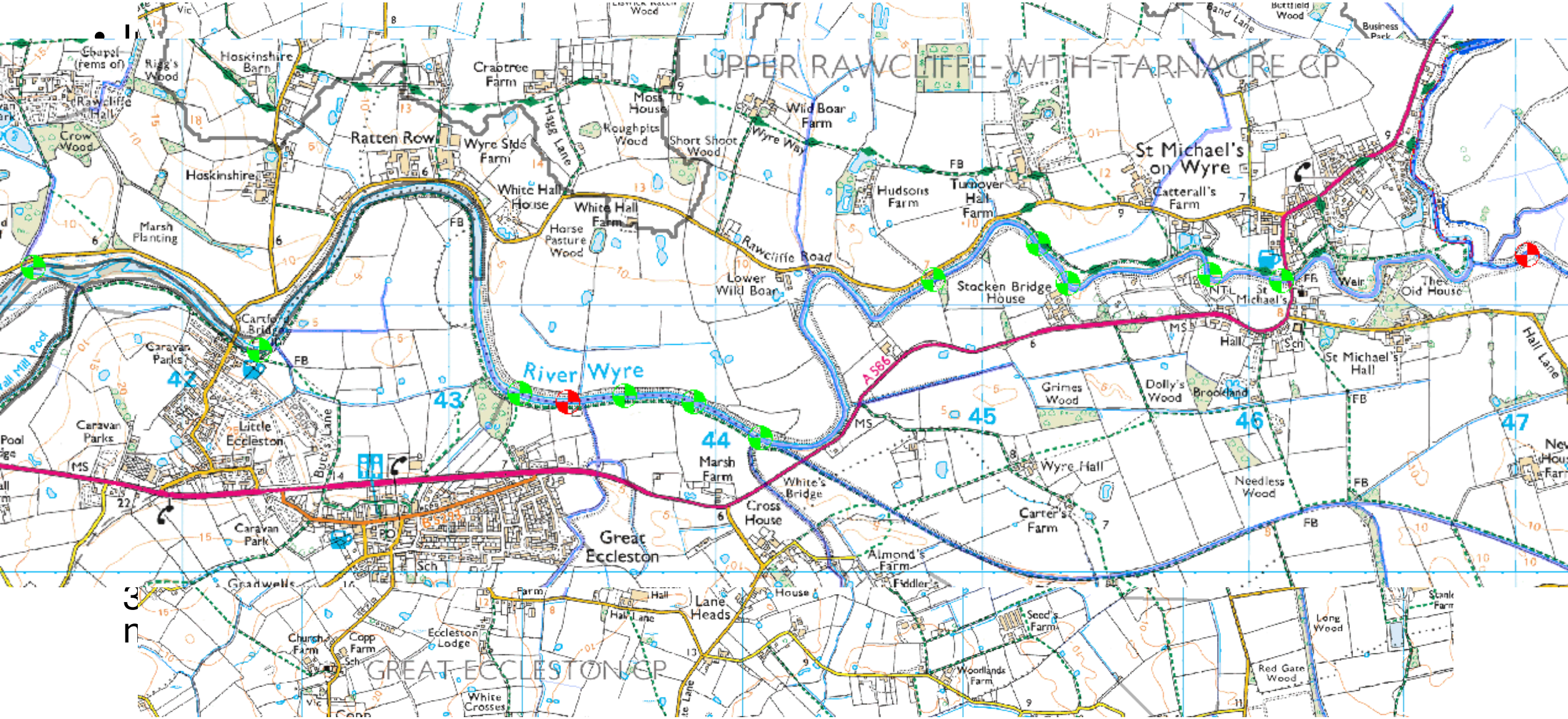
Benefits

- Delivery based on the priorities and measures outlined in the LNRS is expected to benefit habitats and species along with wider environmental and societal benefits.
- Contributing to local and national environmental targets.
    - It will allow for habitat restoration and enhancement, along with habitat creation, expansion and connectivity.
    - Catchment management & sustainable land use
    - Minimising nutrient enrichment and pollution
    - Biosecurity (measures aimed at preventing the introduction or spread of harmful organisms) and the control of invasive species
    - Minimising recreational impacts
- Species recovery
    - I.E European Smelt (*Osmerus eperlanus*)

Wyre Smelt Project (2021)

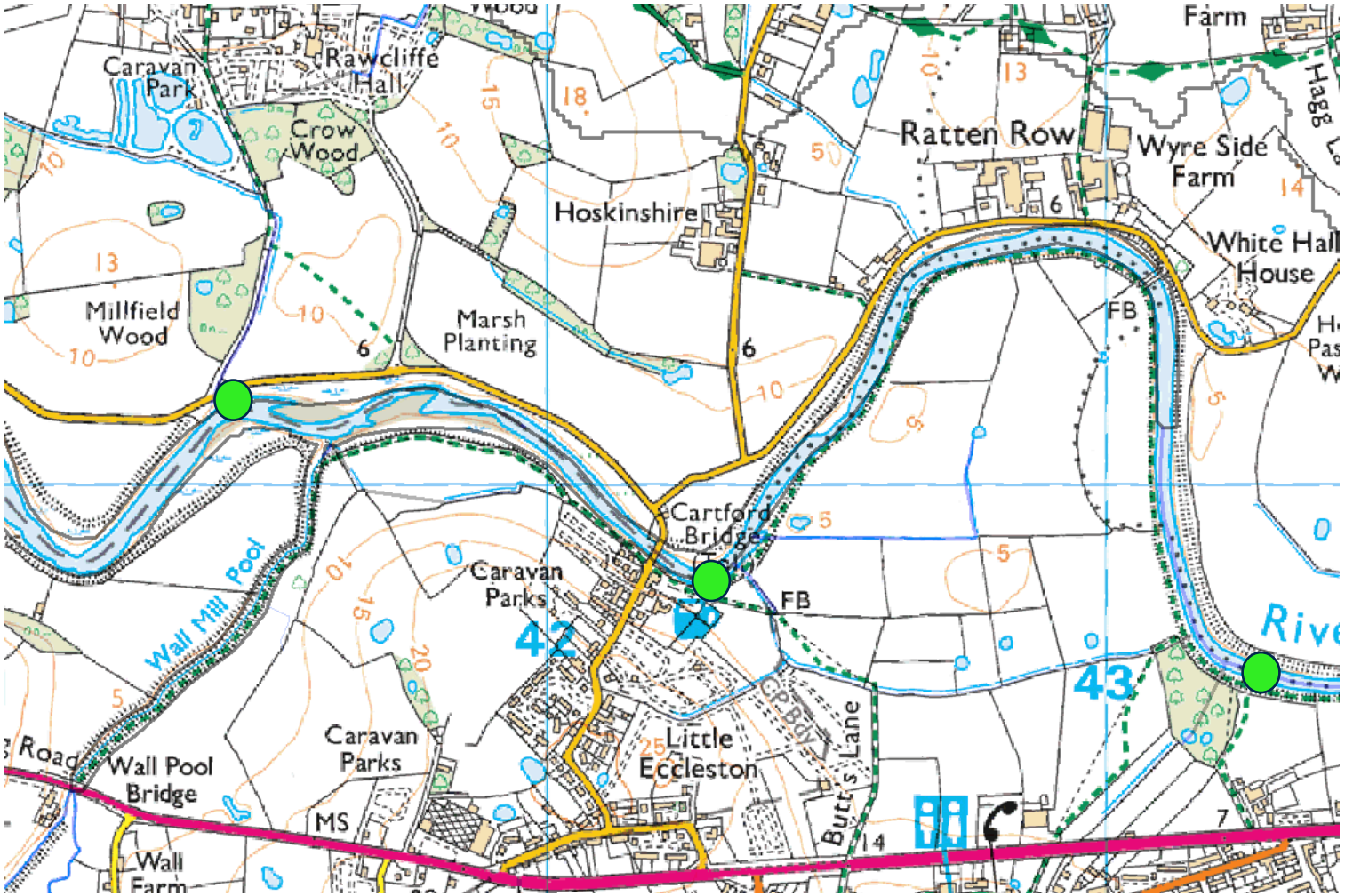
- Natural England provided funding for study and tagging (Project Licence - P3BF61EDF) was arranged for February and March 2021
- There was little confidence from the fishers that smelt would be present.
- 13 Acoustic receivers were placed at strategic locations within the Wyre Estuary
- 22 smelt were captured during nine trawls - 18 fish were large enough for tagging (ml 23.75mm)
- Fish captured included the first examples of sexually mature male and gravid female fish.
- Indicating the first record of a spawning aggregation of smelt in the Wyre estuary.

The Moment of Truth



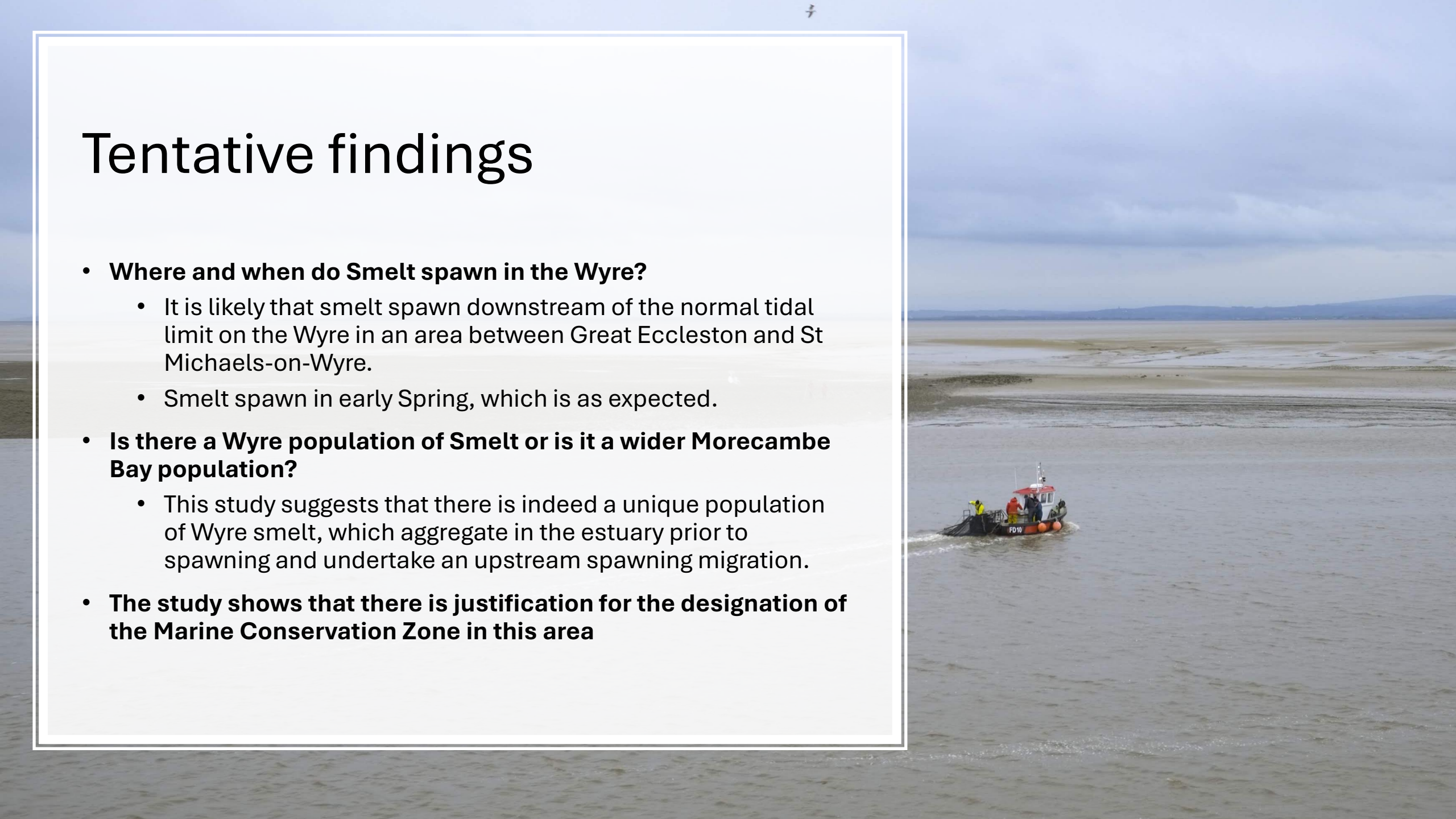
The Female Perspective

- Two heavily gravid fish entered the receiver array within 10 minutes of each other.
- They spent a day in the receiver array travelling 3km beyond our most downstream receiver.
- The fish were both tracked moving back downstream shortly after peak discharge increased with rainfall across the catchment.
- Most importantly there was crossover with male fish within this area
- Given how gravid the female fish were and that there was crossover with sexually mature male fish, it is very likely that a spawning event took place in this region



Tentative findings

- **Where and when do Smelt spawn in the Wyre?**
  - It is likely that smelt spawn downstream of the normal tidal limit on the Wyre in an area between Great Eccleston and St Michaels-on-Wyre.
  - Smelt spawn in early Spring, which is as expected.
- **Is there a Wyre population of Smelt or is it a wider Morecambe Bay population?**
  - This study suggests that there is indeed a unique population of Wyre smelt, which aggregate in the estuary prior to spawning and undertake an upstream spawning migration.
- **The study shows that there is justification for the designation of the Marine Conservation Zone in this area**



Reflections

- LNRS process was delivered in a very short catchment-based by a group of extremely committed individuals
- Time required for engagement is significant, especially for catchment-based organisations.
- Are counties the natural unit for LNRS'?
- Will the LNRS result natures recovery at the scale and pace that we all desire?