

NWIFCA Authority Meeting 17th September 2026: 10:00 a.m.	Report no. 3
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SCIENCE REPORT FOR INFORMATION
5TH OF JUNE 2026 – 2ND OF SEPTEMBER

Purpose: To provide an update on the work of the Science Team in the quarter.

Recommendation: a) Receive the report

UPDATE FOR THIS QUARTER

This quarter, the Science Team's main priority has been the completion of the annual cockle stock assessments across the District. The results of these surveys were presented to the TSB on 4 August. Due to the low biomass of size cockle recorded across the District, it was recommended that all beds remain closed to fishing.

Alongside the cockle surveys, the team has continued to make progress across a number of other research and monitoring projects. Wirral netting surveys have progressed, with samples collected from both local netters and during Science Team inspections. Shrimp sampling and analysis also continue in collaboration with the University of Salford.

A first draft of the Foulney HRA has been completed, while work continues to develop and refine the team's drone survey methodology. The team has also worked to re-establish the Allonby Bay potting surveys. Surveys commenced in August but could not be completed due to operational issues with North Western Protector.

Key achievements since the previous TSB meeting:

- 1) Completed eight cockle surveys, and two cockle inspections, with associated analysis and reports provided in the August 4th TSB meeting. This includes developing a new survey grid for Warton sands.
- 2) Completed 12 mussel inspections, including three using the drone.
- 3) Completed eight shrimp sample collections and officer Lucy Loud has been analysing these in the lab, while also organising a second stakeholder workshop for October with Salford University.
- 4) Conducted five netting surveys and inspections along the Wirral coast.
- 5) Responded to five consultations and two dispensation requests.

ONGOING WORK STREAM UPDATES:

1. Survey and inspections

An overview of the surveys and inspections carried out this quarter across the District for all respective research work is provided in table 1. Full survey and inspection reports for the

relevant cockle and mussel sites is provided in the documentation provided at the TSB meeting on August 5th.

A brief overview of the cockle and mussel surveys will be provided in section 2. Details on the outstanding surveys will be covered in the relevant section under 'NWIFCA research projects'.

Table 1. Survey and inspections this quarter.

Survey Type	No. Sites Surveyed	Sites surveyed	Number of Survey Days	Survey Dates
Mussel inspections	7	Duddon x 2 Bare ayre x 1 South America Heysham x 3 Fleetwood x 2 Wyre end x 1 Falklands (unsuccessful)	11	Jun-Sep 2026
Cockle surveys	8	Southport Leasowe Flookburgh Leven Pilling Newbiggin & Aldingham Middleton Warton	9	Jun-Jul 2026
Cockle inspections	2	Lytham Warton	2	Jun 2026
Shrimp samples	3	Fleetwood x 2 Halfmoon x 3 Flookburgh x 1	6	Jun-Aug 2026
Wirral Netting	2	Wirral x 4 Formby x 2	6	Jun-Aug 2026

2. Cockles and mussels

Mussels:

Inspections of the predominantly seed mussel beds across the District, which do not provide biomass estimates but allow us to assess the extent and availability of seed mussel resources, showed limited settlement. As a result, there are currently no mussel beds considered suitable for seed dredging.

Falklands is the only outstanding bed requiring survey. Attempts to survey the bed this year have been unsuccessful due to a combination of factors, including limited knowledge of its precise location, the shallow nature of the bay restricting access to suitable tidal conditions,

and limited available daylight hours. Consequently, it has not yet been possible to complete the survey. Officers are seeking alternative approaches.

Cockles:

Between June 23rd and July 15th, NWIFCA science officers carried out eight cockle surveys, and three inspections across NWIFCA District. Officers conducted their annual inspection of Warton cockle bed on July 3rd and found there to be sufficient cockle to warrant the first full survey since 2021.

Survey results were assessed against the NWIFCA Cockle Fisheries Management Plan (CFMP) thresholds and supporting ecological considerations. This year, Morecambe Bay's total cockle biomass was above the agreed CFMP threshold, however, the biomass of size cockle had declined by almost 50% since 2025 and is below the minimum opening threshold.

Ribble (Penfold) and Leasowe also remain well below their respective opening thresholds. Juvenile cockle biomass has increased in several areas, providing potential recruitment for future fisheries.

Key information from the summer 2026 survey results:

Table 1. Summary of cockle biomass estimates and whether the 2026 Cockle Fisheries Management Plan opening thresholds have been met.

Cockle area	Cockle beds	Total biomass	Size biomass	Threshold met?	Recommendation
Morecambe	All	Yes	No	No	Closed – size cockle biomass does not exceed the agreed CFMP thresholds
Ribble Estuary	Penfold	No	No	No	Closed – cockle biomass does not exceed the agreed CFMP thresholds
Wirral	Leasowe	No	No	No	Closed – cockle biomass does not exceed the agreed CFMP thresholds

Table 2. Change in estimated size-cockle biomass on Morecambe Bay cockle beds between 2025 and 2026.

Cockle bed	2025 biomass (t)	2026 Biomass (t)	Change
Aldingham & Newbiggin	1,432	1,189	↓17%
Leven	470	482	↑3%
Flookburgh	2,609	1,064	↓59%
Pilling	3,123	1,091	↓65%
Middleton	589	378	↓36%
Warton	Not surveyed	123	na
Morecambe Bay total	8,243	4,327	↓48%

Following the August TSB meeting, industry reported an additional area adjacent to the Leven cockle bed that has possible stock present. Officers have subsequently inspected the area, and will survey later this month as this may affect the current biomass estimate. The results will be reported to the TSB for consideration and recommendation.

3.NWIFCA RESEARCH PROJECTS

This quarter, alongside the main cockle fishery surveys, Science Officers have been making progress with the following research projects:

a) Mergin – maps (officer sightings data)

This project has been led by Officer Robin Love, with support from Maptastic, who have developed an app enabling officers to record shore and patrol sightings and inspection information directly in the field. The system aims to improve the accuracy and consistency of data collection and strengthen the Authority's ability to monitor fishing activity across the District. The system was formally adopted on 1 June.

Development work is continuing to expand the functionality of the system, including automating mapping outputs for Authority reports and improving the way data is presented and communicated to stakeholders. Future development will also explore how the system can support monitoring of the District's Marine Protected Areas.

b) Wirral netting research

This year, Officer Gemma Grose has led a project working with local fishers to better understand the catch composition and fishing practices associated with netting activity along the Wirral coast. During the summer, Gemma carried out a number of inspections and surveys of netting activity, building a dataset on the species composition, size and condition of catches from gill nets operating along the Wirral coast and at Formby. This work aims to provide evidence to help determine the potential causes of reported fish wash-ups and inform any recommendations for future monitoring or management.

c) Shrimp research in the North West

Officer Lucy Loud has been conducting research into shrimp populations within the NWIFCA District. The project is being delivered in partnership with the University of Salford, alongside Cefas and the Mersey Gateway Environmental Trust, and has received funding through the Coast-R Network Small Grants Fund.

The project aims to investigate whether contaminants, including heavy metals and PFAS, are present in shrimp, sediment and water at levels that may affect shrimp populations, alongside examining potential environmental and climate-related stressors such as seawater temperature and salinity. The work also aims to establish baseline information on the size, sex and abundance of shrimp within the main fishing areas of Morecambe Bay.

The project will run until October, with NWIFCA undertaking monthly sampling of shrimp, sediment and water at three locations across Morecambe Bay. Sampling is now nearing completion, and the University of Salford has analysed much of the environmental sample data. During the autumn, NWIFCA will analyse the shrimp size, sex and abundance data, followed by a final stakeholder meeting to present and discuss the findings.

d) Drone survey work development

Senior Officer Jon Haines is leading work to develop and refine drone survey methodologies for monitoring mussel fisheries across the NWIFCA District. Work to date has focused on developing a novel approach to identifying and mapping mussel beds using a DJI multispectral camera.

This has involved trialling different flight heights and speeds to determine the optimal settings for image resolution and data quality. The methodology continues to progress, with outputs from recent drone surveys now being incorporated into inspection reports. Further development will focus on refining and standardising the approach to support future monitoring and assessment of mussel resources across the District.

e) Cockle dispersal PhD project

PhD candidate Maile Juarez began her project this time last year and has already made significant progress. Work to date has focused on developing a model incorporating tides, wind, temperature and other influential environmental factors within the Irish Sea. This will provide the basis for the development of a cockle larval dispersal model, which aims to improve our understanding of connectivity between cockle beds across the North West.

Maile has presented her work to NWIFCA officers, with further findings to be presented to the Authority as the project progresses. She also attended the August TSB meeting, providing an opportunity to discuss her research and gain a greater understanding of the processes involved in cockle fishery management and decision-making.

f) Cockle wet-dredge trial

NWIFCA officers have been assessing the feasibility of developing a cockle wet-dredge fishery within the District. As an initial stage, controlled trials are planned on a suitable cockle bed to assess the operation and potential impacts of the dredging method. A methodology for the trials has been developed, and a Habitats Regulations Assessment (HRA) has been submitted to Natural England.

This work forms part of a longer-term assessment that will first examine the environmental and fisheries impacts of wet dredging, before considering the viability of the method alongside existing cockle fishery management. The findings will ultimately help determine whether wet dredging could provide a suitable and sustainable method of harvesting cockles within the District.

3. MARINE PROTECTED AREAS IN THE NWIFCA DISTRICT:

a) Highly Protected Marine Areas (HPMAs)

Work is currently underway to re-establish the Natural England potting surveys within Allonby Bay. The first survey was undertaken in August; however, mechanical issues with North Western Protector (NWP) meant that the survey could not be completed as planned.

Local fishers subsequently assisted with the recovery of survey pots from within the HPMA, and their support was greatly appreciated by the Authority. Further survey work is planned for the next quarter, subject to vessel availability.

b) Marine Conservation Zone Assessments

NWIFCA is required to assess the impacts of fishing activities within each of the Marine Protected Areas (MPAs) designated across the District. Officers have completed the final assessments and received advice from Natural England regarding outstanding requirements relating to the use and assessment of trigger points.

Following the implementation of Mergin Maps, officers will now focus on strengthening the monitoring and reporting of fishing activity within the District's MPAs. This will include exploring the use of regular reports generated from Mergin Maps data and developing a Monitoring and Control Plan (MCP). The MCP will set out the monitoring arrangements, responsibilities and actions to be taken by NWIFCA where agreed trigger points for protected features are reached or exceeded.

4. FISHERIES MANAGEMENT PLANS

a) NWIFCA Whelk FMP

Officers are drafting a first FMP for whelks in the NW, which will be presented to the Authority by the end of the year.

5. MMO MARINE LICENCE AND OTHER CONSULTATIONS FOR THE QUARTER

Consultations this quarter:

- Walney Extension Pontoon/Jetty dredging and disposal
- Construction of concrete headwall on the Southern bank of the River Dee
- Liverpool Cruise Terminal Extension
- Refurbishment works to Southport Pier
- Stanah Saltmarsh Resilience Project

Dispensations this quarter:

- Environment Agency - Fish surveys
- CEFAS Irish Sea Beam Trawl Surveys 2026

6. WORKING GROUPS AND EXTERNAL PARTNERSHIP WORK

a) Technical Advisory Group

No further update