

NWIFCA Authority Meeting
29th September 2024: 10:00 a.m.

**Agenda
Item
13**

SCIENCE REPORT FOR INFORMATION
27TH OF JUNE 2024 – 29TH 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 main priorities of the science team have been to complete the second round of cockle surveys in Morecambe Bay, and undertake the annual cockle stock assessments for the rest of the District's beds. The team have also completed two associated fishery Habitat Regulation Assessments (HRA's) to facilitate the opening of the fisheries, a consultation with stakeholders, and presented the results at the TSB Authority on August 13th.

In addition to this work, the team have also undertaken a second round of potting surveys in Allonby Bay HPMA in August, assisted with the development of the returns database for Byelaw 4, developed a new whelk sampling schedule, liaised with partner organisations regarding the ongoing marine natural capital work, and undertaken mussel inspection and surveys where necessary.

Key achievements since the previous TSB meeting:

- 1) Completed the second run of HPMA surveys in Allonby Bay using North Western Protector
- 2) Completed seven cockle surveys, and four mussel surveys including South America by RIB – and the associated reports, analysis and presentation to TSB and stakeholders.
- 3) Undertook an informal consultation with stakeholders regarding the survey results and proposed recommendations for TSB
- 4) Initiated the roll-out of the permit database for byelaw 4 – including the development of materials that will assist with stakeholders transitioning to the new system.
- 5) Responded to ten consultation requests and three dispensation requests.

ONGOING WORK STREAM UPDATES:

1. POTTING PERMIT BYELAW

a) Permit database

The science team have been working to set up a database for the suitable logging and analysis of returns data. Science officers are contributing to the returns section to improve recording returns and new ways of analysing the data to help management.

Officers are also leading on the roll-out of the returns database to the Byelaw 4 permit holders, initiating a trial-run period and informative materials to help fishers with the transition to the new system.

2. COCKLES AND MUSSELS

a) Survey and inspections

Between June 27th and September 5th, NWIFCA science officers carried out four mussel inspections and seven cockle surveys across NWIFCA District. Full inspection reports are provided in Annex 1 and 2 of the August 13th TSB reports and are available on the website here: <https://www.nw-ifca.gov.uk/events/technical-science-and-byelaws-sub-committee-meeting-2/>.

Table 1. Mussel and cockle survey and inspections this quarter.

| Surveys and inspections this quarter | Date |
|--|---|
| Mussels | |
| Morecambe Bay (Figure 1): Heysham inspection Fleetwood (Perch and Black Scar) x 2 South America | 23-07-2024 26-06-2024 & 08-08-2024 24-07-2024 |
| Cockles | |
| Morecambe Bay (Figure 2): Flookburgh Pilling Newbiggin and Aldingham Leven Middleton Ribble Estuary Penfold (Southport) Wirral Coast (Figure 3): Leasowe | 09-07-2024 & 10-07-2024 03-07-2024 11-07-2024 28-06-2024 02-07-2024 27-06-2024 25-07-2024 |

b) Morecambe Bay cockle fisheries

Commercial beds: Flookburgh, Leven, Pilling, Middleton, Aldingham and Newbiggin

All cockle beds in Morecambe Bay were surveyed and reports completed by mid July. The results were presented in Agenda item 6 (<https://www.nw-ifca.gov.uk/events/technical-science-and-byelaws-sub-committee-meeting-2/>) at the August 13th TSB.

This year the levels of size cockle biomass and overall density of cockle across the bay have increased, and the high proportion of undersize seen in the 2023, and early 2024 surveys, had grown on to contribute to sufficient size biomass. Officers, therefore recommended opening a fishery on Flookburgh/Leven cockle beds as of September 1st, and a fishery on Pilling cockle bed as of October 1st. The rationale behind delaying the opening of Pilling was due to the high mix of size and undersize stock over a significant portion of the bed. By providing for an additional month, it is hoped a greater proportion of undersize will grow on. A highly mixed fishery is not desirable due to the disturbance or removal of juvenile stock. All other cockle beds remained low, and therefore were not recommended.

The results of the surveys and officer recommendations were put out to stakeholders by way of informal consultation and questionnaire via the Authority's website on the 5th of August. The objective of the consultation was to gain feedback from stakeholders on the results and recommendations put forward. The results of the informal consultation were also presented at the August 13th TSB meeting for Members to consider.

The proposal to open Flookburgh/Leven on September 1st, and Pilling on October 1st (subject to a further inspection), was agreed by TSB Members.

c) Ribble cockle fisheries

Commercial bed: Penfold (Southport)

The Penfold cockle bed at was surveyed on the 27th of June. The results were presented in Agenda item 6 (<https://www.nw-ifca.gov.uk/events/technical-science-and-byelaws-sub-committee-meeting-2/>) at the August 13th TSB.

This year the biomass of size cockle has decreased significantly for a third year in a row. There is extremely low biomass of size, and minimal undersize available to grow on the following year and contribute to population. Therefore, it was recommended by officers that the bed remain closed as of September 1st under paragraph 15 of Byelaw 3. Members voted to approve this recommendation.

d) Wirral coast fisheries

Commercial bed: Leasowe cockle fishery

The Leasow cockle bed was surveyed on July 25th. The results were presented in Agenda item 6 (<https://www.nw-ifca.gov.uk/events/technical-science-and-byelaws-sub-committee-meeting-2/>) at the August 13th TSB.

The biomass of size cockle on Leasowe this year has increased since 2023. The bed had previously received a good spat settlement, and as this is a typically fast growing bed, it was likely it would reach size this year. The total size biomass on site was 799 tonnes, with 715 tonnes of cockle in the 20-25mm range (just below size). Previous HRA agreements based on the food requirements of Oystercatcher detail 800 tonnes needs to be available for the species. Therefore, it was proposed that the bed be opened on October 1st, subject to a second survey. This recommendation allows two further months for cockles to grow and a greater proportion to reach size, and also provides for a total allowable catch (TAC) surplus to the 800 tonnes reserved for oystercatcher to be determined for the fishery.

This situation is not unusual for Leasowe. Typically cockle grow fast on the bed unlike other areas, meaning a settlement may only be a year and a half or less before it reaches size. On other beds in the district cockle typically reach size by 2 years. Precious fisheries have taken place in November due to this as the stock needs additional time to reach size.

It was agreed by Members that Leasowe cockle bed will be opened October 1st subject to the results of a second survey.

e) Seed mussel fisheries

The mussel beds in Morecambe Bay (Heysham, Fleetwood, South America) were inspected a number of times over the past 3 months to determine the suitability of seed mussel fisheries on these beds. A definition of seed mussel ephemerality and criteria for inspection was agreed at the February 6th TSB meeting and is available here: <https://www.nw-ifca.gov.uk/events/technical-science-and-byelaws-sub-committee-4/>

This year, little seed settlement was observed on Fleetwood and South America. The main two beds historically suitable for seed fishing are Perch and Black Scar on Fleetwood. This year much of the mussel from the previous year had scoured, but deep mud remained on parts of the scar. Little seed settlement was seen. It has therefore not been proposed for seed fishing.

Changes in the Leven channel in Morecambe Bay made access to the bed by quad and foot very difficult. In late July, officers accessed the bed using protector Gamma. The bed had a mix of size and seed mussel, and a considerable proportion was sizeable, making the bed unsuitable for seed fishing. Therefore, South America was not proposed open for seed.

Heysham in comparison, had received a dense settlement of seed, however much of this was over historical Sabellaria reef structure, and therefore, non-HRA-compliant. The Heysham mussel bed, was therefore not proposed open for seed fishing this year.



Image shows Protector Gamma dried out on the South America mussel bed in Morecambe Bay



Image shows science officers flying the drone out on South America for the first time.

3. NWIFCA RESEARCH PROJECTS

a) Whelk Fisheries in the North West

A new sampling schedule for determining the size-at-maturity for whelks was developed for the summer of 2024. The aim is to identify the size-at-maturity for whelks in the NWIFCA District as previous work has not provided a consistent dataset and it was important to assess the appropriateness of the MLS stipulated in the flexible permit conditions. Samples are scheduled to be collected as of September 2024.

b) Shrimp research in the North West

Our new science Officer, Lucy, is leading on developing a summary report for the state of the NWIFCA shrimp fisheries. There is a need for the Authority to better understand the current and historical state of the fishery, in order to best focus future research efforts and projects. Historical declines in the number and size of shrimp caught has led to concern among some stakeholders as to the condition of the fishery.

4. MARINE PROTECTED AREAS IN THE NWIFCA DISTRICT:

a) Highly Protected Marine Areas (HPMAs)

NWIFCA have agreed a baseline monitoring program for assessing the changes in Allonby Bay HPMAs with Natural England.

NWIFCA will lead in collecting data and undertaking potting surveys from North Western Protector to gain an understanding of the levels of crab and lobster in the HPMAs. Officers will measure and tag lobsters as part of the project. The project will likely last for >3 years and aims to begin June 2024. The first survey ran from 11th to 15th of June, and the second was completed between August 23rd and September 1st.

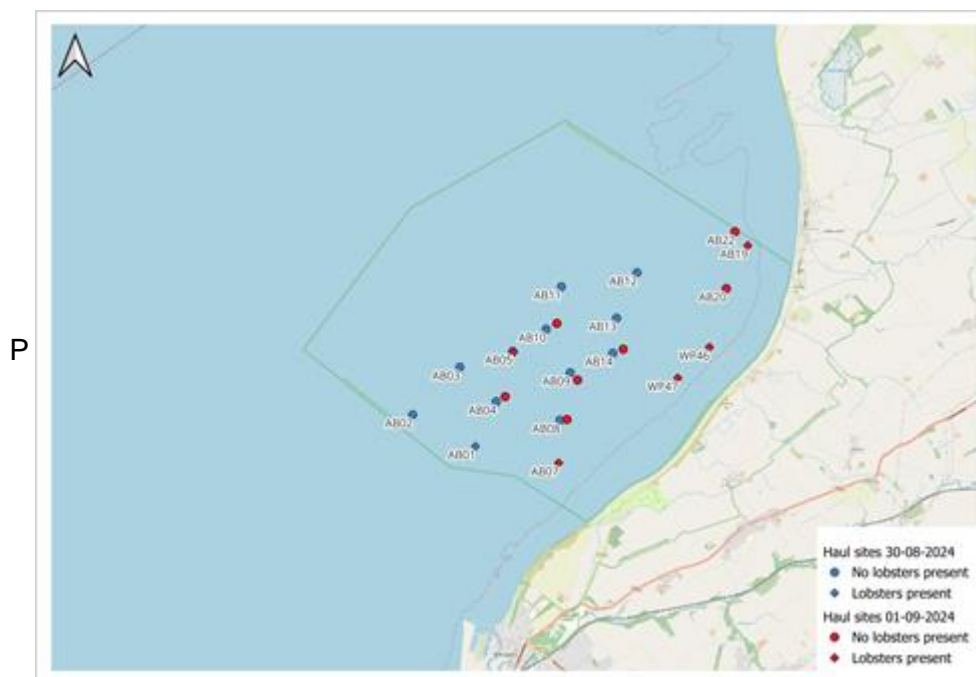


Image shows the location of sample points in the Allonby Bay HPMAs



Image shows officers hauling pots off North Western Protector for the August HPMA surveys.



Image shows a lobster caught and tagged in the HPMA

As of the previous surveys, seven lobsters were caught and tagged in the HPMA. The survey typically runs for three full days and officers log and measure all species caught in the pots.

b) **Marine Natural Capital**

Morecambe Bay is the focus of marine Natural Capital study through the Association of IFCA's and Natural England. NWIFCA has provided information and historical data on the Bay to provide to the Association. The evidence collated will be combined with additional evidence on associated socio-economic value data to develop local placed-based natural capital assessments of fisheries and Morecambe Bay.

NWIFCA have been working with the Association of IFCA and Natural England to develop a project looking into the social values of stakeholders, and how this can be used in management decision making. As part of the project, NWIFCA is assisting NE in setting up interviews with local stakeholders, and Exeter University will be analyzing the interviews to identify social values. There will be further engagement with the Authority as this project progresses, to see how this type of data could be used to assist with cockle fishery management decision making.

5. FISHERIES MANAGEMENT PLANS

a) National (excl. cockle)

No further update

b) Cockle fisheries management plan

NWIFCA is working alongside the Association to contribute to the development of the national cockle management plan. The early stages have involved discussions around development and structure of a plan that must consider multiple different cockle fisheries (Thames cockle fishery, Morecambe Bay, The Wash fishery etc.) and develop clear objectives.

NWIFCA is developing it's own cockle fisheries management plan applicable to the District. Both projects will complement the other with the aim of developing a framework for future data collection and management, a decision-making framework, a research plan and management review. In time the Districts cockle management plan will be presented to the TSB for review.

6. MMO MARINE LICENCE AND OTHER CONSULTATIONS FOR THE QUARTER

a) Morecambe Bay Offshore Wind

No further update

b) Mersey Tidal Power Project

No further update

Consultations this quarter:

- **River Esk/Esk Viaduct - Construction of new works**
- **Anchorholme Coastal Protection Scheme 2024**
- **Lidge Gate Wall**
- **Janson Pool Culvert Replacement**
- **Woodside Ferry Terminal Upgrade Scheme**
- **Maryport South Beach, tidal deposit removals**
- **Transmission Assets of Mona Offshore Windfarm**
- **HyNet carbon dioxide transportation and storage project - offshore**
- **The Wild Oysters Project Conwy Bay - Cultch Re-levelling**
- **Liverpool Bay Alternative Disposal Site**

Dispensations this quarter:

- Environment Agency
- APEM - Mersey Tidal Baseline Surveys
- Natural England - Allonby Fish Surveys

7. WORKING GROUPS AND EXTERNAL PARTNERSHIP WORK

a) **Technical Advisory Group**

No further update

b) **Whelk Working Group**

No Further update

5th of September 2024