

**NWIFCA Authority Meeting**  
**29<sup>th</sup> of September 2022: 11:00 a.m.**

**Agenda Item**

**10**

**SCIENCE REPORT FOR INFORMATION**  
**24<sup>TH</sup> OF JUNE –29<sup>TH</sup> OF SEPTEMBER 2022**

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

**Recommendation:** Report for information, Receive the report

This quarter, the main priorities of the science team have been to carry out the work regarding the annual mussel and cockle surveys, completing HRA's for the required fisheries, responding to consultations and inducting a new member to the science team.

**Key achievements since the previous meeting:**

- 1) Conducted a consultation on the request to reduce the mussel MLS and presented results to TSB.
- 2) Presented our work on Byelaw 4 at the Blue Marine Foundation Whelk Symposium
- 3) Completed 7 cockle surveys, and 9 mussel inspections with corresponding survey notes
- 4) Completed two HRA's for seed dredge fishery at Perch Scar and South America, and for hand gathered seed fisheries at Heysham and Seafield Slip, Lytham.
- 5) Seven consultation requests and four dispensation requests responded to

**ONGOING WORK STREAM UPDATES:**

**1. POTTING PERMIT BYELAW**

Byelaw 4 has been implemented and final applications and payments made since sign off in March. The science team have been working in the interim to set up a database for the suitable logging and analysis of returns data. We are also in discussion with the website developer to set up a form for fishers to more easily submit returns online.

**2. COCKLE AND MUSSEL**

Officers have undertaken a busy survey and inspection schedule this quarter. The corresponding inspection and survey notes are provided on our website in the Annex to TSB reports. The following sections provide a summary of our findings and details of further relevant work.

***Survey and Inspections this quarter***

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<b><i>Mussel</i></b>	
<i>Heysham</i>	16-07-2022 and 12-08-2022
<i>Fleetwood</i>	15-07-2022 and 17-08-2022
<i>South America</i>	17-07-2022 and 13-08-2022
<i>Falklands</i>	14-08-2022
<i>Seafield - Lytham</i>	16-08-2022

<i>Thurstaston and West Kirby</i>	31-08-2022
<b>Cockles</b>	
<i>Pilling</i>	20-07-2022
<i>Warton</i>	15-06-2022
<i>Aldingham and Newbiggin</i>	01-07-2022
<i>Flookburgh and Leven</i>	12-07-2022
<i>Middleton</i>	11-07-2022
<i>Southport</i>	01-09-2022
<i>Leasowe</i>	03-08-2022

#### **a) Mussel seed fisheries**

The mussel beds in Morecambe Bay (Heysham, Fleetwood, South America and Falklands) were inspected a number of times over the past 2 months to determine the suitability of seed mussel fisheries on these beds. Conditions were deemed suitable for a hand gathered seed fishery on Heysham, and a seed dredge fishery on South America and Perch Scar (Fleetwood). This year, spat settlement on these beds was lower than in previous years and both coverage and density were lower. The areas proposed for opening were therefore considerably smaller than in previous fisheries, however, still considered viable for the fishery. A HRA was submitted to Natural England on the 19<sup>th</sup> of August 2022.

This year the Falklands was surveyed by officers drying the RHIB out on the bed during a spring tide. Officers used industry provided locations and previous knowledge of the bed to determine survey locations. The mussel on the Falklands was of size, and on a layer of sand with areas of exposed hard ground.

This year we were requested by fishers to inspect Seafield Slip at Lytham for a potential hand gathered seed fishery. The fishery was not taken to HRA as it did not pass the test of likely significance (the area is less than 1.6ha), and was recommended for opening.

#### **b) Mussel minimum landing size consultation**

At the Technical Science and Byelaw meeting held on the 10th of May 2022, the Authority was asked to consider a reduction to the current minimum landing size (MLS) of mussels in the District from 45 mm to 40 mm. At the meeting, it was resolved that an informal consultation of permit holders will be undertaken to determine the wider view of industry on this matter.

A questionnaire was drafted and approved by TSB by email, before being made available on NWIFCA website on the 29th of June. All relevant members of industry were asked to return their responses to the Authority by the 17th of July. In addition to the questions posed, the consultation also offered the opportunity for industry members to raise any additional information they believe to be relevant to this matter.

The results of the consultation were presented at the August meeting where it was resolved that further work on the considerations surrounding a potential reduction, possible research required and our intended approach, would be brought to the following TSB.

#### **c) Morecambe Bay cockle fisheries**

All cockle beds in Morecambe Bay were surveyed and reports completed by the 28<sup>th</sup> of July. The results were presented in Agenda item 10a of the August TSB reports.

This year the levels of total cockle biomass and density of cockle across the bay had again decreased. There were low levels of both juvenile and adult stock in comparison to previous years, and there has been a continual decline since 2018. Due to these factors, it was recommended that Morecambe Bay cockle beds remain closed at the end of the closed season in 2022 until next year under Byelaw 3 para. 15.

**d) Non-Morecambe Bay cockles**

Cockle beds in the Ribble Estuary including Lytham and Foulness were not of significant quantities to warrant summer surveys. Leasowe was inspected and also found to have low stock levels compared to previous years and would not be a HRA compliant fishery. Therefore it was resolved that the outstanding District cockle beds would also remain closed after the closed season under NWIFCA Byelaw 3 flexible permit conditions until 2023.

This year an early survey of Southport in May identified the potential for a cockle fishery in this area, however the majority of stock consisted of a single year class not currently of size. The bed was surveyed again on the 1<sup>st</sup> of September and found that some of this cockle had grown on, though there was still a large proportion of undersize. The survey estimated the volume of size cockle to be 1100 – 1200 tonnes, and undersize to be 1200 to 1300 tonnes.

The fishery will undergo a HRA this month for approval by NE. In addition, the site is awaiting classification which will likely come through in October.

**3. NWIFCA RESEARCH PROJECTS**

**a) Fisheries Industry Science Partnership Scheme (FISP)**

The Fisheries Industry Science Partnership (FISP) scheme is a £10 million government fund which seeks to: improve data collection, particularly for data limited species, enhance knowledge of technical measures including fishing gear selectivity, and/or build a better understanding of the ecosystem benefits and environmental impacts of aquaculture.

Projects can apply for funding to develop a research study or fully developed scientific proposals. Grants of up to £20,000 are available to develop research proposals. Contracts of up to £300,000 are available to carry out a full research project. The FISP grant is a competitive process managed by DEFRA.

NWIFCA science officers are developing proposals to discuss with TSB and industry to bid for the following round of funding from 21<sup>st</sup> of November to 5<sup>th</sup> of Jan 2023.

**b) Whelk Fisheries in the North West**

Analysis of the 2019 data is underway. Given the introduction of Byelaw 4, there is now a good opportunity to assess the fishery, identify key fishing grounds, and establish a sampling schedule for determining the size-at-maturity in the NWIFCA district. A sample proposal was agreed at the previous Authority meeting and work is in progress determining samples for analysis. The aim of the project will look to determine an appropriate MLS based on size-at-maturity of the district whelks, and possibly the size frequency of catch.

**c) EA Small fish surveys**

NWIFCA are planning to assist the Environment Agency in small fish surveys as part of a continuation of the water framework directive and an extension of this work into natural capital.

Possible surveys are being planned in the Wyre Estuary in October and looking to use fyke and seine netting to survey juvenile fish species.

## **2. MARINE PROTECTED AREAS IN THE NWIFCA DISTRICT:**

### **a) Highly Protected Marine Areas (HPMAs)**

Updates provided in a separate report

### **b) Marine Natural Capital**

On the 27<sup>th</sup> of July, the SS met with Defra for an interview to discuss the use of Natural Capital in management and the potential for future frameworks in which this may be applied

## **3. FISHERIES MANAGEMENT**

### **a) Fisheries Management Plans**

The purpose of the fisheries management plans is to define the fisheries, assess and account for their possible socio-economic and environmental effects and give a framework for their sustainable management. Currently the second draft of the whelk fisheries management plan has been developed and will utilise the data collected during the research project to inform on sustainable management.

Bird food models and new information available from proposed NE surveys will help provide information for cockle and mussel fisheries management plans which will look to be reviewed in the coming months.

## **4. MMO MARINE LICENCE AND OTHER CONSULTATIONS FOR THE QUARTER**

### **a) Offshore Wind Leasing Round 4**

There have been six proposed new offshore wind projects in the latest round of offshore wind leasing. Three of these areas are within the Irish Sea. All of the proposed areas are outside of the district. As yet there is no further update on this, though a stakeholder meeting is planned for September 13<sup>th</sup>.

### **b) Mersey Tidal Power Project**

The SS met with MTPP consultants on the 7<sup>th</sup> of July to discuss progress on the project, responses to current proposals and information sharing. As yet, there has been no update on the proposed location. We provided brief formal comment on the proposed questions earlier this month and have offered to provide details of local fishing activity and survey data to aid their assessment.

### **c) Geological Disposal Facility (GDF)**

NWIFCA met with consultants on the 25<sup>th</sup> of July, to discuss the surveys planned this summer for the sub-sea nuclear waste disposal facility. They informed us of the intention to carry out geological characterisation surveys of the area which may take up to 10 years to complete. The survey area is over 1km<sup>2</sup> off Copeland, located partially within the district closest to St Bees and barrow. The results will be made available in 2023.

## **Consultations this quarter:**

- Threadlow Point Embankment
- Devonshire Dock BAE Barrow
- West Coast Main Life Extension: Gantry Replacements
- Dolgarrog Pipe Bridge, Conwy
- Burbo Bank Bird Guano reduction systems
- Threadlow Point Embankment (additional documents submitted)
- Little Bispham to Bispham & Gynn Square to Cocker Square Coast Protection Scheme Ground Investigations
- West Plain Marsh, Flookburgh, Saline Lagoons

#### **Dispensations this quarter:**

- Environment Agency otter Trawl Surveys

### **5. WORKING GROUPS AND MEETINGS**

#### **a) Technical Advisory Group**

No updates – the next TAG will be held in person in Jersey on the 11<sup>th</sup> to 12<sup>th</sup> of October, where NWIFCA will be presenting their current work.

#### **b) Whelk Working Group**

NWIFCA attend, and contribute to, the biannual Whelk working group (WWG). The group brings together members of all IFCA's, NE, relevant stakeholders, researchers and government bodies (Welsh government, cefas etc.) from across the UK to share research and current management strategies in order to learn from one another. The previous meeting was held on the 12<sup>th</sup> of May and the following planned for the 29<sup>th</sup> of September.

#### **c) Blue Marine Foundation**

In June, the Blue Marine Foundation held the online Whelk Symposium encouraging national government bodies, fisheries regulators, researchers and fishermen to present their work and share knowledge on the fishery status, current management and future of the fishery. This event was the second in a series of Symposia organised by Blue Marine on non-quota fisheries. NWIFCA presented their most recent work regarding Byelaw 4 at the event which is available online to view.

### **6. NWIFCA BIOSECURITY PLAN 2021-2024**

NWIFCA's biosecurity plan has been completed and reviewed by NE. We were also consulted by a member from Plymouth marine labs, MBA and APEM who are conducting a review of all current marine and biosecurity plans for NE. Their review noted NWIFCA's plan as one of the best and most comprehensive. The final version is now available on our website with updates on how sightings can be reported.

Planned work streams for Science team over the next quarter are provided in an Annex to this report.

**9<sup>th</sup> of September 2022**

# Annex 1

Topic	Work stream	Officer				Priority	Target date
		Senior Scientist	Officer	Deputy Senior Scientist	Officer		
COCKLES	Southport	1) Discuss potential for fishery 2) Agree if HRA is required 3) Either: write HRA OR determine next steps	n/a	1) Discuss potential for fishery 2) Agree if HRA is required 3) discuss next steps	Write up the survey note, including maps	HIGH	Sep
	Leasowe	1) Send to TSB with request to close all other non-Morecambe Bay fisheries 2) Update website	n/a	Write up inspection report	n/a	HIGH	Sep
	Solway Survey	participate in survey	1) participate in survey 2) write up survey note with input from officers	1) Organise with Hugh for next set of springs 2) Participate in the survey	1) participate in survey 2) write up survey note and showing new officer	MEDIUM	Oct
	Cockle management plan	1) Read through the current cockle management plan that has been developed 2) identify other IFCA management plans (Eastern and Kent&Essex) 3) Identify outstanding information required- and how we can include this in a new plan 4) engage with TSB re. how we can progress achieving agreement with this 5) Developing research projects to help feed into and progress with the management plan in the long-term - FISP	Assist	Assist	Assist	MEDIUM longterm	on-going but to discuss at Nov TSB
	Cockle data management	Assist	n/a	1) Identify a more user friendly mechanism for storing and analysing long term data sets 2) Explore additional analysis approaches that	n/a	LOW	Jan
	Cockle biomass calculations	Revisit the biomass calculations 1) consult with TAG to see if they have any useful information to contribute 2) Lit review the research and methodolgy currently out there 3) reach out to researchers for guidance	n/a	Re-visit the biomass calculations 1) identify how accurate our current methodology is 2) Identify how we could change it, and if so, how can we do this to ensure they allow us to compare historical data 3) potentially identify a bio-statistician to help with this	n/a	LOW	Jan
	Determine an SOP for aging cockles	1) Review SOP 2) discuss with TAG and KEIFCA how the age data can be incorporated into our analysis and management decisions	1)To carry out a literature review into how cockles are aged 2) idetify how other IFCA's age cockles (Eastern and Kent&essex) 3) draft an SOP for aging cockles	n/a	n/a	MEDIUM	Nov

MUSSELS	Mussel MLS	1) Develop a proposal for how we plan to address the possible reduction in MLS in specific areas for Foulney 2) Organise a trip for members out onto the bed 3) Produce report detailing possible approaches and considerations for discussion at November TSB 4) feed information from these discussions into the mussel management plan	n/a	1) Discuss potential considerations for this proposal 2) identify previous work / TSB discussions which may effect the approach	n/a	HIGH	Sep
	Mussel size dredge	1) develop a document detailing the consideration for a size dredge fishery in the district 2) Discussion at TSB on mechanisms for how this could work and limitations required 3) Hold meeting with officers to discuss all considerations 4) Update industry re. the proposal for this year and our planned work for the next year. 5) feed informatino from these discussion into the mussel management plan	n/a	1) Meeting with SS to discuss the potential considerations for this fishery and update on any relevant historical information	n/a	MEDIUM longterm	Sep to Nov
	Lytham HRA	1) Complete and submit to NE 2) Update website with result 3) inform industry	n/a	1) write up survey note 2) assist with info	n/a	HIGH	Sep
	Dutch wand winter surveys (to obtain pre-winter biomass for bird food requirement calculations)	participate in survey	1) participate in survey 2) write up survey note with input from officers	1) Identify suitable dates for surveys	1) participate in survey 2) write up survey note	MEDIUM	Oct
	Solway mussel side scan	1) participate in survey 2) assist with processing	1) participate in survey 2) assist with processing	1) organise suitable dates with Hugh 2) participate in survey 3) assist with processing	1) participate in survey 2) assist with processing	LOW	Oct
	Mussel management plan	1) Develop the plan alongside on-going work with the cockle management plan - feeding in info from discussions on MLS and dredge fishing 2) identify a plan of action for outstanding tasks on this plan and delegate further tasks to officers	Assist	Assist	Assist	MEDIUM longterm	on-going but to discuss at Nov TSB
	South America survey	participate in survey	n/a	1) Organise survey 2) participate in survey	participate in survey	HIGH	Sep
	Thurstaston and West Kirby inspection	participate in survey	1) participate in survey 2) write up survey note with input from officers	n/a	<del>1) participate in survey</del> 2) write up survey note	HIGH	Sep

<b>WHELKS</b>	Whelk MLS	Calculate a potential riddle size for fishers using current data and R	n/a	n/a	n/a	MEDIUM	Oct
	Research on SOM	1) Speak to researcher about a preferred method of sampling to achieve an accurate SOM estimate 2) determine a sample methodology 3) upload R code to server for use in analysis 4) WWG - ask about the usefulness of other data (size frequency of catch) prior to SOM calculations	1) To assist with tasks 2) develop a database for recording the long term info on catch size frequency	n/a	1) Contact fishers for agreement to the sampling scheme - and determine a price 2) Determine how to sample whelk size after landing (size-frequency of catch - to build a long term data set), ie. could we go to Fleetwood processors for measurements.	MEDIUM	Oct/Nov
	Potting returns	1) Set up new form on the website	1) To collate and log monthly returns on the excel spreadsheet (fishers must supply by the 15th of each month) 2) Check against the list of permit holders and identify those with outstanding returns 3) Produce letters to inform those of their outstanding returns (reminders to be sent by the end of each month). 4) guidance reminder for how to fill out the form	n/a	n/a	MEDIUM longterm	Sep onwards
	Whelk track record	Assist	n/a	Consider mechanism by which we will potentially open up the whelk permits to new applicants	n/a	LOW	Dec
	Outstanding appeals	Assemble appeals panel	n/a	Complete outstanding track record applicant application form and appeals application	n/a	MEDIUM	Sep
<b>CONSULTATIONS AND DISPENSATIONS</b>	Mersey Tidal Power Project	Keep up-to-date with ongoing work and respond where necessary	n/a	n/a	Keep up-to-date with ongoing work and respond where necessary	LOW	n/a
	Geological Disposal Project	Keep up-to-date with ongoing work and respond where necessary	n/a	n/a	Keep up-to-date with ongoing work and respond where necessary	LOW	n/a
	Ongoing consultation and dispensation work	Assist	1) to assist with the consultation responses and learn how to use MCMS	n/a	1) Continual review of new applications 2) introduce new officer to the system	LOW longterm	n/a



<b>MARINE PROTECTED AREAS</b>	Updating the information on the website	Assist	1) Update the MCZ information following structure from Sussex IFCA website 2) Update the EMS information following a similar structure 3) include detailed information on morecambe Bay and information on our requirement for HRA's and how this feeds into management	n/a	n/a	LOW	Oct
	Review MPA assessments	Assist	1) To do the Cumbrian Coast MCZ assessment	n/a	1) to do the Solway netting assessment 2) Identify outstanding assessments and requirements for these in order to plan next steps	LOW	Dec
	Highly protected marine areas (Allonby Bay)	1) To attend the consultation workshops 2) to stay aware of ongoing work and next phases	Assist	n/a	1) To attend the consultation workshops 2) to stay aware of ongoing work and next phases 3) Go through work with Jon on vessel sightings database 4) update website for stakeholder engagement re. the current proposal	LOW	n/a
	Vessel sightings and shore patrol database	Discuss with DSS how this will operate going forward, are any changes needed	n/a	Discuss with SS thoughts about how this could work going forward	n/a	LOW	Jan
	<b>RESEARCH PROJECTS</b>	Fisheries Industry Partnership Scheme	1) Develop 3 bid proposals for the FIPS scheme to take to TSB and promote to industry 2) Obtain industry input and engagement 3) Submit bid in the next round of funding 4) identify deadline for second funding round	Contribute ideas	Contribute ideas	Contribute ideas	HIGH
	External research	1) Consider research for mussel, whelk and cockle workstreams 2) contact liverpool university contact	n/a	n/a	n/a	MEDIUM	Oct

SMALL FISH SURVEYS	Task sheet	1) Go through the task sheet sent through from EA 2) oversee the set up 3) Participate in survey	Participate in survey	1) go through the tasking sheet sent through from Rob and complete tasks 2) liaise with IFCOs re. organisation of the surveys, development of boards and possible dry runs 3) participate in survey	participate in survey	HIGH	Oct
BIOSECURITY	Biosecurity plan	Assist	n/a	n/a	1) updates website 2) update reporting methods 3) set up mechanism for recording reports	MEDIUM	Sep
GIS	Change over from mapinfo to QGIS	1) Discuss with ICT possible options 2) identify a trainer/consultant to help	n/a	Assist	n/a	LOW	Jan