

**NWIFCA Authority meeting
24th of March 2022: 10:00 a.m.**

**Agenda Item
9**

**SCIENCE REPORT FOR INFORMATION
9TH OF DECEMBER – 24TH MARCH 22**

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 resolved at the TSB meetings on the 2nd of November and 1st of February, begin our cockle and mussel survey schedule, prep for the introduction of the Potting Permit byelaw and complete ongoing work on management plans, HRA's and consultation responses.

Key achievements since the previous TSB:

- 1) Byelaw 4 – Potting byelaw completed final review and submitted to defra
- 2) Newbiggin and Pilling HRA reviewed and submitted to NE
- 3) Completion and sign off of Duddon mussel fishery HRA
- 4) Whelk track records collated and prepared for review, letters submitted to applicants and appeals panel members assigned.
- 5) Seven consultation requests and four dispensation requests responded to
- 6) 1st draft of whelk fisheries management plan completed
- 7) Biosecurity plan for INNS draft completed and submitted to NE
- 8) Survey schedule prepared, and inspections of Lytham, Heysham and the Duddon completed with corresponding survey notes.

ONGOING WORK STREAM UPDATES:

1. NWIFCA RESEARCH PROJECTS

a) Razor Clam Collaborative Research

Science team met with Bangor University to discuss progress to date and plans going forward. The main project lead is leaving post and a new researcher has been assigned to the role. Further updates on the progress of this will be provided once a survey schedule has been determined.

b) Whelk Fisheries in the North West

All samples obtained from industry have been processed and analysis of the data has started. and will be finished over the coming months with a report on the work carried out since 2019 provided at a future TSB meeting. The aims are to better inform management within the potting byelaw and identify further sampling which may be required.

Unfortunately due to staffing and other priorities the analysis has not been completed for this meeting as hoped. Once the analysis has been completed a report will be provided to members at a future meeting.

c) **Development of Future Research Schemes – in discussion**

Future work looking into bird food models and the interaction of bird food requirements and the cockle and mussel fisheries in Morecambe Bay area has been discussed with NE. The aim is to gain further information to more accurately inform management.

2. MARINE PROTECTED AREAS IN THE NWIFCA DISTRICT:

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

No further updates

3. FISHERIES MANAGEMENT

a) **Future Inshore Strategic Hand Gathering Implementation Group (FISHGIG)**

The management of 'hand gathering fisheries' come within the scope of the IFCA's section 153 duties within the Marine and Coastal Access Act 2009 (MaCAA 2009). Hand gathering activity for marine resources within English intertidal areas is extensive, occurring in all IFCA Districts and throughout the year, on significant scales and often of considerable value. The purpose of the FISHGIG is for IFCA's to collaborate and share information to improve their management of hand gathering fisheries by; working together to share resources, identifying common management objectives and sharing best practice. The final draft of the package of information has been completed and has been distributed internally to all IFCA's for comment. It is going to Chief Officers Group and Natural England and once available for external distribution it will be provided to members.

b) **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 first 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.

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. Crown Estate are currently undertaking a Plan-Level Habitats Regulations Assessment (HRA) to assess potential impacts to European Marine Sites prior to awarding seabed rights. Further information can be found on the Crown Estate website with links to the process and maps of the proposed areas: <https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/2021-offshore-wind-leasing-round-4-signals-major-vote-of-confidence-in-the-uk-s-green-economy/>. It is expected that the HRA will have been completed spring 2022

b) Mersey Tidal Power Project

The sixth online environmental workshop for the Mersey Estuary Tidal Barrage project ran earlier this month and was attended by NWIFCA. The workshop was again attended by representatives from wide ranging environmental agencies both statutory and non-statutory with knowledge and expertise in the area of potential influence from the proposed barrage.

The potential location of the proposed barrage was presented, with discussions over the potential impact of each option. The workshop discussed changes in sediment and channel movements in the Mersey, the constraints of the project, and the key concerns of environmental agencies. Currently, the project is still in the initial scoping stage. In terms of fish/ fisheries, they are looking at carrying out multi-year duration surveys. A survey schedule will be made available in 2022.

Consultations this quarter:

- Llanddulas to Kinmel Bay Coastal Defence Improvements Project	MMO
- Isle of Man Ferry Terminal Variation request 8	MMO
- Aldingham Beck Culvert Outfall	MMO
- Duddon Estuary Pipeline remediation works - re-consultation	MMO
- bp and EnBW Round 4 Offshore Wind Farm Deep Geotechnical Survey	MMO
- Aldingham Beck Culvert Outfall Consultation 2	MMO
- Llanfairfechan Splash Deck Repairs	NRW
- Geophysical Surveys Mona Offshore Wind Farm 2022	NRW
- Deep Geotechnical Surveys Mona Offshore Wind Farm 2022	NRW

Dispensations this quarter:

- Cefas offshore catch sampling programme 2022
- AECOM Mersey Gateway Surveys 2022

5. WORKING GROUPS AND MEETINGS

a) Technical Advisory Group

NWIFCA continue to attend the technical advisory group (TAG) meetings which offer the opportunity for all 10 IFCA member authorities to discuss similar work schemes and share knowledge. This quarter, TAG was held on the 2nd of March and members discussed updates on HPMAs and fisheries management plans which are national projects each IFCA is involved in.

6. NWIFCA BIOSECURITY PLAN 2021-2024

A first draft of an updated NWIFCA biosecurity plan has been produced and been reviewed by NE. The final version will be sent back to NE before it is made available on our website.

7. POTTING PERMIT BYELAW

A considerable amount of work has gone into completing Byelaw 4 – potting permit byelaw and submitting the final version to Defra. The next stages of work have involved preparations for reviewing applications, and the possible introduction of the byelaw in the coming months. Establishment of appeals panel, track record work and contacting applicants have also been work streams science team have lead on.

8. COCKLE AND MUSSEL

Preparations for this year's surveys have been underway, this has involved preparation of gear, determining a suitable survey schedule and beginning early inspections. The survey schedule proposed was agreed by TSB this month, and the Duddon, Heysham and Lytham have already been inspected with inspection notes included in this report.

24th March 2022

Heysham Flat Mussel and *Sabellaria alveolata* Inspection 01-03-22

Officers present: MC, MB
Tides LW 17:10 1.2m (Liverpool tides)

Officers accessed the skear on foot to inspect the mussel on Heysham Flat. Dallam Dyke was not crossed due to water depth and tide.

There is still a significant *Sabellaria alveolata* reef distributed across much of the skear, with large areas covered by reef, some living and some deteriorated with thin mud/sand on top (Figure 1). Accessing all areas of the skear was made difficult by the extent of reef. The extensive area of reef was present on the North and South of the Skear as seen in previous years but as in 2021 it now extends across the skear from Conger Rock to Dallam Dyke (Figures 2 and 3). The extent is similar to that observed pre 2016 where much of the end of the skear was covered by *Sabellaria alveolata*.

Some mussel had persisted over the winter, with patches of 25-40mm mussel, particularly along the Northern edge of the skear and Dallam Dyke. Much of the live mussel was mixed in with the *Sabellaria alveolata*. There was the occasional size mussel present across the bed. The cleaner and more consistent mussel was found along Dallam Dyke, with some areas of 80-90% coverage. There were no signs of a 2022 mussel settlement but this could be due to the early time of year of the survey. Some areas of bare cobble and dead shell were also present on the skear.

Knott End Skear appeared similar in colour to the main skear so it is presumed that there is mussel present but this cannot be confirmed as access was not possible by foot. There are a number of skear present beyond Knott End skear.

Oystercatcher in large numbers feeding on the Southern edge of Heysham Flat skear.

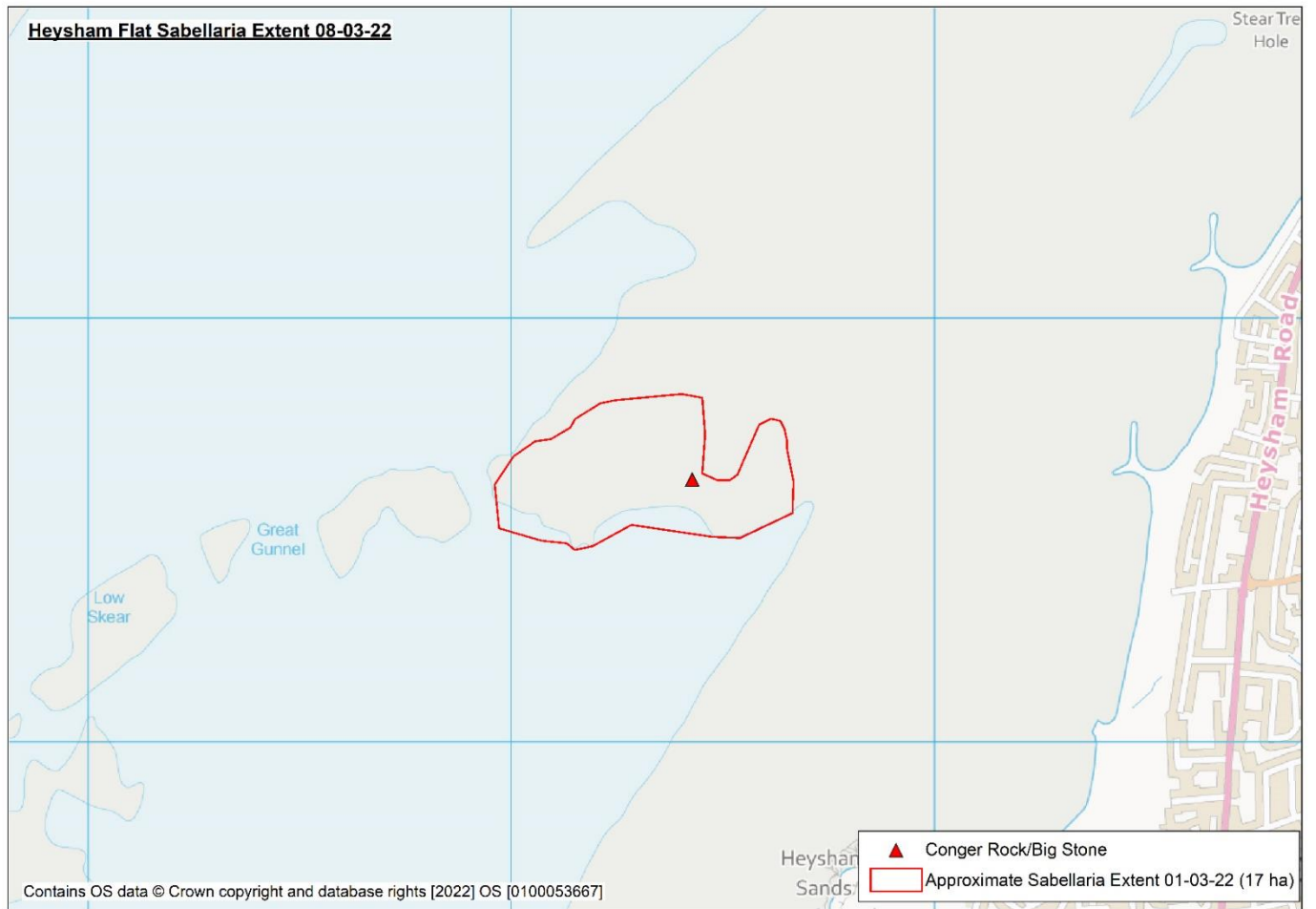


Fig.1 *Sabellaria alveolata* approximate extent 01-03-22.



Fig. 2 Extensive *Sabellaria alveolata* reefs 01-03-22.



Fig. 3 Extensive *Sabellaria alveolata* reefs 01-03-22.



Fig. 4 25-40mm mussel in mud on Heysham Flat 01-03-22.



Fig. 5 Cleaner mussel of 25-40mm along the edge of Dallam dyke 01-03-22.



Fig. 6 Cleaner mussel of 25-40mm along the edge of Dallam dyke 01-03-22.

Duddon Mussel Inspection 05-03-22

Officers: ID, JH

LW: 07:27 1.0m (Liverpool tides)

The Duddon mussel bed named Hard Acre was inspected following reports from industry that there had been significant loss to the mussel bed.

From the inspection it is estimated that 70-80% of the mussel bed has been washed away, this is likely due to the significant amount of storm activity that the UK has had in late January and throughout February. Figure 1 maps the previous bed area from September 2021. The areas of mussel have not been mapped due to the patchy consistency of the mussel and the amount of time available to survey. Instead images have been provided (figures 2 – 13) showing the significant area which has been scoured and the areas which remain. The remaining mussel consists of an area of sparse mussel between figures 2-3, a band running along the channel edge between figure 7 and 9, and patches of mussel in an area on the north western extent of the bed around figure 11.

The mussel which remained was 40-55mm in length with the majority being above the MLS of 45mm. Based on a number of small samples the percentage of 40-45mm mussel ranged from 0-30% depending on the area.

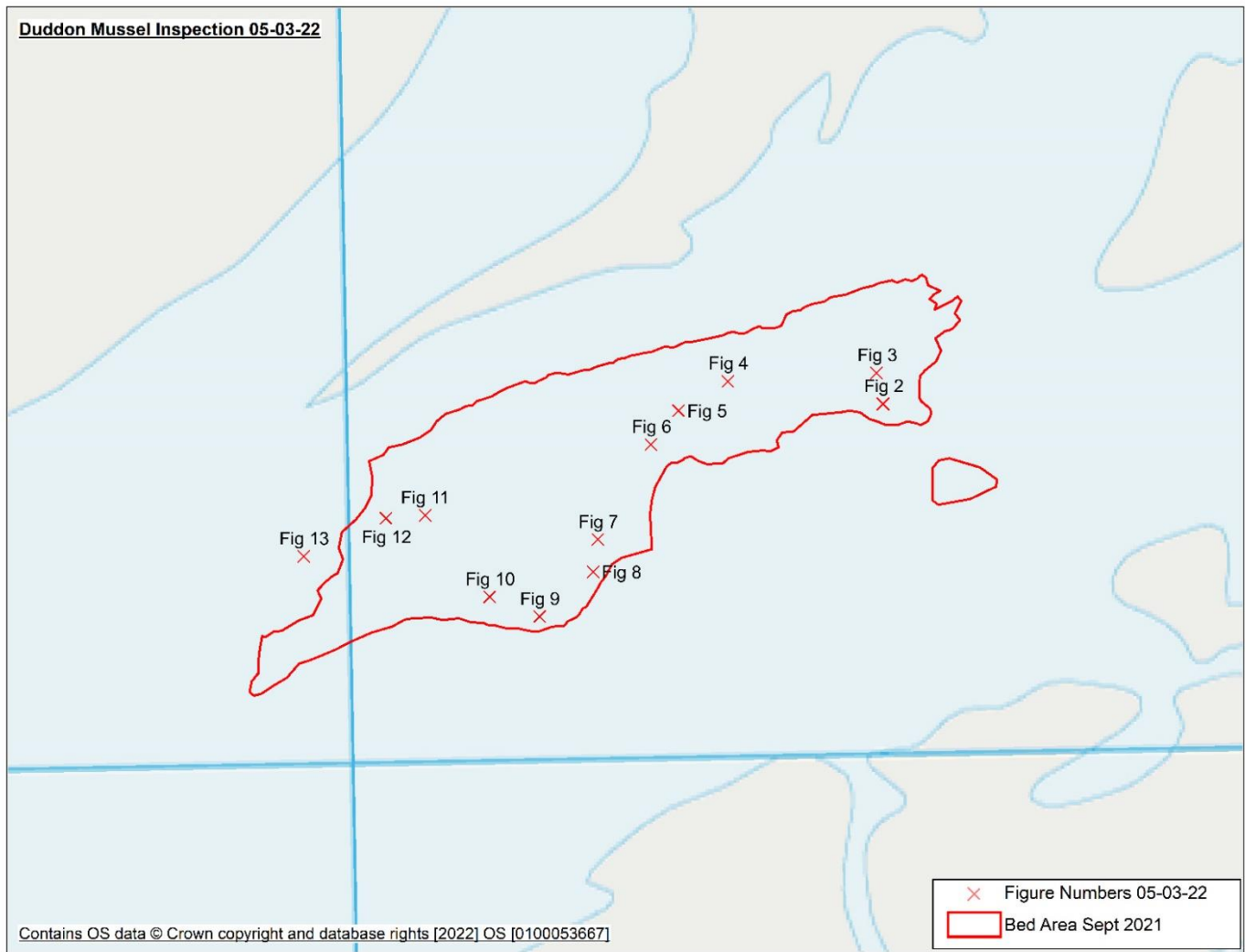


Fig 1 – Figure numbers for images provided against previously mapped bed area



Fig 2 – Sparse density mussel on the Eastern extent of the mussel bed 05-03-22



Fig 3 - Sparse density mussel on the Eastern extent of the mussel bed mixed in with sand mason (*Lanice conchilega*) 05-03-22

East Elevation

☼ 268°W (T) ● 54.175932, -3.283205 ±2 m ▲ 55 m

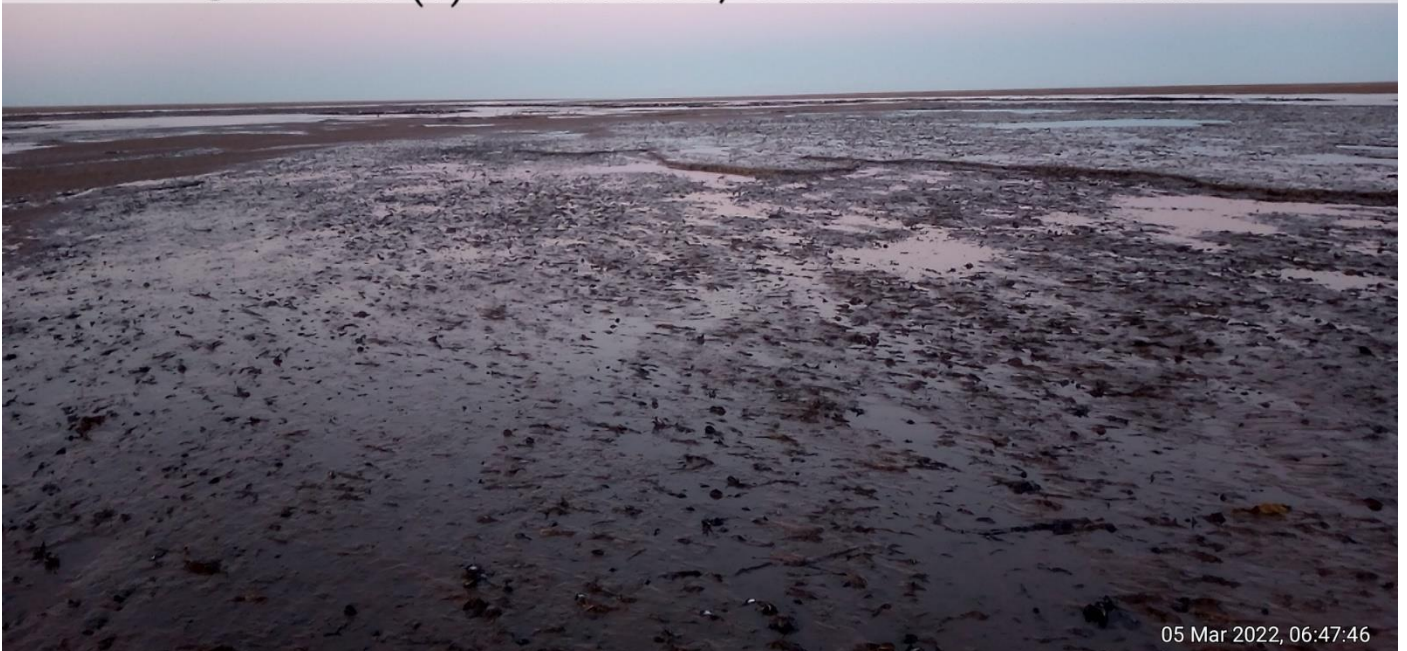


05 Mar 2022, 06:46:35

Fig 4 – Large scoured area in the centre of the bed 05-03-22

North East Elevation

☼ 258°SW (T) ● 54.175698, -3.283875 ±1 m ▲ 55 m



05 Mar 2022, 06:47:46

Fig 5 – Large scoured area in the centre of the bed 05-03-22



Fig 6 – Small patch of mussel in the large scoured area in the centre of the bed 05-03-22



Fig 7 – Small patches of mussel on the Southern extent of the scoured area 05-03-22



Fig 8 – Area of 40-55mm mussel

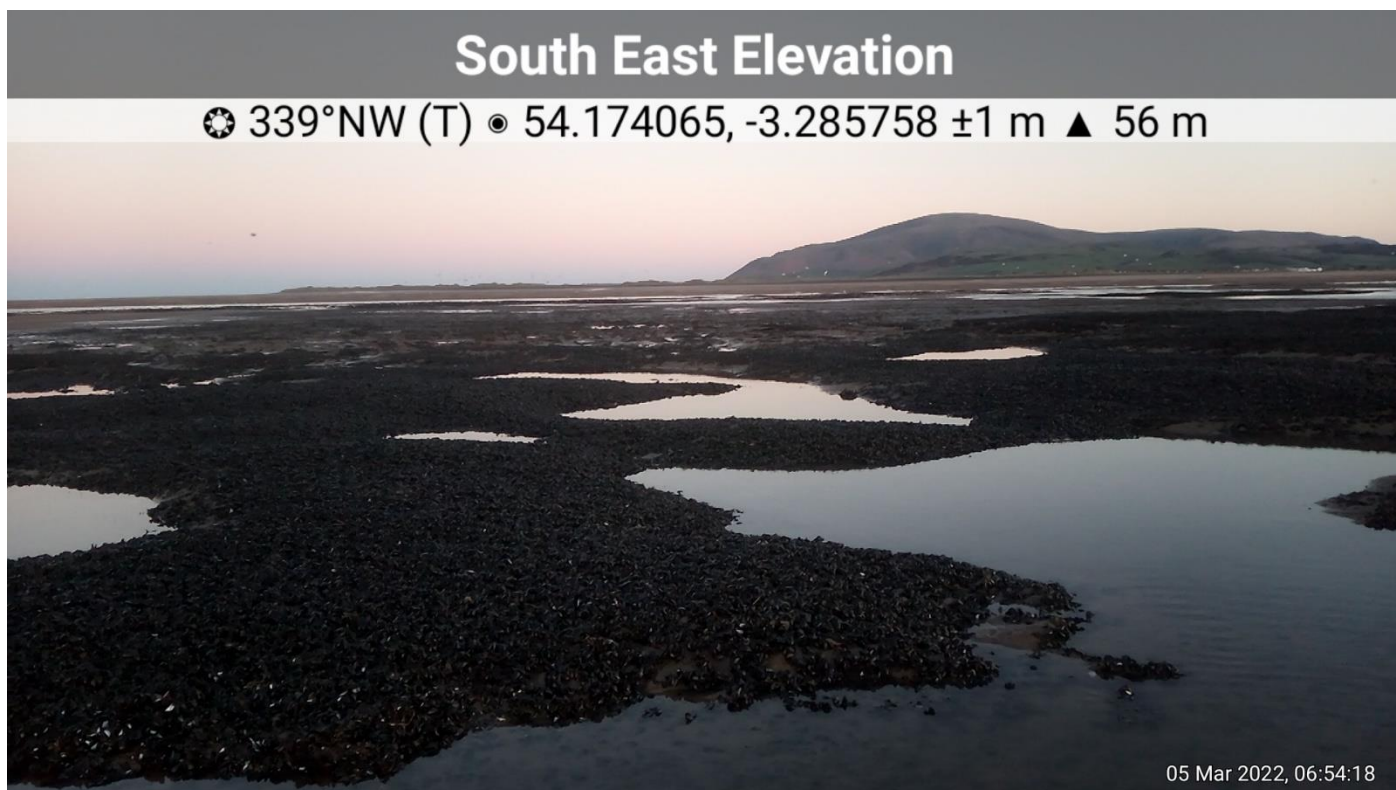


Fig 9 – Band of mussel on the Southern extent of the scoured area 05-03-22

South East Elevation

☼ 342°NW (T) ● 54.174222, -3.286435 ±1 m ▲ 51 m



05 Mar 2022, 06:55:20

Fig 10 – Large scoured area in the South West extent of the bed 05-03-22

South East Elevation

☼ 337°NW (T) ● 54.174868, -3.287307 ±1 m ▲ 50 m



05 Mar 2022, 06:56:57

Fig 11 – Patch of larger mussel 45-55mm on the North West extent of the bed 05-03-22



Fig 12 – Small patches of mussel between areas of sand at the Western extent of the bed 05-03-22



Fig 13 – Small patches of mussel between areas of sand at the Western extent of the bed 05-03-22

Lytham Cockle Inspection 08-03-22

Officers present: MC, MB, AG

Tides: LW 08:57 2.1m (Liverpool tides)

Areas where historically there have been cockle beds were inspected using a jumbo and rake to see if there was significant cockle present to require a full survey. North Run, Mouse Hole and Grannys Bank were inspected as well as the surrounding areas. The majority of the area had no cockle or small numbers present. There was an area on North Run in a muddy gutter that was running parallel to the shore that contained cockle. All of the cockle was undersize and the density ranged from 14 per m² to 340 per m² in this area. Cockle across the surveyed area was patchy, with small patches found on lower areas of Grannys Bank and in gutters. No size cockle or 0-5mm cockle were found at the sites surveyed.

Maps

Maps were created showing the overall survey area, density of undersize cockle (excluding cockles in the 0-5mm size range) and the frequency of size classes (pie charts show the frequency of different size classes, the size of the pie chart indicates the total density of cockles present). No maps were created for density of size cockle or spat (0-5mm size range) as none were found during the survey.

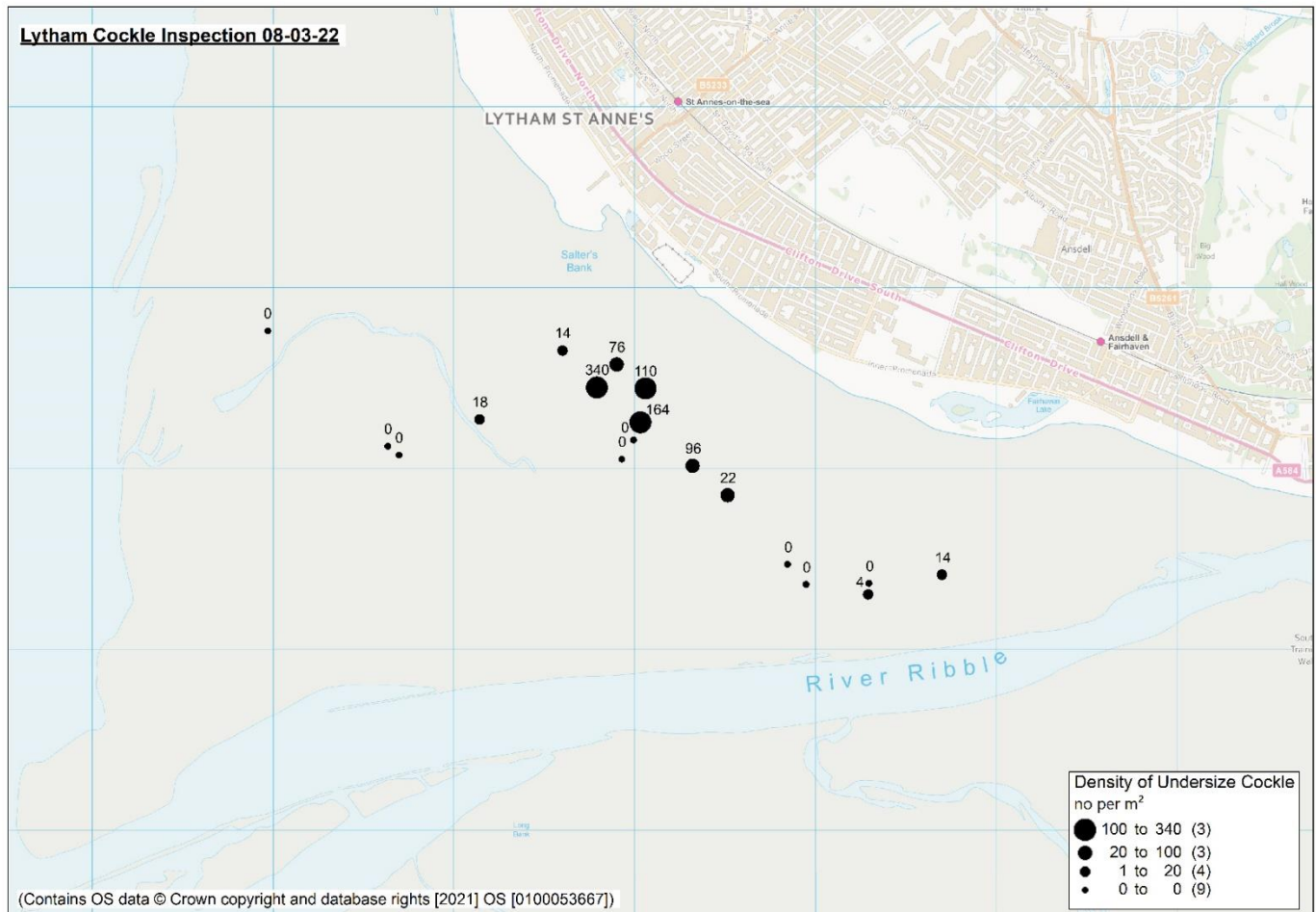


Figure 1: Density of undersize cockle per m² Lytham March 2022.

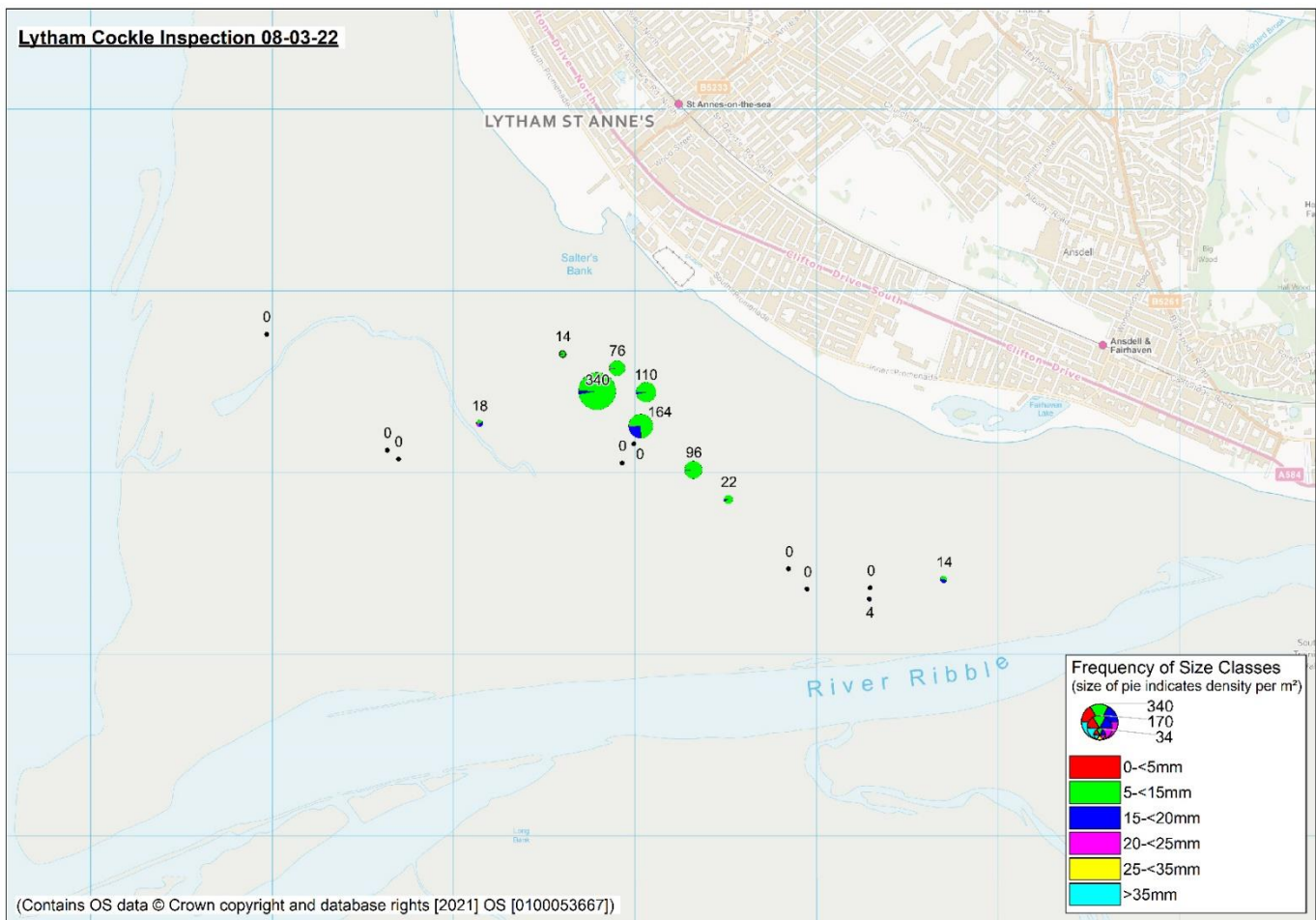


Figure 2: Frequency of size classes of cockle per m² Lytham March 2022.



Figure 3: Example of density of cockle found in North Run 08-03-2022.