

NWIFCA Technical, Science and Byelaw Sub-Committee

31st October 2014: 10:00am

**REPORT
NUMBER**

5

FOULNEY and NORTH MORECAMBE BAY MUSSEL FISHERIES

Purpose: to inform Members about consultation with Byelaw 3 permit holders about proposals for mussel management in North Morecambe Bay

Recommendations

- 1. That Members approve the removal of undersize mussel from Foulney mussel bed during set tides to be agreed with Byelaw 3 permit holders, and subject to Habitats Regulations Assessment**
- 2. That Members approve the work of Officers to consult over the limited removal of undersize mussel from the intertidal mussel bed between Foulney and the oyster farm at Newbiggin, subject to Habitats Regulations Assessment**

Background

- Members will recall that there has been an on-going hand-gathered size mussel fishery at Foulney throughout the winter up to mid-April. Byelaw 3 permit holders have been using riddles to ensure only size mussel was being removed from the fishery. Effort switched to the Duddon mussel bed once that was classified.
- Officers inspected the Foulney bed on the 17th July 2014 and found the whole bed carpeted with dense mussel settlement, as reported to the Authority.
- Officers were of the opinion that some of this seed could be harvested by Byelaw 3 permit holders as the density of the settlement suggested the likelihood of loss to the fishery of a proportion of the stock through natural mortality, mainly through scour and erosion from build-up of loose mussel mud. Some permit holders had previously asked the NWIFCA to consider 'zoning' of the stock, as there are also areas on the skear that grow to around 35-40mm and then become stunted and never reach size. It is also commonly reported that when mussel does reach size it becomes pearled. If a large percentage of the stock is affected this will impact severely on its marketability.
- Looking back at recent records it can be reported that the NW&NWSFC authorised the hand-gathering of seed from the western half of the bed in December 2008, leaving the eastern side unfished. Again when in October 2009 a substantial seed settlement was reported, the western side of the bed had already begun to suffer natural erosion and mortality. By the December 2009 report both areas were said to be dying and that the Committee had 'missed the boat' in authorising a fishery there.
- Back in 2013, Science Officers had intended to carry out some background research of different management options for a bed such as Foulney but unfortunately this work was not progressed due to other priorities (Defra EMS Fisheries Review) and staff changes. At the latter end of the year Officers visited the bed with Natural England staff to assess areas for zoning. Unfortunately due to the time of low water and the weather it did not get light enough to make any kind of meaningful assessment.

6. Officers recommended that Byelaw 3 permit holders were consulted as to their opinions on how much seed can be taken and which part of the bed could be fished. Past experiments on Heysham Flat (2004) have provided evidence that thinning of stock can improve its chances of persisting.
7. Officers met with interested Byelaw 3 permit holders in August to gather their opinions and ideas. General consensus was that there were two areas that stakeholders wished to see managed differently than under the Minimum Landing Size. These were Foulney bed with the stunted growth and pearling issues, and the area between Foulney and the oyster farm which holds large stocks of densely packed seed mussel in most years.

Foulney Mussels

1. Foulney mussel bed was surveyed using the Dutch Wand method on 11th September 2014 on a 0.2m tide. The total bed size was estimated at 40.8 Ha with an estimated 3283 tonnes of mussel and estimated 71% coverage.

In general, mussels were clean and loose. Sample 5A to 5B (Fig. 1) contained the largest mussels. Overall there seemed to be a general area running along the middle of the 'tongue' shape of small, seed mussel and larger (mainly undersize) mussel on the outskirts of the tongue. Some larger mussels were cut open on return to the lab and it was found there was very little meat content. Officers also did not find any pearls within the mussels.

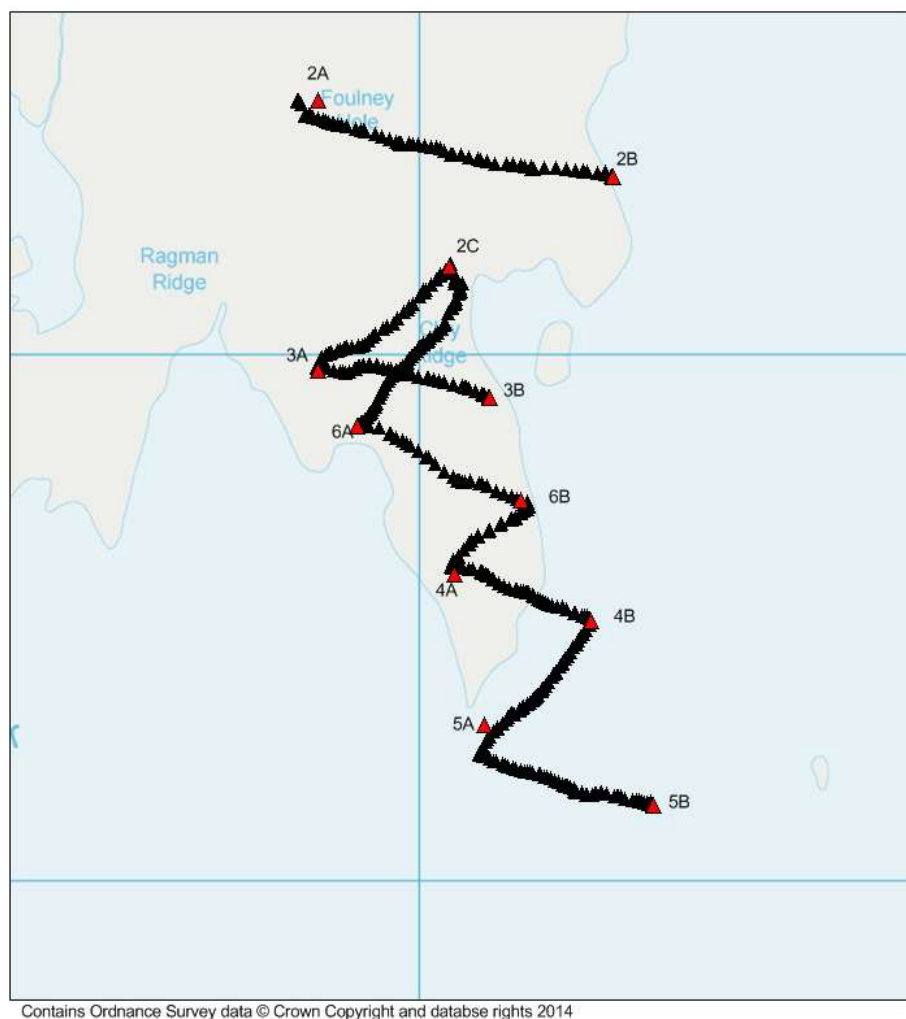


Fig. 1. Mapping of Foulney mussel survey 11th September 2014

2. Byelaw 3 permit holders have stated that they want the mussel at the bottom of the skear (ie.4B to 5B) to be left to grow to size. This area was fished last winter. They state that Foulney is the only area potentially, where full time fishermen can earn their livelihood in winter, and every chance should be given to allow the natural growth to give them the optimum earnings potential. Officers do not disagree with this opinion which corresponds to NWIFCA policy and fisheries and ecological good practice of leaving stock to grow to reproductive maturity whenever environmental constraints allow.
3. The Senior Scientist and IFCO Ian Dixon thoroughly inspected the stock while the survey was being carried out. They had invited Mr Steven Manning to accompany them and discuss the proposal further, however Mr Manning was unable to attend due to illness. They identified an area roughly lying between points 2A to 2C in Figure 1 that held mussels of mixed sizes in loose mud. The area around 2A had 80 – 90% cover of just under MLS mussel. This is the area stakeholders consider to be where the mussel becomes stunted and fails to put on growth. One hypothesis voiced to Officers is that the mussels may be subject to a virus and it would be interesting to get some samples analysed.
4. Having consulted with the Enforcement Director, both IFCO Dixon and Ms Knott consider that the optimum approach to managing this resource if the Authority agrees to allow the removal of the stunted mussel is to open the fishery for undersize mussels only on certain tides – ie. only on tides when the upper reaches of the bed can be reached, so as to prevent the removal of undersize mussel which does not fall into the stunted growth area and should be left.
5. The recommendation is for IFCO Dixon to work with stakeholders to identify the size of tide on which this area uncovers, but not beyond. It is surmised to be around a 1.6 or 1.8m tide and this will be corroborated. Stakeholders will also be consulted on when the fishery should open.
6. The level of activity will be monitored and Science Officers will work with Natural England to agree an acceptable level of harvesting in relation to the European Marine Site features. Should that level be reached the option will be to change the tidal height (ie to a higher level and so restrict the harvest in the lower area) or to withdraw the authorisation for undersize mussel.
7. It should be noted that the size mussel fishery will be open as per the status quo and IFCOs will enforce the minimum landing size on other tides.
8. This proposal is subject to an HRA and agreement with Natural England, and it is not suggested that all of the seed should be harvested.

Foulney to Oyster Farm

1. Officers had intended to survey and inspect this area, again with stakeholders input. Unfortunately, work on other active fisheries in Morecambe Bay has prevented this from going ahead.
2. The Senior Scientist and IFCO Erik Thinnesen were able to carry out a rapid visual inspection and rough tracking around the area on the morning of 10th October 2014. Due to the soft mud it was not possible to track the bed exactly. However the inspection enabled them to confirm that there is a large area, estimated at around 1km², holding undersize mussel on loose mud as illustrated in Figures 2, 3 and 4. It is known from past observations of this area, and reports of the regular build-up of mussel and then scour around the oyster frames, that some of this stock is regularly washed out by tide and weather. There are also areas where mussel persists and grows to size.

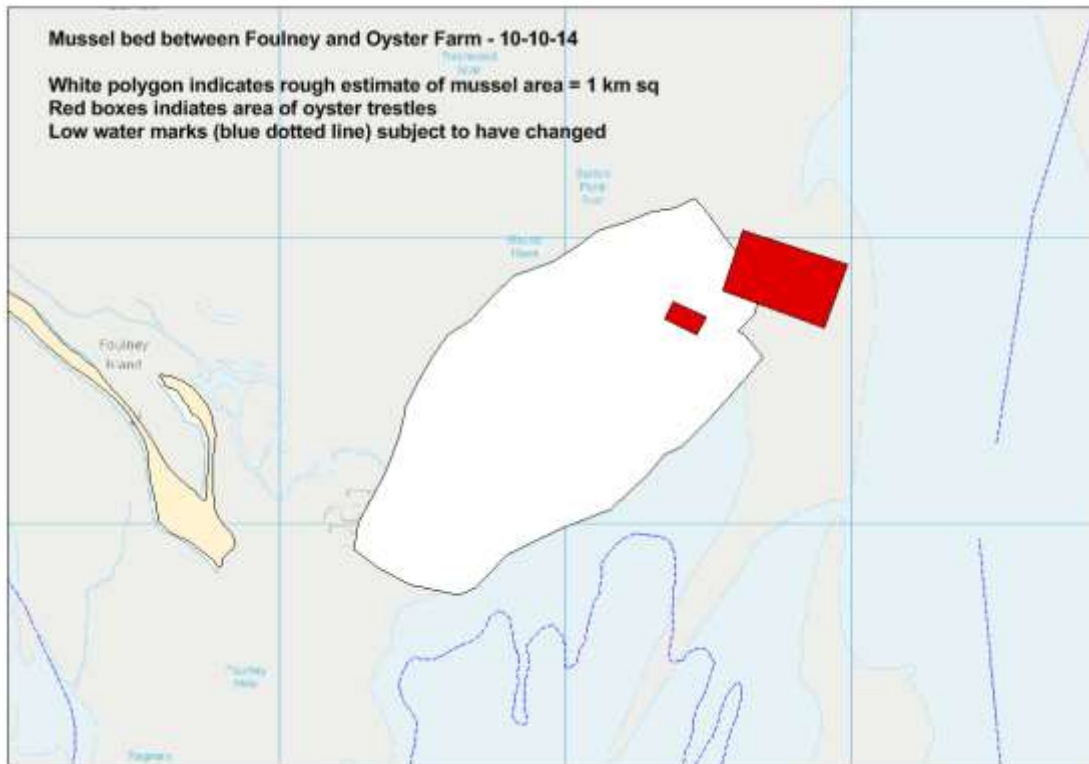


Fig. 2. Illustration of estimated size and position of mussel bed between Foulney and the oyster farm. 10th October 2014



Fig. 3. Illustration of the size and extent of the mussel bed and associated mussel bed between Foulney and the oyster farm. 10th October 2014



Fig. 4. Evidence of the density of the mussel on the bed between Foulney and the oyster farm. 10th October 2014

3. The majority of this area lies on land owned by Boughton Estate and leased to Seasalter Seafoods (Walney) Ltd for their pacific oyster aquaculture business. The position of the trestles is indicated in Figure 2, which shows that a large proportion of the bed has no physical aquaculture structures at the present time. Members will recall the on-going dispute over fishery rights, whereby the NWIFCA maintains the public right to fish and upholds IFCA byelaws on this land.
4. Officers recommend that further work should be carried out with Byelaw 3 permit holders input, into surveying and assessing biomass and authorising the hand-gathering of a proportion of undersize mussel, likely to be lost to the fishery. This will be restricted either spatially, temporally or both, in agreement with stakeholders, subject to HRA and agreement with Natural England.

Senior Scientist
16th October 2014