

# **NWIFCA Technical, Science and Byelaw Sub-Committee**

**10<sup>th</sup> February 2015: 10:00am**

**REPORT  
NUMBER**

**8**

## **FOULNEY and NORTH MORECAMBE BAY MUSSEL FISHERIES**

**Purpose:** to inform Members of developments regarding mussel harvest by Byelaw 3 permit holders in North Morecambe Bay

### **Recommendations**

- 1. That Members approve the work of Officers**
- 2. That Members approve the recommendation not to proceed with an authorisation to remove stunted mussel in North Morecambe Bay at this time**
- 3. That Members approve that the discussion about removal of stunted mussel in future years is incorporated into annual planning of the management of the Morecambe Bay mussel resource by the Shellfish Working Group**

### **Background**

- Members will recall that at the last TSB meeting they approved the proposal that Officers worked to open a limited harvest by Byelaw 3 permit holders of an area of stunted mussel on the upper reaches of the skear at Foulney, and that requests to further harvest undersize mussel from the area between Foulney Island and the oyster frames should be referred to a future Mussel Working Group.

### **Foulney Mussels**

- On the 12<sup>th</sup> November 2014 following a period of weather with high winds (ie. risk of wash out and scour), IFCO Dixon inspected the skear at low water on a 2.5m tide. He reported evidence of some scour with around 65% of the stunted mussel still in position. The remainder of the bed which revealed on that tide was still covered with tiny pin size spat (evidence of a further settlement late in the season) and on-growing mussel from the spring recruitment. It appeared that there was still a viable resource of the stunted stock to proceed with plans to partially harvest them.
- A detailed HRA was carried out and agreed with Natural England. In writing this HRA, a more robust approach was adopted in order to not only improve the standard and quality of mussel fishery assessments carried out by the NWIFCA, but also to develop a template for use in future assessments of fisheries within Morecambe Bay in line with the Defra Revised Approach to Fisheries Management in European Marine Sites.
- In early January Science and Enforcement Officers met to agree the tides to open the fishery and a draft authorisation was being progressed.
- Representation was made to Officers by Byelaw 3 permit holders to open the area adjacent to the main Foulney Island tongue alongside the 'Ditch' (Fig. 1) comprising an estimated area of 15 hectares (from GIS mapping). Officers inspected this area with stakeholders on 9<sup>th</sup> January and also revisited the area that had been agreed to be opened. It was found that the mussel stock in the original area to be authorised had been severely affected by the December weather, with a high proportion of the loose mussel having been washed out and the remaining small mussel having 'gone back in' – ie. hunkered itself down into the hard mud, rendering the area not suitable for harvest.

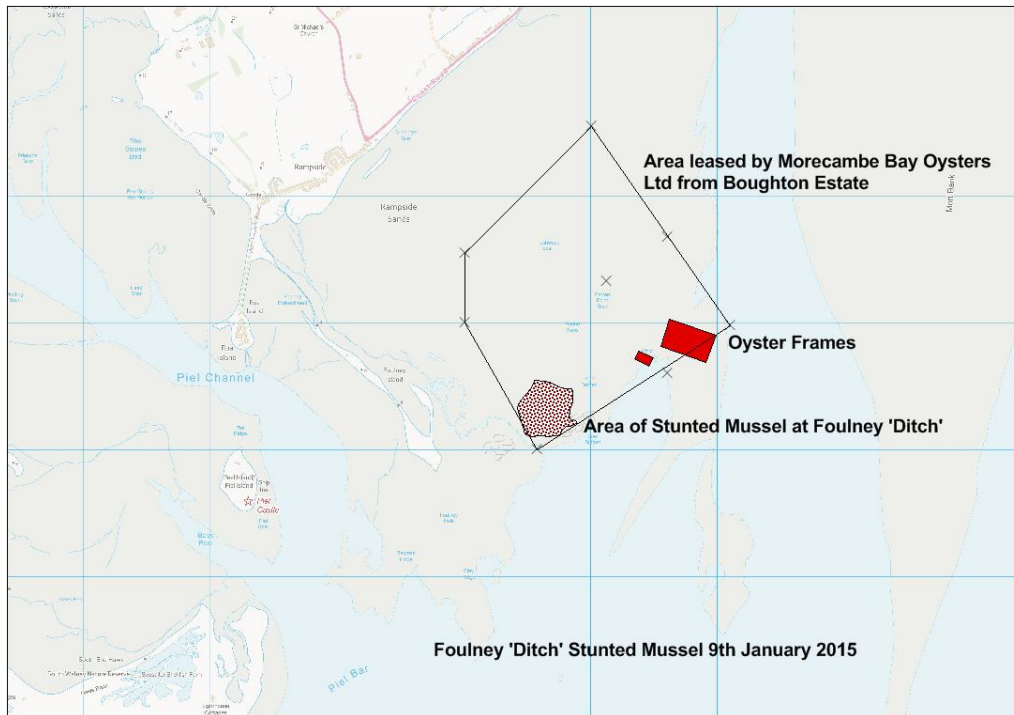


Fig. 1. Illustration of position of stunted mussel at Foulney 'Ditch' in relation to Foulney Island and the oyster farm. North Morecambe Bay. 9<sup>th</sup> January 2015

### Other Mussel Beds in Morecambe Bay

1. As stakeholders are now requesting that the NWIFCA moves quickly to open the Foulney 'Ditch' area Officers are mindful of the requirements under EU law and the Birds Directive that an adequate supply of food for overwintering birds – particularly oystercatcher and knot – and minimal disturbance is necessary to show in any assessment before the fishery can be authorised.
2. IFCOs have been inspecting the other beds around the Bay on the large spring tides to provide information on prey availability to inform the assessment. Oystercatchers have been observed on all the beds feeding around the low water line as would be expected.
3. Heysham Flat

The tide only permitted an upper skear inspection on 11<sup>th</sup> January revealing that the skear had been badly eroded and the mussel stock had been washed out, reverting the skear back to bare cobble in most places. There was some remaining small mussel very hard in.

An inspection on 23<sup>rd</sup> January permitted Officers to inspect as far as Dallam Dyke. Some size or just under size mussel persists at these lower reaches, and is only revealed to fishers and to birds for feeding on the largest spring tides. A sample taken provided a mean size of 44mm from 50 measured mussels. A further inspection will be carried out on the Knott End skear area once daylight and tides allow. It is expected that a size fishery will develop on Knott End skear.

### Perch Scar / Black Scar – 22. January 2015

Remaining mussel on both Perch Scar and Black Scar beds are well sanded in. A considerable amount of stock has been lost to scouring and weather but a proportion of smaller mussel can still be found hard in to the mud, which is likely to persist through the winter.

### Wyre End Scar – 26 January 2015

About 20% mussel cover, of around 20 – 30mm length (Fig. 2). The small mussel is hard in, with a lot of shell (Fig. 3). The more sheltered (eastern) side held more mussel, and is possibly the most densely stocked skewer within the Bay at the present time.



Fig. 2. Wyre End Scar with approx. 20% mussel cover. 26 January 2015



Fig. 3. Wyre End Scar – hard in mussel remaining. 26 January 2015

### Duddon Estuary

A low level of hand-gathering for size mussel is still on-going on the Duddon mussels. The bed is sanding over.

## Foulney 'Ditch' to Oyster Farm

1. An inspection was carried out over low water on 23<sup>rd</sup> January 0.7m tide.

The area is badly scoured out with very little mussel remaining. What there is is small and very hard-in. The skear is covered in shell, with large scoured out areas (Fig. 4). The area between the 'Ditch' and Foulney Island ie. the area under investigation for authorising removal of stunted mussel, possibly holds a better resource. Here some hand-gathering for size was occurring using graders to remove undersize. However it is suspected that the condition of the mussels will be poor and the difficulty of removing large amounts of shell might result in the prosecution of this area ceasing. The areas under and around the oyster frames has also been washed out.



Fig. 4. Area between Foulney 'Ditch' and oyster farm, showing dense piles of shell and scoured out areas. 23 January 2015.

2. Three samples were removed and processed in the lab. Samples were washed, mussels were separated from the shell, measured and recorded. The weight of shell and weight of mussels were recorded. (Sample 1, n =69. Sample 2, n = 171. Sample 3, n = 23).
3. Mean length of mussels was 24.3 mm (range 8.2 – 45.8mm). The smaller mussels were collected from the upper skear and the larger from the lower skear areas. Around a third of the bags (in weight and volume) was mussel, the remainder shell (Fig. 5).



Fig. 5. One of the samples from the inspection on 23<sup>rd</sup> January, showing proportions of shell to live mussel.

### Meat Yields

1. Throughout the inspections over the winter samples have been taken and opened to observe meat yields, all of which have been low as would be expected at this time of year. An indication of this from the large mussel at Heysham Flat is shown in Figure 6 below.



Fig. 6. Indication of current meat yields of Morecambe Bay mussels. Heysham Flat sample collected 23 January 2015

2. Low meat yields need to be considered when assessing biomass of prey availability for the over-wintering birds. All indications are that this is low across all beds in the Bay.

## **Conclusion**

- Small mussel remains in low densities on all beds inspected but is 'hard'in' to the mud.
- There is a stock of undersize stunted mussel in the Foulney 'Ditch' area, mixed in with broken shell.
- The only larger mussel remaining is on the lower reaches of the scars, and therefore only revealed on the bigger spring tides.
- The proposal to remove stunted mussel was to have been managed by restricting fishing to certain tides.
- There is very little or no mussel on any of the beds at these tidal heights.
- Mussel is of low meat yield, and therefore of low profit to bird feeding.
- Habitats Regulations require the Authority to take a precautionary approach when it cannot be fully concluded that fishing activities will have no adverse effect on the conservation features of the EMS (in this case, oystercatchers and knot).

## **Recommendation**

Due to the low levels and poor condition of mussel remaining that Members approve the recommendation not to proceed with an authorisation to remove stunted mussel in North Morecambe Bay at this time.

That Members approve that the discussion about removal of stunted mussel in future years is incorporated into annual planning of the management of the Morecambe Bay mussel resource by the Shellfish Working Group.

**Mandy Knott**  
**Senior Scientist**  
**28<sup>th</sup> January 2015**