

# **Annex A**

## **Morecambe Bay and Duddon Estuary**

### **Mussel Management Plan**

#### **2016 – 2020**



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## **Purpose of the Management Plan**

This Management Plan is a five year plan of agreed measures, parameters and constraints, agreed with stakeholders over the utilisation of mussel stocks. The Plan is designed to be adaptive and is subject to annual review to ensure any changes in status of mussel beds, and environmental and conservation features have been fully taken into account.

The purpose of the Plan is to define the fisheries, assess and account for their possible socio-economic and environmental effects and give a framework for their sustainable management, by building on established management principles, embedding the best practice from the current regime and using a wider and more flexible approach. The objective is to develop a modern, professional and sustainable mussel fishery, with provision for the development of cultivation and aquaculture.

### **Aim: To create a 5 year rolling plan (2016-2020) with annual review.**

The aim of the NWIFCA is to produce a Habitats Regulations compliant Mussel Management Plan which details management measures and parameters for opening and closing fisheries, to ensure the NWIFCA's duties under EU legislation are adhered to.

Activities and management that are consistent with the Plan should only require a simple HR check to ensure they are compliant with it and that there are no material changes in circumstances that might affect the HRA. This will be recorded for audit.

Where plans and projects not covered by the plan are proposed, or other material changes in circumstances have occurred, a more detailed HRA may be needed.

The principles within this Policy are:

1. The Management Plan is subject to HRA.
2. Sustainable exploitation of mussels.
3. Protection and development of mussel fisheries.
4. Protection and enhancement of all the conservation features and biodiversity of the EMS.
5. All members of the BMWG should respect resolutions of the group and the duties of statutory bodies to manage fishing which may be damaging to the EMS.

The plan has been produced in full consultation with other relevant bodies, including different sectors of industry, Natural England and environmental stakeholders. It will allow a suite of adaptive management measures that are flexible to stock levels, condition of mussel beds, and environmental considerations, including restricting effort and fishing methods, implementing permanent and temporary spatial and temporal closures, designating access and landing points, enforcing TACs, and restricting fishing hours.

The Management Plan should allow for potential changes and developments in the fishery.

The Management Plan is required to go through a process of Habitats Regulations Assessment (HRA), a procedure which has been undertaken by the Authority in close liaison with Natural England. As part of the HRA, the Appropriate Assessment outlines the management measures to be used to mitigate the effects of specific identified activities on SAC and SPA features. The Authority has been able to conclude, with the agreement of Natural England, that the fishing activities proposed within this Management Plan, subject to the specific avoidance and mitigation measures included, will not adversely affect the integrity of the Morecambe Bay, Duddon Estuary or any other European Sites. A copy of the full HRA accompanies this report (to be appended when completed) (Appendix ?).

## **Regulatory Framework:**

This Management Plan sits within the byelaw regime of the NWIFCA. The specific byelaws relating to mussel management are:

NWIFCA Byelaw 3:	Permit to fish for Cockles and Mussels;
NWIFCA Byelaw 6	Protection for European Marine Site features
NWSFC Byelaw 12:	Restriction on fishing for bivalve molluscan shellfish;
NWSFC Byelaw 13a:	Cockles and Mussels – Management of the Fishery;
NWSFC Byelaw 16:	Shell fishery temporary closure.

The NWIFCA also encourages adoption of the voluntary 'Code of Conduct for Intertidal Shellfisheries' (Appendix ?).

### **Rationale for Restricting Seed Mussel Dredge Fishery:**

**Yet to be drafted**

### **NWIFCA Decision-making Process and Delegated Powers:**

**Yet to be drafted**

### **Non-Commercial Gathering:**

Notwithstanding all other regulations including those relating to bed closures, designated commercial beds and minimum landing size, a per person daily allowance for un-permitted persons of up to 5kg of mussels is allowed for personal consumption.

Where appropriate, the Authority may approve the removal of shellfish by un-permitted persons for the purposes of hygiene monitoring, stock management and other scientific purposes.

<b>Principles and Management Measures – Mussels</b>		
<b>1.</b>	<b>Management Measures</b>	<b>Comments</b>
<b>1.1</b>	<p>Annual extensive surveys to evaluate the distribution, abundance and stock composition characteristics of the Morecambe Bay and Duddon Estuary mussel population prior to and following the fishing season. This enables the total fishable stock to be quantified, suitable fishing areas to be identified, fishing mortality to be quantified, spatfall and recruitment levels to be assessed, and an estimation of future fishery characteristics to be made.</p> <p>Co-ordinated by - NWIFCA Carried out by – NWIFCA with industry assistance</p>	Agreed BMWG 19.11.15
<b>1.2</b>	The minimum landing size for mussels from the EMS is 45mm (Byelaw 3) unless a written authorisation is in place.	Agreed BMWG 19.11.15
<b>1.3</b>	<p>Mussel fishing in the EMS is not permitted unless mussel stocks present in the EMS exceed the combined agreed minimum spawning stock biomass (MSSB) and the agreed minimum bird feeding requirements (MBFR).</p> <p>i) MSSB - A minimum adult stock (&gt; 45mm in length) will be set according to scientific advice, in order to protect future fisheries.</p> <p>ii) MBFR - Data and advice will be provided by Natural England on bird feeding requirements (tonnage) set on key areas / month / bird species / prey size preference.</p>	<p>Agreed in principle but two unknowns and until we have some figures to work with cannot agree specifics (BMWG 19.11.15)</p> <p>Agreed that this is necessary for sustainable fishery not just Habs Regs (BMWG 18.01.16)</p>
<b>1.4</b>	Where there is a lack of data the NWIFCA needs to take the Precautionary Approach in relation to fisheries impacts on conservation features.	Agreed BMWG 19.11.15
<b>1.5</b>	Mussels over 45mm may be fished whenever there are mussel stocks exceeding the limits in 3 above.	Agreed BMWG 19.11.15
<b>1.6</b>	Mussel beds may be closed, or parts of beds may be closed, on certain days or at certain times - for example for enforcement / social / management reasons or to minimise disturbance to birds.	Discussed and understood that size fisheries will be subject to HRA and will only be closed if cannot conclude no adverse effect on the EMS (BMWG 18.01.16)
<b>1.7</b>	Mussel beds may be closed if there is evidence that fishing activity is damaging stock.	Agreed BMWG 19.11.15

<b>1.8</b>	Where evidence exists to show the presence of stable mussel beds that support high levels of biological diversity, these areas may be excluded from the mussel fishery, as appropriate, through liaison with stakeholders.	Agreed in principle – mapping and agreement of these areas carried out annually with stakeholders (BMWG 18.01.16)
<b>1.9</b>	Exclusion zones / closed areas will be used where conservation features may be impacted on by fishing activity or access to fishable areas– eg. <i>Sabellaria alveolata</i> reef at Heysham Flat, or to prevent disturbance to particular bird feeding areas. These will be incorporated into the conditions attached to the fishery, and if feasible, physically marked out on the fishable beds, and clearly communicated to industry. The areas will be assessed annually.	Agreed BMWG 18.01.16
<b>1.10</b>	Fishing methods in the EMS are defined in NWIFCA Byelaws 3 and 6, and NWSFC Byelaw 12.	Agreed BMWG 19.11.15
<b>1.11</b>	Catch returns on all mussels taken by all sectors must be provided to NWIFCA a minimum of monthly, or more frequent as required, by post or email. The facility to complete returns via the NWIFCA website will be investigated.	Agreed BMWG 19.11.15
<b>1.12</b>	An annual charging regime for seed dredge vessel permits will operate as in 2012-13 with annual inflation increases based on UK December RPI.	Agreed BMWG 19.11.15
<b>1.13</b>	Fishing may be halted or interrupted by NWIFCA for re-survey if advice suggests beds may be overexploited, and / or stock has been subject to natural erosion or mortality, or there has been a change of status of the bed.	Agreed BMWG 19.11.15
<b>1.14</b>	NWIFCA Fishery Officers conduct frequent inspections of fishing activity and landings. The fishery may be closed if any extensive breaches of conditions are detected.	Agreed BMWG 18.01.16
<b>2.</b>	<b>NWIFCA ongoing work to deliver the plan</b>	<b>Comments</b>
<b>2.1</b>	Regular survey and other evidence gathering as required to determine: stock area, abundance (%cover), composition (age structure and size range) and the combined presence of MSSB and MBFR.	Agreed BMWG 19.11.15
<b>2.2</b>	NWIFCA Officers will work with all sectors to improve evidence and data gathering.	Agreed BMWG 19.11.15
<b>2.3</b>	Additional survey following significant change in stock such as resulting from erosion or settlement, and / or change in status of the bed.	Agreed BMWG 19.11.15
<b>2.4</b>	Timely circulation of information to members of the BMWG and NWIFCA showing areas with size mussel which may be fished, seed mussel areas open to fishing, and areas under consideration for fishing by both sectors.	Agreed BMWG 19.11.15

<b>2.5</b>	Decisions over mussel management will be informed by stakeholder consultation.	Agreed BMWG 19.11.15
<b>2.6</b>	Six monthly meetings of the BMWG to review this plan. Other meetings may be called by any 3 members of the BMWG.	Agreed BMWG 19.11.15
<b>2.7</b>	Research subject to available resources.  Examples: a) Research and trialling of effects of removal of stunted or pearled mussel from defined areas, specifically Foulney area; b) Research and trialling of effects of relocating stunted or pearled mussel on to under-stocked beds within the Bay; c) Trialling of relay areas of undersize mussel within specified areas, over specified time periods; d) Research into bird dependency on mussel.	Agreed BMWG 19.11.15  and examples agreed BMWG 18.01.16
<b>3.</b>	<b>Seed mussel fishery regulations may include:</b>	
<b>3.1</b>	Total allowable catch (TAC) – eg. in situations where imposing a TAC would assist in the sustainability or development of a fishery; if bird feeding size preference necessitates specific temporal seed availability.	Agreed BMWG 19.11.15
<b>3.2</b>	Daily catch limit for vessels.	Agreed BMWG 19.11.15
<b>3.3</b>	Mussel beds may be closed, or parts of beds may be closed, on certain days or at certain times - for example for enforcement / social / management reasons or to minimise disturbance to birds.	Agreed BMWG 18.01.16
<b>3.4</b>	a) maximum dredge head width; b) maximum number of dredges; c) dredge design.	Agreed BMWG 18.01.16
<b>3.5</b>	Limiting the number of entitlements, the spatial extent of the fishery and the times of fishing. This will be assessed and decided on annually.	Rationale for this needs to be included in the Plan and agreed
<b>3.6</b>	Seed mussel dredge authorisations will be allocated to applicants who fit the suitability criteria by having appropriate experience of shellfish dredging and by providing proof of possession of an appropriate fishing licence.	Query whether this was agreed or not at BMWG 18.01.16

4.	Sectoral resource allocation	
4.1	<p>There are 2 distinct fishing sectors seeking access to mussels from the EMS. These are handworkers and dredge vessels.</p> <p>Both sectors agree:</p> <ul style="list-style-type: none"> <li>a) To acknowledge and respect the interests of the other sectors;</li> <li>b) To not unreasonably seek to hinder or prevent legitimate fisheries by the other sector under this plan;</li> <li>c) To work collaboratively through the BMWG to annually agree the distribution and status of the resource, and its utilisation and allocation across sectors;</li> <li>d) To respect the decisions taken by the NWIFCA over the management of the resource where agreement between sectors cannot be reached.</li> </ul>	<p>Agreed BMWG 19.11.15</p> <p>Agreed BMWG 19.11.15  Agreed BMWG 19.11.15  Agreed BMWG 19.11.15</p> <p>Agreed BMWG 18.01.16</p>
4.2	Ephemeral mussels will normally be made available for seed fishing under regulated authorisations.	Agreed BMWG 19.11.15
4.3	Some beds may be assessed as only partially ephemeral. In such cases only the percentage assessed as ephemeral will be allocated as seed with the remainder left to grow to size. The setting of a TAC may be necessary.	Agreed BMWG 18.01.16
4.4	If industry submits a proposal that is not consistent with the Plan, it may undertake its own HRA, or Shadow HRA, which must be submitted to NWIFCA for adopting. NWIFCA may request further information or may carry out its own HRA and will consult with NE for advice. NWIFCA will provide some guidance to industry on carrying out HRAs.	Agreed BMWG 19.11.15

## **Definitions**

1. Ephemeral mussels are mussels not expected to grow to 45mm because they are lost through storms, erosion, or predation. Some beds may be assessed as only partially ephemeral. In such cases only a percentage of the stock will be classed as ephemeral.
2. Habitats Regulations Assessment (HRA) - Legal requirement to assess impacts of fishing activities on EMS sites and features. Regulating Authority (eg NWIFCA) must carry out HRA with NE advice, and be able to conclude that the proposed fishery will not adversely affect the integrity of the site before permitting the fishery to go ahead.
3. Minimum spawning stock biomass (MSSB): The minimum biomass of mussels of breeding size (45mm length) which must be present in the EMS for fishing to be permitted.
4. Minimum bird feeding requirements The minimum biomass of mussels of varying sizes which must be present in the EMS in addition to the MSSB to provide bird food resources for the three key species - knot, oystercatcher and eiders.

(Both of these figures to be agreed following delivery of conservation advice from Natural England).

## **Access for Hand-gathering**

Where there are environmental or management concerns, access to and from the hand-gathering fishery will be via designated access and landing points, as specified in the table below. Additional access routes may be designated if needed, such as in the case where stocks are situated in new areas.

In consultation with other relevant bodies and the BMWG, the Authority shall consider the issues and potential problems relating to the use of each access point and agree any specific restrictions. Such restrictions should be observed as part of the conditions of any fishery opening.

The use of two-wheel drive vehicles other than tractors and ATVs to access the mussel beds shall be prohibited. Mussels may be transported from the beds by tractor, ATV or boat.

In the event of a medical or practical emergency the safest and/or most expeditious point of access or recovery should be used.

Where not already implicit (e.g. a public right of way) landowners' permission must be obtained to use access points and any conditions attached observed as part of the conditions of any authorisation.

The maximum size of boat used for accessing hand-gathered fishery will be 10m without written authorisation. Each boat must be equipped with a serviceable VHF radio, global positioning equipment, marine distress flares and an adequate anchor/anchor rope. No person shall use a boat to access mussel beds without having in their possession a valid boat endorsed Byelaw 3 permit, and a serviceable personal lifejacket at all times.



**Recommended Access and Landing Points for Hand-gathering Mussels in Morecambe Bay and Duddon Estuary**  
**Issues relating to Conservation Features subject to HRA**

	Location	Grid Ref	Bed Served	Interest	Constraints	Comments	Mitigation / Management
1	Sunken Car Park Fleetwood	SD 331482	Black, Perch, Kings Scar	Intertidal Sand with Shingle/Cobbles, Sand dunes	Recreational beach Built-up area Bird disturbance if heading south	Barrier on car park – council arrangements	Timing of access to avoid roosting birds if heading south
2	Battery Car Park, Morecambe	SD 421636	Heysham Flat	Intertidal sand & mud & skears		Used successfully small scale. Permit required from LCC.	Designated and marked route to skear avoiding <i>Sabellaria alveolata</i> reef
3	Bare Ayre	SD 455657		Intertidal sand & mud & skears		Permit required from LCC.	
4	Aldingham village			Sand, skears, pioneer saltmarsh & shingle	Social issues	Keep closed Privately owned foreshore by fishers??	
5	Roosebeck	SD 258678	Roosebeck / Foulney	Sand, skears, pioneer saltmarsh & shingle	Used previously. nesting birds on shingle. Saltmarsh.	Route past Foulney marked. generally good compliance by fishers	Renew markers past Foulney. Notices to show agreed routes. Monitor while terns nesting Preferred to Rampside
6	Rampside	SD 242664	Foulney	Sand, skears and saltmarsh			Not favoured by NE
7	Foulney Car Park	SD 233657	Foulney	Sand, skears and saltmarsh	Nesting birds, shingle and saltmarsh	Keep closed	'Access Closed' notice at entrance at Foulney car park

	<b>Duddon Estuary</b>						
8	Roanhead	SD 200756	Duddon Sands	Sand dune Natterjack toads Nature reserve	By-way on to sands to Askam. Danger of killing toads March – mid summer..	Issues in parking in car park – height barrier to be installed. Toning up – issues. Liaison with industry and LAs and NT.	Liaise with NT over tides to avoid in relation to toads. If necessary mark out designated route to avoid pools toads are utilising.
9	Askam	??? SD 208779 ??		Sand & cobble	Some social issues	Most utilities cross estuary here – H&S issues	

Key: Highlighted RED indicates use of Access Point likely to cause Significant Effect on Conservation Feature(s) and should be kept closed.

Highlighted AMBER indicates use Access Point runs risk of causing Likely Significant Effect and would require management to prevent damage to Conservation Feature(s).