#### NWIFCA-MB-EMS-UNDERSIZE MUSSEL HEYSHAM FLAT JULY 2020

There is a long history of management of hand-gathered seed mussel fisheries in Morecambe Bay and specifically on Heysham Flat skear. The NWIFCA (and its predecessor the NW&NWSFC) has carried out Habitats Regulations Assessments for this fishery each year it was opened since 2006. The most recent HRAs are available on the NWIFCA website: <u>https://www.nw-ifca.gov.uk/marine-protected-areas/hra/</u> These contain lengthy detail about the nature of the fisheries, the ephemerality of the stock, the conservation features for which the site is designated, their conservation status, the potential risks fishing activity could pose to the features, along with detail on potential impacts, vulnerability, and features' exposure to pressures. Finally the HRAs contain detail of the management (byelaws, and specific measures for each year depending on circumstances of the skear and the stock) to ensure no risk to the integrity of the European Site.

Considering the long history of this fishery there seems little point in producing a lengthy document which repeats the information contained in previous versions. The NWIFCA has taken the approach to summarise the factors that have changed for 2020 as previously done in 2018 and 2019, and carry out an Appropriate Assessment on these. This is provided in concise format below.

Please refer to the HRA for this seed mussel fishery carried out for 2017 for the most up-to-date detailed information on other factors that are not covered in this document: NWIFCA-MB-EMS-SEED MUSSEL HEYSHAM FLAT-11-07-17

## Management of Mussel Stock – NWIFCA

Certain conditions need to occur for the NWIFCA to authorise fishing of seed mussel, namely that the stock has been assessed as in imminent likelihood of being lost to the fishery through natural causes, and subsequently that a high proportion of it will not grow through to reach size (45mm); and that conditions pertain to fishing being possible without risk of damage to the cobble and boulder substrate conservation features. These include:

- settlement in high abundance and density, and;
- fast growing and high deposits of pseudofaeces (mussel mud), and;
- the mussel mud becoming very soft and loose and at risk of being washed out, taking the mussel with it;
- or dense settlement being heavily predated on by thousands of starfish.

The fishery is highly variable depending on the vagaries of the stock, and the changes in the dynamic environment of the North West coast and have to be assessed on a year by year basis.

#### 1. Proposed Hand-gathered Seed Mussel Fishery 2020

The NWIFCA proposes to allow the hand-gathering of seed mussel from Heysham Flat to NWIFCA Byelaw 3 permit holders. This will be done under authorisation in the NWIFCA byelaw 3. The current number of permit holders is 127 with a maximum number of 141. In reality from past fisheries it is known that a maximum number of around 40 permit holders will prosecute the fishery at any one time. It is also known from many previous calculations of biomass that when the skear holds dense mussel in this way there is around 6000 tonnes of mussel present, and that the fishery takes a maximum of 700 tonnes from it. Landings returns are mandatory under the byelaw.

There will be an exclusion zone marked out on the beach to protect healthy *Sabellaria alveolata* and this will be enforced by NWIFCA Enforcement Team. As agreed in previous years gathering will only be permitted during daylight hours, defined as one hour before sunrise and one hour after sunset, Monday to Friday inclusive. The fishery will open on 3<sup>rd</sup> August 2020 and run to the end of the year, though in reality it usually ceases once the resource begins to deplete naturally.

#### 2. Seed mussel stock and condition and extent of Sabellaria alveolata at Heysham Flat

Inspections of the stock on Heysham Flat have taken place on 12<sup>th</sup> March, 10<sup>th</sup> May, 9<sup>th</sup> June and 3rd July 2020. Figure 1 shows the location of the skears. Table 1 is a summary of the stock and condition of the Sabellaria alveolata from each of the inspections.



Figure 1 – Location of Heysham, Knott End, Little Out and Great Out Skear

Table 1 – Summary of Inspections carried out of Heysham Skears (order of skears heading seawards from Oakley Road - Heysham Flat skear, Knott End skear, Little Out skear, Great Out skear).

		Sabellaria alveolata condition and
Date	Mussel Stock Information	extent
	Heysham Flat Skear	Heysham Flat Skear
12 <sup>th</sup> March 2020	The extent of dense 2019 seed mussel had been scoured to bare cobble with dead mussel shell. This could be due to the seed mussel becoming very unstable in summer of 2019 as it had been seen to have started washing out in August. It could also be attributable to the severe winter storms, in particular storm Ciara and Dennis in February 2020. There was some evidence of a small 2020 mussel spat settlement.	The area to the north of the skear persisted from 2019. A new area mid channel north of Dallam Dyke to a drying bed had developed. There was also an area south of the skear that protruded to mid skear, landward side of Conger Rock.
	Heysham Flat Skear	Heysham Flat Skear
10 <sup>th</sup> May 2020	A minor level of mussel recruitment in comparison with previous years only over parts of the skear. Mainly on the upper skear and patchy. A central band across the skear was barren of mussel and down to bare cobble. There was also some hard-in larger mussel with spat mixed in towards the western end near to Dallam Dyke - this often persists when the rest of the skear is heavily scoured as occurred in 2019. Other areas were covered in old mussel shell. <b>Knott End Skear</b> There was substantially more mussel settlement on Knott End skear, mixed in with a significant amount of size mussel, some sitting proud and some hard in to the ground. There were expanses of this skear bare of mussel and down to cobble and pebble, which is the norm for the past few years at least. <b>Outer Skears</b>	Effort was concentrated on inspecting the honeycomb worm reef on the southern side and the northern area was not inspected. A significant observation was the recovery of the <i>Sabellaria alveolata</i> reef forms away from the main skear, with a vast expanse running south just off of the main skear. The outer edge of this area looked as if it was heavily eroded: presumably a winter settlement had built up colonies which were then hit by the earlier storms experienced along this coastline. Some of this degraded reef had mussel settlement on it. However there was an extensive area of healthy living reef continuing back towards the main skear (Fig. 2). Northeast of Conger Rock there were some isolated mounds of worm colonies. <b>Knott End Skear</b> Healthy colonies were found in the water off of the north edge of Knott End skear.
	Efforts made to wade across from the	
	western edge of Knott End Skear to the	
	Outer Skear were abandoned as the water was too deep. Looking across it appeared that the southern side of the Outer Skear was covered in sand.	
	Hevsham Flat Skear	Hevsham Flat Skear
9 <sup>th</sup> June 2020	An increase in mussel settlement since May although there were areas on skear devoid of 2020 mussel. Significant mussel higher up the skear to Conger rock, some areas have had significant algae growth but the seed	The majority of the Sabellaria alveolata was to the north and south of main skear apart from a wedge shaped area which protruded from the south to the middle of the skear.

	was still present. Between Conger rock and Dallam Dyke mussel was patchy and in large bands across the skear with areas of bare substrate. A large area on the south of the skear that had no 2020 mussel present. The 2020 mussel ranged from 4-5mm higher up the skear to 8-10mm lower down. Areas	The edges of the <i>Sabellaria alveolata</i> had a significant mussel settlement on it. <b>Knott End Skear</b> Not accessible on this tide.
	which had some 2019 mussel present, mixed in with seed. Knott End Skear	
	Hevsham Flat Skear	Hevsham Flat Skear
3rd July 2020	South westerly gales were blowing with driving rain and the skear beyond Conger Rock did not ebb off. Some areas could be seen rising above the water suggesting dense mussel, so there is no reason to think it may have gone from previous inspection. Phone / smart screen for camera malfunctioned with wet hands so limited photos taken. Seed mussel across the upper skear all the way down (Fig. 3). Initially hard in and at around 5 - 10mm. Mussel became more consistent the further down the skear, increasing in size to around 15-20mm. All the mussel was soft shelled, and on sandy rather than muddy substrate. <b>Knott End Skear</b> Not accessible on this tide.	Area of healthy Sabellaria in a wedge shape consistent with the June inspection and this area was tracked in order to provide co- ordinates for an exclusion zone for the fishery to protect this Sabellaria. There was no other Sabellaria witnessed on the area that was inspected on this tide. <b>Knott End Skear</b> Not accessible on this tide.



Fig. 2 - healthy honeycomb worm reef on south eastern edge of main skear 10th May 2020



Fig. 3 - dense mussel on upper reaches of main skear, Heysham Flat - 3rd July 2020



Fig. 4 - dense mussel on upper reaches of main skear, Heysham Flat - 3rd July 2020

#### 3. Assessment of cockle and mussel stocks in the Bay as a whole

The NWIFCA monitors cockle and mussel beds in Morecambe Bay regularly throughout the year and keeps an on-going record (with information from all sources) of the state of the stocks.

#### a) Latest Information on Mussel Stocks:

The majority of the mussel beds in Morecambe Bay currently hold an abundant stock of mussels. As in 2019 this year there has been a significant increase in the amount of size mussel within Morecambe Bay, some of which has reached greater than 60mm in shell length. The beds at Low Bottom and Foulney have had a mass settlement, while Foulney and 'islands' in the north of the Bay held size mussel from over-wintering stock - including Trailer Bank off the bottom end of Foulney, and beds in the Falklands area. Wyre End skear holds new recruits and a minor stock of 2019 mussel. Kings Scar and Rossall Scar beds also have significant 2020 recruitment.

A summary of the surveys and inspections carried out along with industry reports is provided in Table 2, showing the coverage and density of mussel.



Fig. 5 – Location of the historic mussel beds in Morecambe Bay

Table 2 – Summary of Dutch Wand surveys, industry reports and NWIFCA inspections in Morecambe Bay and Fleetwood

Date	Location	Skear	Survey Method	Tide Height (m)	Description	Size Class < 10mm	Size Class 10 - 30mm	Size Class > 30mm
14.01.20	Foulney	Foulney	Industry report	1.4	ID had spoken to B3 mussel gatherers. There is some tiny spat settlement on the skear in 'the bay' area. Not known about rest of skear.			
27.01.20	Heysham	Heysham Flat	Inspection	1.8	Transects walked across the skear after reported fuel spill. Tide did not ebb past Conger Rock, some areas of 2019 persists mixed in with dead shell. There is a large area of low lying <i>Sabellaria aveolata</i> inshore of Conger Rock from edge of skear to middle of skear.			
12.03.20	Heysham	Heysham Flat	Inspection	0.4	Skear down to bare cobble with only the occasional 2019 mussel. Some signs of 2020 spat in low densities. <i>Sabellaria alveolata</i> on north and south of the skear.			
13.03.20	North Morecambe Bay	Falklands	Inspection	0.7	Area not accessed, but ground visible and gull activity present. Areas that looked black appeared uncovered in channel between Falklands, Walney and Foulney			
13.03.20	North Morecambe Bay	South America	Inspection	0.7	New area has been exposed, 2020 mussel settlement, presents of <i>S. alveolata</i>			
14.03.20	Foulney	Foulney	Rapid Visual Assessment (% cover)	1.1	Much of skear covered in mussel. Bottom has been fished but still large mussel around. Good pin prick spat settlement			
14.03.20	Foulney	Foulney Island	Rapid Visual Assessment (% cover)	1.1	Whole of island covered in large mussel. Clean and loose. Good meat content/ Spat settled.			
8.4.20	North Morecambe Bay	South America	Industry report	0.2	Sporadic seed settlement and an abundance of starfish. Limited area covered.			

		Falklands	Industry report	0.2	To the south and west of the Falklands area, two areas of mussel named Trailer Bank and Small Island were visible. Both size mussel and spat settlements present on both, and an abundance of starfish. Mussel were hard in to the substrate and although beginning to build mud in some areas.			
6.5.20	Foulney	Foulney	Dutch Wand	0.7	Foulney and Foulney Island surveyed together as the area between has filled with mussel, resulting in an increased area from 2019. Spat has settled across most of the skear in high densities. Sizes of mussel (excluding spat) were between 15-67mm, with although predominantly between 50- 60mm in size, and as such over 3/4 of the mussel meets the 45mm MLS, areas that were predominantly undersize were on the higher areas of Foulney Skear. Starfish were observed along the bottom of Foulney Island. Estimates: area = 53.7ha, 6771 tonnes	Abundant	Abundant	Superabundant
7.5.20	Foulney	Walney Channel	Dutch Wand	0.5	Walney channel area reduced from 2019. Spat has settled in high densities across the eastern side of the area, no spat observed along the channel edge areas. Mussel (excluding spat) was between 40- 68mm, as such the majority of mussel is of size. No starfish were observed. Estimates: area = 18.41ha, 1623 tonnes	Common	Frequent	Abundant
7.5.20	North Morecambe Bay	Falklands	Industry report	0.5	Trailer Bank and Small Island areas surveyed. Mussel and spat have grown on and are putting down mussel mud. Starfish are still abundant in large numbers. Cobble areas were observed but were isolated between the larger areas of mussel. Trailer Bank was estimated at 26.53ha and small island at 16.89ha.			
8.5.20	North Morecambe Bay	Low Bottom	Inspection	0.5	Dense spat settlement across large area, sizes ranges 4-10mm. The upper reaches of the bed held older barnacled mussel.			

9.5.20	Heysham	Heysham Flat	Inspection	0.7	Patchy settlement on the main skear, larger mussel present towards Dallam Dyke, some areas of bare cobble present. Knott End skear held denser mussel settlement and a significant amount of size mussel. <i>Sabellaria alveolata</i> colonies present away from main skear.			
4.6.20	Duddon Estuary	Hardacre	Inspection	1.1	No mussel present, substrate mainly sandy with dead mussel shell, area of bare cobble visible at low water.			
4.6.20	Fleetwood	Black Scar	Inspection	1.1	Dense spat settlement 8-10mm in size, approximately 90% coverage on hard substrate. Small areas of 2019 mussel mixed in with spat.			
4.6.20	Fleetwood	Perch Scar	Inspection	1.1	Dense spat settlement 8-10mm in size, approximately 60-70% coverage on hard substrate. Small areas of 2019 mussel mixed in with spat.			
4.6.20	Fleetwood	Kings Scar	Inspection	1.1	Patchy spat settlement that had grown on to 5-15mm in size mixed in with 20-40mm mussel. Areas of bare cobble and <i>Sabellaria alveolata</i> , although the latter was covered in spat.			
4.6.20	Fleetwood	Rossall skear	Inspection	1.1	50% coverage of spat settlement with 20- 30mm 2019 mussel.			
7.6.20	North Morecambe Bay	South America	Inspection	1	Seed mussel settlement surveyed previously has grown on to 10mm. Mussel is on muddy sandy substrate with no bare areas. Cobble area present to the north where there is no mussel. Some patches of <i>Sabellaria alveolata</i> that are covered in mussel.			
8.6.20	Knott End	Wyre End	Inspection	1.1	Seed mussel settlement present across much of the main skear and a smaller channel edge area. Northern third of the main skear received no settlement. Larger mussel present across both areas with sizes ranging from 20-45mm, mussel and spat coverage ranged from 50-80%. Bare cobble area present on raised area of main skear, remnant <i>Sabellaria alveolata</i> deteriorated and covered in spat.	Abundant	Abundant	Abundant

9.6.20	Heysham	Heysham	Inspection	1.4	Further settlement of spat since last survey			
		Flat			in May although still bands of bare cobble			
					present. Some areas with 2019 mussel			
					mixed with spat. Sabellaria alveolata on the			
					main skear has been settled on by spat.			
03.07.20	Heysham	Heysham	Inspection	1.7	Much of upper skear with dense mussel	Superabundant	Superabundant	Common
		Flat			covering of increasing sizes as you go			
					down skear. Gales and tide didn't ebb off			
					much beyond Conger Rock. Sabellaria			
					alveolata on upper skear looking healthy			
					and relatively free of mussel cover.			

## b) Latest Information on Cockle Stocks.

All cockle beds within Morecambe Bay are closed between May and August under the seasonal closure to protect spat and juvenile stock. Figure 6 shows the location of the historic Morecambe Bay cockle beds. A number of cockle beds (Newbiggin, Flookburgh, Leven Sands and part of Pilling Sands) where opened in the 2019 season and remained open until the start of the closed season in 2020.

Cockle stocks from survey results:

Cockle Bed	Date of Survey	Area (ha)	Size Cockle (tonnes) <sup>1</sup>	Undersize Cockle (tonnes) <sup>2</sup>
Warton Sands	23 <sup>rd</sup> June 2020			
Main Area		271.2	175	~115
Warton Sands		14.6	105	~790
Dense Area				
Aldingham and Newbiggin	9 <sup>th</sup> July 2020	1351	~3200	~770
Pilling Sands	7 <sup>th</sup> July 2020	1576	~2400	~900
Middleton Sands	8 <sup>th</sup> July 2020	615	~300	~200
Flookburgh	22 <sup>nd</sup> July 2020	2398	~3300	~500
Leven Sands	23rd July 2020	1859	~3100	~700



Fig. 6 – Location of the historic cockle beds in Morecambe Bay

#### Conclusion:

There is a significant stock of mussel around Morecambe Bay and Fleetwood beds of varying and mixed size classes. There are also stocks of cockles of various densities and size ranges on most beds in the Bay.

In addition to the hand-gathering fishery at Heysham Flat where a low proportion of the ephemeral stock will be harvested, the NWIFCA has authorised a dredge fishery at Perch and Black Scars at Fleetwood, also due to the ephemeral nature of the mussel there. This fishery has been separately assessed. Hand gathering for size mussel occurs at low effort levels (maximum 20 on limited tides) on Foulney, Foulney Island and Walney Channel beds.

Other beds in North Morecambe Bay are of interest to industry but have not been authorised of yet. NWIFCA will monitor the stock and condition of the resources there and should a fishery be possible will assess these against current active fisheries.

This leaves large areas within the Bay holding an abundance of mussel and cockles of varying sizes undisturbed as food resource for SPA bird species.

# There is consequently no risk of adverse effect to SPA bird species that rely on mussels as a food resource, or to other species feeding in these areas.

## 4. rMCZ –Wyre / Lune

In May 2019 Defra designated the Tranche 3 MCZ (Marine Conservation Zones). One T3 site – Wyre Lune rMCZ lies within Morecambe Bay and is proposed for designation for the protection of smelt, which will have a recover General Management Approach. The Wyre discharges at Fleetwood / Knott End, and the Lune discharges between the Pilling and Middleton Sands cockle beds.

The seed mussel fishery lies north of the Lune Estuary with a distance of around 10km and in theory smelt could swim in the area of the skear when the tide covers it, and fish have been known to become entrained in the screens at the Heysham nuclear power station situated just south of the skear.

However there is no interaction between smelt and the hand-gathered intertidal fishery and therefore the rMCZ has been screened out of the assessment at this stage.

#### 5. Updated conservation advice for Morecambe Bay and Duddon Estuary SPA.

Grey plover, dunlin, sanderling and turnstone have a restore target for population due to declines in population exceeding regional and national trends.

#### 6. Biosecurity

Morecambe Bay is currently shellfish disease free and the Authority considers it a priority to maintain this status. The invasive non-native species (INNS) Chinese Mitten Crab (*Eriocheir sinensis*), Japweed (*Sargassum muticum*) and Leathery Sea-squirt (*Styela clava*) have previously been recorded within the Morecambe Bay EMS. In order to implement effective measures to prevent the introduction and / or spread of diseases or INNS the Authority has developed and published a Biosecurity Plan, detailing controls and conditions that will be applied to all commercial shellfish activities. The Biosecurity Plan seeks to ensure that consignments and/or the areas from which they come, are regularly and thoroughly checked for invasive non-native invasive species (INNS).

In addition in May 2018 there was a single report from the Walney Channel of a Chinese Mitten Crab. Since then there have been no further reports despite extensive surveys, publicity and requests to report findings.

Quarterly surveys are being carried out by the NWIFCA on the Foulney and Heysham Flat mussel beds in order to continue the time series of data on monitoring and surveillance for Chinese Mitten Crab in the Bay. No CMC have been found. (NB. Q2 CMC surveys were ot possible due to Coronovirus restrictions).

An Advice Notice has been produced for gatherers and buyers, and a Code of Practice for Seed Mussel has been distributed and published on our website. Fisheries regulators in areas where seed is known to be likely to be transported have also been notified.

## 7. Appropriate Assessment

The scope of the appropriate assessment was the following:

- Vehicular, trampling and fishing damage to:
- Sabellaria alveolata reefs
  - Vehicular/human disturbance to birds
  - Physical removal of seed mussel

# Appropriate Assessment Summary Table

Feature/Sub	Conservation	Potential pressure	Potential ecological	Level of exposure	Mitigation
feature(s)	Objective	(such as abrasion,	impacts of pressure	of feature to	measures
		disturbance)	exerted by the	pressure	
		exerted by gear	activity/activities on		
		type(s)	the feature (reference to		
			conservation objectives)		
Intertidal biogenic reef: including mussel and Sabellaria alveolata communities (Reefs)	Maintain or restore the extent, distribution structure or function of the feature.	Abrasion/disturbance of the substrate on the surface of the seabed	Abrasion/disturbance of the Sabellaria alveolata reef feature could damage the reef building capacity on the skear	As detailed in 7.1.1 NWIFCA-MB- EMS-SEED MUSSEL HEYSHAM FLAT-11-07-17	The live areas of Sabellaria alveolata will be protected from fishing and transiting by a defined exclusion zone shown in the authorisation to gather and marked out on the beach with poles painted with fluorescent paint.
		Litter	Litter could pose potential threat to wildlife, especially birds through ingestion or entanglement;	As detailed in 7.1.2 NWIFCA-MB- EMS-SEED MUSSEL HEYSHAM FLAT-11-07-17	Code of Conduct includes responsibility for littering. NWIFCA officers will work with gatherers, buyers and local authority to ensure littering does not affect the conservation features. NWIFCA keeps a swift response to any alerts to littering issues.
Intertidal biogenic reef: including mussel and Sabellaria alveolata communities (Reefs)	Maintain or restore the extent, distribution structure or function of the feature.	Removal of target species	Removal of target species could change the invertebrate community composition of the skear.	Target species is classed as ephemeral and likely to wash out by autumn and therefore no likelihood of change to community composition occurring than through natural events. It is therefore unlikely to have a significant effect on the extent, distribution, structure or function of the features. As detailed in 7.1.3 NWIFCA-MB- EMS-SEED MUSSEL HEYSHAM FLAT-11-07-17	NWIFCA Byelaw 3 that permits hand-gathering of mussel has reduced number of permits to maximum of 141. In reality the highest number of gatherers at any point will be around 40 persons. Previous fishery landings returns have shown that only a fraction of the seed mussel on the Heysham skears is removed by the fishery - expected maximum 700 tonnes from 2014, 2015 and 2016 returns, 503, 684 and 268 respectively)

Common eider,	Maintain or restore the	Removal of target species	Removal of food source / prey items has	The level of exposure depends on	NWIFCA Byelaw 3 that permits
Eurasian	population of each of the	(mussels)	the potential to affect condition,	time of year of fishery, availability of	hand-gathering of mussel has
oystercatcher, Red	qualifying features, and,		productivity and survival of species, as	alternative food resources, stock	reduced number of permits to
knot, Herring gull	the distribution of the		detailed in As detailed in 6.2.3 NWIFCA-	status and level of effort.	maximum of 141. In reality the
	qualifying features within		MB-EMS-SEED MUSSEL HEYSHAM		highest number of gatherers at
	the site		FLAT-11-07-17	There are large areas of mussel	any point will be around 40
			-	ground within the Bay that hold a	persons.
				further resource of both size and	F
				undersize mussel which knot and	Previous fishery landings returns
				ovstercatcher may utilise.	have shown that only a fraction of
					the seed mussel on the Hevsham
				Target species is classed as	skears is removed by the fishery
				ephemeral and likely to wash out by	- expected maximum 700 tonnes
				autumn and therefore no likelihood	from 2014, 2015 and 2016
				of change to bird food resource	returns, 503, 684 and 268
				occurring than through natural	respectively)
				events.	
				As detailed in 7.1.1 NWIFCA-MB-	
				EMS-SEED MUSSEL HEYSHAM	
				FLAT-11-07-17	
Common eider,	Maintain or restore the	Visual disturbance	Visual disturbance could impact on	Footprint of activity is limited and	Knott End skear has abundant
Eurasian	population of each of the		condition of birds feeding or loafing in the	impact likely to be minimal.	stock of seed and size mussel
oystercatcher, Red	qualifying features, and,		area, by causing unnecessary energy	Alternative feeding areas available.	and is not accessible due to
knot, Herring gull,	the distribution of the		expenditure if flushed and taking to flight.		Dallam Dyke and channels
shore feeding SPA	qualifying features within		For birds feeding near the affected	As detailed in 7.2.2 NWIFCA-MB-	around the main skear. This will
features that feed on	the site		areas it could also reduce	EMS-SEED MUSSEL HEYSHAM	provide an undisturbed area for
infaunal molluscs			feeding times, and increase competition if	FLAT-11-07-17	SPA bird feeding.
			birds are forced to concentrate into		
			reduced feeding areas.		Further, fishing times are
					restricted to daylight hours only
			6.2.3 NWIFCA-MB-EMS-SEED MUSSEL		Monday - Friday leaving times
			HEYSHAM FLAT-11-07-17		when the fished area will be
					undisturbed.
					NWIFCA Byelaw 3 that permits
					hand-gathering of mussel has
					reduced number of permits to
					maximum of 141. In reality the
					highest number of gatherers at
					any point will be around 40
					persons.
					Other beds that are not going to
					be fished - Wyre End, Low
					Bottom, South America and

				Falklands, Rossall, Neckings and Kings Scar at Fleetwood, all with alternative stocks of mussel.
Birds frequenting the intertidal area: little egret, ringed plover, European golden plover, Grey plover, Lapwing, Sanderling, Dunlin, Black-tailed godwit, Eurasian curlew, Common redshank, Ruddy turnstone, Common shelduck, Wigeon, Northern pintail, Gulls	Visual disturbance	Visual disturbance could impact on condition of birds feeding or loafing in the area, by causing unnecessary energy expenditure if flushed and taking to flight. For birds feeding near the affected areas it could also reduce feeding times, and increase competition if birds are forced to concentrate into reduced feeding areas. 6.2.3 NWIFCA-MB-EMS-SEED MUSSEL HEYSHAM FLAT-11-07-17	Footprint of activity is limited and impact likely to be minimal. Alternative feeding areas available. As detailed in 7.2.2 NWIFCA-MB- EMS-SEED MUSSEL HEYSHAM FLAT-11-07-17	<ul> <li>Knott End skear has abundant stock of seed and size mussel and is not accessible due to Dallam Dyke and channels around the main skear. This will provide an undisturbed area for SPA bird feeding.</li> <li>Further, fishing times are restricted to daylight hours only Monday – Friday leaving times when the fished area will be undisturbed.</li> <li>NWIFCA Byelaw 3 that permits hand-gathering of mussel has reduced number of permits to maximum of 141. In reality the highest number of gatherers at any point will be around 40 persons.</li> <li>Other beds that are not going to be fished - Wyre End, Low Bottom, South America and Falklands, Rossall, Neckings and Kings Scar at Fleetwood, all with alternative stocks of mussel.</li> </ul>

## 8. Conclusion

The natural condition of the stock being ephemeral, the availability of abundant mussel on other skears around the Bay, plus the management and mitigation measures incorporated into this fishery to protect the *Sabellaria alveloata* reef areas, and the use of an effective enforcement team of NWIFCA Officers allows the NWIFCA to conclude that the seed mussel hand-gathered fishery at Heysham Flat, Morecambe Bay between 3<sup>rd</sup> August to 31<sup>st</sup> December 2020 will have no adverse effect on the integrity of the European Site.

## 9. In Combination Assessment

#### i. Cockle Fisheries

All cockle beds are closed under NWIFCA Byelaw 3 until the 1<sup>st</sup> September 2020. Any cockle fishery will undergo a full HRA and will consider this fishery in the in-combination assessment before any fishery can go ahead taking into consideration bird food requirements and visual disturbance.

#### ii. Size Mussel Fisheries

Size mussel fisheries are open for hand-gathering by Byelaw 3 permit holders. Two areas within north Morecambe Bay have been fished for size mussel. They are Walney Channel side of Foulney and along the main skear at Foulney. Both of the fisheries are limited by the tide and can only be fished on spring tides for approximately 15 tides per month. The number of Byelaw 3 permit holders fishing these areas have been a combined maximum of 27 people with typical number being between 5 and 10 people, and on a tide a gatherer will typically remove between 500-1000kg of mussel. If permit holders are working on these skears they will not be on the Heysham skear at the same time.

# iii. Pressures and features assessed within the in combination assessment

#### Size mussel fishery - removal of target species (mussel) for oystercatcher, knot, common eider, herring gull

NWIFCA considers the in-combination effects of removal of target species (mussel) will have no risk of adverse effect on the integrity or conservation status of the site due to the following reasons:-

- the fishery is only authorised due to the target species being classed as ephemeral and likely to wash out by autumn and therefore no likelihood of change to bird food resource occurring than through natural events;
- removal from size mussel fishery is minimal compared overall mussel biomass;
- fishing of undersize mussel has the potential to increase biomass by thinning the mussel out and making it more stable;
- large areas of Morecambe Bay hold areas of unfished mussels that contain mixed size classes and are uncovered on most tides;
- both fisheries will be prosecuted by some of the same permit holders and therefore when one fishery is being fished it is likely to decrease the removal from the other fishery;
- both fisheries are restricted by tides leaving unfished tides;
- both fisheries have areas that will remain unfished and can be utilised by the birds;
- eiders feed in the subtidal areas, fishing only occurs when the mussel beds are uncovered in intertidal areas;
- there are alternative bird food resources of cockles on most of the cockle beds within the site, although current stock levels are unknown until a full suite of surveys have been completed. These beds are currently closed to fishing and unlikely to open at the end of the closed season on 1<sup>st</sup> September 2019.

#### Size mussel fishery - Visual Disturbance for all SPA features

NWIFCA considers the in-combination effects of visual disturbance will have no risk of adverse effect on the integrity or conservation status of the site due to the following reasons:

- low level of effort on size mussel fisheries and all fishing effort on the seed mussel fishery will be concentrated in a small area;
- large areas of Morecambe Bay hold areas of unfished mussels that contain mixed size classes and are available on most size tides;
- both fisheries are restricted by tides leaving unfished tides where there is no fishing disturbance;
- both fisheries have areas that will remain unfished and can be utilised by the birds;
- disturbance to none intertidal species, wildfowl, divers and terns unlikely and any disturbance will be minimal;
- many of the designated species are overwintering birds with the population size within the site increasing in the colder months, the fishing usually decreases and ceases as the mussel is typically lost in the autumn weather;
- many of the wader species utilise the areas not being fished; dunlin, black tailed godwit, bar tailed godwits, curlew and redshank mainly target mudflats as their feeding grounds. Oystercatcher, ringed plover, grey plover, knot, sanderling and turnstone feed on a variety of substrates in the intertidal area as well as the fished areas. Golden plover are only likely to feed in the intertidal areas in cold weather conditions.
- iv. Pressures and features assessed within the in combination assessment

# Considering Perch Scar and Black Scar dredge mussel fishery

Two companies have applied for permits to dredge seed mussel from the Fleetwood open beds. As of 14<sup>th</sup> July one company has removed 100 tonnes and has indicated that it does not intend on returning. The other company has not begun fishing yet.

#### Removal of target species (mussel) for oystercatcher, knot, common eider, herring gull

NWIFCA only authorises the removal of seed mussel when the resource is under particular natural conditions ie. that it is showing clear signs of being highly likely to be lost to the fishery either through erosion and scouring / wash out, or through high levels of starfish predation. In such cases the resource is naturally removed from the stock available as bird prey, and so in effect the fishery does not affect what would have been available had no fishing been authorised.

The stocks at both the Perch and Black Scar fishery and the Heysham Flat hand-gathered fishery are in this condition in July 2020.

#### Visual Disturbance for all SPA features

Dredge fishing for seed mussel occurs over high water, avoiding the spring tides due to the higher speed currents. Depending on accessibility of the fishery hand-gathering mainly occurs over spring tides. They are therefore operating on different tides and the areas fished would are not uncovered and available to wading birds. Common eider might target the resource on these tides in the area, and there are alternative undisturbed mussel beds directly opposite at Wyre End and around the other side of the sandbanks at Kings Scar and Rossall Scar. There are also the other areas of Knott End skear, Heysham Flat, and the beds in the north of the Bay which are closer to the eider colonies.

# Conclusion - in considering the in-combination effects of the Perch and Black Scar dredge fishery against the proposed hand-gathered fishery at Heysham Flat, the NWIFCA concludes there is no risk of adverse effect on the integrity of the Morecambe Bay SPA condition or features.

## 9. Cold Weather Conditions

NWIFCA has a policy of reviewing any intertidal open cockle and mussel fishery during prolonged periods of cold weather to ensure bird feeding and roosting is not detrimentally disturbed. The NWIFCA Technical Science and Byelaws Sub-Committee (TSB) approved the following on 6<sup>th</sup> February 2018:

"In future during winter fisheries, if cold weather is predicted to be below zero for more than 12 hours a day for 5 consecutive days then an assessment of the risk to SPA features would be completed taking into account the fishing activity, and a decision made on whether to close any individual fisheries."

#### Annex A - Authorisation for Hand-gathering of Seed Mussel Heysham Flat 2020

![](_page_20_Picture_1.jpeg)

AUTHORISATION TO FISH UNDERSIZED MUSSELS FROM

HEYSHAM FLAT SKEAR 2020

#### All Current NWIFCA Byelaw 3 Permit Holders

**DATE XXX 2020** 

With effect from: 03/08/2020

Expiry Date: 31/12/2020

All current Byelaw 3 permit holders are hereby authorised, under Byelaw 3, paragraph 6 (Minimum Sizes) to fish undersized mussels from Heysham Flat, in the **permitted fishing and transiting area** as *defined in paragraph 2* and illustrated in Annex A, and are responsible for complying with the conditions given below at paragraph 1.

#### 1. Conditions of Authorisation

This authorisation is issued subject to the following conditions.

- (a) It is only valid for the period from 03/08/2020 to 31/12/2020, excluding Bank Holiday Monday 31st August 2020.
- (b) That the mussels shall only be gathered by hand or with a rake.
- (c) That fishing shall take place only from Monday to Friday inclusive, during daylight hours, defined as one hour before sunrise and one hour after sunset.
- (d) The NWIFCA will close the fishery during periods of prolonged cold weather.
- (e) The authorisation is only valid for current Byelaw 3 permit holders. It does not allow any other person to take or remove undersized mussels.
- (f) This authorisation does not exonerate the holder from other sea fisheries legislation, nor does it prejudice any other consents the holder may need to obtain nor does it override or provide permission to go over private land.
- (g) Any fishing taking place under this authorisation shall be carried out in accordance with the Authority's Code of Conduct for Intertidal Shellfisheries.
- (h) Gathering of mussel and transit by ATVs (quad bikes) or tractors in the excluded area defined in paragraph 2 and illustrated in Annex A is prohibited.

#### 2. Definition of Permitted Fishing and Transiting Area

Part of that area within Morecambe Bay known as Heysham Flat Skear as illustrated on the map attached at Annex A, *excluding* the area bound by the following co-ordinates:

Point	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees, decimal minutes)	Longitude (degrees, decimal minutes)
Α	54.055396	-2.912977	54° 3.323'' N	2° 54.778'' W
В	54.056080	-2.911510	54° 3.364'' N	2° 54.69'' W
С	54.057690	-2.908111	54° 3.461'' N	2° 54.486'' W
D	54.056029	-2.907592	54° 3.361'' N	2° 54.455'' W

#### 3. Advisory Notes

- (a) When fishing, or when operating vehicles in the vicinity of Heysham Flat Skear, take care to avoid live colonies of the Honeycomb Worm. These are a protected species, and damaging them could lead to a fine of up to £20,000, revoking of authorisations and **closure of the fishery**.
- (b) NWIFCA officers have the power to withdraw authorisations at any point should the need arise, and will consult with Natural England throughout the duration of the fishery. Should there be concerns that losses of mussel around Morecambe Bay is occurring which will impact on the available bird feeding resource, the NWIFCA will withdraw authorisations and close the fishery.
- (c) Avoid driving vehicles over the seed mussels as far as possible. Using a single access route will avoid unnecessary damage to the mussel stock.

This authorisation may be revoked by the NWIFCA at any time and any breach of the terms or conditions of this authorisation shall make it null and void.

By Order of the Authority

STEPHEN ATKINS Chief Executive Annex A - Heysham Flat Seed Mussel 2020 - Protection of Sabellaria alveolata on the fringes of the skear

Gathering of mussel and transit by ATVs (quad bikes) or tractors in the excluded area is prohibited

![](_page_22_Figure_2.jpeg)

Date: 30 July 2020 Our ref: 323834 Your ref: NWIFCA Heysham Flat Seed Mussel July 2020

North Western Inshore Fisheries and Conservation Authority (NWIFCA) Preston Street Carnforth Lancashire LA5 9BY

BY EMAIL ONLY

![](_page_23_Picture_4.jpeg)

Hornbeam House Crewe Business Park Electra Way Crewe Cheshire CW1 6GJ

T 0300 060 3900

Dear Mandy Knott,

#### NWIFCA Heysham Flat Seed Mussel July 2020 Heysham Flat, Morecambe Bay

Thank you for your consultation dated 23 July 2020 and the updated HRA received on 23 July 2020. The following constitutes Natural England's formal statutory response.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

#### THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010 (AS AMENDED)

The application site is within a European designated site (also commonly referred to as Natura 2000 sites), and therefore has the potential to affect its interest features. European sites are afforded protection under the Conservation of Habitats and Species Regulations 2010, as amended (the 'Habitats Regulations'). The application site is within the Morecambe Bay Special Protection Area (SPA), Morecambe Bay and Duddon Estuary potential SPA (pSPA) and the Morecambe Bay Special Area of Conservation (SAC) which are European sites. The site is also listed as Morecambe Bay Ramsar site<sup>2</sup> and also notified at a national level as Morecambe Bay Site of Special Scientific Interest (SSSI). Please see the subsequent sections of this letter for our advice relating to SSSI features.

In considering the European site interest, Natural England advises that you, as a competent authority under the provisions of the Habitats Regulations, should have regard for any potential impacts that a plan or project may have<sup>2</sup>.

<sup>1</sup>Listed or proposed Wetlands of International Importance under the Ramsar Convention (Ramsar) sites are protected as matter of Government policy. Paragraph 118 of the National Planning Policy Framework applies the same protection measures as those in place for European sites.

<sup>2</sup>Requirements are set out within Regulations 61 and 62 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect a European site. The steps and tests set out within Regulations 61 and 62 are commonly referred to as the 'Habitats Regulations Assessment' process.

Page 1 of 2

#### No objection

Natural England notes that your authority, as competent authority under the provisions of the Habitats Regulations, has undertaken an Appropriate Assessment of the proposal, in accordance with Regulation 61 of the Regulations. Natural England is a statutory consultee on the Appropriate Assessment stage of the Habitats Regulations Assessment process.

Your appropriate assessment concludes that your authority is able to ascertain that the proposal will not result in adverse effects on the integrity of any of the sites in question. Having considered the assessment, and the measures proposed to mitigate for all identified adverse effects that could potentially occur as a result of the proposal, including the proposed exclusion zone, Natural England advises that we concur with the assessment conclusions, providing that all mitigation measures are appropriately secured in any permission given.

#### WILDLIFE AND COUNTRYSIDE ACT 1981 (AS AMENDED)

#### No objection – no conditions requested

This application is within Morecambe Bay Site of Special Scientific Interest (SSSI). Natural England is satisfied that the proposed development being carried out in strict accordance with the details of the application, as submitted, will not damage or destroy the interest features for which the site has been notified. We therefore advise your authority that this SSSI does not represent a constraint in determining this application. Should the details of this application change, Natural England draws your attention to Section 28(I) of the *Wildlife and Countryside Act 1981* (as amended), requiring your authority to reconsult Natural England.

Yours sincerely,

R: Morner

Rosie Horner Cheshire to Lancashire Area Team E-mail: Rosie.Horner@naturalengland.org.uk Telephone: 07887290872

<sup>1</sup>Listed or proposed Wetlands of International Importance under the Ramsar Convention (Ramsar) sites are protected as matter of Government policy. Paragraph 118 of the National Planning Policy Framework applies the same protection measures as those in place for European sites.

<sup>2</sup>Requirements are set out within Regulations 61 and 62 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect a European site. The steps and tests set out within Regulations 61 and 62 are commonly referred to as the 'Habitats Regulations Assessment' process.

Page 2 of 2