

NWIFCA Quarterly Meeting

13th March 2015: 11.00 a.m.

AGENDA
ITEM NO.

11

SCIENCE REPORT 22ND NOVEMBER 2014 - 27TH FEBRUARY 2015

MORECAMBE BAY HYBRID FISHERY ORDER

A special meeting was held on 16th December 2014 to decide upon the direction the NWIFCA takes over management of cockle and mussel fisheries in Morecambe Bay and the Duddon Estuary. The full record of this meeting is provided in the minutes. The following motion was voted on and approved and shall be taken to the next full Authority meeting for ratification:

‘Future management of shellfisheries in Morecambe Bay and NW District be progressed under byelaw’.

BIVALVE MOLLUSC WORKING GROUP

Following the issues posed by the management of the mussel fisheries in Morecambe Bay in 2014 and the move away from the Fishery Order to management of cockle and mussel fisheries under byelaw, the Senior Scientist proposed the setting up of a Working Group to bring together the different sectors, including those of industry and conservation and environmental concerns, to provide a forum for discussion and agreement. This kind of forum has been in place in previous years under NW&NWSFC.

Further discussion between Officers developed the proposal into a District-wide Bivalve Mollusc Working Group, with the ultimate aim of developing Management Plans for all of the District’s cockle and mussel fisheries, with input and ownership of the differing sectors.

The initial priority will be to focus on the Morecambe Bay mussel resource as a matter of urgency and to use the Management Plan drafted for the Fishery Order application as a basis for getting this work off the ground.

Terms of Reference have been drawn up and discussed and approved at TSB. A notice with a link to the TOR has been posted on the website. A call has been sent out for representatives to be decided by the sectors to be notified to the Senior Scientist who will then convene the first meeting.

<http://www.nw-ifca.gov.uk/contents/images/Bivalve%20Mollusc%20Working%20Group%20TOR%2011%2002%2015.pdf>

Vision:

To foster good relations between the various sectors with an interest in bivalve mollusc shellfish in the NWIFCA District, and to encourage co-existence and agreed sustainable management regimes between all sectors.

Objectives:

- 1) To ensure bivalve mollusc resources are managed sustainably;

- 2) To balance the social and economic benefits of fisheries activity against the statutory duty to protect designated marine habitats and species from such activities;
- 3) To balance the interests of all stakeholders with an interest in those fisheries;
- 4) To annually agree a plan for fair access to and sustainable exploitation of those resources by all sectors;
- 5) To support the decision making of the NWIFCA TSB sub-committee, by providing information and recommendations on the management of mussel and cockle fisheries in the NWIFCA District.

CONSULTATIONS MEMBERS MAY WISH TO RESPOND TO

This quarter has seen a plethora of consultation releases and demands on Officer time. There are currently five consultations underway that may be of interest to Members, who may wish to respond in their own right. Officers will be responding on behalf of the NWIFCA.

a) MCZ CONSULTATION TRANCHE TWO SITES

Defra announced the start of a three month consultation for Marine Conservation Zone T2 Sites on 30th January, which will run until 24th April 2015. 23 proposed MCZs have been taken forward for consultation in the second tranche. It is proposed to add new features for conservation in 10 of the first tranche MCZs. Sites omitted for consultation at this stage will potentially be taken through during Tranche 3. Officers have been engaged with Defra, MMO, Cefas and Natural England throughout the process leading up to T2 consultation, and members will recall our facilitating meetings between Defra, NE and the MMO with stakeholders in 2014.

For the NWIFCA District, there are two T2 sites: Allonby Bay and West of Walney (co-located with the windfarm and cross-border with the MMO jurisdiction) up for consultation. A third site, Mud Hole which is outside of the NWIFCA District (over 11 nm offshore) but of importance to Cumbrian fisher stakeholders as prime nephrops ground, has not been put through for consultation in this Tranche.

There is a proposal for one additional feature to the Fylde MCZ, designated in T1 in December 2013. This is subtidal mud. This is basically the result of further survey and analysis of particle size providing evidence that some areas designated for subtidal sand are actually subtidal mud. There are no additional costs attributable to the inclusion of this feature and the general management approach is still 'maintain at favourable condition'.

The full consultation, details about why some sites have been taken through and others not and relevant documents can be found at:

<https://consult.defra.gov.uk/marine/tranche2mczs>

b) MARINE STRATEGY FRAMEWORK DIRECTIVE CONSULTATION (MSFD)

Running concurrently with the MCZ consultation (30 January to 24 April 2015), Defra, the Northern Ireland Executive, the Scottish government and the Welsh government are seeking views on the UK's proposed programme of measures to maintain or achieve Good Environmental Status (GES) in their seas by 2020.

The consultation covers programme of measures proposals for each of the 11 Marine Strategy Framework Directive (MSFD) descriptors. These relate to biological diversity, non-indigenous species, commercially exploited fish and shellfish, food webs, human-induced eutrophication, seafloor integrity, hydrographical conditions, contaminants, contaminants in fish and other seafood, marine litter and introduction of energy (including underwater noise).

The target audiences are groups or individuals who use the sea for whatever purpose, or have an interest in it, business users of the sea, national and local interest groups, and governments in other EU member states.

The MSFD requires that member states put in place measures to achieve or maintain GES in their seas by 2020. GES involves protecting the marine environment, preventing its deterioration and restoring it where practical, while using marine resources sustainably.

The full consultation and relevant documents can be found at:

<https://consult.defra.gov.uk/marine/msfd-programme-of-measures>

c) RIVER BASIN MANAGEMENT PLAN CONSULTATION

The Environment Agency is running a consultation on the draft updates to the river basin management plans closing on 10th April 2015.

Estuaries and Coastal waters constitute a significant part of England's water environment. They support numerous activities and present a range of environmental challenges and economic interests that straddle the land-sea interface. These waters provide important trade routes and natural resources, are home to some unique fauna and flora, support key industries and are becoming increasingly significant areas for economic development and growth. Important socioeconomic industries such as shell and fin fisheries and the recreation and tourism industries rely upon the good quality of estuarine and coastal waters. These complex inter-relationships are amplified by the large size of the water bodies.

The Water Framework Directive (WFD) provides a mechanism for managing the water environment throughout Europe, including estuarine and coastal waters. At its core is an ecosystem approach that requires measures to be taken to encourage the sustainable use of water and to protect and improve inland surface waters, groundwater and estuarine and coastal waters with the aim of achieving good status.

Under the WFD, a management plan must be developed for each river basin district (including estuaries and coasts). These river basin management plans (RBMPs) and the objectives and measures contained within them, must be reviewed every six years. The next set of updated plans is due in December 2015; a consultation on these updated plans can be found on the consultation web pages on the GOV.UK website

www.gov.uk/government/consultations/update-to-the-draft-river-basin-management-plans

d) MORECAMBE BAY AND DUDDON ESTUARY SPA EXTENSION INFORMAL CONSULTATION

Natural England has prepared a Technical Information Note (TIN) to help inform stakeholders about the development of recommendations to combine and extend Morecambe Bay and Duddon Estuary Special Protection Areas (SPA) to create one SPA. It can be downloaded from: <http://publications.naturalengland.org.uk/publication/5745195152834560>

Morecambe Bay and Duddon Estuary were classified as SPAs in October 1996 and August 1998 respectively, as both sites support internationally important populations of regularly occurring breeding seabirds and non-breeding waterbirds. The UK Government has ongoing obligations under the Birds Directive, the legislation that requires SPA classification, to identify and classify SPAs. As part of work to identify potential marine SPAs in UK waters, Natural England is compiling proposals for Defra to consider as part of the commitment to improving seabird protection within the SPA network. Key elements of these proposals are to:

- Combine the two existing SPAs into one site to extend protection to little tern *Sternula albifrons* breeding colony in the Duddon Estuary.
- Extend the combined SPA in order to protect foraging areas of Sandwich terns *Sterna sandvicensis* and little terns.

NE are developing recommendations to combine and extend existing sites to create one SPA that is ecologically coherent and delivers protection to the appropriate species. The possible extension to the sites extends north along the Cumbria coast to Ravenglass and seawards to approximately 7 km at its widest point.

Natural England is responsible for recommending potential SPAs in English waters out to 12 nautical miles to Defra for classification. Once they have developed initial site recommendations for a draft SPA, and held informal discussions with stakeholders, they will submit proposals (approved by their Executive Board) as formal advice to Defra.

The informal discussions are intended to ensure that as many stakeholders as possible are aware of their proposal and to give them an opportunity to provide information to inform the recommendations. Towards the end of 2015, subject to Ministerial approval, the formal public consultation processes will commence which will last twelve weeks. This period is an opportunity for stakeholders to formally submit views on the proposals. After the consultation they will consider the responses and submit their final recommendations to Defra. It is Defra's intention to have made a decision regarding the classification of the site by December 2016.

e) **CROWN ESTATE TIDAL ENERGY STAKEHOLDER ENGAGEMENT**

To date, Crown Estate have been active in the development of new opportunities for wind, wave and tidal current energy projects in direct response to industry demand, and in alignment with government ambitions for growth in these technology sectors.

Until recently, industry ambition to progress tidal range projects has been limited, in part due to limited demonstrable evidence of the technology and its environmental impacts, and the absence of clear government policy to underpin the economic case for this emerging technology.

As part of their work to determine industry appetite to explore new markets, an exercise was concluded in early 2014 to establish the market interest in tidal range energy schemes across the UK. As a consequence they have decided to respond to market interest by running a leasing process to offer potential developers the opportunity to secure seabed rights for tidal range projects in England and Wales, excluding the inner Severn Estuary, to facilitate further exploration and development of such opportunities in the UK.

The Crown Estate's leasing process will follow this timetable:

- Pre-qualifications were sought in August 2014 with Invitations to Tender issued in December.
- Bid submissions are due at the end of March 2015, following which stakeholder engagement will be undertaken.
- Subject to Habitats Regulations Appraisal (HRA), the process is due to be completed by early summer 2015.

For stakeholder organisations that have not yet registered with them, registration forms are available:

<http://www.thecrownestate.co.uk/energy-and-infrastructure/wave-and-tidal/tidal-range/>

The IFCAs are listed as statutory consultees.

ASSESSMENT OF FISHING ACTIVITIES IN EUROPEAN MARINE SITES

Feedback from Natural England for the “Light” TLSE assessments (where an activity is not currently occurring in an EMS) has been received and incorporated into these documents. Completed assessments have been re submitted to Natural England for their final advice.

Work has continued on a number of assessments. Appropriate Assessments for Lune Deep SAC (potting and netting) are at a final draft stage. Tests of Likely Significant Effect for netting, demersal longlines, shrimp push nets and beach seine/ring nets in the Solway Firth and Dee Estuary are underway and await further activity data collection by officers. Work has also begun on assessing these activities in Morecambe Bay.

Officers continue to contribute to the process nationally through submission of quarterly progress reporting and monthly dial-in meetings. Officers also attended a national HRA workshop at the Defra offices in London. This workshop allowed the IFCAs, MMO, EA and Natural England to share their work so far and discuss future plans. One of the major conclusions of discussions was that, due to differing local characteristics of fisheries, IFCAs may produce assessments with differing formats which is acceptable as long the information contained within them is clear.

EU BASS MANAGEMENT MEASURES – UPDATE

Members are likely to be aware that the status and future management of Bass has been reported in the press recently. The International Commission for the Exploration of the Seas (ICES) have identified Bass as being particularly vulnerable to over-fishing due to:

- Slow growth and maturity at around 31-35cm in males and 40-45cm in females
- Aggregating behaviour
- Vulnerability to low sea water temperatures – especially in the northern limits of their range

Current ICES advice is that Bass stocks are suffering from a rapid decline in biomass and that the “current spawning stock biomass is declining to lowest historically observed level” due to:

- Increasing fishing mortality – currently 4 times what the stock can sustain
- Declining recruitment into the stock

Historic trends in the stock:

- Biomass increased through the 1990s to the mid-2000s
- A decline commenced in the 2000s
- The cold winters since 2008 have caused further concern around the juvenile stock

Negotiations on the management of Bass stocks have been on-going at EU level since 2012. The UK unsuccessfully attempted to secure a one-fish bag limit in the recreational sector at the December 2014 EU Agriculture and Fisheries Council Meeting. At the same meeting no agreement on addressing the declining Bass stock levels was reached other than a commitment to work with member states to reduce fishing pressure at the start of 2015.

Following on from the above the UK requested that the EU commission take action under article 12 of regulation of the Cod recovery regulation 1380/2013. This article gives provision for emergency measures, when justified, in response to a serious biological threat to a species. This is done in response to a request from a member state and is time limited to 6 months.

The UK made such a request in writing on the 19th December by closing Irish Sea (area VIIIa, IFCA District) as well as Celtic sea, Channel and southern North sea to:

- Pelagic trawls
- Mid water trawls

This ban will be in place until the 30th April 2015 to protect the Bass breeding season. On the 26th January 2015 the commission announced that this ban was being replicated across all member states. In addition the commission is making “a renewed and urgent effort” in order to bring further measures into place, inclusive of:

- A 3 fish per day bag limit
- An increase in the MLS to 42cm
- Limits on fisheries other than pelagic fisheries

Since the report was written, a possible IFCA position statement drafted by Southern IFCA, which all IFCA are invited to agree as a general common policy on Bass supported by all IFCA, is attached at Annex A.

NORTH WEST COAST CONNECTIONS - NATIONAL GRID PROPOSAL FOR A TUNNEL UNDER MORECAMBE BAY

A further meeting was held of the Stakeholder Reference Group to discuss the next stages following the 12 week public consultation over the preferred route options last year. The meeting consisted of an array of representatives, mainly from local authority planning departments, and a speaker from the Planning Inspectorate.

The NWCC team sent out over 136,000 newsletters to those within a variable 1km buffer zone around the preferred route corridors, held 33 events, ran a consultation phone line and email hotdesk, and gained substantial press and media coverage of the consultation. 1772 people attended the events and 1245 responses were submitted, which were mainly of a high quality, very thorough and relating to specific questions. These are in the process of being analysed and a full report will be produced. All the responses and analyses will be posted on NWCC project website for the general public to see.

There were some common themes running through the responses: those affecting the NWIFCA and fisheries concerns focused around a) the ‘Offshore’ option and why it had been ‘parked’ in favour of the onshore route; and b) questions around the tunnel under Morecambe Bay and what else it could be utilised for (eg. road link etc); c) Duddon Estuary ‘pinch points’.

- a) The ‘Offshore’ Option was an original option of taking the cabling out into the Irish Sea from Moorside and bringing it around to Heysham, Fleetwood or Blackpool. Respondents generally considered that this would be a more suitable option than running it round sensitive terrestrial areas, and causing ‘visual impact’ to and from the Lake District National Park. Some cited that the costs of mitigating against the terrestrial impacts may outweigh the high costs of running it out to sea. The Senior Scientist holds this up to be a very clear justification for why it has been essential that NWIFCA has been fully engaged in dialogue with NWCC since the early stages, and that this must continue. There is little understanding of the potential impacts on the marine environment from the general public and an ‘out of sight out of mind’ mentality. There are few other, if any, advocates for ensuring marine environmental and fisheries interests are heard. However the NWCC team reported that once the reasoning for why this option had been parked had been explained to attendees at the events, that they were then generally accepting of the logistical and cost restrictions. It should be noted that the main reasons for not taking this option forward are not environmental or fisheries related, but

operational and functionally feasible in relation to other infrastructure already in place in the Irish Sea;

- b) There was a general feeling of excitement and interest in the tunnel under Morecambe Bay proposal – some of which was fuelled by media interest and suggestions for additional uses for the tunnel. The meeting asked that NWCC make it clear to the general public what the limitations of this are and to create a realism around it. The Senior Scientist once again requested an early meeting with fishermen in relation to the size and location of the ‘islets’ – ventilation shafts - putting forward the argument that whereas the terrestrial aspects of the project could well be represented by many of those present in the room, only fishers active in Morecambe Bay could fully input into potential impacts of the shafts on their activities. After discussion it was agreed that the NWCC would open that dialogue in the next few weeks and that the Senior Scientist would act to facilitate invitations to a meeting. In the meantime she will also stay involved in the sub-group on the ecological impacts of the tunnel;
- c) Overall there was much disquiet over the proposals for the routing round the Duddon Estuary and NWCC will be reviewing the preferred option. This may have implications for fisheries interests if a proposal to position pylons in the sands comes back to the table. The Senior Scientist has signed up to a sub-group to ensure engagement as discussions proceed, and will ensure the Authority is kept informed of developments.

The Senior Scientist facilitated a meeting held by National Grid with fishermen on 16th February 2015 to explain the project plans and allow stakeholders to raise any associated concerns with the design, size and positioning of the tunnel ventilation shafts. The current preferred option involves cables being housed in a 22km long tunnel (5m diameter) located 25m-35m below the seabed running from Roosecote to Heysham. Currently it is hoped that only one ventilation shaft will be required, located in the middle of the tunnel and raised 9m above the highest tide. Health and safety requirements may dictate that two additional escape shafts are required, however these would be only be present for the construction phase and then removed. Seismic and bathymetric surveys will be carried out in summer 2015 to ascertain the rock type present in the seabed at the proposed tunnel and ventilation shaft locations. Fishermen will continue to be involved in future discussions with National Grid through Fishermen’s Association meetings and spokespersons. Members will be kept informed and Officers will continue to work with the NWCC team to ensure fishers’ voices and concerns are heard.

The Senior Scientist also passed on contact information to the seed dredge fishery so they had the opportunity to discuss any concerns they had prior to survey work starting.

WEST CUMBRIA TIDAL LAGOON

Officers met with Roger Woods of Tidal Lagoon Power to discuss proposals to construct a tidal lagoon off the West Coast of Cumbria for the generation of electricity. The proposed lagoon would run out into the Irish Sea, starting at Silloth or Dubmill Point and ending just north of Workington. The lagoon wall will be made of an impermeable breakwater with water passing through banks of turbines in breaks in the wall as the tide goes in and out. The developer is currently in the early stages of planning and development and is carrying out initial surveys and a feasibility study. They hope to submit a scoping report (which details what will be included in an Environmental Impact Assessment) in summer 2015. There are many issues (such as vessel transit, fisheries access, impact on fish stocks and sedimentology) which will need to be addressed in this application.

Mr. Woods showed Officers a video which gave an outline of the Swansea Bay tidal lagoon project (also developed by Tidal Lagoon Power). This can be found at <http://www.tidallagoonswanseabay.com/film.aspx> . Although this lagoon is much smaller than and in a very different setting (enclosed and urban) to the proposed West Cumbria lagoon it shows some of the technology and environmental enhancements that could be used in West Cumbria. The planning

application for the Swansea Bay lagoon has been submitted to the Planning Inspectorate and a final decision from the secretary of state is expected in June 2015. These types of tidal lagoon projects must go through the National Infrastructure Planning process as they are regarded as nationally significant infrastructure projects (NSIPs).

Officers welcomed Tidal Lagoon Power's early consultation and have requested to be involved in future meetings with other statutory bodies such as Natural England and MMO. The developer has also made contact with other stakeholders such as the local ports and Officers have strongly recommended discussing plans with fishermen at this early stage. Officers have made contact with Devon and Severn IFCA, who have similar proposals in their District, to share information and concerns. The very large size and reach of this project and its potential impacts means that Officers will continue to seek to engage with the planning process at all opportunities and update Members on its progress.

SOLWAY ENERGY GATEWAY

The Senior Scientist met with Nigel Catterson from the Solway Energy Gateway Project in an effort to gain a better understanding of the various projects and proposals for energy generation along the north west coast and to develop communications. It should be stressed from the outset that Solway Energy Gateway is an entirely different project from the North West Energy Squared Project previously reported on. This project is investigating the feasibility of installing an estuarine tidal energy capture between Annan and Bowness in the Solway Estuary (Fig. 2 and 3), a site that historically was bridged (Fig. 4).



Fig. 2. Solway Energy Gateway - Proposed site of tidal energy capture scheme



Fig. 3. Solway Energy Gateway - Proposed site of tidal energy capture scheme – Bowness in foreground, Annan is distance.



Fig. 4. Bowness to Annan crossing circa 1920

A brief history of the proposal is given below:

Proposal history

2006 - Solway Energy Gateway concept launched

2009 – Solway Estuary feasibility study undertaken / Halcrow
Suitable technology identified. MOU with VerdErg Renewables Ltd signed

2012 – VETT prototype testing Dalston, Cumbria. Successful operation witnessed and certified by Lloyds Register. December 2012

2013 – Highly successful VETT fish testing carried out in Utrecht

2014 – Partnership formed with Arup

Currently the project team are seeking to raise funding for a scoping study on the Solway, which will inform a further more in-depth Feasibility Study.

Ms Knott suggests that Members invite Mr Catterson at some point in the future to present to the Authority on the project where specific questions, particularly around impacts on fish of the new technology, can be raised with him. Further details will be made available on the website: www.solwayenergygateway.org.uk

SHALE GAS EXPLORATION

As requested by Members, Officers contacted Lancashire County Council to enquire further about shale gas exploration in the District. The letter received in reply from Jo Turton, Chief Executive, (Annex B) confirms that current planning applications for shale gas exploration in Preston New Road and Roseacre Wood do not include horizontal drilling that will reach the marine or coastal environment. For future applications the expected reach of horizontal drilling would have to be included in plans submitted by the developer. Officers further contacted Ms Turton to reiterate the role of the NWIFCA, explain Members' concerns and to request that during future applications and consultations the Authority is contacted as a matter of course.

A Lancashire County Council Planning Report released on 21st January recommended that both developments be rejected due to noise pollution and heavy traffic on rural roads. Committee meetings to decide the final outcome of the planning permission due to be held on 28th, 29th and 30th January, were suspended according to the BBC for the following:

A decision on whether to allow fracking in Lancashire has been deferred by county councillors following a request from energy firm Cuadrilla.

The firm had applied to extract shale gas at its sites in Little Plumpton and Roseacre Wood, near Blackpool. But Lancashire County Council planners recommended rejecting the application due to noise and traffic problems.

It was due to be discussed by councillors, but has now been deferred by eight weeks. The council's chief legal adviser Ian Young said it would be "unlawful" for the planning development control committee to vote against a deferral. He said Cuadrilla had provided "substantial additional information" to its applications, which require further public consultation.

<http://www.bbc.co.uk/news/uk-england-lancashire-31007062> 28th January. 12.57

SURVEY AND FISHERIES WORK

Cockle and Mussel Fisheries in the NWIFCA District

Disappointingly there has been no sign of improvement in the cockle or mussel fisheries in the southern part of the District (Dee to Ribble Estuary). There is regular low level harvesting of size mussel in the Ribble Estuary. IFCOs regularly report to the Science Team on the state of the beds and to date there has been no sign of any significant spatfall of either species suggesting it is unlikely there will be any fisheries there in 2015.

Perch Scar seed mussel, Fleetwood

Having been opened to hand-gatherers for a week in October 2014 and subsequently as a small dredge fishery, a total of 110 tonnes were fished from Perch Scar seed mussel fishery. An inspection of the stock remaining was carried out by IFCOs on 22nd January to provide data to be included in assessments for other potential mussel fisheries in the area. 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.

Heysham Flat seed mussel

The authorisation issued to Byelaw 3 permit holders to gather undersize mussel from Heysham Flat was extended into December and January following requests from industry and inspections showing there was a fishable stock remaining. A closure over the Christmas period was included in the extension. However, the high winds during early January have taken their toll on the upper reaches of the skear, as is normal for this time of year, and the mussel in this area has been washed out. The authorisation was subsequently revoked on 12th January 2015.

The stock on the lower skears surprisingly appears to have persisted, despite assumptions that this would have been the first area to become scoured in view of the dense mud layers observed under the mussel in August. Officers are inspecting this on the large tides with a view to ensuring this will be available to Byelaw 3 permit holders as a size mussel fishery in due course. An inspection on 18th February 2015 showed the majority of this stock was still just undersize (45mm). Officers will continue to inform the local authority of the developments with this fishery. Members are reminded that this area can only be accessed on the largest spring tides due to its location at the lower reaches of the skear.

Foulney Mussels

An HRA was drafted for the tidally limited harvest by Byelaw 3 permit holders of an area of stunted mussel on the upper reaches of the skear at Foulney. Representation was later made to Officers by Byelaw 3 permit holders to open the area adjacent to the main Foulney Island tongue alongside the 'Ditch'. However, an inspection on 9th January 2015 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 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. An inspection of the area adjacent to the 'Ditch' area and up to the oyster frames was carried out on 23rd January 2015 and found it was badly scoured with little mussel remaining, small and very hard in. The mussels were of low meat yield and of low profit to bird feeding. It appeared that the only mussel of any benefit remaining to the birds was in the 'Ditch' area. 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). On 10th February 2015, TSB members approved Officers' recommendation not to proceed with an authorisation to remove stunted mussel in North Morecambe Bay due to the low levels and poor condition of mussel remaining, and that the removal of stunted mussel in future years would be incorporated into annual planning of the management of the Morecambe Bay mussel resource by the Bivalve Mollusc Working Group. Members with a pecuniary interest in this fishery who were present at the TSB stated that the mussel was of no worth now, and that they had no intention of harvesting it.

Duddon Estuary Mussels

A low level of hand-gathering for size mussel is still on-going on the Duddon mussels. Due to high results of e-coli through the regular sampling, the hygiene classification was down-graded from a B to a C in December, which means that all mussel harvested must be relayed for 2 months in a suitable area followed by purification, or be subjected to EC approved heat treatment before going for human consumption. Following representation from the industry to the local Environmental Health Officers and the Food Standards Agency that the high readings were due to high rainfall and run-off from fields surrounding the area and was in effect a one-off event, this has now been reclassified as a B. However the incidence of sheep manure washing on to and around the mussel bed appears to be increasing which may result in more high e-coli results in the future.

Newbiggin Cockle Survey

On 2nd December 2014 a survey was carried out at Newbiggin in North Morecambe Bay after receiving reports from fishermen and IFCO Dixon of a presence of cockles in the area. An original grid of survey stations 500m apart was produced; however in order to fully cover the area in the time the tide allowed every other station was surveyed. The area chosen to survey was informed by information from previous visits of most suitable terrain for cockles.

An estimated area of 686 hectares was surveyed covering a total of 44 stations. Size cockle was present at 21 stations (48%) with a mean density of 3 per m² (maximum density of 18 size cockles per m²). Undersize cockle was present at 21 (48%) stations with a mean density of 5 per m² (maximum density of 32 undersize cockle per m²) (see Fig 1). Ages of cockles sampled ranged from 2014 recruits to those over 3 years old. Although not sampled, a significantly higher number of *Macoma balthica* (Baltic tellin) were found compared to recent surveys.

Oystercatchers and Knot were observed on the low tide lines and appeared to be feeding. However, on closer investigation there were no obvious signs of feeding on cockle, although in one area crushed cockle shell was observed in the bird faeces.

The results of the survey show that, although cockle is present in the area, this is not of a great enough density to support a commercial fishery.

Solway Firth

Officers have had two useful meetings with representatives from Marine Scotland, to discuss management of cockles in the Solway Firth. The first included a representative from Natural Resources Wales enforcement team and provided the opportunity to discuss the recent Cockle Management Study carried out on the Scottish side of the Solway and how their fishery may develop in the future. Discussions focused on enforcement across the Wales / North West England / Scotland cockle fisheries and allowed officers to share experiences and ideas. A second meeting was held in Edinburgh between NWIFCA Science Officers, Marine Scotland, Scottish Natural Heritage and Natural England and focused on the more scientific aspects of the fishery. The way in which surveys are undertaken and how this data is used to calculate TACs and produce Habitat Regulations Assessments was discussed. Marine Scotland input substantial resources in order to carry out in-depth surveys of all cockle beds in the intertidal areas on the Scottish coast of the Solway, results from which are fed into the bird model (Stillman et al. Bournemouth University) to provide the TAC. One run of the model at its lowest resolution is reported to cost around £8000.

NWIFCA data of resources on the English side are also used when they are available, although it was acknowledged that IFCA science resources are limited and directed to where the priorities lie, and that data required to fully inform these assessments and setting TACs may not have been collected.

The meetings were valuable and communication will continue to allow the cockle and mussel fishery resources within the Solway to be viewed more as a whole when carrying out future assessments and making management decisions, including those around enforcement particularly of the beds straddling the border in the centre of the estuary.

Further consideration has been given to the possibility of a suction dredge cockle fishery on the Middle Bank in the Solway Firth. As mentioned in previous reports, before a fishery can commence, further surveys must be undertaken to ascertain current stock levels, management measures decided upon and a Habitat Regulations Assessment undertaken. Officers have been in contact with other IFCA's and Marine Scotland to gather information about the impacts of suction dredging and management measures used in other, similar fisheries. It is intended to carry out further surveys of the bed in the spring.

PHD PROPOSAL WITH LANCASTER UNIVERSITY

Unfortunately the proposal for a PhD studentship to study and model the ephemeral mussel beds in Morecambe Bay submitted by Lancaster University as a partnership project with the NWIFCA for a NERC Doctoral Training Project was not successful. Staff at the university agreed to take it forward for the possibility of funding to their Faculty Studentships and the outcome of this is awaited. Opportunities for research project funding is an area that could be investigated by the proposed Bivalve Mollusc Working Group.

IFCA TECHNICAL ADVISORY GROUP (TAG) MEETING – LONDON 13TH NOVEMBER

The Senior Scientist attended the TAG meeting in November where scientists from all the IFCA's along with representatives from Natural England, Cefas, Environment Agency and NRW meet to share updates on their work, and discuss national issues and collaborative working opportunities. Areas of discussion covered included the availability of Fishing Activity data from Cefas to assist in MPA work; Project Inshore Stage 3 report and Stage 4, opportunities to develop fisheries improvement (for specific fisheries identified through the project); Natural England national update on resources being made available to assist MPA work; potting research projects – impacts on different habitats; Newcastle University lobster population research via trapping and remote sensing telemetry; birds and netting interactions – collaborative work between Cornwall IFCA and RSPB; Jersey IFCA – whelk minimum landing sizes and age at sexual maturity; Eastern IFCA – use of side-scan sonar to monitor cobble and boulder reef condition, and trialing of cockle shell deposit as cultch for mussel settlement. The Chair and Secretary of TAG were elected. Under the Terms of reference for TAG these seats rotate around the IFCA's. However it is becoming more and more problematic for Officers to be able to volunteer for the posts in view of the work-load faced by all, and how the role of Chair of TAG has evolved. The proposition of this becoming a paid role has been discussed at the Chief Officers Group but the outcome of that discussion was not known. The NWIFCA Senior Scientist does not feel in a position to be able to put herself forward for either of these posts at the present time, but would hope that at some point in the future this situation would change once the vast volume of EMS Review and MPA work had been completed, and a consistent and skilled Science Team had been achieved.

MEETING WITH NEW MARINE PROGRAMME DIRECTOR OF NATURAL ENGLAND

Following the appointment of Jonathan Burney as the new Marine Programme Director of Natural England, Stephen Atkins and the Ms Knott had a constructive meeting with him and other national, regional and local representatives from Natural England to discuss the NWIFCA's work in relation to Marine Protected Areas, and Natural England's nationalised programme.

AUTHORISATIONS AND CONSULTATIONS

Harrowside Outfall Replacement
Sellafield Sea Line Pipe Testing
Robin Rigg Emergency Cable Repairs

MEETINGS, WORKSHOPS AND COURSES ATTENDED

NWIFCA Enforcement Meetings
Byelaw review meetings
Cockle Management meeting with NRW and Marine Scotland
National HRA Workshop, London

Scottish Local Coastal Partnerships Celebration Reception at Scottish Parliament
Solway Firth Partnership Advisory Group Quarterly Meeting
Natural England EMS Delivery meeting
Marine Scotland Cockle Management meeting, Edinburgh
Meeting with Boughton Estate

Tidal Energy: A New Future for the UK? – Talk given by Dr G Aggidis, Director of the Renewable Energy Group at Lancaster University
Mersey Estuary Conservation Group
Coastal Futures 2015 conference, London
Menai Strait Mussel Farming Visit
Mersey Sediment Management Meeting
Meeting with Tidal Lagoon Power re: West Cumbria Tidal Lagoon
National Grid environment sub-group and meeting with fishermen
FLOWW Working Group Meeting
Monthly Fisheries in EMS Working Group Teleconference
MCZ Consultation – Defra Conference Call
Meeting with Natural England re: SPA Extensions
Marine Pathways Project Conference, Cardiff
Moorside Power Station – meeting with consultants

Science Officers
27th February 2015