

NWIFCA Technical, Science and Byelaw Sub-Committee

17 May 2013: 10:00am

AGENDA
ITEM NO.

5

EXCLUSION ZONES FOR PROPOSED BYELAW 6: PROTECTION FOR EUROPEAN MARINE SITE FEATURES

Purpose of Report

To outline the proposed exclusion zones that will be incorporated within the proposed Byelaw 6.

Recommendations

Members make a decision on the draft exclusion zones

Details

1. In response to Defra's "revised approach to management of fisheries in European Marine Sites" the IFCA must create a byelaw that protects sensitive features within EMS from the impact of some fishing activities (mainly reefs and bottom towed gear). The proposed draft byelaw is below and sets out areas where bottom towed gear (and in some cases hand gathering and bait digging) will be excluded in order to protect certain features. Science Officers have been working with Natural England to create maps of these features in order that exclusion zones or boxes can be drawn.
2. These maps refer to features already designated as part of SACs and SPA. This work does not relate to MCZ management.

Draft Byelaw

Proposed Byelaw 6: Protection for European Marine site features

No person shall use any bottom towed gear except with the written permission of and using gear approved by the NWIFCA in the following areas

1. Lune Deep reef and Morecambe Bay boulder and cobble reef adjoining Lune Deep SAC
2. Solway Firth subtidal boulder and cobble skear areas
3. Solway Firth *Sabellaria alveolata* reef
4. Morecambe Bay *Sabellaria alveolata* reef; Heysham Flat
5. Morecambe Bay boulder and cobble reef; Heysham Lake
6. Morecambe Bay boulder and cobble reef; Walney Channel
7. Dee Estuary *Sabellaria alveolata* reef; Hilbre Island
8. Morecambe Bay; Seagrass beds

All bait collection and hand worked fisheries and vehicular access are prohibited at all times in Area 8.

Explanatory note: Bottom towed gear means any fishing gear towed by boat, vehicle or animal in contact with the seabed below Mean High Water.

NB Byelaw has been changed to separate skear and *Sabellaria alveolata* reef in the Solway.

NE Advice on Buffers

3. Natural England has provided IFCAs with an advice document on the use of buffers when creating these byelaws. Buffers around features are required to ensure that fishing activity is a suitable distance away from the feature to ensure that impacts are limited and also to ensure practical enforcement. Natural England's advice is based upon a JNCC document ('*UK Guidance on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast*' 2012). The advice on **minimum** buffer size is outlined below. It has also been suggested by Natural England that for features at depths less than 20 m a minimum buffer of 80 m should be used.

Water depth	Ratio warp length:depth	Approx. length of trawl warp	Boundary extension to be added to the habitat area of interest
Shallow waters (≤ 25 m)	4:1	100 m at 25 m depth	4 x actual depth
Continental shelf (25-200 m)	3:1	600 m at 200 m depth	3 x actual depth
Deep waters (200 to over 1000 m)	2:1	2000 m at 1000 m depth	2 x actual depth

4. Solway Firth EMS

4.1 Sabellaria alveolata

In March 2013 Science Officers and the local IFCO visited likely locations for *Sabellaria alveolata* and found very little of the species on any of the scars in the area. However, a report by IECS (Hull University) from 2002 does highlight some reef like structures present in the EMS. The Regulation 33 advice from Natural England for this site suggests that mussel beds and *Sabellaria alveolata* are both found on intertidal scars and that these species occur in a cyclical manner. The advice states that "*due to the cyclical nature of the reefs found, the structure of the reef varies on a temporal basis. Although the location of reefs is predictable, the habitat may not always be found in these locations in its full structure.*"

Because the feature in need of protection (*Sabellaria alveolata*) varies naturally in its extent and position, a more adaptive method of management may be required. This could include reactive closures of areas when *Sabellaria alveolata* reef is observed. An alternative is to prohibit bottom towed fishing in any area where *Sabellaria alveolata* reef may occur (i.e. all the scars in the Cumbrian Solway Firth EMS).

Key

- Sabellaria Type 1 <10 sq m
- Fixed Boundary
- - - Diffuse/Uncertain Boundary
- Sabellaria Type 2
- Sabellaria Type 2-3
- Sabellaria Type 3
- Sabellaria Type 3-4
- Sabellaria Type 4
- Sabellaria Type 4-5
- Sabellaria Type 5
- Sabellaria Type 5-6
- Sabellaria Type 6
- Sabellaria Type 6-7
- Sabellaria Type 7

Reef3. Sabellaria type 4-5. 10-15% coverage inshore & up to 50% coverage offshore. Poorer quality inshore with 10% live worms. Better quality offshore with 30-50% live worms. Interspersed with mussel beds. 308900 sq m area.

Reef2. Sabellaria type 4-5. 10-15% coverage inshore and up to 50% coverage offshore. Poorer quality inshore with 10% live worms. Better quality offshore with 30-50% live worms. Interspersed with mussel beds. 9830 sq m area.

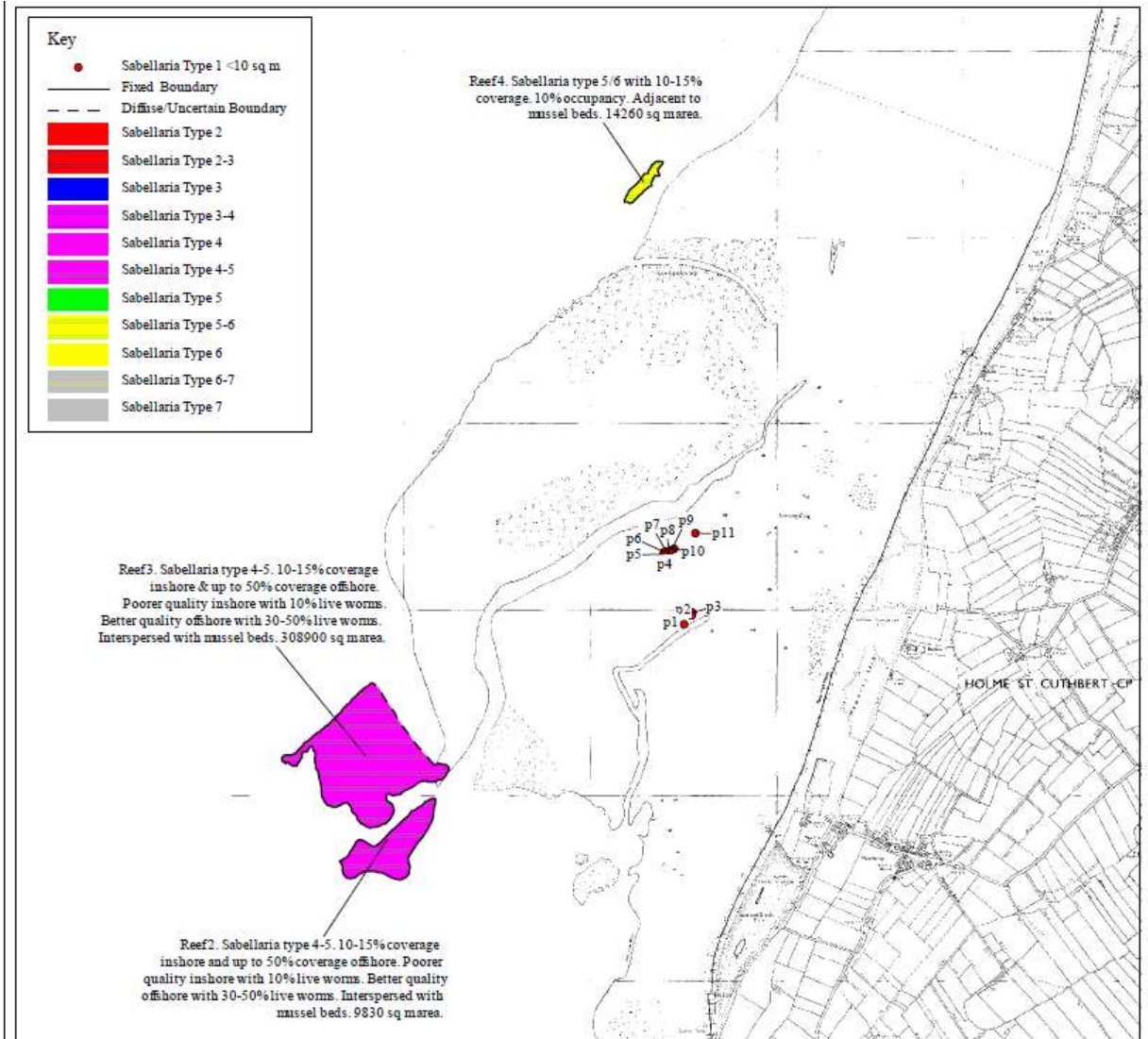
Reef4. Sabellaria type 5/6 with 10-15% coverage. 10% occupancy. Adjacent to mussel beds. 14260 sq m area.



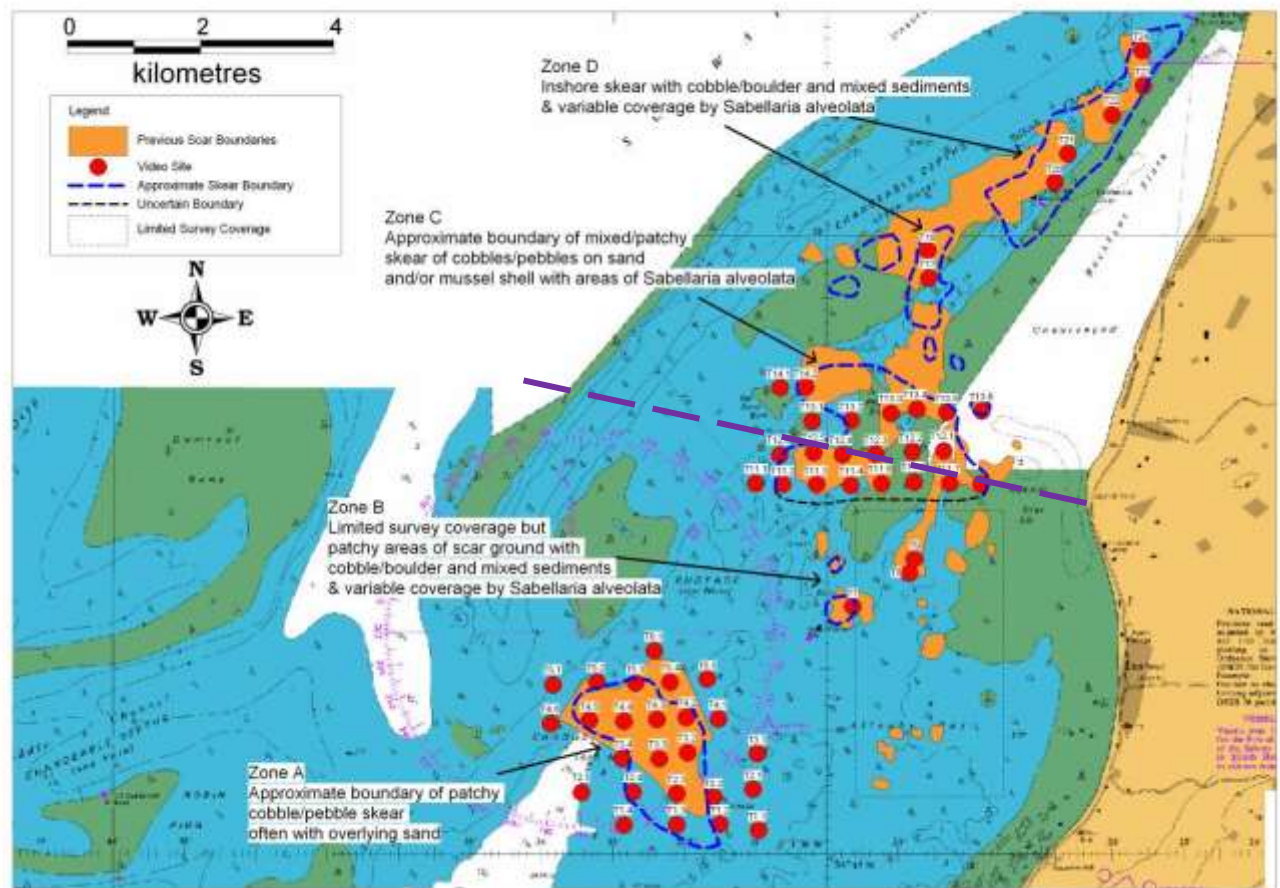
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HOLME ST. CUTHBERT CP



4.2 Subtidal Boulder and Cobble Reef (Scar)



Institute of Estuarine & Coastal Studies (IECS), The University of Hull, 2006
(Previous Boundaries from SNH, 1999)

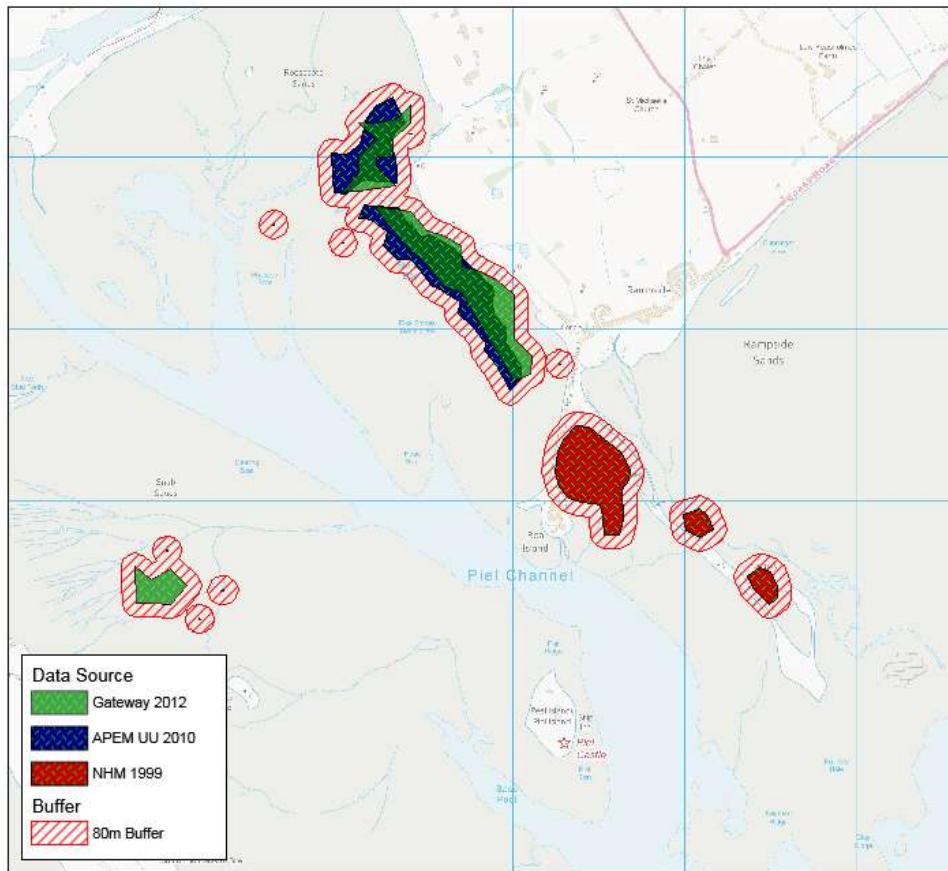
NB EMS boundary runs across map, approx position shown in dashed purple.

This data from 1999 and 2006 show that in most cases subtidal scars have moved very little in this time. However, there is some concern that these scars are close to the channels where shrimping occurs. Also, in the past dredging for size mussel has been allowed in this area.

Buffer zones could not be created for these features as officers are awaiting GIS (mapping) data.

5. Morecambe Bay

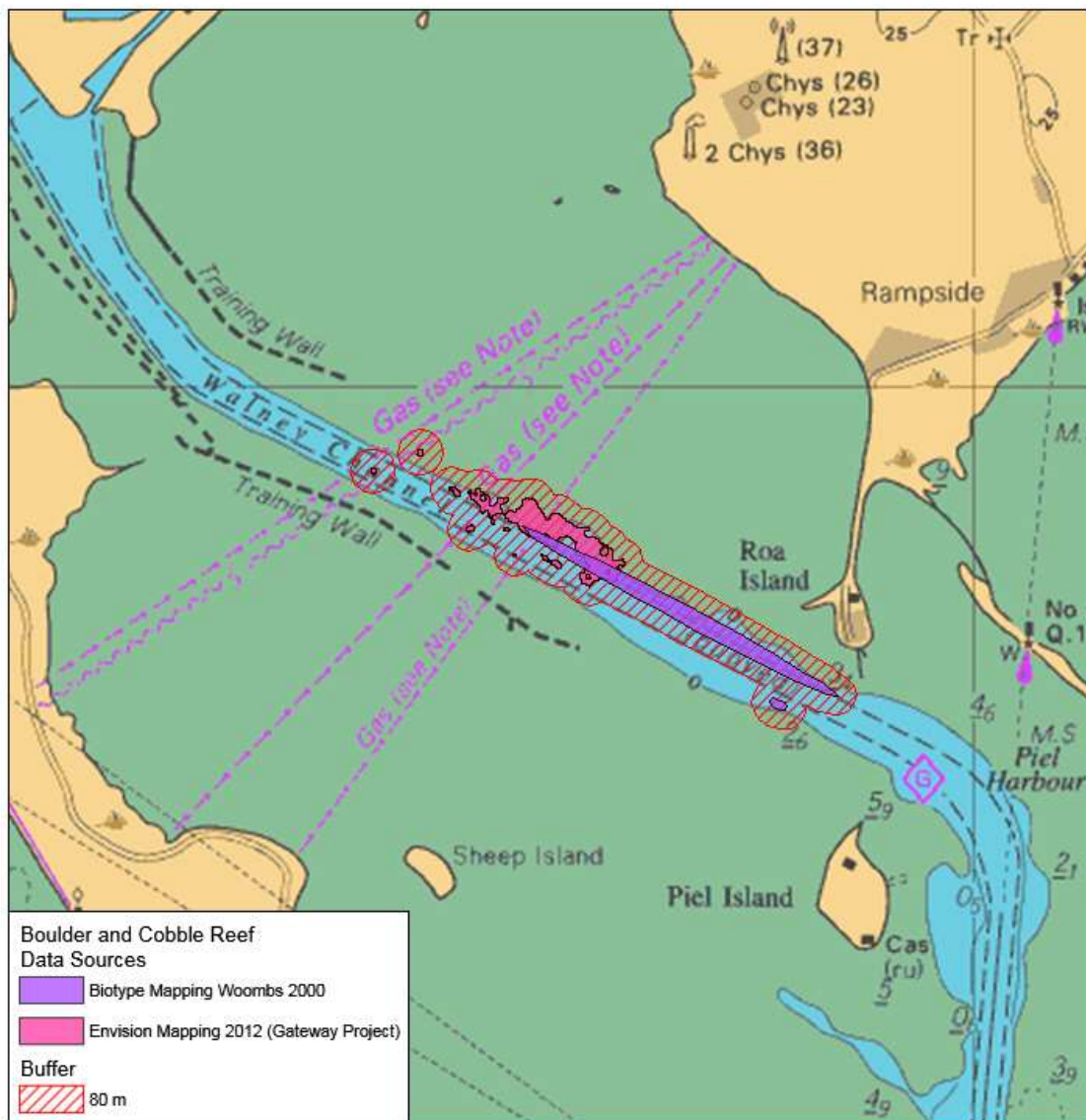
5.1 Seagrass



In these areas hand gathering and bait digging, in addition to bottom towed gear, would be prohibited. The Natural History Museum (NHM) data is older, however re-assessment of these areas cannot occur until late summer due to the plants' visibility during its yearly cycle.

5.2 Subtidal Boulder and Cobble Reef

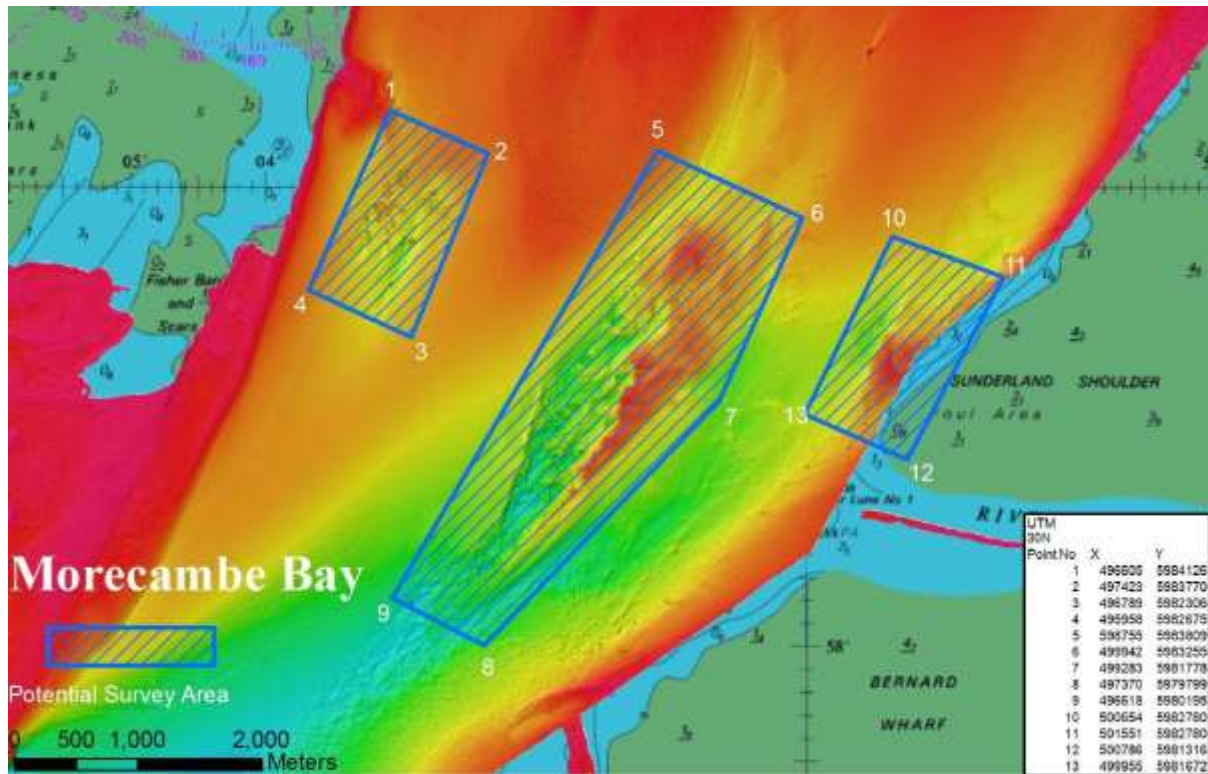
5.2.1 Walney Channel



Data from the Envision Mapping does not extend westward as it was commissioned to assess a small area of the channel. The Woombs mapping was more extensive but is less defined as it was created using points where dives took place.

5.2.2 Heysham Lake

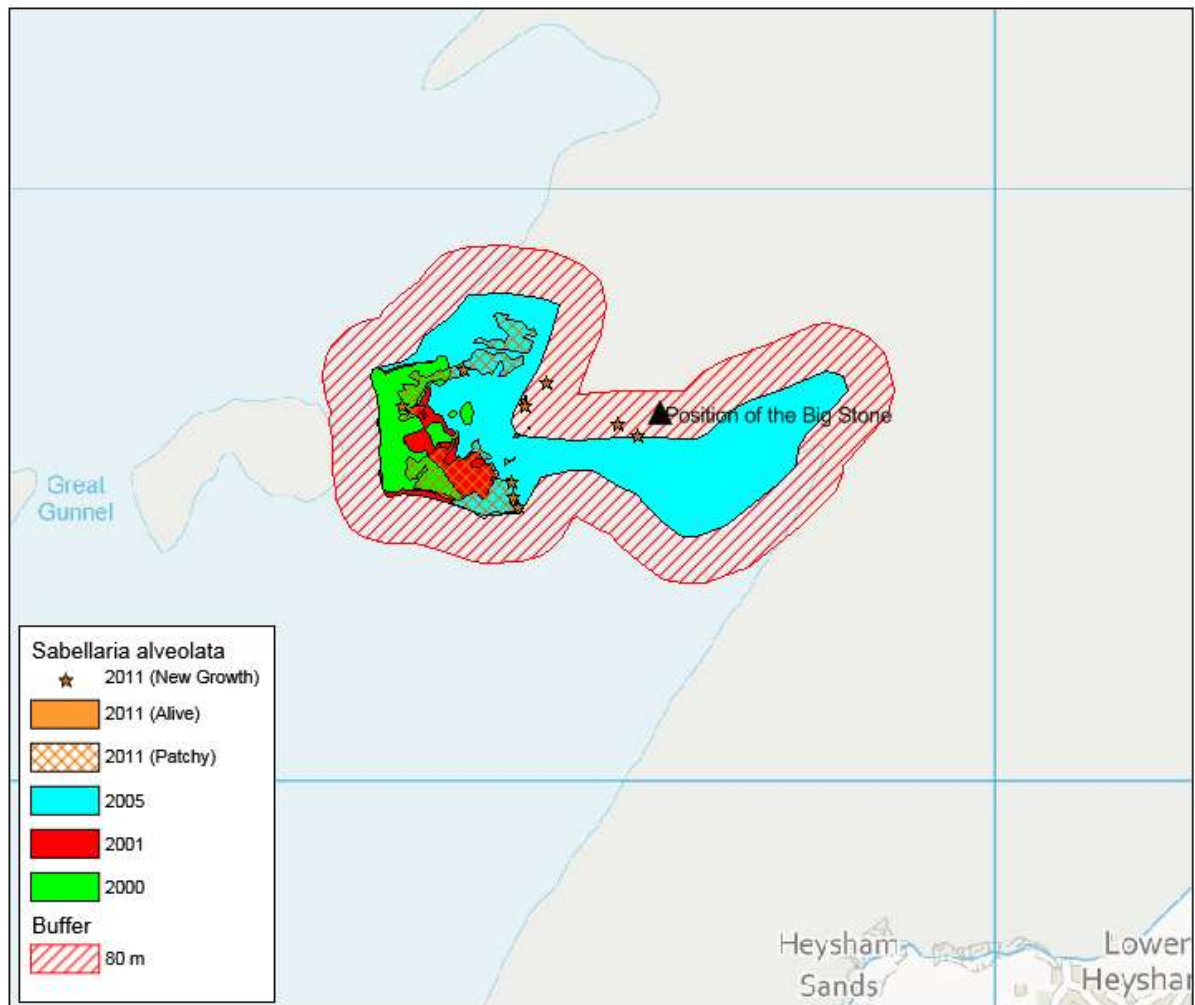
There is no definitive mapping for the boulder and cobble reef that may be present in the Heysham Lake area. Instead this has been identified via Natural England bathymetry data. Data from grab samples taken by the EA and video transects by DONG energy confirm that boulders and cobbles are present in this general area. However further surveys are required to fully understand the benthic habitat in the area.



5.2.3 Lune Deep Extension

A small amount of the bedrock and boulder and cobble reef of the Lune Deep extends from the Lune Deep SAC into the Morecambe Bay SAC. Due to the continuous nature of this feature it will be discussed as part of Lune Deep.

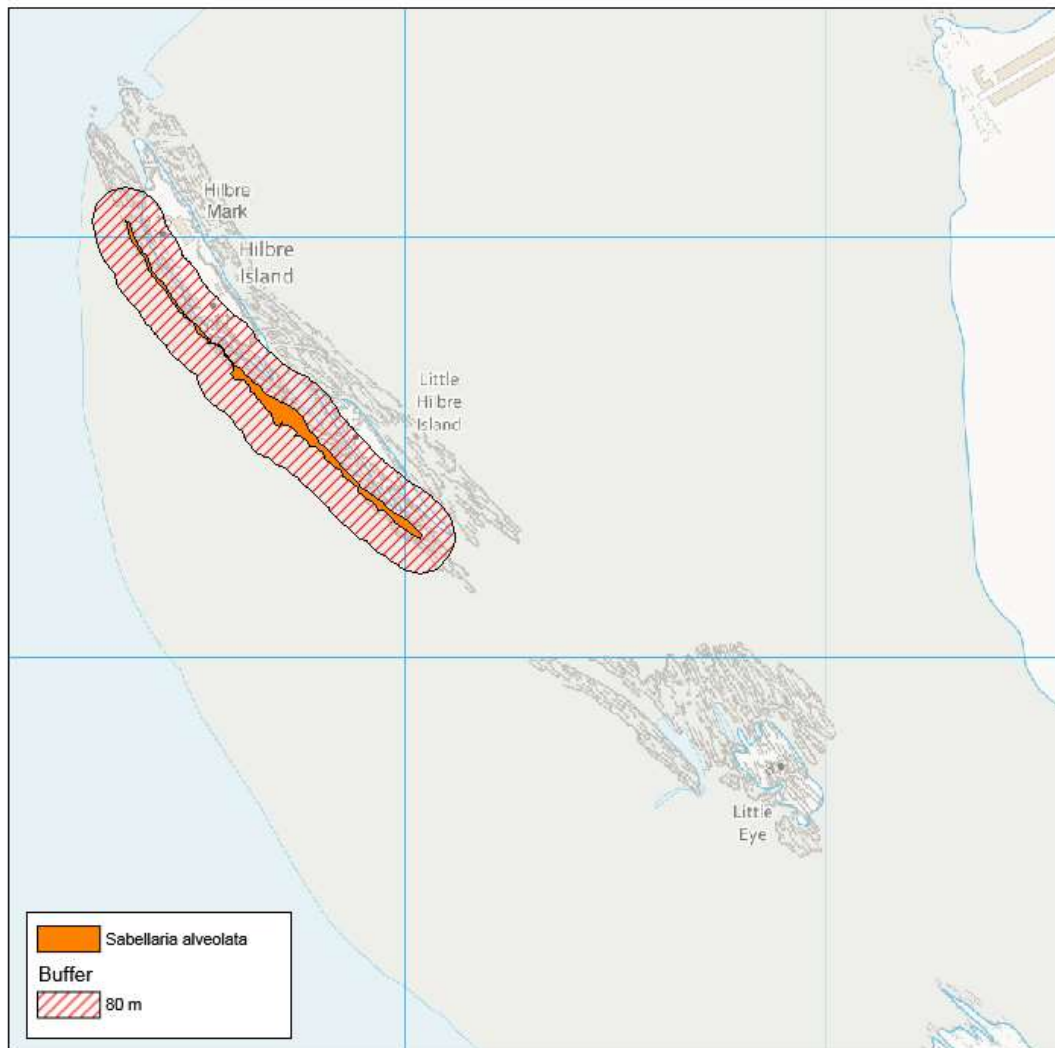
5.3 *Sabellaria alveolata*, Heysham Flat



This mapping shows buffering for the largest area of *Sabellaria alveolata* recorded at this site. However, this extent of reef has only been recorded once in several years. Therefore it is suggested that only the consistent “core” area is protected by an exclusion zone. This is the area to the west of Big Stone (a.k.a. Conger Rock). The 80 m buffer covers the channel to the west of the flat. However local IFCOs have stated that bottom towed fishing activity does not occur in this area.

6. Dee Estuary

6.1 *Sabellaria alveolata*, Hilbre Island



CMACS habitat mapping 2011, *Sabellaria alveolata* (LS.LBR.Sab.Salv) shown in orange

The data for this map comes from a 2011 study by CMACS that mapped the habitat around Hilbre Island. *Sabellaria alveolata* was also surveyed in 2004. However the report used paper mapping and so this is not included in this report. However, this lies in a similar position to those shown on the CMACS map.

7. Lune Deep (Map 1)

Lune Deep is part of the Shell Flat and Lune Deep SAC.

Lune Deep is located at the entrance to Morecambe Bay, and is a deep water channel created by ice movements associated with the last ice age.

The reef habitat present in the area represents a good example of boulder and bedrock reef. This unique enclosed deep hole provides a contrasting habitat to the surrounding muddy communities of the Eastern Irish Mudbelt. The northern flanks of Lune Deep are composed of exposed bedrock with a rugged seabed physiography. In contrast, the southern flank consists of a smooth seabed which is a sink for muddy sands.

7.2 Recommended Buffers

Buffers around features are required to ensure that fishing activity is a suitable distance away from the feature to ensure that impacts are limited and also to ensure practical enforcement. Based on JNCC guidance (cited in NE guidance 04/13) for features 25 – 200 m in depth a minimum buffer of 3 x actual depth is required. For depths shallower than 25 m this increases to 4 x actual depth. Natural England has advised that a minimum buffer of 80 m may be required for all features in water shallower than 20 m.

7.3 Deepest Point of Reef feature (Map 2)

At its deepest point the reef features of Lune Deep is approx 50 m. Following guidance a buffer zone should therefore be 150 m (three times the depth) wide.

7.4 Deepest Point at North Wall (Map 3)

Because the reef feature is sloping, the northerly edge is considerably shallower than the southerly. Therefore at the northern edge the buffer could be smaller. For depths less than 20 m a precautionary buffer of 80 m is advised. This buffer can be used for the northern part of the wall with the larger buffer used for the southern. This creates a variable buffer zone which accommodates the depths of the north and south walls separately.

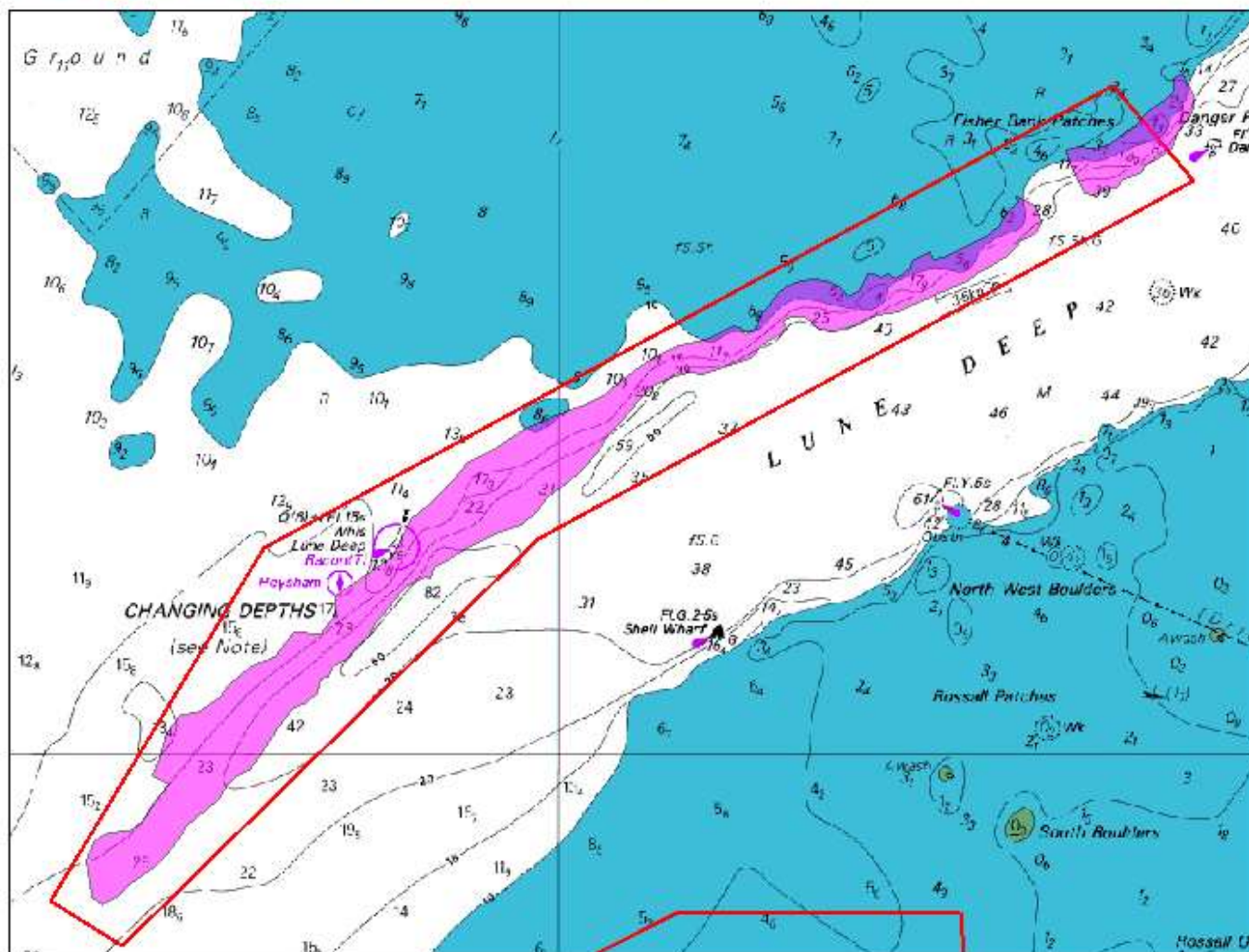
7.5 Fishing Activity in Lune Deep

Bottom towed trawls for flatfish currently occur in the sandy bottom next to the Lune Deep reef feature. The proposed exclusion zone (even with modified buffer) would preclude this fishing activity from taking place despite it currently not having a detrimental impact on the reef feature. It is not the aim of EMS management to unnecessarily restrict economically important fishing activity that is known not to currently threaten the health of this reef feature.

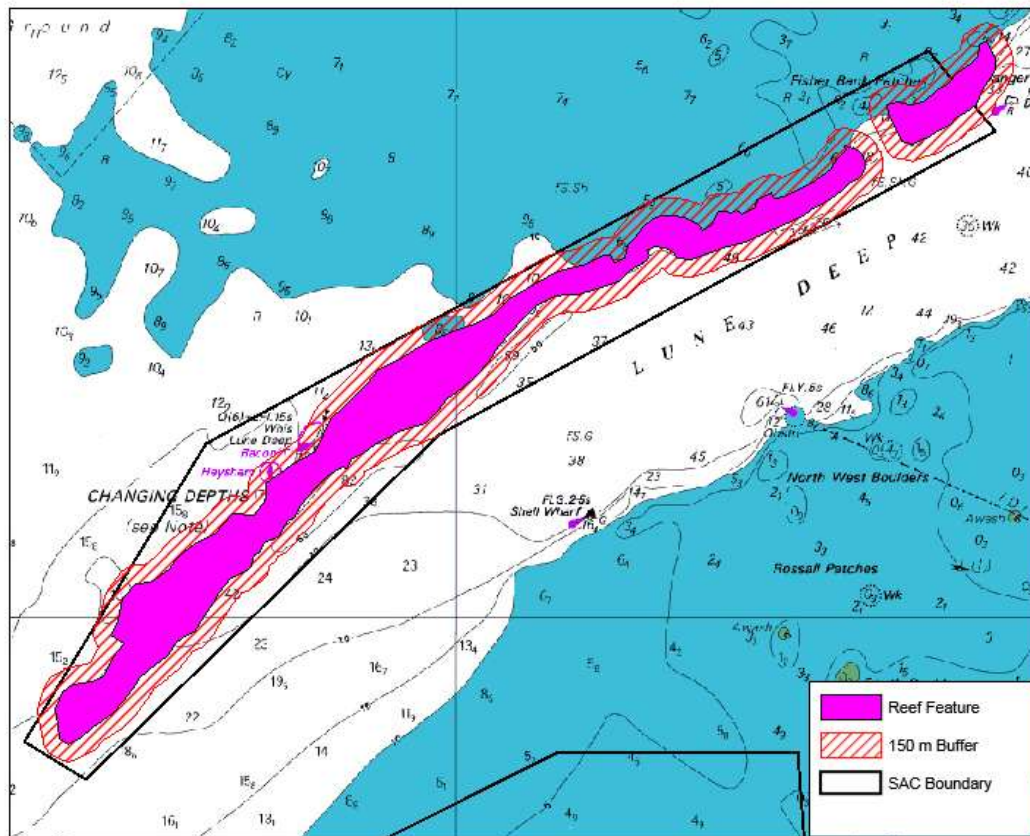
The use of iVMS (boat position tracking) was considered as an enforcement mechanism to allow the exclusion zone to closely follow the feature boundary. However, the narrow nature of the reef feature and the movement of water around it during the ebb and flood of the tide, means that on the surface boats will be “on top of” the reef feature when fishing gear is in the sandy bottom. Therefore, this enforcement tool is not suitable in this case. This is compounded by the position of boats changing according to the state of the tide.

NWIFCA Officers are currently seeking a solution to this difficult issue. This paper along with TSB members' comments will be submitted to the EMS Working Group for discussion and if necessary will be flagged up at Implementation Group level.

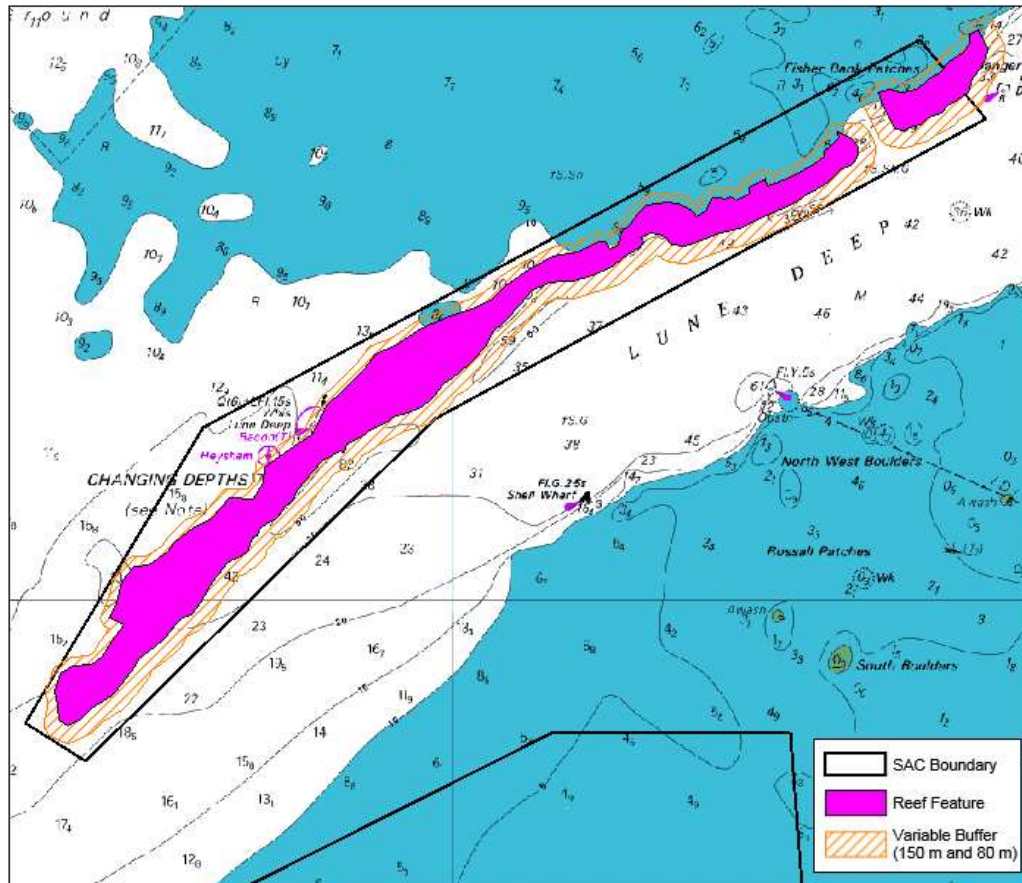
The map shows a coastal area with a large body of water (blue) and surrounding land (green and brown). A red outline highlights a specific area in the water, likely the study area. A legend in the bottom right corner identifies various symbols and colors used on the map. A scale bar and a north arrow are also present.



Map 2: Lune Deep Reef Feature with 150m Buffer Zone



Map 3: Lune Deep Reef Feature with Variable Buffer Zone



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13 May 2013