

Fisheries in European Sites Habitats Regulations Assessment for **Amber** and **Green** risk categories

NWIFCA-SF-EMS-009

Date completed: 17/12/2015

Completed by: S.Temple & M.Knott

Site: Solway Firth

European Designated Sites: UK0013025 Solway Firth Special Area of Conservation (SAC)
UK9005012 Upper Solway Flats and Marshes Special
Protection Area (SPA)
UK11079 Upper Solway Flats and Marshes Ramsar

European Marine Site: Solway Firth

Only features within the English part of the EMS are assessed by NWIFCA.

Qualifying Feature(s):

SAC and Ramsar

H1110. Sandbanks which are slightly covered by sea water all the time

H1130. Estuaries

H1140. Mudflats and sandflats not covered by seawater at low tide

H1170. Reefs

H1220. Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves (NON MARINE)

H1310. *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand

H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Atlantic salt meadows

H2130. Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland (NON MARINE)

S1095. *Petromyzon marinus*; Sea lamprey

S1099. *Lampetra fluviatilis*; River lamprey

Natterjack toad (NON MARINE)

SPA and Ramsar

A038 *Cygnus cygnus*; Whooper swan (non-breeding)

A040 *Anser brachyrhynchus*; Pink-footed goose (non-breeding)

A045b *Branta leucopsis*; Barnacle goose (non-breeding)

A130 *Haematopus ostralegus*; Eurasian oystercatcher (non-breeding)

A140 *Pluvialis apricaria*; European golden plover

A143 *Calidris canutus*; Red knot (non-breeding)

A144 *Calidris alba*; Sanderling (non-breeding)

A160 *Numenius arquata*; Eurasian curlew (non-breeding)

A162 *Tringa totanus*; Common redshank (non-breeding)

A 054 *Anas acuta*; Northern Pintail (non-breeding)

A137 *Charadris hiaticula*; Ringed plover (non-breeding)

A149 *Caladris alpine alpine*; Dunlin (non-breeding)

A 157 *Limosa lapponica*; Bar-tailed godwit (non-breeding)

Waterbird Assemblage

Site sub-feature/Notable communities(s):**SAC and Ramsar**

Estuaries: Rocky scar communities; Subtidal sandbanks; Intertidal mudflats and sandflats; Pioneer saltmarsh; Saltmarsh; Sea Lamprey; River Lamprey; Reefs

Subtidal sandbanks: Infralittoral gravel and sand communities

Mud and sand Flats not covered by seawater at low tide- Muddy sand communities; Sandy mud communities; Gravel and clean sand communities

Salicornia and other annuals colonising mud and sand (Pioneer saltmarsh) Annual *Salicornia* spp. communities

Atlantic salt meadows: Low marsh communities; Mid marsh communities; Upper marsh communities

River Lamprey

Sea Lamprey

Reefs: *Sabellaria alveolata* reefs, Biogenic reefs

Supporting habitat Natterjack toad- coastal sand dunes

SPA and Ramsar

Intertidal mudflat and sandflat communities, intertidal and subtidal boulder and cobble skewar communities, saltmarsh communities, coastal lagoon communities, Shingle areas

Generic sub-feature(s):

Subtidal gravel & sand; Intertidal mud & sand; Intertidal gravel & sand; Saltmarsh spp., Sea lamprey; River lamprey; Subtidal boulder & cobble reef; Intertidal boulder & cobble reef; *Sabellaria* spp. Reef; Estuarine Birds; Benthic feeding Seabirds.

High Level Conservation Objectives:**Solway Firth SAC**

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed above), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Upper Solway Flats & Marshes SPA

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed above), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Fishing activities assessed:

Gear type(s):	Longlines (demersal)
----------------------	---------------------------------

1. Introduction

1.1 Need for an HRA assessment

In 2012, the Department for Environment, Food and Rural Affairs (Defra) announced a revised approach to the management of commercial fisheries in European Marine Sites (EMS). The objective of this revised approach is to ensure that all existing and potential commercial fishing activities are managed in accordance with Article 6 of the Habitats Directive.

This approach is being implemented using an evidence based, risk-prioritised, and phased basis. Risk prioritisation is informed by using a matrix of the generic sensitivity of the sub-features of EMS to a suite of fishing activities as a decision making tool. These sub-feature-activity combinations have been categorised according to specific definitions, as red, amber, green or blue.

Activity/feature interactions identified within the matrix as red risk have the highest priority for implementation of management measures by the end of 2013 in order to avoid the deterioration of Annex I features in line with obligations under Article 6(2) of the Habitats Directive.

Activity/feature interactions identified within the matrix as amber risk require a site-level assessment to determine whether management of an activity is required to conserve site features. Activity/feature interactions identified within the matrix as green also require a site level assessment if there are “in combination effects” with other plans or projects.

Some European Sites within the NWIFCA District consist of features that are not fully marine (eg. sand dunes) and therefore fall outwith of the EMS Review process. They have not been included in the original risk matrix. Due to the nature of some of the fisheries in the District, particularly intertidal fisheries, the NWIFCA has adopted the approach of carrying out full HRA on all the features (including non-marine) within European Sites to ensure that any potential risk from fishing activity has been identified and assessed.

Site level assessments are being carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive, that is to determine that fishing activities are not having an adverse effect on the integrity of the site, to inform a judgement on whether or not appropriate steps are required to avoid the deterioration of natural habitats and the habitats of species as well as disturbances of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this directive.

If measures are required, the revised approach requires these to be implemented by 2016.

The purpose of this site specific assessment document is to assess whether or not in the view of NWIFCA the fishing activity longlining has a likely significant effect on the qualifying features of the Solway Firth European Site, and on the basis of this assessment whether or not it can be concluded that the Longlining will not have an adverse effect on the integrity of this European Site.

1.2 Documents reviewed to inform this assessment

- Natural England's risk assessment Matrix of fishing activities and European habitat features and protected species¹
- Reference list² (Annex 1)
- Natural England's consultation advice (Annex 2)
- Site map(s) – sub-feature/feature location and extent (Annex 3)
- Fishing activity data (map(s), etc) (Annex 4)

2. Information about the EMS

(See cover pages)

3. Interest feature(s) of the EMS categorised as 'Red' risk and overview of management measure(s) (if applicable)

- Reefs: All bottom towed gear prohibited around area of *Sabellaria alevolata* reef by NWIFCA Byelaw 6.

4. Information about the fishing activities within the site

Longlining in the Solway is a very small scale fishery that is prosecuted on the whole as a recreational fishery.

Lines are set on the beach across Beckfoot flats (Silloth – Allonby) in intertidal areas (see table in Annex 4). Areas of rocky ground are usually avoided in favour of sand. However, it is not unknown for longlines to be placed on rockier areas. Particularly targeted is sand close to (10 – 15 yards) or on patches of sand within rocky ground.

Longlines are set out using small temporary stakes. Length ranges from 50 hooks to 250 hooks with spacing between hooks of approx. 1 foot. Lines are often set out in a "C" shape, running perpendicular to the tide.

Hooks are baited by lugworms and species targeted include bass, codling, flatfish and thornback rays. Spotted dogfish are also often caught on lines.

Current and recent activity in the Solway Firth European Site is low. Approx. 4 fishers each with 3-4 lines each are active in the area (see Table 1 in Annex). On average 6 lines are set across the whole area at any one time.

This fishing activity can occur all year round, however activity is at its highest outside of the netting season (i.e. in the Summer months).

No other longlining activity occurs in the Solway Firth EMS.

¹ See Fisheries in EMS matrix:

http://www.marinemanagement.org.uk/protecting/conservation/documents/ems_fisheries/populated_matrix3.xls

² Reference list will include literature cited in the assessment (peer, grey and site specific evidence e.g. research, data on natural disturbance/energy levels etc)

5. Test for Likely Significant Effect (LSE)

The Habitats Regulations assessment (HRA) is a step-wise process and is first subject to a coarse test of whether a plan or project will cause a likely significant effect on an EMS³.

Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?

NO

5.1 Table 1: Assessment of LSE

What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s) to features? (taken from NE Advice on Operations-anchored lines)

1. Above water noise
2. Visual disturbance
3. Underwater noise changes
4. Collision above and below water with lines
5. Litter
6. Removal of non-target species
7. Removal of target species
8. Introduction or spread of non-indigenous species
9. Genetic modification and translocation of indigenous species
10. Abrasion/ disturbance of the substrate on the surface of the seabed (*also supporting habitat*)
11. Penetration and/ or disturbance of the substrate below the surface of the seabed (*also supporting habitat*)

SCREENED OUT-

Due to the nature of the longlining activity and the low levels of activity occurring in the European Site and existing background levels, the following potential pressures can be screened out as unlikely to be a pressure:

12. Barrier to species movement
13. Hydrocarbon and PAH contamination
14. Introduction of light
15. Introduction of other substances
16. Organic enrichment
17. Synthetic compound contamination
18. Transition elements and organo-metal contamination

Qualifying Feature	Sub-feature	Gear type and potential pressures	Potential for Likely Significant Effect?	Justification and evidence
H1110. Sandbanks which are slightly covered by sea water all the time	Infralittoral gravel and sand communities	Beach Longline	NO	Activity does not occur in or near subtidal areas. Feature interaction categorised as "Green" in generic matrix.
H1130. Estuaries	Rocky scar communities; Subtidal sandbanks; Intertidal mudflats and sandflats;	Beach Longline 10. Abrasion/ disturbance of the substrate on the surface of the seabed 11. Penetration and/	NO	Rocky scar communities Potential risk of physical impacts through abrasion/ disturbance of lines on the substrate, however the activity

³ Managing Natura 2000 sites: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

	Pioneer saltmarsh; Saltmarsh; Sea Lamprey; River Lamprey; Reefs	or disturbance of the substrate below the surface of the seabed		is limited in scale and is low level, lines are rarely set on rocky ground. Habitat has a low sensitivity to this type of activity (Hall et al 2008). <i>All other habitats/species are assessed as features in their own right.</i>
H1140. Mudflats and sandflats not covered by seawater at low tide	Muddy sand communities; Sandy mud communities; Gravel and clean sand communities	Beach Longline 10. Abrasion/ disturbance of the substrate on the surface of the seabed 11. Penetration and/ or disturbance of the substrate below the surface of the seabed	NO	Potential risk of physical impacts through abrasion/ disturbance of lines on the substrate, however the activity is limited in scale and is low level. Feature interaction categorised as "Green" in generic matrix.
H1170. Reefs	<i>Sabellaria alveolata</i> reefs, Biogenic reefs	Beach Longline 10. Abrasion/ disturbance of the substrate on the surface of the seabed 11. Penetration and/ or disturbance of the substrate below the surface of the seabed	NO	Potential risk of physical impacts through abrasion/ disturbance of lines on the substrate, however the activity is limited in scale, is low level and does not occur on biogenic reef features.
H1220. Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves (NON MARINE)		Beach Longline	NO	Access to beach is via foot on established access routes.
H1310. <i>Salicornia</i> and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand	Annual <i>Salicornia</i> spp. communities	Beach Longline	NO	Access to beach is via foot on established access routes. Feature interaction categorised as "Blue" in generic matrix.
H1330. Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>); Atlantic salt meadows	Low marsh communities; Mid marsh communities; Upper marsh communities	Beach Longline	NO	Access to beach is via foot on established access routes. Feature interaction categorised as "Blue" in generic matrix.
H2130. Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland (NON MARINE)		Beach Longline	NO	Access to beach is via foot on established access routes.

S1095. <i>Petromyzon marinus</i> ; Sea lamprey S1099. <i>Lampetra fluviatilis</i> ; River lamprey		Beach Longline	NO	Bycatch is highly unlikely and has never been reported.
Natterjack toad (NON MARINE)	Coastal sand dunes	Beach Longline	NO	Access to beach is via foot on established access routes.
A038 <i>Cygnus cygnus</i> ; Whooper swan (non-breeding) A040 <i>Anser brachyrhynchus</i> ; Pink-footed goose (non-breeding) A045b <i>Branta leucopsis</i> ; Barnacle goose (non-breeding) A130 <i>Haematopus ostralegus</i> ; Eurasian oystercatcher (non-breeding) A140 <i>Pluvialis apricaria</i> ; European golden plover A143 <i>Calidris canutus</i> ; Red knot (non-breeding) A144 <i>Calidris alba</i> ; Sanderling (non-breeding) A160 <i>Numenius arquata</i> ; Eurasian curlew (non-breeding) A162 <i>Tringa totanus</i> ; Common redshank (non-breeding) A 054 <i>Anas acuta</i> ; Northern Pintail (non-breeding) A137 <i>Charadrius hiaticula</i> ; Ringed plover (non-breeding) A149 <i>Caladris alpine alpine</i> ; Dunlin (non-breeding) A 157 <i>Limosa lapponica</i> ; Bar-tailed godwit (non-breeding)	Intertidal mudflat and sandflat communities, intertidal and subtidal boulder and cobble skear communities, saltmarsh communities, coastal lagoon communities, Shingle areas	Beach Longline 1. Above water noise 2. Visual disturbance 3. Underwater noise changes 4. Collision above and below water with lines 5. Litter 6. Removal of non-target species 7. Removal of target species 8. Introduction or spread of non-indigenous species 9. Genetic modification and translocation of indigenous species 10. Abrasion/ disturbance of the substrate on the surface of the seabed (<i>supporting habitat</i>) 11. Penetration and/ or disturbance of the substrate	NO	Estuarine Birds 1,2 & 3. Limited activity means that noise and visual disturbance is minimal. Access is via established access routes. 4. Interaction (such as collision) with bird feature and fishing gear highly unlikely due to small numbers of lines set and limited scale of activity. No bycatch of birds recorded. 5. Limited activity means that exposure of features to potential pressure is minimal and no greater than existing background levels. 6 & 7. Removal of target and non-target species through fishing activity- limited activity means impact on bird feature food resource is minimal. 8 & 9. Limited activity means that exposure of features to potential pressure is minimal and no greater than existing background levels. Fishermen don't move lines further than local area therefore unlikely to move non-indigenous species. 10 & 11. Abrasion risk to substrate and sub-surface substrate- potential impact to substrate and associated communities through abrasion and movement of substrate via contact of lines. Fishing activity footprint is small- limited activity means that exposure of features and sub-features to potential pressures is minimal.

		below the surface of the seabed (<i>supporting habitat</i>)		Area is naturally highly dynamic. Access to the fishery is via established access routes. No increase in disturbance on existing background levels. Feature interaction categorised as "Blue" in generic matrix.
Is the potential scale or magnitude of any effect likely to be significant?⁴	Alone No	Comments : Small scale activity with very limited impacts on a small number of features.	In-combination⁵ Uncertain	Comments : These activities also occur at the site- <ul style="list-style-type: none"> • Beam trawl (shrimp) • Gill nets, trammels, entangling • Handlines (rod/gurdy) • Fyke and stakenets In combination effects will be assessed when all initial TLSEs for a site are completed.
Have NE been consulted on this LSE test? If yes, what was NE's advice?	Yes			

Annex 1: Reference list

K. Hall, O.A.L. Paramor, L. A. Robinson, A. Winrow-Giffin & C.L.J. Frid, N.C. Eno, K.M. Dernie, R.A.M. Sharp, G.C.Wyn & K Ramsay. (2008) Mapping the sensitivity of benthic habitats to fishing in Welsh waters - development of a protocol. CCW Policy Research Report No. 08/12.

⁴ Yes or uncertain: completion of AA required. If no: LSE required only.

⁵ If conclusion of LSE alone an in-combination assessment is not required.

Annex 2: Natural England's consultation advice

Date: 18 January 2016
Our ref: 174648
Your ref: Formal Sign Off – SF EMS



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

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

BY EMAIL ONLY

T 0300 060 3900

Dear Sarah

Formal Advice to NWIFCA. Review of Fisheries in Marine Protected Areas. Assessments for Solway Firth European Marine Site

Thank you for your consultation on the above which was received by Natural England on 18 December 2015.

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.

In 2012, the Department for Environment, Food and Rural Affairs (Defra) announced a revised approach to the management of commercial fisheries in EMSs¹. The objective of this revised approach is to ensure that all existing and potential commercial fishing activities are managed in accordance with Article 6 of the Habitats Directive. This document states that for 'green' risk activities a site level assessment will be required if there are 'in combination effects' with other plans or projects. The Department's strong preference is that site level assessments be carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive. Appropriate management measures should be put in place to ensure that the fishing activity or activities either 1) have no likely significant effect on a site in view of its conservation objectives or 2) following assessment, can be concluded to have no adverse effect on the integrity of the site.

Natural England has considered the two Habitat Regulations Assessments (HRAs) prepared by North Western Inshore Fisheries and Conservation Authority (IFCA) for the purposes of making an assessment consistent with the provisions of Article 6(3). Please accept this letter as Natural England's formal advice on the assessment and the conclusions it makes. The assessments consider the effects of the following fishing activities in the Solway Firth European Marine Site which includes Upper Solway Flats and Marshes Special Protection Area (SPA) and Ramsar and Solway Firth Special Area of Conservation (SAC) :

- NWIFCA-SF-EMS-005 Suction Dredge (Cockles);
- NWIFCA-SF-EMS-009 Longlines (Demersal)

¹ Defra revised approach:

<https://www.gov.uk/government/publications/revised-approach-to-the-management-of-commercial-fisheries-in-european-marine-sites-overarching-policy-and-delivery>

Page 1 of 2

CUSTOMER
SERVICE
EXCELLENCE



Natural England is accredited to the Cabinet Office Service Excellence Standard

We are content that the best available and most up to date evidence has been used to carry out the HRAs by North Western IFCA officers to determine whether management of an activity is required to conserve site features, and thus to ensure the protection of the features, from direct and indirect impacts, from the collection of marine fisheries resources.

We note that in combination effects will be assessed in a separate document when all initial Tests of Likely Significant Effects (TLSEs) for a site are completed.

Subject to the outcomes of the in combination assessments, it is Natural England's view that through their two HRAs, North Western IFCA officers appear to have appropriately identified those activities that are likely to have a significant effect in view of the site's conservation objectives, and whether management measures are required in order to ensure that the assessed fishing activity or activities will have no adverse effect on the integrity of the EMS.

It is Natural England's view that any foreseeable risk, or harm to the site has been appropriately assessed; and a robust mechanism for re-assessing that risk is in place. This view is based on our current knowledge of the impacts of these fishing activities on the designated features.

If you require any further comments or have any queries regarding the above please contact me to discuss them further.

Yours sincerely



Helen Ake
Cumbria Area Team
Email: Helen.Ake@naturalengland.org.uk
Tel: 0300 060 0493



Annex 3: Site Map

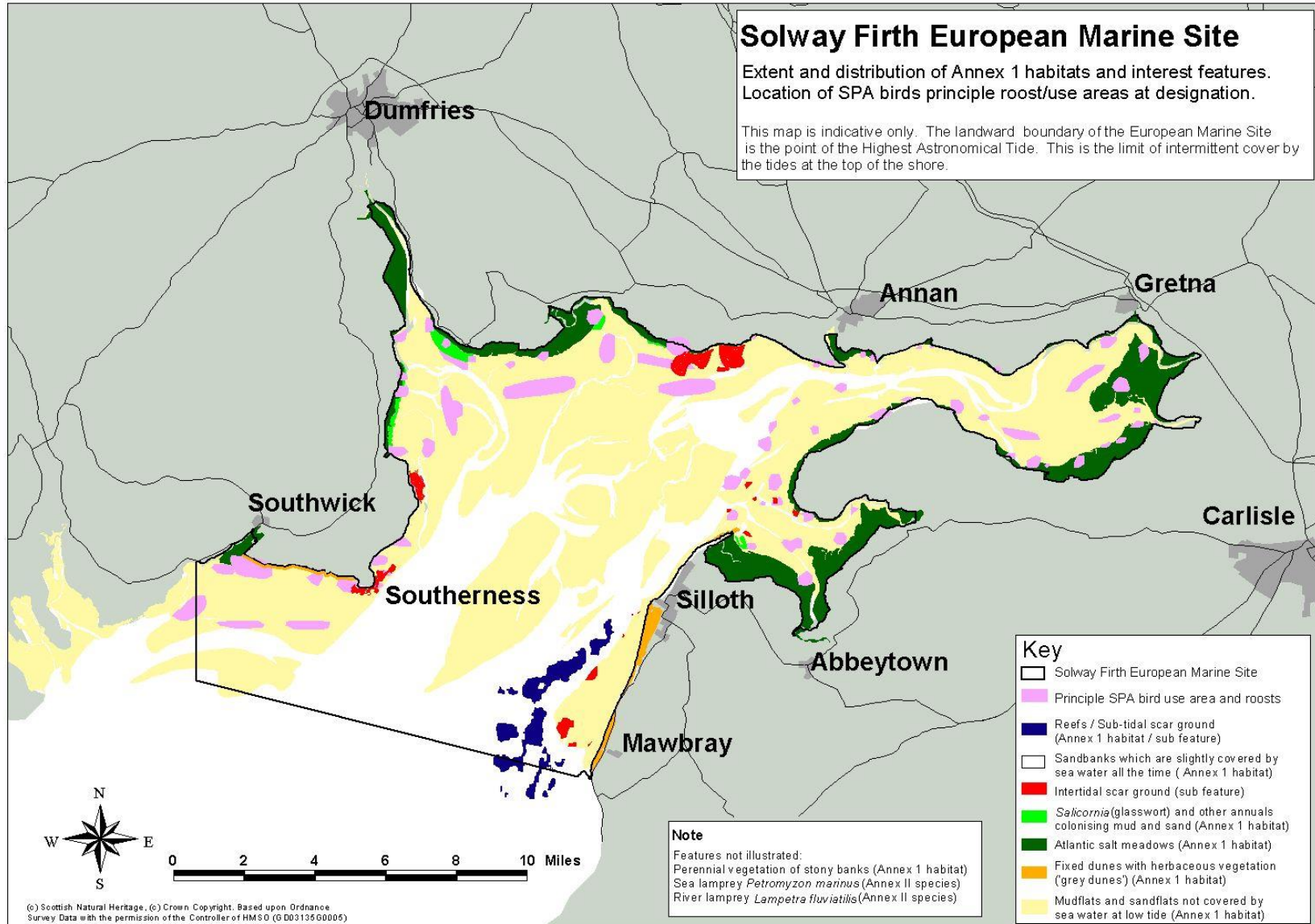
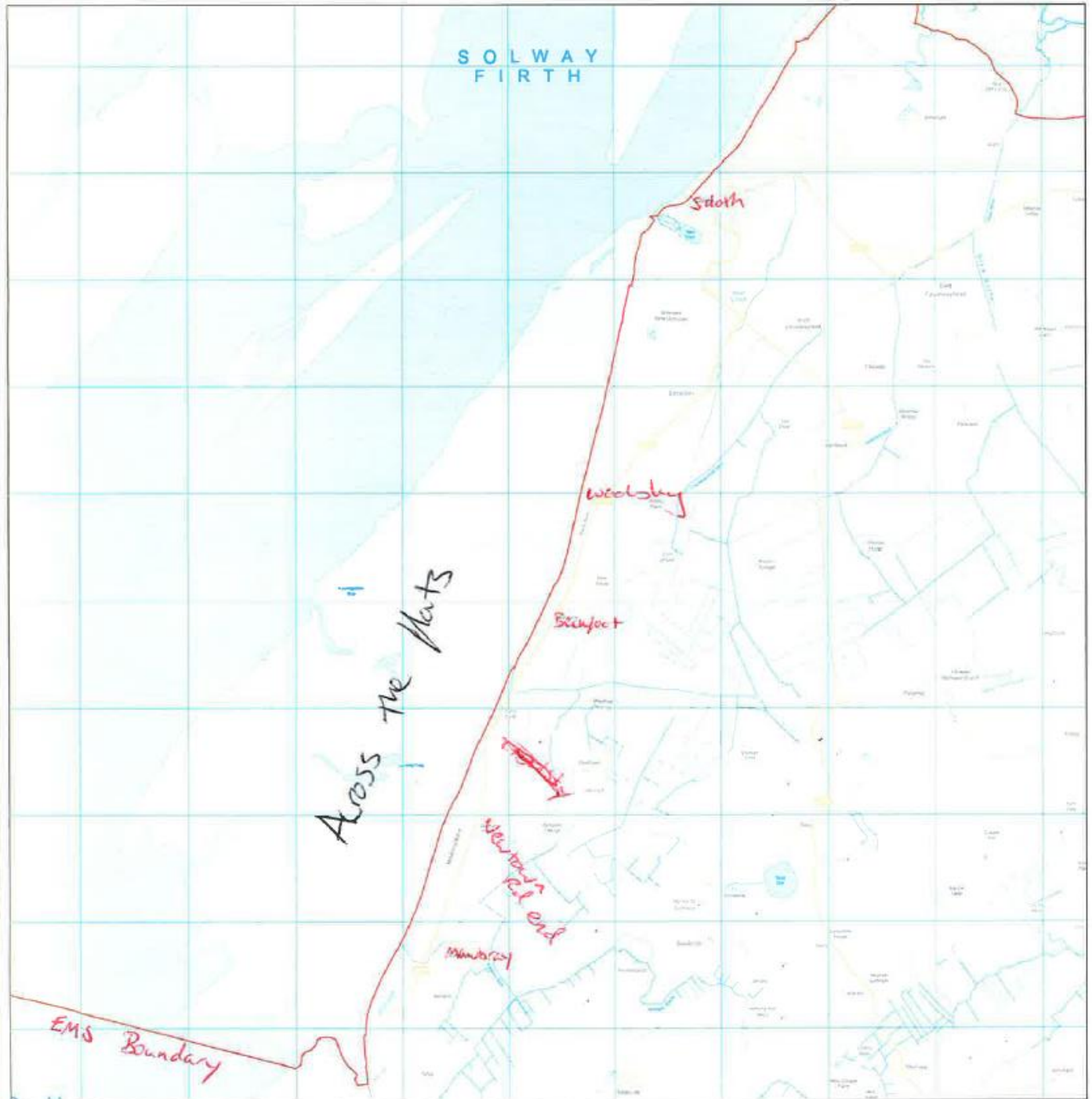


Fig 1. Map of Solway Firth EMS with features.

Annex 4: Fishing activity maps

Longlining in Solway Firth

From Stats: Woolsty Lane End
Apr-12 Beckfoot
Oct-14 Newton Road End
Dunmill Point



Erik Thimexen

3-12-14

Fig 2. Map showing location of IFCO patrol points and demersal longlining Activity in Solway Firth EMS.

	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	May-13	Jun-13	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	SU M
Total	0	0	3	0	0	0	0	0	0	0	0	0	1	9	0	8	7	6	5	0	39
Burgh-by-Sands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Port Carlisle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campfield Marsh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Silloth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Woolsty Lane End	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Beckfoot	0	0	3	0	0	0	0	0	0	0	0	0	1	7	0	7	5	6	5	0	34
Newtown Road End	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Mawbray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dubmill Point	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Allonby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 1. IFCO sightings of demersal longlines in Solway Firth EMS (April 2012 to October 2014). Months where patrols did not take place are not included.



Fig 3. Example of beach longline set in Solway Firth EMS. (Clockwise from top.) Extent of line, Hook baited with lugworm, Post for line attachment.