

Norfolk Boreas Offshore Wind Farm
**The Haisborough
Hammond and
Winterton Special
Area of Conservation
Position Paper
Appendix 2**
Draft Joint Recommendation Paper

Applicant: Norfolk Boreas Limited
Document Reference: ExA.AS-6.D5.V1
Deadline 5
Date: February 2020
Revision: Version 1
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Photo: Ormonde Offshore Wind Farm

Version	Initials and date	Comments
0.2	AW, 14/10/2016	Updated 2014 VMS charts for HHW and NNSSR
0.3	AW, 17/10/2016	Updated 2014 tabled Landings information for HHW and NNSSR
0.4	AW, 21/10/2016	Updated 5.4 and Seasonal trend charts
0.5	VM, 25/10/2016	Updated section 3, 5, 5.5, 5.1.1, 5.1.2, 5.2, 5.4, 6 and section 11
0.6	RB 28.10.16	Update symbology of proposal map as per actions from ad-hoc meeting of Scheveningen group
0.7	TB 291016	Gear tables made clearer, further text added setting out adaptive management approach in section 7, further explanation given as to how MCZ sites meet MSFD requirements and GES in Introduction.

Joint Recommendation regarding the protection of Sandbanks slightly covered by seawater all the time and Reefs features within the North Norfolk Sandbanks and Saturn Reef Site of Community Importance and the Haisborough, Hammond and Winterton Site of Community Importance under the Habitats Directive 92/43/EEC of 21 May 1992 under Articles 11 and 18 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (the Basic Regulation).

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Joint Recommendation

1. Introduction

This joint recommendation contains two proposals for the regulation of fisheries activity and is initiated by the United Kingdom (UK) and submitted to the European Commission jointly by the UK and the following Member States: The Netherlands, France, Denmark, Germany, Sweden and Belgium; being those Member States who have a direct management interest affected by the joint recommendation.

The overall aim of this joint recommendation is to ensure the protection of Annex I Habitats 1170 Reefs and 1110 Sandbanks which are slightly covered by sea water all the time within the North Norfolk Sandbanks and Saturn Reef Site of Community Importance (SCI) and beyond the 12 nautical mile (nm) limit in the Haisborough, Hammond and Winterton SCI from fisheries, thereby contributing to the obligation of maintaining or restoring reef structures and sandbanks which are slightly covered by seawater all the time to Favourable Condition in accordance with Article 6 of the Habitats Directive¹. These two SCIs are being taken forward in the same joint recommendation due to their close proximity and similarities.

It is the intention of the UK government (as the initiating Member State) to take forward measures in respect to fisheries activities exercised by all fishing vessels including those carrying the flag of other Member States of the EU.

2. The Recommendations to be Implemented

The following recommendations are proposed for adoption for the North Norfolk Sandbanks and Saturn Reef SCI:

- The exclusion of demersal trawling, dredging and seine netting (Table 1) to protect 1170 Reef and the exclusion of demersal trawling and dredging (Table 1) to protect 1110 Sandbanks which are slightly covered by sea water all the time within the site's management boundaries (Figure 1 of Supporting Documentation, page 26), and an increased reporting zone around the site's management boundaries (see Section 8 of Annex A).

¹ Council Directive 92/43/EEC, of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1992L0043:20070101:EN:PDF>

Table 1: Gear types to be prohibited within the management boundaries of the North Norfolk Sandbank and Saturn Reef SCI as shown in Figure 1 (page 26).

Gear types to be prohibited within the site's management boundaries	Habitat code	Gear code Annex XI in EU Regulation No 404/2011	International Standard Classification of Fishing Gears
Beam trawling (within the blue polygons (areas identified to protect H1110 Sandbanks) and red polygons (areas identified to protect H1170 Reef))	H1110, H1170	TBB	TBB
Bottom/Otter trawling (within the blue and red polygons)	H110, H1170	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Dredging (within the blue and red polygons)	H1110, H1170	DRB	DRB, DRH
Demersal seines (within the red polygons only)	H1170	SDN, SSC, SX, SV	SPR, SDN, SSC, SX, SV

The following recommendations are proposed for adoption for the Haisborough, Hammond and Winterton SCI:

- The exclusion of demersal trawling, dredging and seine netting (Table 1) to protect 1170 Reef and the exclusion of demersal trawling and dredging (Table 1) to protect 1110 Sandbanks which are slightly covered by sea water all the time within the site's management boundary (Figure 2 of Supporting Documentation, page 27), and an increased reporting zone around the site's management boundary (see Section 8 of Annex A).

Table 2: Gear types to be prohibited within the management boundary of the Haisborough, Hammond and Winterton SCI as shown in Figure 2 (page 27).

Gear types to be prohibited within the site's management boundary	Habitat code	Gear code Annex XI in EU Regulation No 404/2011	International Standard Classification of Fishing Gears
Beam trawling	H1110, H1170	TBB	TBB
Bottom/Otter trawling	H1110, H1170	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Demersal seines	H1170	SDN, SSC, SX, SV	SPR, SDN, SSC, SX, SV
Dredging	H1110, H1170	DRB	DRB, DRH

The coordinates of the sites and management boundaries are as follows:

Table 3: Coordinates for the North Norfolk Sandbanks and Saturn Reef SCI site boundary.

Point	Latitude	Longitude
1	53°37' 0" N	2°36' 0" E
2	52°58' 52" N	2°22' 42" E
3	53°0' 0" N	2°7' 60" E
4	53°12' 3" N	1°43' 1" E
5	53°23' 24" N	1°36' 26" E
6	53°26' 58" N	1°55' 13" E
7	53°40' 57" N	1°33' 18" E
8	53°45' 0" N	1°37' 0" E
9	53°36' 0" N	2°4' 0" E
10	53°43' 0" N	2°24' 0" E

Table 4: Coordinates for the North Norfolk Sandbanks and Saturn Reef SCI management boundaries for all demersal trawl, dredge and seine netting gears.

Area	Point	Latitude	Longitude
1	1	53°34' 30" N	2°3' 30" E
1	2	53°34' 30" N	2°9' 30" E
1	3	53°32' 30" N	2°9' 30" E
1	4	53°32' 30" N	2°3' 30" E
2	1	53°31' 30" N	1°57' 30" E
2	2	53°29' 32" N	2°0' 35" E
2	3	53°26' 58" N	1°55' 13" E
2	4	53°28' 54" N	1°52' 11" E
3	1	53°23' 30" N	1°59' 0" E
3	2	53°17' 50" N	2°5' 9" E
3	3	53°15' 52" N	2°0' 30" E
3	4	53°21' 15" N	1°53' 15" E
4	1	53°6' 60" N	2°19' 0" E
4	2	53°7' 37" N	2°25' 45" E
4	3	52°58' 52" N	2°22' 42" E
4	4	52°59' 38" N	2°12' 42" E

Table 5: Coordinates for the North Norfolk Sandbanks and Saturn Reef SCI management boundaries for demersal trawl and dredge only.

Area	Point	Latitude	Longitude
1	1	53°45' 0" N	1°37' 0" E
1	2	53°36' 0" N	2°4' 0" E
1	3	53°43' 0" N	2°24' 0" E
1	4	53°37' 0" N	2°36' 0" E
1	5	53°29' 32" N	2°0' 35" E
1	6	53°26' 58" N	1°55' 13" E
1	7	53°40' 58" N	1°33' 18" E
2	1	53°26' 58" N	1°55' 13" E
2	2	53°17' 50" N	2°5' 9" E
2	3	53°12' 55" N	1°53' 35" E
2	4	53°5' 45" N	2°5' 45" E
2	5	53°7' 37" N	2°25' 45" E
2	6	52°58' 52" N	2°22' 44" E
2	7	53°0' 0" N	2°7' 60" E
2	8	53°12' 3" N	1°43' 1" E
2	9	53° 23' 24" N	1°36' 27" E

Table 6: Coordinates for the Haisborough, Hammond and Winterton SCI site boundary.

Point	Latitude	Longitude
1	53° 0' 1" N	1°32' 6" E
2	53° 2' 43" N	1° 42' 58" E
3	52° 59' 59" N	2°5' 47" E
4	52°55' 0" N	2°12' 49"E
5	52°44' 34" N	2°18' 15" E
6	52°40' 18" N	2°18' 27" E
7	52°38' 49" N	2°12' 7" E
8	52°39' 48" N	2°4' 21" E
9	52°39' 0" N	1°59' 36" E
10	52°36' 31" N	1°52' 31" E
11	52°53' 31" N	1°41' 54" E

Table 7: Coordinates for the Haisborough, Hammond and Winterton SCI management boundary for all demersal trawl, dredge and seine netting gears.

Point	Latitude	Longitude
1	52°50' 38" N	1°45' 13" E
2	52°53' 0" N	1°53' 0" E
3	52°53' 60" N	2°6' 0" E
4	52°50' 30" N	2°12' 30" E
5	52°43' 30" N	2°16' 48" E
6	52°39' 55" N	2°16' 48" E
7	52°39' 48" N	2°4' 21" E
8	52°39' 0" N	1°59' 36" E
9	52° 39' 0" N	1°57' 59" E

3. Control and enforcement of the proposed fisheries management measures

Control and enforcement of the proposed fisheries management measures will be based on the risk-based systems in accordance with the model developed by the UK's Marine Management Organisation (MMO).

Key provisions which should be included in an EC regulation to facilitate control, enforcement and compliance include:

- A prohibition on any demersal towed gears or dredging being deployed within the management areas of these SCIs. All gear types are permitted to fish in the reporting zone outside the management area with increased VMS reporting.
- Establishment of a 1nm (1.852km) reporting zone around the proposed management areas of the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough, Hammond and Winterton SCI. All fishing vessels within these areas shall be required to record or report vessel positions at 10 minute intervals. These areas are defined by the reporting zones and coordinates displayed in Annex F.
- A requirement for all fishing vessels entering the reporting zones to have a system for recording and reporting vessel position which meets prescribed specifications (see Section 8.2 of Annex A for minimal requirements) and is installed and operative. Any fishing vessel entering either North Norfolk Sandbanks and Saturn Reef SCI or Haisborough, Hammond

and Winterton SCI, or the reporting zones of these sites, without such a system will be committing an offence.

- A requirement for all fishing vessels transiting the prohibited areas carrying prohibited gears to have all gears on board lashed and stowed during transit.
- A requirement for all fishing vessels transiting the restricted areas carrying prohibited gears to ensure that the speed during transit is not less than 6 knots except in the case of force majeure or adverse conditions². In such cases, the master shall immediately inform the fisheries monitoring centre (FMC) of the flag member state which shall then inform the Marine Management Organisation (MMO FMC).

The proposal on which gear types to prohibit is formulated in terms of Gear Codes in Annex XI in EU Regulation 404/2011 and is explained in more detail in Section 8 of Annex A.

The ongoing management needs of these sites will be assessed on an annual basis. If changes to the current management status are required, the UK will coordinate such a requirement in accordance with Articles 11 and 18 of the Basic Regulation and in collaboration with those Member States with a direct management interest in the North Norfolk Sandbanks and Saturn Reef, and the Haisborough, Hammond and Winterton sites.

² Article 50 4(b) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:343:0001:0050:EN:PDF>

Joint Recommendation regarding the protection of sandbanks slightly covered by sea water all the time and reef features within the North Norfolk Sandbanks and Saturn Reef Site of Community Importance and the Haisborough, Hammond and Winterton Site of Community Importance under the Habitats Directive 92/43/EEC of 21 May 1992 under Articles 11 and 18 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (the Basic Regulation).

Supporting Documentation

1. Introduction

1.1 General Remarks

The North Norfolk Sandbanks and Saturn Reef and Haisborough, Hammond and Winterton sites were both submitted to the European Commission as candidate Special Areas of Conservation (cSACs) in August 2010 and approved by the Commission as a Sites of Community Importance (SCIs) in November 2011. Both sites are designated to protect Annex I Habitats 1170 Reef and 1110 Sandbanks which are slightly covered by sea water all the time. These two SCIs are being taken forward in the same joint recommendation due to their close proximity and similarities.

The conservation objective for North Norfolk Sandbanks and Saturn Reef SCI is to restore habitat types 1110 and 1170 to favourable condition. The conservation objective for Haisborough, Hammond and Winterton SCI is to maintain habitat type 1110 in favourable condition; and maintain or restore habitat type 1170 to favourable condition. Under Article 6 of the Habitats Directive, Member States have a duty to take appropriate steps to avoid the deterioration of natural habitats for which SACs have been designated. Commercial fishing has been identified as an activity which could adversely impact the integrity of the sites' features and as such require being assessed and, if necessary, managed to reduce its impact.

Due to the close proximity and shared management requirements of North Norfolk Sandbanks and Saturn Reef SCI and Haisborough, Hammond and Winterton SCI, management proposals for both sites have been developed together and are presented in the same Joint Recommendation.

Haisborough, Hammond and Winterton SCI crosses the 6 and 12 nautical miles (nm) limits and extends into the offshore region. Belgium is the only Member State with historic access to the 6 to 12nm area of this site. For the 0-6nm area, the MMO and the relevant Inshore Fisheries Conservation Authority (IFCA) will identify appropriate management measures if required. Management measures discussed within in this document relate to features located in the 6-12 area of the site and those that extend offshore beyond the 12nm limit.

As the proposed management boundaries for the two sites fall beyond 12 nm of the UK coastline, all Member States have access to the areas within North Norfolk Sandbanks and Saturn Reef SCI and to those within the offshore portion of Haisborough, Hammond and Winterton SCI. The UK, The Netherlands, France, Denmark and Belgium, and to a lesser extent, Sweden and Germany, are currently the only Member States with an active fishing interest in the sites. It is the intention of the UK Government (as the initiating Member State) to take forward measures in respect to fisheries activities exercised by all vessels including fishing vessels carrying the flag of other Member States of the EU.

This document covers the 11 information items of the Commission's guidelines from 2008 concerning development of proposals for fisheries management measures in marine Natura 2000 areas within the scope of the Common Fisheries Policy.

1.2 Overall aim of the present proposals

The overall aim of the present proposal is to ensure adequate protection of the designated features 1170 Reef and 1110 Sandbanks which are slightly covered by sea water all the time from fishing activities and thereby to contribute to the obligation of achieving or maintaining their favourable conservation status in accordance with Art. 6 (2) of the Habitats Directive; which states that Member States shall take appropriate steps to avoid the deterioration of natural habitats for which the areas have been designated.

The conservation objectives for the North Norfolk Sandbanks and Saturn Reef SCI are to restore the habitat type 1170 and 1110 to favourable condition; and for Haisborough, Hammond and Winterton SCI is to maintain the habitat type 1100 and maintain or restore the habitat type 1170 to favourable condition. According to advice provided by the Joint Nature Conservation Committee (JNCC), the UK Government's statutory scientific advisor for offshore habitats, where fishing using mobile demersal gears overlaps with the feature it may pose a risk to achieving the conservation objectives for the site. Management measures may focus on the removal of pressures (to reduce the risk of not achieving the conservation objectives to the lowest possible level), or the reduction of pressures (to reduce the risk of not achieving the conservation objectives).

The UK is proposing to restrict fishing activity with mobile demersal gears within certain areas of sites where such activity could pose a risk to the restoration of the sites to favourable conservation status. Where there is uncertainty regarding the impacts of fishing on the features, an "adaptive management" approach is proposed, which would allow the site to move towards its conservation objectives while providing the opportunity to improve our understanding of the impacts and subsequently adapt management accordingly.

The content of the proposed fisheries management measures is explained in more detail in section 1.3 below. The proposals have also been reviewed by the Centre for Environment, Fisheries and Aquaculture Sciences (Cefas) (see Section 5).

1.3 Recommendations to be implemented

The following recommendations are proposed for adoption for the North Norfolk Sandbanks and Saturn Reef SCI:

- The exclusion of demersal trawling, dredging and seine netting (Table 1) to protect 1170 Reef and the exclusion of demersal trawling and dredging (Table 1) to protect 1110 Sandbanks which are slightly covered by sea water all the time within the site’s management boundaries (Figure 1), and an increased reporting zone around the site’s management boundaries (see Section 8 of Annex A).

Table 1: Gear types to be prohibited within the management boundaries of the North Norfolk Sandbank and Saturn Reef SCI as shown in Figure 1 (page 26).

Gear types to be prohibited within the site’s management boundaries	Habitat code	Gear code Annex XI in EU Regulation No 404/2011	International Standard Classification of Fishing Gears
Beam trawling (within the blue polygons (areas identified to protect H1110 Sandbanks) and red polygons (areas identified to protect H1170 Reef))	H1110, H1170	TBB	TBB
Bottom/Otter trawling (within the blue and red polygons)	H110, H1170	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Dredging (within the blue and red polygons)	H1110, H1170	DRB	DRB, DRH

Demersal seines (within the red polygons only)	H1170	SDN, SSC, SX, SV	SPR, SDN, SSC, SX, SV
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The following recommendations are proposed for adoption for the Haisborough, Hammond and Winterton SCI:

- The exclusion of demersal trawling, dredging and seine netting (Table 1) to protect 1170 Reef and the exclusion of demersal trawling and dredging (Table 1) to protect 1110 Sandbanks which are slightly covered by sea water all the time within the site's management boundary (Figure 2), and an increased reporting zone around the site's management boundary (see Section 8 of Annex A).

Table 2: Gear types to be prohibited within the management boundary of the Haisborough, Hammond and Winterton SCI as shown in Figure 2 (page 27).

Gear types to be prohibited within the site's management boundary	Habitat code	Gear code Annex XI in EU Regulation No 404/2011	International Standard Classification of Fishing Gears
Beam trawling	H1110, H1170	TBB	TBB
Bottom/Otter trawling	H1110, H1170	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Demersal seines	H1170	SDN, SSC, SX, SV	SPR, SDN, SSC, SX, SV
Dredging	H1110, H1170	DRB	DRB, DRH

The coordinates of the sites and management boundaries are as follows:

Table 3: Coordinates for the North Norfolk Sandbanks and Saturn Reef SCI site boundary.

Point	Latitude	Longitude
1	53° 37' 0" N	2° 36' 0" E
2	52° 58' 52" N	2° 22' 42" E
3	53° 0' 0" N	2° 7' 60" E
4	53° 12' 3" N	1° 43' 1" E

5	53°23'24" N	1°36'26" E
6	53°26'58" N	1°55'13" E
7	53°40'57" N	1°33'18" E
8	53°45'0" N	1°37'0" E
9	53°36'0" N	2°4'0" E
10	53°43'0" N	2°24'0" E

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Table 4: Coordinates for the North Norfolk Sandbanks and Saturn Reef SCI management boundaries for all demersal trawl, dredge and seine netting gears.

Area	Point	Latitude	Longitude
1	1	53°34'30" N	2°3'30" E
1	2	53°34'30" N	2°9'30" E
1	3	53°32'30" N	2°9'30" E
1	4	53°32'30" N	2°3'30" E
2	1	53°31'30" N	1°57'30" E
2	2	53°29'32" N	2°0'35" E
2	3	53°26'58" N	1°55'13" E
2	4	53°28'54" N	1°52'11" E
3	1	53°23'30" N	1°59'0" E
3	2	53°17'50" N	2°5'9" E
3	3	53°15'52" N	2°0'30" E
3	4	53°21'15" N	1°53'15" E
4	1	53°6'60" N	2°19'0" E
4	2	53°7'37" N	2°25'45" E
4	3	52°58'52" N	2°22'42" E
4	4	52°59'38" N	2°12'42" E

Table 5: Coordinates for the North Norfolk Sandbanks and Saturn Reef SCI management boundaries for demersal trawl and dredge only.

Area	Point	Latitude	Longitude
1	1	53°45' 0" N	1°37' 0" E
1	2	53°36' 0" N	2°4' 0" E
1	3	53°43' 0" N	2°24' 0" E
1	4	53°37' 0" N	2°36' 0" E
1	5	53°29' 32" N	2°0' 35" E
1	6	53°26' 58" N	1°55' 13" E
1	7	53°40' 58" N	1°33' 18" E
2	1	53°26' 58" N	1°55' 13" E
2	2	53°17' 50" N	2°5' 9" E
2	3	53°12' 55" N	1°53' 35" E
2	4	53°5' 45" N	2°5' 45" E
2	5	53°7' 37" N	2°25' 45" E
2	6	52°58' 52" N	2°22' 44" E
2	7	53°0' 0" N	2°7' 60" E
2	8	53°12' 3" N	1°43' 1" E
2	9	53° 23' 24" N	1°36' 27" E

Table 6: Coordinates for the Haisborough, Hammond and Winterton SCI site boundary.

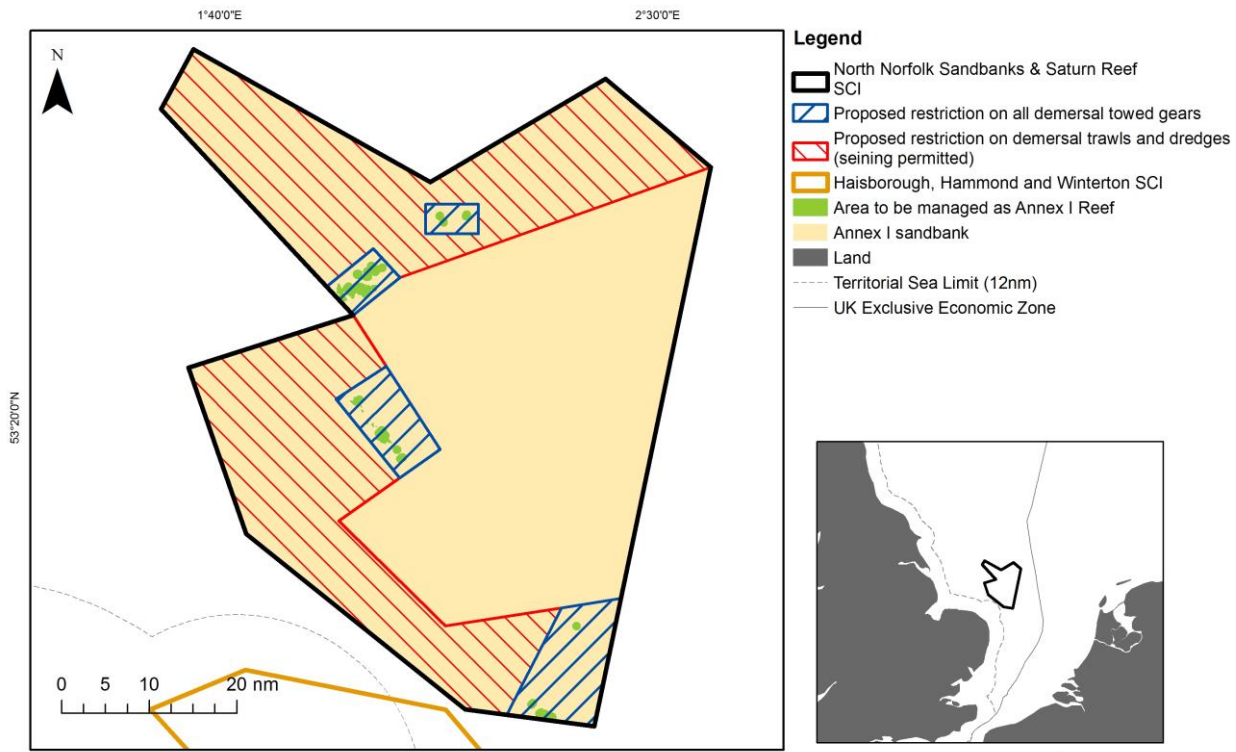
Point	Latitude	Longitude
1	53° 0' 1" N	1°32' 6" E
2	53° 2' 43" N	1° 42' 58" E
3	52° 59' 59" N	2°5' 47" E
4	52°55' 0" N	2°12' 49"E
5	52°44' 34" N	2°18' 15" E
6	52°40' 18" N	2°18' 27" E
7	52°38' 49" N	2°12' 7" E
8	52°39' 48" N	2°4' 21" E
9	52°39' 0" N	1°59' 36" E
10	52°36' 31" N	1°52' 31" E
11	52°53' 31" N	1°41' 54" E

Table 7: Coordinates for the Haisborough, Hammond and Winterton SCI management boundary for all demersal trawl, dredge and seine netting gears.

Point	Latitude	Longitude
1	52°50' 38" N	1°45' 13" E
2	52°53' 0" N	1°53' 0" E
3	52°53' 60" N	2°6' 0" E
4	52°50' 30" N	2°12' 30" E
5	52°43' 30" N	2°16' 48" E
6	52°39' 55" N	2°16' 48" E
7	52°39' 48" N	2°4' 21" E
8	52°39' 0" N	1°59' 36" E
9	52°39' 0" N	1°57' 59" E

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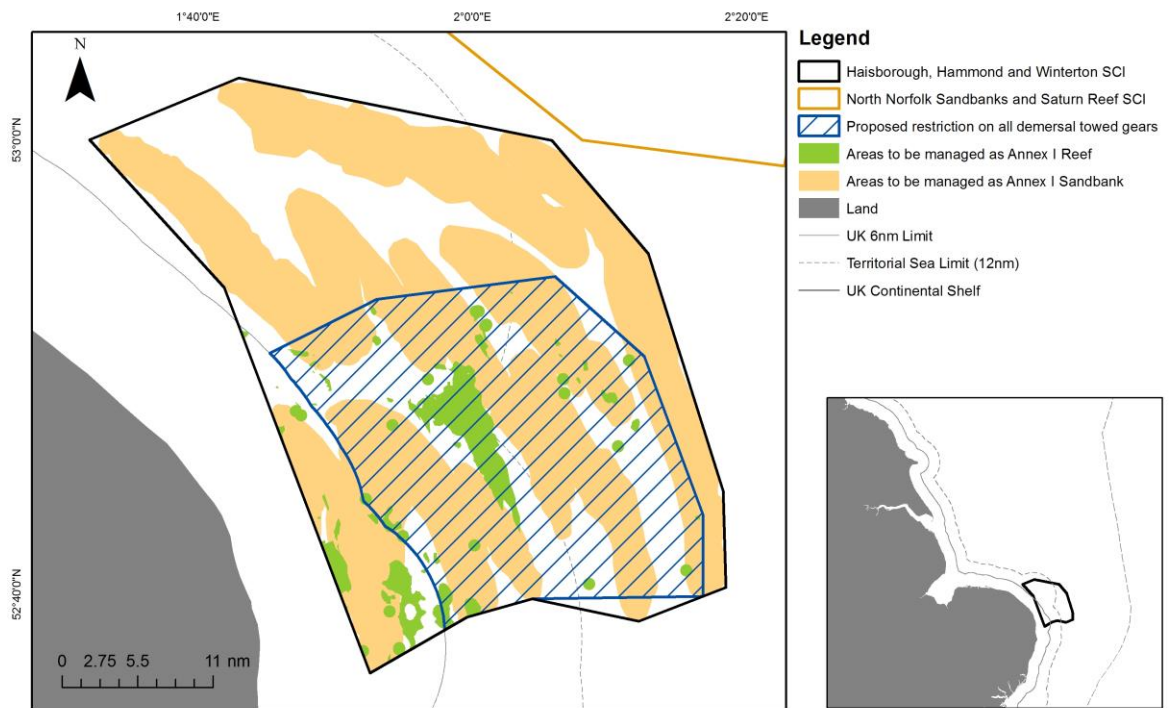


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 for Environment
 Food & Rural Affairs

Figure 1: North Norfolk

Sandbanks and Saturn Reef SCI site and management boundaries.



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 Combining source layers from UKHO. © Crown copyright © JNCC. UK Exclusive Economic Zone © Crown copyright. The exact limits of the EEZ are set out in The Exclusive Economic Zone Order 2013. World Vector Shoreline © US Defence Mapping Agency. Not to be used for navigation.



Figure 2: Map of Haisborough, Hammond and Winterton SCI site and management boundaries.

2. Legal framework

2.1 Common Fisheries Policy

The Common Fisheries Policy (Regulation No 1380/2013 (The Basic Regulation) Article 11) states that Member States are empowered to adopt conservation measures not affecting fishing vessels of other Member States that are applicable to waters under their sovereignty or jurisdiction and that are necessary to comply with the obligations under Article 6 of Directive 92/43/EEC and Article 13(4) of 2008/56/EC.

Where a Member State (“initiating Member State”) considers that measures need to be adopted for the purpose of complying with the obligations referred to above, and other Member States have a direct management interest in the fishery to be affected by such measures, the European Commission shall be empowered to adopt such measures, upon request, by means of delegated acts. For this purpose cooperation between Member States having a direct management interest is foreseen with a view to formulating a joint recommendation in agreement on draft fisheries management measures to be forwarded to the Commission.

The initiating Member State shall provide the Commission and the other Member States having a direct management interest with relevant information on the measures required, including their rationale, scientific evidence in support and details on their practical implementation and enforcement. Member States shall consult the relevant Advisory Councils.

The initiating Member State and the other Member States having a direct management interest may submit a joint recommendation within six months from the provision of sufficient information. The Commission shall adopt the measures, taking into account any available scientific advice, within three months from receipt of a complete request (Reg 1380/2013, Articles 11 and 18).

The following chapters describe how the UK, as the initiating Member State, has taken the Commission’s criteria for decision making into account, as well as the requirements for regional coordination in line with the new Basic Regulation.

2.2 Fisheries Access to the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough Hammond and Winterton SCI

In accordance with the Basic Regulation the following Member States operate mobile demersal gears within the proposed management zones: UK, The Netherlands, France, Denmark, Belgium, Sweden and Germany. Further information on fishing activity can be found at Section 5 of Annex A.

2.3 Designation of the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough Hammond and Winterton SCI

The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (SI 2007/1842)³, as amended, provide the legal basis for the designation of Natura 2000 sites in offshore waters and areas of the extended continental shelf in the UK. In accordance with Regulation 7 of the above Regulations, both the North Norfolk Sandbanks and Saturn Reef and the Haisborough Hammond and Winterton sites were submitted to the European Commission as Candidate Special Areas of Conservation (cSACs) in August 2010 and adopted by the Commission as SCIs in November 2011. In accordance with Article 4(4) of the Habitats Directive, Member States have a maximum of six years from the site being adopted as a SCI to implement the necessary management measures and formally designate the site as a SAC.

3. Process

This chapter describes the process from when the initiative to protect Annex I Habitats from fisheries activities in the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough Hammond and Winterton SCI was commenced at a fisheries management workshop held in The Hague, August 2014 by the Department for Environment Food and Rural Affairs (Defra) until submission of fisheries management measures in the form of 'A Joint Recommendation' by the UK, the Netherlands, France, Denmark, Germany, Sweden, and Belgium to the European Commission.

3.1 Stakeholder workshops

Two workshops were held in the Netherlands and the UK in August 2014 and May 2015 with the intention of allowing stakeholder input to management measures. The meetings were attended by representatives of the Dutch, French, Belgian and UK fishing industries and environmental Non-Governmental Organisations (NGOs).

Participants were provided with fisheries management options papers for the sites, which discussed the risk to achievement of the conservation objectives associated with a range of management options, and they were invited to contribute to the process of developing appropriate management measures to achieve the conservation objectives while complying with the principals of proportionality and non-discrimination.

³ <http://www.legislation.gov.uk/uksi/2007/1842/contents/made>

While it was not possible to achieve agreement on management measures during these meetings, stakeholder views were recorded and taken into consideration in subsequent drafting of measures. Notes from the meetings are available upon request from Defra.

3.2 Consultation on management proposals

Draft proposals for fisheries management measures were developed using feedback from the stakeholder workshops as well as advice from the UK's statutory nature conservation bodies, the JNCC and Natural England, and offshore fisheries regulator, the MMO.

The draft management proposals were subject to a six week period of consultation with Member States with a direct management interest in the sites and the North Sea Advisory Council. This was followed by a consultation meeting with representatives from both groups to provide further opportunity for comments and views on the proposals to be raised. At the meeting, support for the proposals amongst other Member States was strong and any outstanding concerns were recorded and subsequently addressed during the finalisation of the management proposals. A note from the meeting is available upon request from Defra.

3.3 Formal agreement of Joint Recommendations

Finalised management proposals were presented to other Member States with a direct management interest in the sites for agreement that sufficient information had been provided in order to commence the formal agreement of the proposals as Joint Recommendations. Following this, ad hoc meetings of the Scheveningen FISH-ENVI Technical Group were held to start formal agreement proceedings for the Joint Recommendations. Any outstanding issues were then addressed before agreement was reached on the Joint Recommendations by members of the Scheveningen High-Level Group and they were submitted to the European Commission to be adopted.]

Kommenterede [m1]: To be completed

3.4 Involvement of the North Sea Advisory Council

The North Sea Advisory Council (NSAC) has been involved in the development of fisheries management measures from the outset, with members attending the stakeholder workshops in the Netherlands and the UK. At the beginning of the consultation period the draft proposals were presented to NSAC members at an NSAC Spatial Planning Working Group meeting, before they were invited to comment on the proposals. NSAC representatives also attended the consultation meeting that followed in London as well as the ad hoc meeting of the Scheveningen FISH-ENVI Technical Group to start formal agreement proceedings for the Joint Recommendations.

3.5 Fishing industry proposals

Representatives of the Dutch, Belgian and British fishing industry undertook further consultation with their members and subsequently submitted their own proposals for fisheries management measures, as coordinated by VisNed, and which are set out at Annex D within separate documentation. The fishing industry proposals were reviewed by Cefas and the JNCC, and an account of how they were used during the development of Joint Recommendations is provided in section 7.2 of Annex A.

In addition, the National Federation of Fishermen's Organisations commissioned ABPmer and Ichthys Marine Ecological Consulting Ltd to conduct shadow site-level assessment of beam trawling activity in North Norfolk Sandbanks and Saturn Reef SCI (ABPmer and Ichthys Marine, 2015). Cefas have provided independent review of ABPmer and Ichthys Marine (2015), which is available from Defra upon request, and concluded that the "adequacy of (Member States') proposed management measures and the likelihood of long term progress in achieving conservation objectives is supported by recommendations of (the) study". Once implemented, it is hoped that the proposed zoned approach to management will provide opportunity to validate the assessments made by both ABPmer and Ichthys Marine (2015) and the UK's statutory conservation advisors presented here to inform the ongoing adaptive management of the sandbank features in the site.

4. Rationale for measures

Impacts of mobile demersal gears (including scallop dredges, beam trawls, otter trawls and seine nets)

1170 Reefs

Demersal towed gears have the potential to effect the long term natural distribution of the *Sabellaria spinulosa* reefs and the structure and function of their associated biological communities. Loss of *S. spinulosa* reefs in the North East Atlantic has been attributed to the long-term effects of various fishing practices, predominantly that of towed demersal gear (Jones et al, 2000; Holt et al. 1998). Trawls break apart *S. spinulosa* tubes, resulting in direct mortality of the worms and a reduction of the structure and complexity of the habitat, which may no longer support associated animals and plants (UK Biodiversity Action Plan, 2000).

Consequently, it is concluded that use of any mobile demersal gear (including seine netting) would result in an unacceptable risk to the conservation objectives for the feature. In order to reduce this risk, it was decided to prohibit the use of mobile demersal gear over all areas to be managed as *S. spinulosa* reef within the sites, as identified by the UK's statutory nature conservation advisors, the

JNNC and where relevant Natural England. This approach is consistent with the UK Government's precautionary approach and is described further in Section 7 of Annex A.

1110 Sandbanks which are slightly covered by sea water all the time

Whilst it is unlikely that mobile bottom contact gear can affect the long-term natural distribution of sandbanks, there is evidence to indicate that the use of bottom contacting mobile gears can impact the structure and function of the habitat and the long term survival of its associated species.

The extent to which mobile gear impacts on sand and gravel communities can vary considerably, according to the type of gear, the intensity of fishing and the sediment composition. Trawling and dredging tend to cause increased mortality of fragile and long lived species and favour opportunistic, disturbance-tolerant species (Bergman & Van Santbrink, 2000; Eleftheriou & Robertson, 1992). Some particularly sensitive species may disappear entirely (Bergman & Van Santbrink, 2000). The net result is benthic communities modified to varying degrees relative to the un-impacted state (Bergman & Van Santbrink, 2000; Kaiser *et al.* 2006).

In higher energy locations, for example the sandy bank tops or wave and/or tide exposed areas the associated fauna tend to be well adapted to disturbance and as a result are more tolerant of fishing-related disturbance (Dernie *et al.* 2003; Hiddink *et al.* 2006). The habitat may be maintained in a modified state; however modification is likely to be low relative to natural variation. In lower energy locations, such as muddy sands and sand in deep water, or on the flanks and towards troughs between banks, sediments tend to be more stable and their associated fauna less tolerant of disturbance (Kaiser *et al.* 2006; Hiddink *et al.* 2006). The habitat may be maintained in a modified state with reduced abundance of fragile, long lived species.

Considering the degree of uncertainty regarding the impacts of trawling and dredging and the level at which their effects would be considered unacceptable, it was decided to implement an "adaptive management" approach, whereby a proportion of the feature will be closed to these gears and subsequently monitored to improve our understanding of impacts and inform future management. This approach is consistent with the UK Government's precautionary approach and is described further in Section 7 of Annex A.

Demersal seines (Danish and Scottish seines) lack the heavy penetrating gear components of mobile demersal gears, such as otter doors and trawl shoes (Suuronen *et al.* 2012; Donaldson *et al.* 2010), so the risk of impact to the sandbank feature is considered likely to be lower. In this case, the risk to the achievement of the conservation objective for sandbank feature is considered to be sufficiently low that no additional management is considered necessary. However, if monitoring indicates impacts from these gears, it may be necessary to impose some degree of management in the future.

Impacts of static demersal gears (including gillnets, trammel nets, longlines, pots and traps)

1170 Reefs

It is unlikely that demersal static gears at moderate levels of fishing effort will have a significant effect on the long-term natural distribution of *S. spinulosa* reefs, or on the structure and function of their associated biological communities. Sensitivity of *S. spinulosa* reefs to static gears is low to medium depending on fishing intensity (Hall *et al.* 2008; Tillin *et al.* 2010). However, effects at high levels of fishing intensity are uncertain and it is possible in some circumstances that damage to reef structures could exceed their capacity to recover.

The risk to the achievement of the conservation objective is considered to be sufficiently low that no additional management is considered necessary for demersal static gears. However, if monitoring indicates impacts from these gears, it may be necessary to introduce some degree of management in the future.

1110 Sandbanks which are slightly covered by sea water all the time

Demersal static gears are considered unlikely to have a significant effect on the long-term natural distribution of sandbanks, or on the structure and function of their associated biological communities at any level.

The risk to the achievement of the conservation objective is considered to be sufficiently low that no additional management is considered necessary for demersal static gears. However, if monitoring indicates impacts from these gears, it may be necessary to introduce some degree of management in the future.

5. Principles

While developing the Joint Recommendations, the following principles were applied:

1) Sound scientific basis

This proposal for fisheries management measures is based on scientific evidence and advice, and takes all relevant information into account. JNCC has provided scientific advice in relation to the principles and methods pursued in the present proposal. The proposal has also been reviewed by Cefas. The advice from Cefas was that the proposed approach for the two sites is considered to be consistent with ensuring favourable conservation status of designated marine habitats and species in their respective Natura 2000 network and for taking appropriate steps to avoid the deterioration of

natural habitats as well as disturbance of the species for which these Natura 2000 sites have been designated whilst at the same time minimising the effect on the fishing industry.

2) *Stakeholder involvement*

An important element of the process of formulating fisheries management measures has been the involvement of stakeholders. This has been outlined in further detail in sections 3.1 and 3.2.

3) *Transparency*

In this proposal the UK has been transparent on the data being used, the steps being taken and the methodology used, as well as the involvement of stakeholders.

4) *Proportionality*

An approach was sought that would deliver a regulatory proposal that delivers a key contribution to the achievement of the conservation objectives while minimising the effect on the fishing industry. A key safeguard in the process to deliver such an outcome was to follow the European Commission guidance in this regard, which described a proportional approach towards balancing sustainable exploitation of resources and the need to conserve important habitats, including a precautionary approach to fisheries management. Information on fishing activity can be found at section 5 of Annex A.

5) *Non discrimination*

The proposal has ensured that measures are not applied in a discriminatory manner. A coordinated approach between Member States is the only way of ensuring non-discrimination for fleets affected by the proposed measures. Ultimately, a joint recommendation is presented to the European Commission for regulation in the framework of the Common Fisheries Policy, ensuring a fair outcome across the fishing sector affected.

6. Proposal scope

North Norfolk Sandbanks and Saturn Reef SCI

The proposed management boundary for a closure to demersal trawls and dredges encompasses approximately 54% of the site and approximately 54% of H1110 Sandbanks which are slightly covered by sea water all the time within the site.

The proposed management boundary for a closure to demersal trawls, dredges and seines encompasses approximately 8% of the site and 100% of H1170 Reefs within the site.

Haisborough Hammond and Winterton SCI

The proposed management boundary for a closure to demersal trawls, dredges and seines encompasses approximately 45% of the site, approximately 70% of H1170 Reefs within the site (100% of the feature in the site beyond 6nm) and approximately 43% of H1110 Sandbanks which are slightly covered by sea water all the time within the site (approximately 50% of the feature in the site beyond 6nm).

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Annex A – Overview of the 11 information items in the Commission’s guidelines from 2008

The Commission has issued guidance on a consistent approach to requests for fisheries management measures under the Common Fisheries Policy⁴. Accordingly, this document provides the scientific and technical information required to support a formal request to the Commission for fisheries regulation under the Common Fisheries Policy.

1 Comprehensive description of the natural features including distribution within the sites

North Norfolk Sandbanks and Saturn Reef SCI

The North Norfolk Sandbanks are the most extensive example of the offshore linear ridge sandbank type in UK waters. They are subject to a range of current strengths which are strongest on the banks closest to shore and which reduce offshore. The outer banks are the best example of open sea, tidal sandbanks in a moderate current strength in UK waters. Sandwaves are present, being best developed on the inner banks; the outer banks having small or no sandwaves associated with them.

In 2013, Cefas and JNCC carried out a targeted survey of the MPA which identified three EUNIS level 3 habitat types; Sublittoral Sands, Sublittoral Mixed Sediments and Sublittoral Coarse Sediments (Jenkins et al. 2015). Samples from the biological communities recorded fewer species on the inner banks and the eastern most end of the outer banks. Increasing species numbers were recorded on the outer most banks, particularly on the Indefatigables and the western-most end of the Swarte Bank, which is likely to be related to the change in hydrodynamic regime with increasing distance from the coast. JNCC undertook additional statistical analysis of the biological communities present within the SCI, using data from grab and video samples from the 2013 survey. This analysis identified four community biotopes, based on the characterising species and sediment composition. It was concluded that these biological communities occur across the MPA and as such, the entire MPA should be considered as a representative functioning example of the H1110 feature Sandbanks which are slightly covered by sea water all the time. Further information on the extent of the Annex I sandbank feature can be found in Annex C.

Saturn reef was discovered in 2002 as an area of *Sabellaria spinulosa* biogenic reef covering an area approximately 750m by 500m, varying in density over this area. This data was used to support the designation of the site, which was approved by the European Commission as a Site of Community Importance in 2011. Subsequent surveys failed to identify the extensive areas of *S.spinulosa* reef previously identified at Saturn Reef. However, the 2013 Cefas and JNCC survey recorded *S.spinulosa* reef at a number of locations within the site, including an area overlapping with the original location

⁴ http://ec.europa.eu/environment/nature/natura2000/marine/docs/fish_measures.pdf

of Saturn Reef, suggesting the potential migration of the Saturn Reef feature in a westerly direction, or loss of the feature and development of subsequent reef structures (Jenkins et al. 2015). The previous extent of Saturn reef, in comparison to the more recently collated data highlights the ephemeral nature of this feature, and indicates favourable conditions for *S.spinulosa* reef formation are present within the MPA. These more recent data on the presence of *S.spinulosa* reef have been included alongside the original data from before site designation and are considered to provide a more up-to-date picture of areas that require management as *S.spinulosa* reef to enable the feature to achieve its conservation objectives. Further information on areas to be managed as *S.spinulosa* reef and changes in feature extent since designation can be found in Annex C.

Haisborough, Hammond and Winterton SCI

The Haisborough, Hammond and Winterton SCI lies off the north east coast of Norfolk, and contains a series of sandbanks which meet the Annex I habitat description for "Sandbanks slightly covered by sea water all the time". The central sandbank ridge in the site is composed of alternating ridge headland associated sandbanks. This ridge consists of the sinusoidal banks which have evolved over the last 5,000 years, originally associated with the coastal alignment at the time that the Holocene marine transgression occurred. Individual banks have been delineated using a slope analysis methodology (Klein, 2006) and a precautionary margin of 500m has been added to each bank to account for uncertainty in feature extent. A further margin of 1,000m has been added to the boundary of Middle and North Cross sandbanks to account for migration in the last 5 years and over the next 5 years. These margins have been included within the total area to be managed as sandbank feature. Further information on the delineation of areas to be managed as sandbank feature can be found in Annex D.

The sandy sediments within the site are very mobile in the strong tidal currents which characterise the area. Large-scale bank migration or movement appears to be slow, but within the sandbank system there is a level of sediment movement around, and also across, the banks. This is evidenced by megaripple and sandwave formations on the banks. Infaunal communities of the sandy bank tops are consequently of low biodiversity, characterised by mobile polychaetes and amphipods which are able to rapidly re-bury themselves into the dynamic sediment environments. Along the flanks of the banks the sediments tend to be slightly more stable with gravels exposed in areas. In these regions of the site, infaunal and epifaunal communities are much more diverse. There are a number of areas where sediment movements are reduced and these areas support an abundance of attached bryozoans, hydroids and sea anemones. Other tube-building worms such as keel worms *Pomatoceros* sp. and sand mason worms *Lanice conchilega* are also found in these areas, along with bivalves and crustaceans.

S. spinulosa reef is an ephemeral feature, and thus presents a challenge to precisely map its location at any instance in time. The most recent data for this site has been gathered from the Marine Aggregate Levy Sustainability Fund's East Coast Regional Environmental Characterisation (REC) survey (MALSF, 2010) and ground truthing data from a Cefas/JNCC benthic Survey of the site undertaken in 2011 (Frojan et al, 2013). These new data are in addition to those provided in the original Haisborough Hammond and Winterton Site Assessment Document (JNCC/NE, 2010). Further information on areas to be managed as *Sabellaria* reef and changes in feature extent since designation can be found in Annex D.

2 Scientific rationale for the selection of the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough, Hammond and Winterton SCI. Intrinsic value of the features. Specific conservation objectives.

The North Norfolk Sandbanks and Saturn Reef and Haisborough, Hammond and Winterton sites are located in the Southern North Sea Regional Sea and represent Annex I sandbanks and reef. The North Norfolk Sandbanks and Saturn Reef site represents non-vegetated, sublittoral, open shelf ridge tidal current sandbanks consisting of sandy sediment. The interest feature is located in full salinity waters, away from coastal influences. The North Norfolk sandbanks as a group are the best example of tidal linear sandbanks in UK waters.

The site also represents *Sabellaria spinulosa* biogenic reef in an open, tide-swept situation on sand and gravelly sand habitat. The interest feature is located in full salinity waters, away from coastal influences. Despite the widespread occurrence of the species *S. spinulosa*, there are few known areas of well-developed biogenic reef formed by *S. spinulosa* in UK waters (and very few in other European waters).

The Haisborough, Hammond and Winterton site contains a number of non-vegetated sublittoral headland associated sandbanks with alternating ridges. These sandbanks are curved and orientated parallel to the coast, composed of sandy sediment and lie in full salinity water with intermediate coastal influence.

As well as sandbanks, *S. spinulosa* biogenic reef is also a feature of Haisborough Hammond and Winterton. The habitat feature is located in full salinity waters and separated from coastal influences by the series of sandbanks aligned along the coast. Despite the widespread occurrence of the species *S. spinulosa*, there are few known areas of well developed biogenic reef formed by this species in UK waters (and very few in other European territorial waters).

2.1 Conservation objectives

Conservation objectives set out the desired state for the protected features of an MPA. The conservation objectives for the protected features of the sites have been set based on knowledge of the condition of the protected features at the time of writing.

The conservation objectives for the protected features of the North Norfolk Sandbanks and Saturn Reef SCI are:

Subject to natural change, **restore** the sandbanks and reef to favourable condition such that:

- The natural environmental quality, natural environmental processes and extent are maintained;
- The physical structure, diversity, community structure and typical species representative of sandbanks which are slightly covered by seawater all the time and reefs in the Southern North Sea are restored.

The conservation objectives for the protected features of the Haisborough, Hammond and Winterton SCI are:

Subject to natural change **maintain** the sandbanks in **favourable condition**, in particular the sub-features:

- Low diversity dynamic sand communities;
- Gravelly muddy sand communities.

Subject to natural change, **maintain** or **restore** the reefs in **favourable condition**.

3 Basis for the spatial extent of the site boundaries clearly justified in terms of conservation objectives

The site boundary for the North Norfolk Sandbanks and Saturn Reef site was defined using JNCC's marine SAC boundary definition guidelines (JNCC, 2012) and information provided during public consultation on this site in 2007-2008. The boundary is a simple polygon enclosing the minimum area necessary to ensure protection of the Annex I habitats, taking into account potential movement of the sandbanks. The boundary presented includes both 'sandy sediments in less than 20m water depth' and the flanks and troughs of these banks which are also part of the sandbank feature but extend into deeper waters. Coordinate points have been positioned as close to the edge of these interest features as possible, rather than being located at the nearest whole degree or minute point.

No buffer to allow for mobile gear was applied given the shallow water depth at this site and the lack of a precise feature edge from which to add a buffer.

The boundary of the site has been defined to enable conservation of the structure and functions of the sandbanks and to include representation of both more disturbed (inshore) and more stable (offshore) sandbank biological communities. The sandbank structures are maintained through offshore sediment transport, with each bank acting as a stepping stone, and the development of new sandbanks between existing banks. Therefore, the proposed boundary encompasses the whole linear sandbank system rather than attempting to separate out individual banks. The proposed boundary allows for the potential elongation of banks in a north-easterly direction, and the coarse scale at which the underlying geological and bathymetric data are mapped.

The boundary around the Haisborough, Hammond and Winterton SCI was defined using the guidance provided by JNCC (2012). The boundary is a simple polygon enclosing the minimum area necessary to ensure protection for the Annex I features. A buffer in proportion to water depth was added when defining the site boundary, to allow for the effects of mobile fishing gears on the seabed at some distance from a vessel at the surface. The SCI contains Annex I sandbanks at depths of predominantly <25m BCD. Therefore, a buffer of 100m was used around each sandbank feature (prior to the addition of the 500m margin for uncertainty) except where a straight line between two points was the more sensible option to avoid an overcomplicated boundary.

4 Threats to the long-term natural distribution, structure and functions of the habitats and the long-term survival of associated species from different types of fishing gear. List of other human activities in the area that could damage the habitats

4.1 All mobile demersal gears (including scallop dredges, beam trawls, otter trawls and seine nets)

1170 Reefs

Demersal towed gears have the potential to effect the long term natural distribution of the *Sabellaria spinulosa* reefs and the structure and function of their associated biological communities. Loss of *S. spinulosa* reefs in the North East Atlantic has been attributed to the long-term effects of various fishing practices, predominantly that of demersal towed gear (Jones et al, 2000; Holt et al. 1998). Trawls break apart *S. spinulosa* tubes, resulting in direct mortality of the worms and a reduction of the structure and complexity of the habitat, which may no longer support associated animals and plants (UK Biodiversity Action Plan, 2000).

Consequently, it is concluded that use of any mobile demersal gear (including seine netting) would result in an unacceptable risk to the conservation objectives for the feature. In order to reduce this

risk, it was decided to prohibit the use of mobile demersal gear over all areas to be managed as *S. spinulosa* reef within the site, as identified by the UK's statutory nature conservation advisors, the JNNC and where relevant Natural England. This approach is consistent with the UK Government's precautionary approach and is described further in Section 7.

1110 Sandbanks which are slightly covered by sea water all the time

Whilst it is unlikely that demersal towed gear can affect the long-term natural distribution of sandbanks, there is evidence to indicate that the use of demersal towed gears can impact the structure and function of the habitat and the long term survival of its associated species.

The extent to which mobile gear impacts on sand and gravel communities can vary considerably, according to the type of gear, the intensity of fishing and the sediment composition. Trawling and dredging tend to cause increased mortality of fragile and long lived species and favour opportunistic, disturbance-tolerant species (Bergman & Van Santbrink, 2000; Eleftheriou & Robertson, 1992). Some particularly sensitive species may disappear entirely (Bergman & Van Santbrink, 2000). The net result is benthic communities modified to varying degrees relative to the un-impacted state (Bergman & Van Santbrink, 2000; Kaiser et al. 2006).

In higher energy locations, for example the sandy bank tops or wave and/or tide exposed areas the associated fauna tend to be well adapted to disturbance and as a result are more tolerant of fishing-related disturbance (Dernie et al. 2003; Hiddink et al. 2006). The habitat may be maintained in a modified state; however modification is likely to be low relative to natural variation. In lower energy locations, such as muddy sands and sand in deep water, or on the flanks and towards troughs between banks, sediments tend to be more stable and their associated fauna less tolerant of disturbance (Kaiser et al. 2006; Hiddink et al. 2006). The habitat may be maintained in a modified state with reduced abundance of fragile, long lived species.

Considering the degree of uncertainty regarding the impacts of trawling and dredging and the level at which their effects would be considered unacceptable, it was decided to implement an "adaptive management" approach, whereby a proportion of the feature will be closed to these gears and subsequently monitored to improve our understanding of impacts and inform future management. This approach is consistent with the UK Government's precautionary approach and is described further in Section 7.

Demersal seines (Danish and Scottish seines) lack the heavy penetrating gear components of other demersal trawls, such as otter doors and trawl shoes (Suuronen et al. 2012; Donaldson et al 2010), so the risk of impact to the sandbank feature is considered likely to be lower. In this case, the risk to

the achievement of the conservation objective for the sandbank feature is considered to be sufficiently low that no additional management is considered necessary. However, if monitoring indicates impacts from these gears, it may be necessary to impose some degree of management in the future.

4.2 All demersal static gears (including gillnets, trammel nets, longlines, pots and traps)

1170 Reefs

It is unlikely that demersal static gears at moderate levels of fishing effort will have a significant effect on the long-term natural distribution of *S. spinulosa* reefs, or on the structure and function of their associated biological communities. Sensitivity of *S. spinulosa* reefs to static gears is low to medium depending on fishing intensity (Hall et al. 2008; Tillin et al. 2010). However, effects at high levels of fishing intensity are uncertain and it is possible in some circumstances that damage to reef structures could exceed their capacity to recover.

The risk to the achievement of the conservation objective is considered to be sufficiently low that no additional management is considered necessary for demersal static gears. However, if monitoring indicates impacts from these gears, it may be necessary to introduce some degree of management in the future.

1110 Sandbanks which are slightly covered by sea water all the time

Demersal static gears are considered unlikely to have a significant effect on the long term natural distribution of sandbanks, or on the structure and function of their associated biological communities at any level.

The risk to the achievement of the conservation objective is considered to be sufficiently low that no additional management is considered necessary for demersal static gears. However, if monitoring indicates impacts from these gears, it may be necessary to introduce some degree of management in the future.

4.3 Other Human activities

The information within this section represents current knowledge of the nature and extent of activities taking place within or close to the sites.

North Norfolk Sandbanks and Saturn Reef SCI

A considerable number of oil and gas developments overlap within this MPA, including many fields, pipelines, wells and surface and subsurface infrastructure. Two areas licensed for aggregate

extraction overlap with this MPA. There are two areas of aggregate extraction activity and two dredge disposal sites located within the MPA boundary. A number of navigational aids are located within the MPA demarking the location of the sandbanks. Existing licensed activities that take place or may take place in the future within the North Norfolk Sandbanks and Saturn Reef SCI will continue to be managed in line with relevant legislation and application processes by the competent authorities.

Low level shipping activity takes place within the MPA, and the North East region RYA cruising route crosses through the site. However, considering the location of the MPA it is unlikely that this activity will include anchoring. Under international law, ships have a rite of passage at sea including in areas designated as MPAs (unless management specifies the restriction of ship transiting as outlined through an International Maritime Organisation measure). The pressures associated with shipping activity within the North Norfolk Sandbanks and Saturn Reef SCI are not considered likely to impact the protected features of the site.

Haisborough, Hammond and Winterton SCI

A considerable number of oil and gas developments overlap the Haisborough, Hammond and Winterton MPA, including many fields, pipelines, wells and associated infrastructure. Additionally, commercial aggregate extraction takes place along the site boundary. Whilst none of the licence areas are co-incidental with designated features, two licence areas and one application area are located within the southern part of the site. Existing licensed activities that take place within Haisborough, Hammond and Winterton MPA will continue to be managed in line with relevant legislation and application processes by the competent authorities.

Telecommunications cables pass through the site. Cables are largely an unregulated activity in offshore waters depending upon the type of cable being laid (or maintained), where it is being laid between and whether the cable is part of a larger development (which may be regulated).

A moderate level of commercial and recreational shipping activity takes place within the site, which involves vessels transiting the site. Due to the location of the MPA, it is unlikely that vessels anchor within the site. Under international law, ships have a rite of passage at sea including in areas designated as MPAs. The pressures associated with shipping activity within Haisborough, Hammond and Winterton SCI are not considered likely to impact the protected features of the site.

5. Fleet activity in the area and in the region, distribution of fleets (by nation, gear and species) and information on target and bycatch species over 5 years from 2010 to 2014 inclusive.

5.1 Validity of data

In this section relevant fleet statistics for the years 2010-2014 are provided as requested by the European Commission guidance. The UK, as the initiating Member State, analysed fishing from all Member States active in the areas of the North Norfolk Sandbanks and Saturn Reef site and the Haisborough, Hammond and Winterton site over a five year period. This approach is consistent with other management proposal methodology across Member States. A four year dataset is considered to be representative of the contemporary fisheries carried out in the area and thus valid for the purposes of underpinning the current proposal.

Overall, the fisheries have been changing since the early 2000s as a result of changes in economic and regulatory conditions, e.g. fuel prices and engine efficiencies, the introduction of individual transferable quota (ITQ) systems⁵ in various forms. Fishing fleets have been reduced in terms of the number of vessels and fishing effort has decreased. Fishing opportunities are dictated by stock status, market conditions, fuel prices and technological opportunities as well as quota availability. In addition, policy decisions on alternative use of marine habitat, sustainable exploration and environmental policies will influence fishing opportunities.

The fisheries are dynamic and sound judgement is required when using the data. However, more recent datasets are expected to improve our understanding of the structure of the fisheries.

Vessels from eight Member States have been present within the relevant areas according to VMS reports or “pings”. However, French vessels routinely report every hour and not every two hours like all other Member States’ vessels. The data concerning the number of French vessels will be accurate but their activity through pings may appear distorted. To maintain consistency across all vessels and Member States data, the information on French vessels has been displayed how it was received into the MMO FMC; therefore it has not been altered to reflect possible one hour vessel pings as this could alter the validity of the data further. To establish which vessels specifically report at a higher level would require additional processing and information.

To note, unknown gear classification relates to a specific VMS report which does not have valid corresponding log book information.

⁵ Individual transferable quotas (ITQs) are a type of catch share system, which is a tool used by some governments to manage fisheries

5.1.1 Data analysis

Data presented has been analysed by applying the standard methodology used to identify whether or not vessels have been fishing in a specified spatial area. VMS reports (“pings”) were used to indicate vessel fishing activity based on the speed of the vessel as contained within the VMS report. Each ping was classified as indicative of fishing activity if, the speed was zero knots or greater and less than or equal to six knots⁶.

Each speed filtered VMS ping (0-6kts) received from a vessel in ICES statistical rectangles 34F1, 34F2, 35F1, 35F2, 36F1 and 36F2 was extracted from the UK VMS system. Each ping will hold the following information: the vessel identity (CFR) number; position and speed; and the date and time of that ping. The fishing pings from the rectangles concerned are then processed in GIS software to identify whether the position was inside or outside the SCIs or the proposed management areas. This provides a proportion of pings falling within the area for the vessels of each Member State.

5.1.2 Data limitations

The data provided in this section is subject to several limitations:

1. Data are only available from vessels that are required to carry EU VMS systems (i.e. vessels 15 metres and above in length). As such their pattern of activity may differ from vessels of less than 15 metres in length.
2. Unless stated otherwise, all data shown is over a five year period 2010- 2014. UK 2014 data (both landings values and VMS) is currently being processed and the data section of this Joint Recommendation will be updated once it is available. Where a Member State has supplied 2014 landings values, these are displayed but please note that all 2014 VMS data is still pending.
3. The speed thresholds (0-6 knots) used to make assumptions as to whether a vessel is fishing or not only provide indications, not definitive proof of fishing and may not be equally valid for all gear types.
4. The proportion of activity inside an area is based on the number of VMS reports (pings) as opposed to actual fishing time.

⁶ Article 50 of Council Regulation (EC) No 1224/2009 : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:343:0001:0050:EN:PDF>

5. VMS reports are sent by every fishing vessel at 2 hourly intervals, with the exception of the French VMS activity. This was witnessed at an hourly rate.
6. There are a high proportion of VMS reports from vessels that were on guard vessel duty during the construction of an offshore wind farm in these sites. The MMO cross checked this information with vessels log book and coastal office information to assist in identifying what vessels were likely to be on guard vessel duty. As there is no guard vessels register, this is only an indication.

5.2 Fleet activity by state

North Norfolk Sandbanks and Saturn Reef SCI

From 2010 to 2014 vessels from eight Member States were active within and around the North Norfolk Sandbanks and Saturn Reef SCI (see table 1). Of these, the most significant activity was from UK and Dutch vessels, with low levels of activity from all other Member State vessels (see table 1).

There were reports from a ninth Member State, Lithuania, but this was only one vessel with two VMS reports (4 hours only) in 2014 with no landings data attributed. This is most likely one occasion of a vessel transiting over the 5 years analysed.

Table 1: Number of vessels and pings (0-6knots) associated with the North Norfolk Sandbanks and Saturn Reef SCI by year and Member State.

Nationalities within North Norfolk Sandbanks and Saturn Reef SCI		2010	2011	2012	2013	2014
		Total	Total	Total	Total	Total
Belgium	Number of vessels	6	3	5	7	7
	Number of pings	65	13	93	123	94
Denmark	Number of vessels	10	7	1	4	3
	Number of pings	24	57	7	11	13
Lithuania	Number of vessels	0	0	0	0	1
	Number of pings	0	0	0	0	2
France*	Number of vessels	0	3	5	1	4
	Number of pings	0	9	8	1	8
Germany	Number of vessels	2	1	0	3	3
	Number of pings	4	5	0	39	15
Netherlands	Number of vessels	31	31	29	38	8
	Number of pings	3339	3099	2584	3398	1099
Norway	Number of vessels	0	0	0	2	0
	Number of pings	0	0	0	8	0
Sweden	Number of vessels	1	3	0	0	0
	Number of pings	9	48	0	0	0
**UK	Number of vessels	22	20	23	27	14
	Number of pings	352	880	950	1174	983

*French VMS reporting is on average, hourly, all other Member States' reporting is on average two hourly

**Please note that the UK number of pings has excluded reports from vessels known on guardship duties.

Haisborough, Hammond and Winterton SCI

From 2010 to 2014 vessels from seven Member States were active within and around the Haisborough Hammond and Winterton SCI (see table 2). Of these, the most significant activity was from Dutch vessels, with lower levels of activity from UK and Belgian although they have additional access within the 6 to 12nm (see table 2). Much lower levels from other Member States.

Table 2: Number of vessels and pings (0-6knots) associated with Haisborough, Hammond and Winterton SCI by year and Member State.

Nationalities within Haisborough, Hammond and Winterton SCI		2010	2011	2012	2013	2014
		Total	Total	Total	Total	Total
Belgium	Number of vessels	6	4	6	4	8
	Number of pings	160	4	41	120	273
Denmark	Number of vessels	5	3	1	0	0
	Number of pings	92	7	1	0	0
France*	Number of vessels	2	5	9	4	7
	Number of pings	3	14	12	6	10
Germany	Number of vessels	0	0	0	1	0
	Number of pings	0	0	0	17	0
Netherlands	Number of vessels	22	23	17	17	6
	Number of pings	1907	1961	1795	1200	280
Norway	Number of vessels	0	0	1	1	0
	Number of pings	0	0	1	1	0
**UK	Number of vessels	33	39	42	40	20
	Number of pings	91	111	125	200	107

*French VMS reporting is on average, hourly, all other Member States' reporting is on average two hourly.

**Please note that the UK number of pings has excluded reports from vessels known on guardship duties.

5.3 Landings values

North Norfolk Sandbanks and Saturn Reef SCI

As shown in Tables 3 and 4 the gear groups of major importance for North Norfolk Sandbanks and Saturn Reef SCI in terms of quantity and value of landings include (1) beam trawls directed at demersal fish (flatfish), (2) otter board bottom trawls for demersal fish, (3) otter board bottom trawls for demersal and semi pelagic fish. Fishing for these species occurs throughout the mid and southern North Sea. Please note the totals recorded in Tables 3 and 4 are at specific ICES rectangle level.

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Table 3: Landings (£) from vessels operating around North Norfolk Sandbanks and Saturn Reef SCI by gear type, year and Member State. All information at ICES level (35F1 35F2, 36F1 and 36F2⁷).

Value £ (35F1, 35F2, 36F1 and 36F2)		Year					
Nationality	Gear	2010	2011	2012	2013	2014	Grand Total
BEL	Bottom otter trawls	£82,871	£52,952	£149,534	£18,928	£14,744	£319,030
	Scottish seines	£32,905	£32,644	£69,954	£15,365	£0	£150,868
	Beam trawls	£499,802	£817,197	£609,977	£521,293	£561,595	£3,009,864
BEL Total		£615,578	£902,794	£829,465	£555,586	£576,338	£3,479,761
DEU	Beam trawls	£143,993	£209,189	£73,261	£78,724	£31,546	£536,713
	Bottom trawls	£174,622	£92,047	£142,361	£111,311	£85,558	£605,899
	Pelagic trawls	£0	£0	£0	£0	£0	£0
DEU Total		£318,615	£301,235	£215,622	£190,036	£117,104	£1,142,612
DNK	Bottom trawls	£244,765	£229,342	£3,870	£296,617	£74,006	£848,601
	Nets	£2,884	£561	£0	£1,887	£0	£5,332
	Pelagic trawls	£1,824,257	£284,460	£124,498	£837	£94,538	£2,328,590
DNK Total		£2,071,906	£514,363	£128,369	£299,341	£168,544	£3,182,523
FRA	Anchored seines	£0	£38,453	£20,809	£0	£1,618	£60,881
	Bottom trawls	£0	£94,210	£72,430	£18,382	£100,797	£285,819
	Nets	£0	£1,439	£1,314	£9,736	£1,225	£13,713
	Pelagic trawls	£0	£75,187	£137,318	£33,803	£117,862	£364,170
FRA Total		£0	£209,288	£231,871	£61,920	£221,502	£724,582
IRE	Pots	£0	£0	£335	£0	£0	£335
IRE Total		£0	£0	£335	£0	£0	£335
NLD**	TBC	TBC	TBC	TBC	TBC	TBC	TBC
NLD Total		£0	£0	£0	£0	£0	£0
SWE	Bottom otter trawls	£0	£19,532	£0	£0	£0	£19,532
	Mid-water otter trawls	£105,173	£0	£43,572	£0	£0	£148,744
SWE Total		£105,173	£19,532	£43,572	£0	£0	£168,276
UK	Beam trawls	£1,142,535	£843,077	£199,064	£1,274,525	£713,796	£4,172,997
	Boat dredges	£0	£27,716	£12,865	£168	£15,622	£56,371
	Danish seines	£0	£0	£14	£0	£0	£14
	Driftnets	£1,233	£84	£0	£0	£900	£2,217
	Gillnets (all)	£1,408	£824	£8,131	£0	£812	£11,175
	Hand lines and pole-lines (hand-operated)	£535	£0	£0	£0	£0	£535
	Hooks and lines (not specified)	£702	£0	£0	£0	£0	£702
	Longlines (not specified)	£869	£0	£350	£927	£300	£2,446
	Miscellaneous gear	£0	£0	£0	£838	£5,998	£6,836
Nephrops trawls	£0	£45,696	£45,933	£52,645	£13,974	£158,247	

⁷ Approximately 1.3% of North Norfolk Sandbanks and Saturn Reef SCI also falls within ICES rectangle 34F2. As this section of 34F2 is subject to low fishing activity, the rectangle has been excluded from analysis to prevent its data from distorting the landings for the site.

Otter trawls (Bottom and not specified)	£102,537	£78,415	£127,617	£172,710	£209,755	£691,035
Otter trawls – mid-water	£6,990	£235,416	£139,905	£0	£0	£382,311
Otter twin trawls	£0	£78,110	£8,549	£7,928	£29,161	£123,747
Pair trawls - bottom	£0	£0	£0	£0	£180	£180
Pair trawls – mid-water	£0	£27,619	£0	£0	£0	£27,619
Pots	£1,217,049	£1,272,495	£1,753,001	£1,842,697	£2,467,797	£8,553,039
Scottish seines	£76,985	£0	£261	£2,822	£0	£80,068
UK Total	£2,550,842	£2,609,452	£2,295,691	£3,355,260	£3,458,294	£14,269,539
Grand Total	£5,662,114	£4,556,664	£3,744,925	£4,462,143	£4,541,782	£22,967,628

**At the time of writing (25/10/2016) the Netherlands had not provided the UK with the requested landings (£) data for the site. The UK will continue working with the Netherlands to gain access to the data with the intention of adding them to the Joint Recommendations at a later date.

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Table 4: Landings (tonnes) from vessels operating around North Norfolk Sandbanks and Saturn Reef SCI by gear type, year and Member State. All information at ICES level (35F1 35F2, 36F1 and 36F2⁸).

Tonnes (35F1, 35F2, 36F1 and 36F2)		Year					
Nationality	Gear	2010	2011	2012	2013	2014	Grand Total
BEL	Bottom otter trawls	41.85	17.69	71.73	7.52	7.45	146.24
	Scottish seines	25.62	19.4	44.79	11.54	0	101.36
	Beam trawls	266.56	473.4	394.13	284.13	318.42	1,736.63
BEL Total		334.02	510.49	510.65	303.19	325.87	1,984.23
DEU	Beam trawls	62.39	114.47	38.04	38.32	15.01	268.22
	Bottom trawls	105.6	118.91	67.88	63.15	71.95	427.48
	Pelagic trawls	0	0	0	0	0	0
DEU Total		167.99	233.37	105.92	101.47	86.96	695.7
DNK	Bottom trawls	1,392.86	1,505.00	20	1,565.00	423.26	4,906.12
	Nets	0.58	0.06	0	0.46	0	1.1
	Pelagic trawls	11,790.00	1,825.00	630	5	675.17	14,925.17
DNK Total		13,183.43	3,330.06	650	1,570.46	1,098.43	19,832.39
FRA	Anchored seines	0	18.44	7.21	0	1.22	26.87
	Bottom trawls	0	98.16	83.05	21.39	134.87	337.47
	Nets	0	0.54	0.33	2.74	0.3	3.9
	Pelagic trawls	0	78.77	162.05	39.32	172.24	452.38
FRA Total		0	195.92	252.64	63.45	308.62	820.63
IRE	Pots	0	0	0.25	0	0	0.25
IRE Total		0	0	0.25	0	0	0.25
NLD**	Gill nets	0	0	0.21	0	0	0.21
	Scottish seines	1.68	0	0	0	0	1.68
	Beam trawls	161.74	181.05	119.4	86.64	109.43	658.26
NLD Total		163.42	181.05	119.61	86.64	109.43	660.16
SWE	Bottom otter trawls	0	130	0	0	0	130
	Mid-water otter trawls	560	0	215	0	0	775
SWE Total		560	130	215	0	0	905
UK	Beam trawls	450.7364	355.7841	83.1178	488.2436	274.0875	1651.9694
	Boat dredges	0	13.3238	6.1565	0.076	13.8173	33.3736
	Danish seines	0	0	0.0059	0	0	0.0059
	Driftnets	0.1491	0.042	0	0	0.15	0.3411
	Gillnets (all)	1.1402	0.3985	4.6377	0	0.2223	6.3987
	Hand lines and pole-lines (hand-operated)	0.3998	0	0	0	0	0.3998
	Hooks and lines (not specified)	0.5411	0	0	0	0	0.5411

⁸ Approximately 1.3% of North Norfolk Sandbanks and Saturn Reef SCI also falls within ICES rectangle 34F2. As this section of 34F2 is subject to low fishing activity, the rectangle has been excluded from analysis to prevent its data from distorting the landings for the site.

Longlines (not specified)	0.3989	0	0.2015	0.4581	0.2596	1.3181
Miscellaneous gear	0	0	0	2.095	5.894	7.989
Nephrops trawls	0	17.5147	21.7677	21.5124	7.842	68.6368
Otter trawls (Bottom and not specified)	60.826	37.7575	53.9719	128.6317	130.8515	412.0386
Otter trawls – mid-water	35.4919	909.4404	838	0	0	1782.9323
Otter twin trawls	0	28.4375	3.9661	4.9027	13.5428	50.8491
Pair trawls - bottom	0	0	0	0	0.0302	0.0302
Pair trawls – mid-water	0	100.4319	0	0	0	100.4319
Pots	767.3809	778.7978	1392.246	1710.3097	2091.5581	6740.2925
Scottish seines	25.2858	0	0.3075	2.2279	0	27.8212
UK Total	1,342.35	2,241.93	2,404.38	2,358.46	2,538.26	10,885.37
Grand Total	15,751.21	6,822.82	4,258.45	4,483.67	4,467.57	35,783.73

** At the time of writing (25/10/2016) The Netherlands had only provided the UK with landings data (tonnes) for ICES rectangle 35F1. Data from 35F2, 36F1, 36F2 are missing and will be required to fully represent the Dutch activity in the site. The UK will continue working with the Netherlands to gain access to the data with the intention of adding them to the Joint Recommendations at a later date. The UK have also sought further clarification from the Netherlands on the data they have provided to date as values appear not to match VMS reports for the site.

Haisborough, Hammond and Winterton SCI

Tables 5 and 6 show the gear groups of major importance for Haisborough, Hammond and Winterton SCI in terms of quantity and value of landings include (1) beam trawls directed at demersal fish (flatfish), (2) otter board bottom trawls for demersal fish, (3) otter board bottom trawls for demersal and semi pelagic fish. Fishing for these species occurs throughout the mid and southern North Sea.

Table 5: Landings values (£) from vessels operating around Haisborough Hammond and Winterton SCI by gear type, year and Member State. All information at ICES level (34F1 and 34F2).

Value £ (34F1 and 34F2)		Year					Grand Total
Nationality	Gear	2010	2011	2012	2013	2014	
DEU	Beam trawls	£0	£1,173	£0	£33,645	£53,185	£88,003
	Bottom trawls	£4,979	£358	£0	£0	£0	£5,336
	Nets	£3,654	£1,943	£10,994	£0	£0	£16,592
DEU Total		£8,633	£3,474	£10,994	£33,645	£53,185	£109,932
DNK	Bottom trawls	£0	£96,410	£0	£46,144	£0	£142,554
	Nets	£17,829	£44,657	£0	£976	£10,965	£74,428
	Pelagic trawls	£265,043	£146,153	£0	£36,959	£0	£448,156
DNK Total		£282,873	£287,221	£0	£84,079	£10,965	£665,138
FRA	Anchored seines	£0	£243	£0	£0	£0	£243
	Bottom trawls	£0	£208	£24,718	£6,846	£1,155	£32,927
	Nets	£0	£9,144	£0	£165	£0	£9,309
	Pelagic trawls	£0	£233	£200	£3,907	£20,649	£24,989
FRA Total		£0	£9,830	£24,917	£10,918	£21,804	£67,469
NLD**	TBC	TBC	TBC	TBC	TBC	TBC	TBC
NLD Total		TBC	TBC	TBC	TBC	TBC	TBC
Grand Total		£291,506	£300,525	£35,911	£128,642	£85,955	£842,538

**At the time of writing (21/07/2016) the Netherlands had not provided the UK with the requested landings (£) data for the site. The UK will continue working with the Netherlands to gain access to the data with the intention of adding them to the Joint Recommendations at a later date.

UK and Belgium landings have been separated as both have access to a section of the site which is contained inside 35F1, in addition to 34F1 and 34F2. (Haisborough Hammond and Winterton SCI)

Value £ (34F1, 34F2 and 35F1)		Year					
Nationality	Gear	2010	2011	2012	2013	2014	Grand Total
BEL	Bottom otter trawls	£0	£0	£2,658	£0	£0	£2,658
	Scottish seines	£5,963	£3,832	£0	£12,310	£1,362	£23,468
	Beam trawls	£664,840	£500,482	£147,989	£750,994	£772,020	£2,836,325
BEL Total		£670,803	£504,314	£150,647	£763,304	£773,382	£2,862.45
UK	Beam trawls	£54,458	£314,416	£151,747	£1,131,348	£1,160,042	£2,812,012.30
	Boat dredges	£2,992	£3,200	£0	£0	£11,880	£18,072.04
	Driftnets	£14,135	£17,675	£20,138	£22,960	£11,884	£86,792.77
	Gillnets (all)	£7,893	£6,724	£19,122	£7,435	£8,200	£49,373.92
	Hooks and lines (not specified)	£702	£0	£0	£0	£0	£702.20
	Longlines (not specified)	£114,673	£64,902	£20,744	£30,916	£11,478	£242,713.26
	Miscellaneous gear	£3,218	£7,123	£2,975	£838	£5,998	£20,151.60
	Otter trawls (Bottom and not specified)	£1,926	£9,423	£18,923	£1,287	950.03	£32,510
	Otter trawls – mid-water	£0	£74,028	£0	£0	0	£74,028
	Otter twin trawls	£0	£1,079	£418	£0	2594.36	£4,091
	Pair trawls - bottom	£0	£0	£0	£0	180.45	£180
	Pots	£623,828	£928,907	£1,163,387	£1,668,836	1627956.6	£6,012,915
	Scottish seines	£2,079	£0	£59	£0	0	£2,138.18
	Shrimp trawls – mid-water	£305	£0	£0	£0	0	£304.75
UK Total		£826,209	£1,427,479	£1,397,515	£2,863,620	£2,841,164	£9,355,986
Grand Total		£1,497.01	£1,931.79	£1,548.16	£3,628.07	£773,382	£9,378.42

Table 6: Landings (tonnes) from vessels operating around Haisborough Hammond and Winterton SCI by gear type, year and Member State. All information at ICES level (34F1 and 34F2).

Quantity Tonnes (34F1 and 34F2)		Year					Grand Total
Nationality	Gear	2010	2011	2012	2013	2014	
DEU	Beam trawls	0.00	0.47	0.00	12.08	28.93	41.48
	Bottom trawls	4.39	0.53	0.00	0.00	0.00	4.91
	Nets	0.55	0.36	2.50	0.00	0.00	3.41
DEU Total		4.93	1.35	2.50	12.08	28.93	49.79
DNK	Bottom trawls	0.00	535.00	0.00	360.00	0.00	895.00
	Nets	3.15	8.43	0.00	0.24	2.46	14.28
	Pelagic trawls	2,310.00	814.00	0.00	278.40	0.00	3,402.40
DNK Total		2,313.15	1,357.43	0.00	638.64	2.46	4,311.68
FRA	Anchored seines	0.00	0.29	21.56	10.09	1.53	33.47
	Bottom trawls	0.00	2.57	0.00	0.19	0.00	2.76
	Nets	0.00	0.24	0.38	3.69	27.58	31.89
	Pelagic trawl	0.00	0.00	0.00	0.00	0.00	0.00
FRA Total		0.00	3.29	21.94	13.97	29.11	68.30
NLD	Pots	27.56	1.94	1.11	0.00	0.00	30.60
	Gill nets	218.86	275.94	0.01	71.88	0.00	566.69
	SumWing pulse trawls**	76.65	102.15	48.23	32.60	68.36	328.00
	Handlines and pole-lines	2,746.46	2,465.36	2,045.92	2,861.43	2,224.55	12,343.71
	Handlines and pole-lines	2.76	0.99	0.01	0.02	0.11	3.89
	Bottom otter trawls	1.48	5.21	0.00	0.00	0.00	6.70
	Midwater otter trawls	10.82	2.54	11.70	6.12	0.00	31.18
	Midwater pair trawls	0.00	276.57	0.00	0.00	0.00	276.57
	Dutch seines	0.00	0.00	0.01	0.00	0.00	0.01
	Scottish seines	0.00	0.00	2.75	0.22	0.03	2.99
	Beam trawls	0.00	0.00	0.00	0.00	0.13	0.13
NLD Total		3,084.60	3,130.70	2,109.72	2,972.27	2,293.18	13,590.46
Grand Total		5,402.68	4,492.76	2,134.17	3,636.95	2,353.68	18,020.24

** Dutch data provided with SumWing pulse trawls activity separated from other trawls. SumWing pulse trawl is not an EC recognised gear code.

UK and Belgium landings have been separated as both have access to a section of the site which is contained inside 35F1, in addition to 34F1 and 34F2. Haisborough Hammond and Winterton SCI

Quantity Tonnes (34F1, 34F2 and 35F1)		Year					Grand Total
Nationality	Gear	2010	2011	2012	2013	2014	
BEL	Bottom otter trawls	0.00	0.00	1.36	0.00	0.00	1.36
	Scottish seines	6.05	1.8	0.00	11.17	1.44	20.46
	Beam trawls	209.04	139.21	52.32	269.28	232.89	902.73
BEL Total		215.09	141.01	53.68	280.44	234.33	924.55
UK	Beam trawls	17.36	65.85	27.48	321.44	288.62	720.75
	Boat dredges	1.82	2,403.52	0.00	0.00	12.00	2,417.34
	Driftnets	18.34	19.54	27.56	24.39	14.19	104.03
	Gillnets (all)	3.27	1.26	7.54	1.99	2.03	16.09
	Hooks and lines (not specified)	0.54	0.00	0.00	0.00	0.00	0.54
	Longlines (not specified)	50.13	26.02	9.14	13.75	5.76	104.80
	Miscellaneous gear	33.25	125.08	5.12	2.10	5.89	171.43
	Otter trawls (Bottom and not specified)	0.97	3.89	3.64	0.40	0.35	9.25
	Otter trawls – mid-water	0.00	342.25	0.00	0.00	0.00	342.25
	Otter twin trawls	0.00	0.24	0.17	0.00	0.63	1.04
	Pair trawls - bottom	0.00	0.00	0.00	0.00	0.03	0.03
	Pots	433.99	550.87	1,025.05	1,578.49	1,367.12	4,955.53
	Scottish seines	1.56	0.00	0.08	0.00	0.00	1.64
Shrimp trawls – mid-water	0.17	0.00	0.00	0.00	0.00	0.17	
UK Total		561.41	3538.52	1105.78	1942.54	1696.61	8844.89
Grand Total		776.50	3679.53	1159.46	2222.98	1930.94	9769.44

5.4 Annual variation in fishing activity

Fishing effort is indicated by the number of VMS reports at speeds indicative of fishing (0 to 6 knots) received by the MMO FMC. Reports are sent by every fishing vessel at, on average, two hourly intervals, with the exception of a number of French vessels, which reported on average, hourly.

North Norfolk Sandbanks and Saturn Reef SCI

Over the years analysed (2010-2014), the total number of vessels fishing in the North Norfolk Sandbanks and Saturn Reef SCI were 106 from the UK and 219 from other Member States, making a total of 325 (vessels over 15metres). Vessels have been counted more than once if they enter the SCI in separate years. See Table 1 for a breakdown per year.

Norwegian (2 vessels observed in 2013 only), French, Swedish and German vessels were rarely observed in this site with less than 20 vessels recorded per year each and absent some years. **One Lithuanian vessel was reported in the site in 2014 and it is estimated to be 2 hours only. There is no**

corresponding landings data so it can be assumed that this vessels was transiting or could have been on guardship duty or a patrol vessel. Danish and Belgian vessels are regularly recorded in the site but in low numbers, and activity is considered to be low.

The majority of the vessel activity was from the Dutch and UK fleets. Numbers of Dutch vessels in the site were stable throughout the years 2010 to 2013, between 29 and 38 vessels. Dutch vessels also had the highest volume of VMS pings recorded from any Member State. However in 2014 the Dutch activity dramatically dropped to 8 vessels recorded in the site at speeds of 0 to 6knots, with the VMS ping volume dropping by over two thousand to 1099 pings.

The UK (15metre and over) activity varies between 22 and 27 vessels per year operating in the site over the years from 2010 to 2013. Despite the high vessel numbers from the UK fleet, the number of VMS pings was much lower than from Dutch vessels. 2013 showed a peak in both UK and Dutch vessel numbers and number of VMS pings. However in 2014 the UK activity has dropped in terms of vessel numbers to 14, although the VMS ping volume remained fairly constant, just above the UK average analysed (867) at this site at 983.

The specific ICES rectangle landings values (£) and quantities (tonnes) from within the SCI varies between each Member State. See Tables 3 and 4.

UK landings in 2014 (peak catch year) are 2,538 tonnes and £3,458,294. The majority of these landings are attributed to trawls, pots and traps. Traps will not be prohibited as part of this management proposal and will be allowed to continue. Potting will be allowed to continue also, although the activity mainly occurs outside of site within the ICES rectangle 36F1.

No Dutch data was provided for the values landed. However, in their peak year of 2011 the Dutch landed 181.05 tonnes from the ICES rectangles analysed. The quantity of tonnes landed from the Dutch fleet has decreased over the years, with the 2014 figure decreasing to 109.43 tonnes.

Belgian activity varies in the site over the years analysed. Lowest landings values from the site are £555,586 in 2013 with the highest at £902,794 in 2011. The majority of this activity was from Beam Trawls (TBB). There is a notable reduction in the amount of Belgian landings since 2011, with the latest 2014 figure of £576,338 from 325.87 tonnes.

The areas of the site which are to be closed to demersal towed gears, and seines in some areas, have moderate to high numbers of VMS reports from mainly UK and Dutch vessels using demersal towed gears and some seines. There was much less demersal towed gear activity in the area of Saturn Reef.

Haisborough, Hammond and Winterton SCI

Over the years analysed (2010-2014), the total number of vessels fishing in Haisborough, Hammond and Winterton SCI were 174 from the UK and 152 from other Member States, making a total of 326 (vessels over 15metres). Vessels have been counted more than once if they enter the SCI in separate years. See Table 2 for a breakdown per year.

Norwegian, Danish and German vessels were rarely observed in this site and are often absent over the years analysed. None of these fleets were observed in 2014.

French vessels were regularly recorded in the site but at low vessel numbers and activity from these are considered to be low, ranging from 2 to 9 vessels per year.

Belgian vessels were regularly recorded in the site, ranging from 4 to 8 vessels per year. The VMS ping volume has increased since 2011 to 273 pings in 2014. However, although Belgium has fishing access rights to operate for demersal species within the 6 to 12nm limits, they tend to favour the most eastern portion of the site beyond the 12nm limit.

The majority of the vessel VMS activity was from the UK and Dutch fleets. Numbers of UK vessels in the site was stable throughout the years (2010-2013) ranging from 33 in 2010 to 42 vessels in 2012. However in 2014 the vessel numbers decreased to 20 vessels. The UK has the highest amount of vessels per year accessing the site but very low levels of VMS pings. When looking at the UK landings data for this site it appears that there is no dedicated UK fishing pattern in this site and the high numbers of vessels recorded are most likely to be transiting through the site.

The Dutch activity remained stable over the years analysed with the exception of 2014 the vessels number dropped to 6, the peak being in 2011 with 23 vessels. The VMS ping volume also shows a decline from 1907 VMS pings in 2010 down to 280 pings in 2014.

The specific ICES rectangle landings values (£) and quantities (tonnes) from within the SCI sits varies between each Member State. See Tables 5 and 6.

Fishing effort within the SCI is considered to be moderate with the majority of this activity from Dutch vessels operating in the most eastern portion of the site beyond the 12nm limit.

No Dutch data was provided for the values landed. The Dutch landings data (tonnes) appears to fluctuate over in the years, with 3084 tonnes in 2010 and 3130 tonnes in 2011, then decreases to 2109 tonnes in 2012, increases back to 2972 tonnes in 2013 before decreasing a second time to 2293 tonnes in 2014, with the majority of the activity being from beam trawling fleet. Considering the vast amount of VMS reports and 2-3 clear fishing patterns from Dutch vessels, it is apparent that this is an established fishing route for Dutch vessels and at least one of the fishing patterns will be affected by the proposed closure.

The UK landings and values in 2014 were 1,696.61 tonnes and £2,841,164. The majority of these landings were attributed to potting at 1367 tonnes and trawling at 288 tonnes. UK potting has increased over the years analysed from 433 tonnes in 2010 to 1367 tonnes in 2014. UK trawling fluctuated over the years analysed from just less than 18 tonnes 2010 to 288 tonnes 2014. Potting will not be prohibited as part of this management proposal and will be allowed to continue.

Belgian activity varies in this site over the years analysed. Lowest landings values from this site are £150,647 in 2012 and highest at £773,382 in 2014. The majority of this activity was from Beam Trawls (TBB).

The areas of the site which are to be closed to demersal towed gears, and seines in some areas, have moderate to high levels of VMS reports from mainly UK and Dutch vessels using bottom contacting gears and some seines. There is lower demersal towed gear activity in areas of known reef. The north section of the site is rarely fished. Belgium is the only other Member State that has access to the 6-12nm area of the site. UK and Belgian vessels are both recorded as fishing in this area which already has two closures to bottom towed gears in areas of known reef through an MMO byelaw

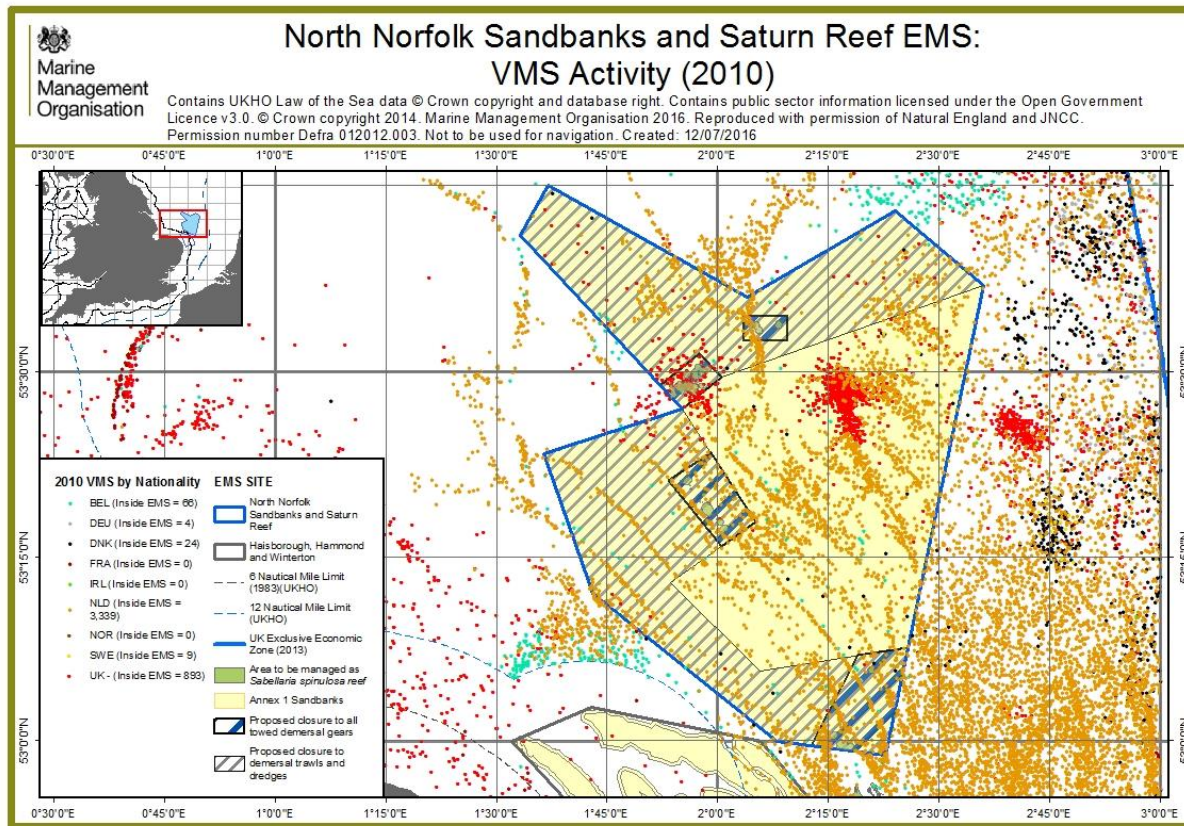


Figure 1: VMS reports indicating all fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2010 by Nationality.

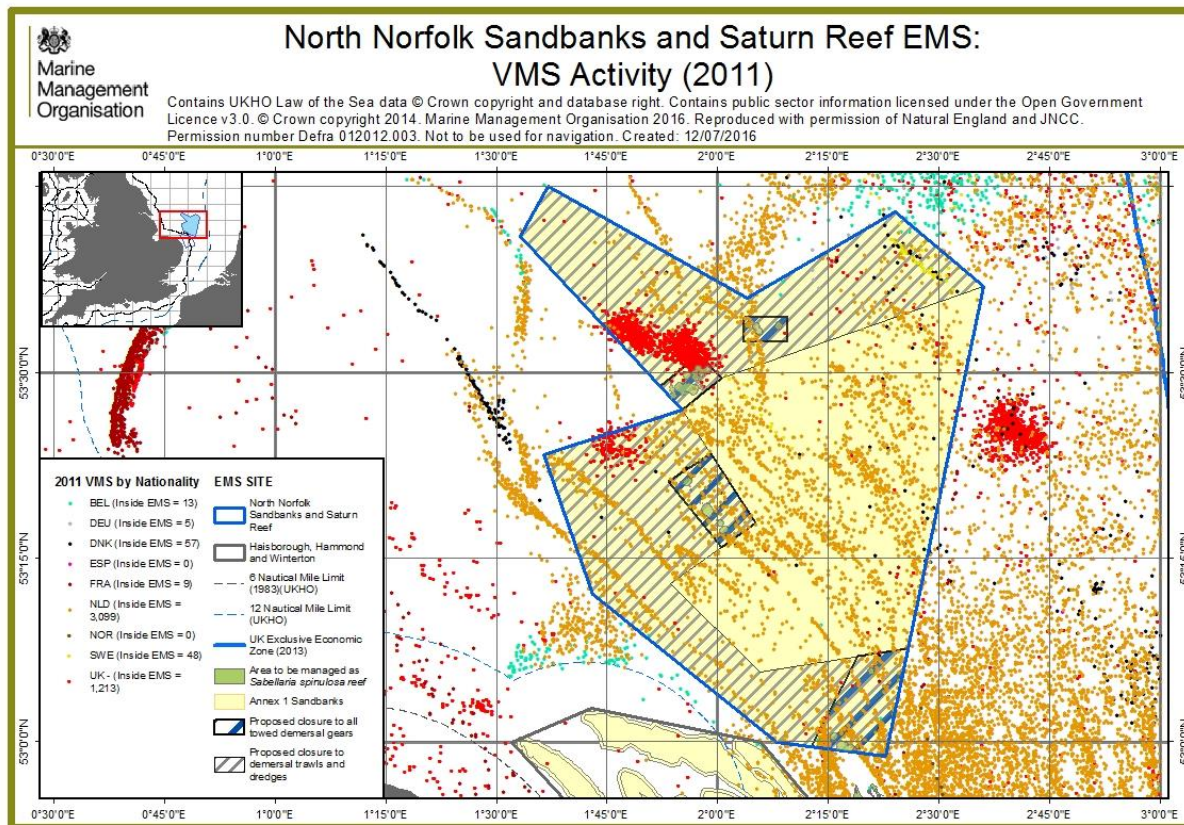


Figure 2: VMS reports indicating all fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2011 by Nationality.

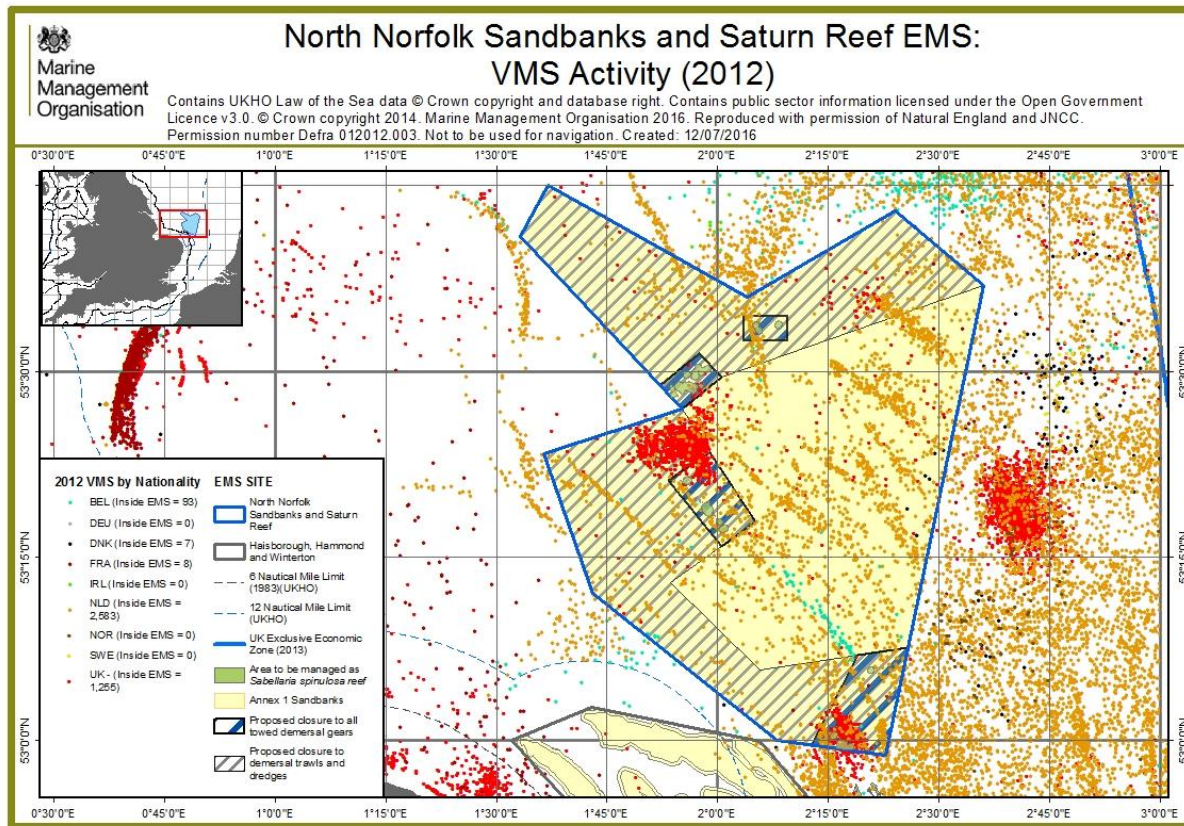


Figure 3: VMS reports indicating all fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2012 by Nationality.

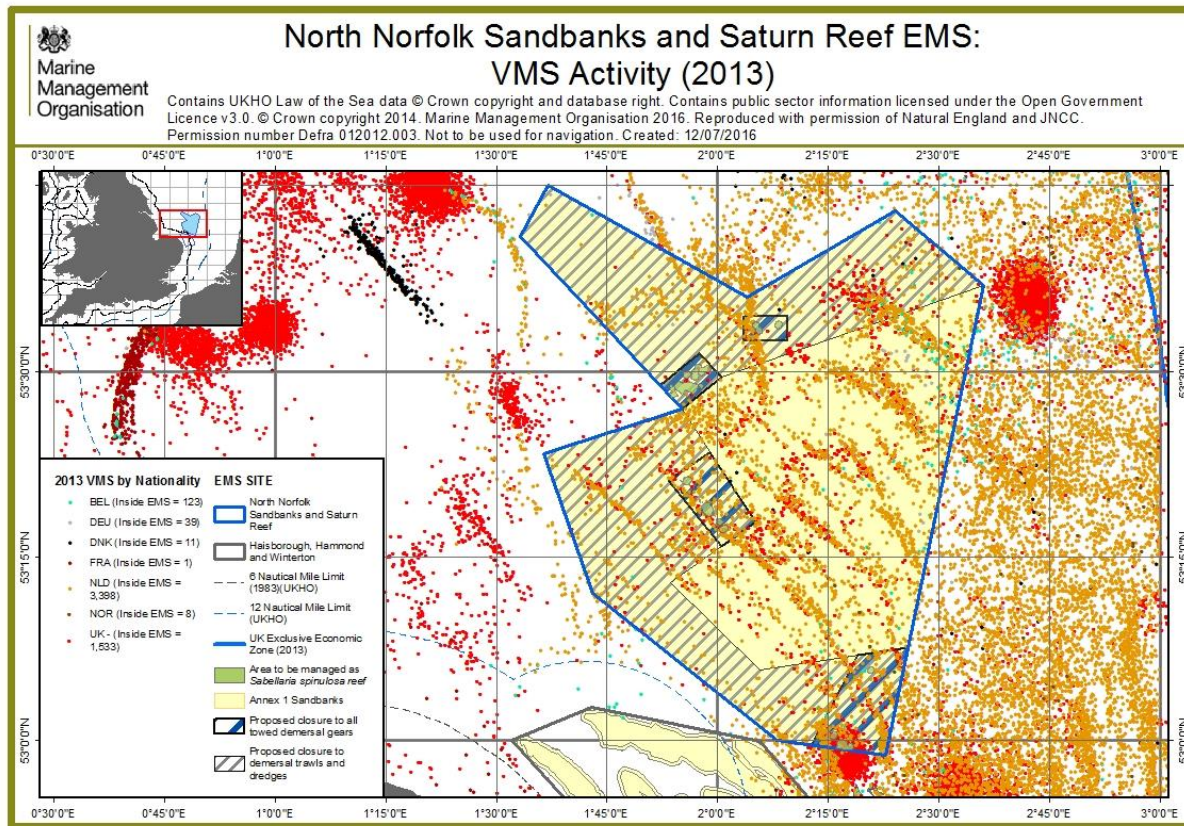


Figure 4: VMS reports indicating all fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2013 by Nationality.

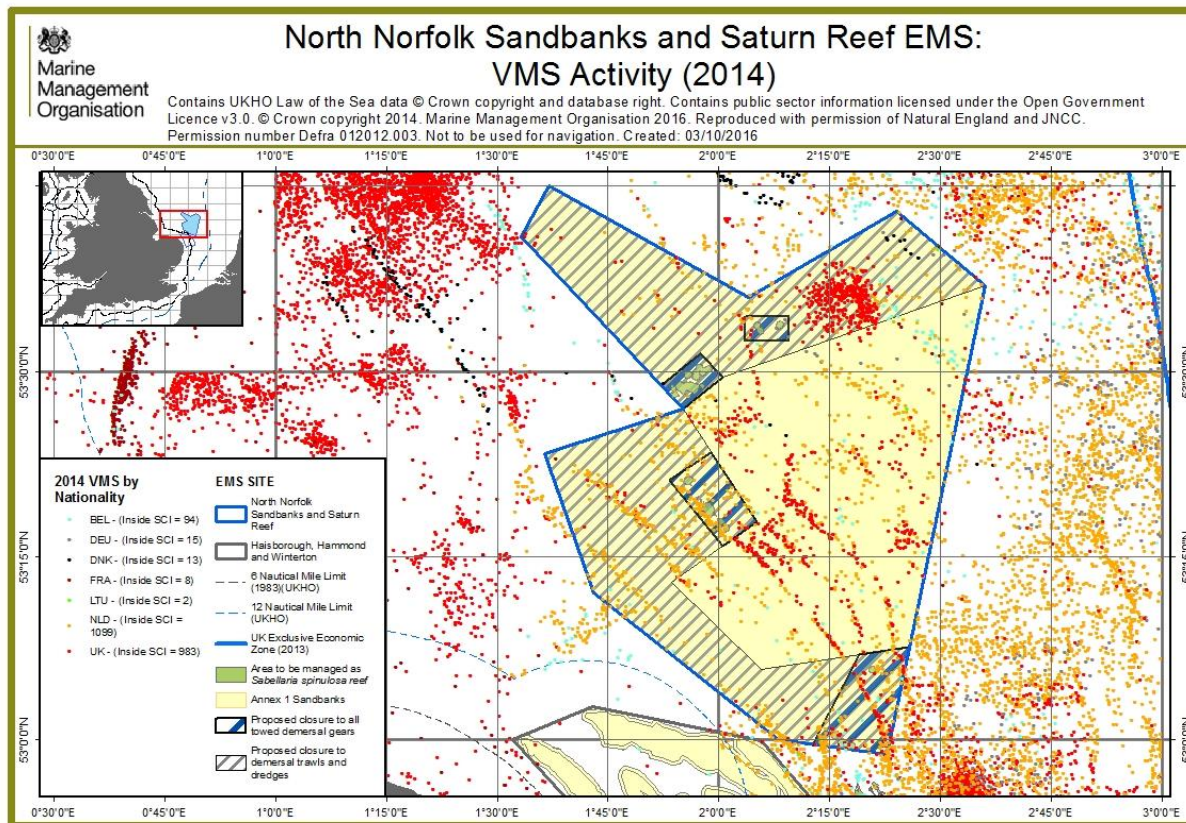


Figure 5: VMS reports indicating all fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2014 by Nationality.

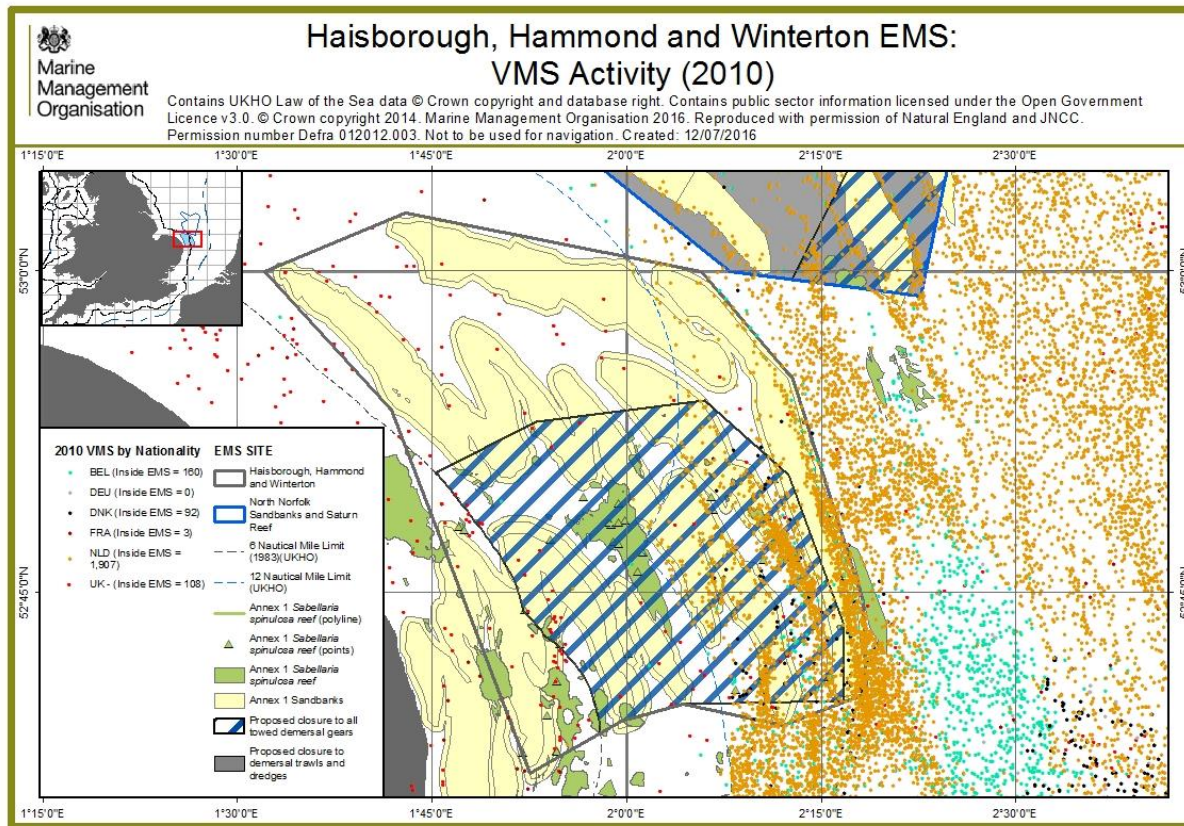


Figure 6: VMS reports indicating all fishing activity (0-6 knots) in Haisborough, Hammond and Winterton EMS 2010 by Nationality.

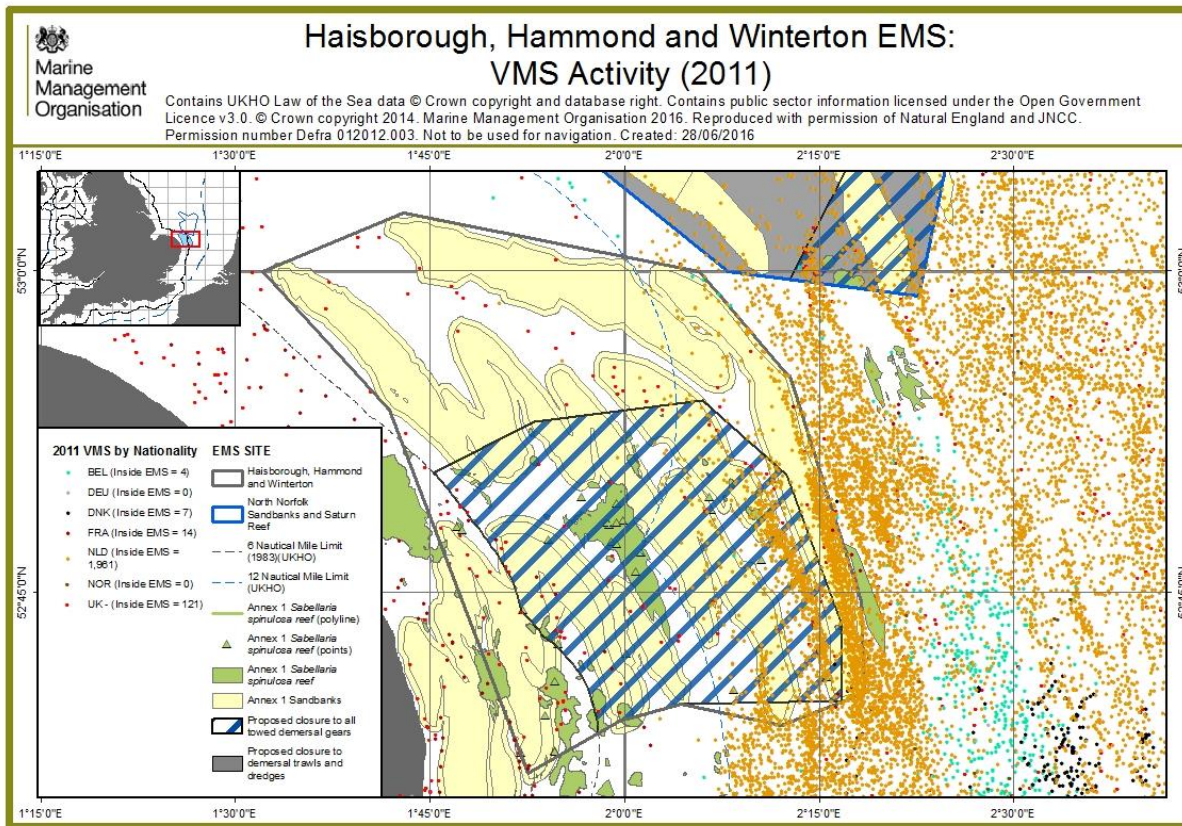


Figure 7: VMS reports indicating all fishing activity (0-6 knots) in Haisborough Hammond and Winterton EMS 2011 by Nationality.

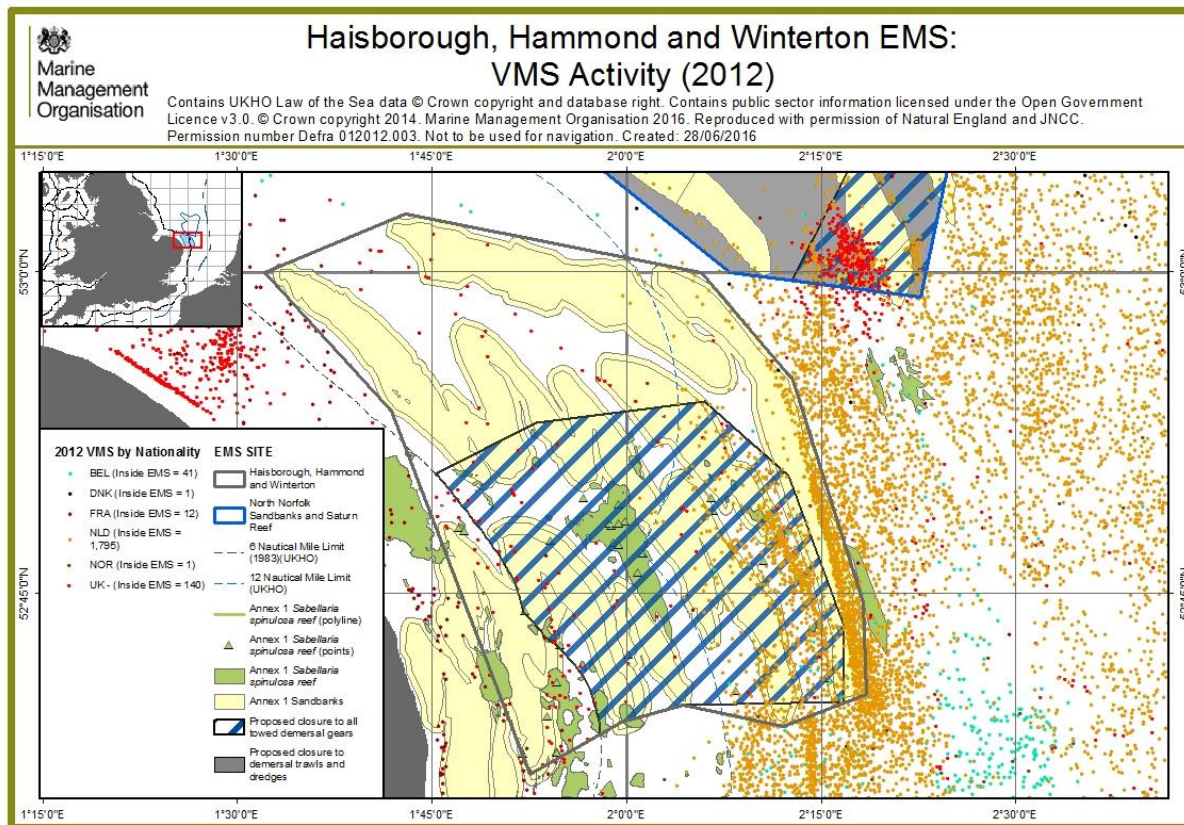


Figure 8: VMS reports indicating all fishing activity (0-6 knots) in Haisborough Hammond and Winterton EMS 2012 by Nationality.

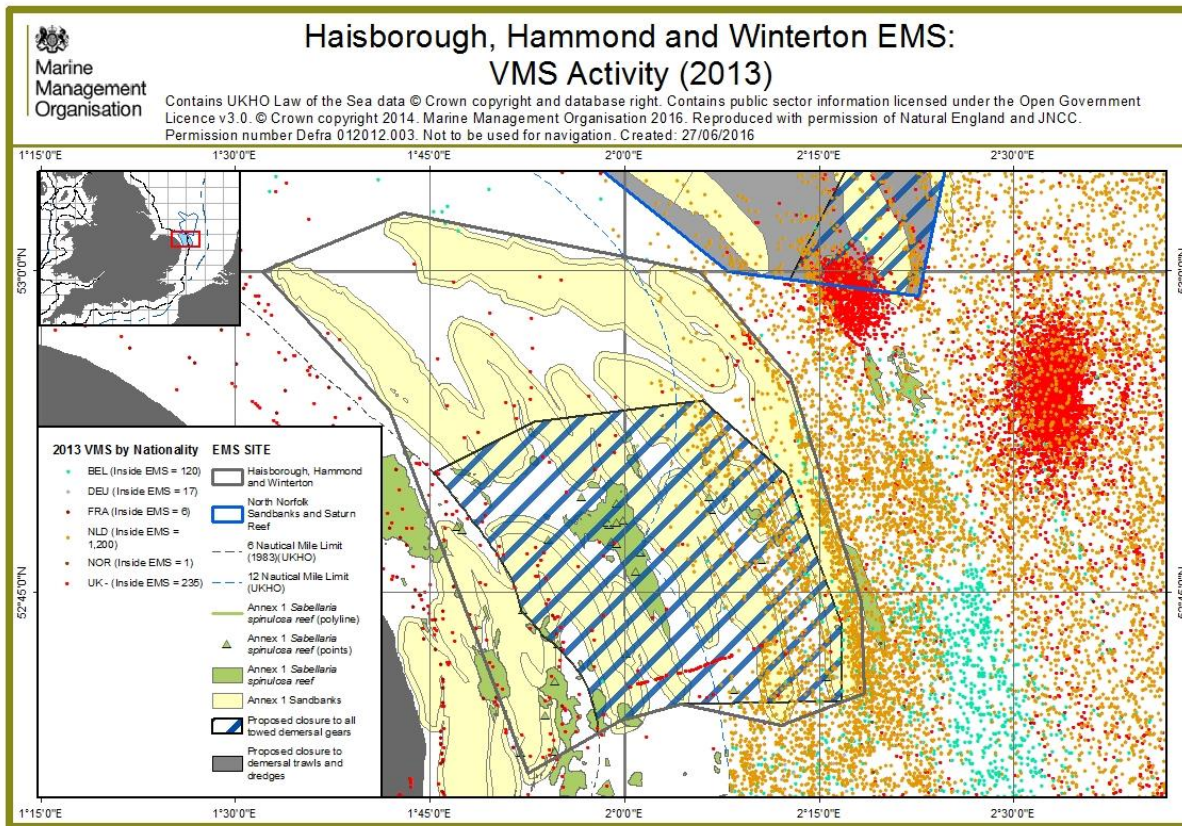


Figure 9: VMS reports indicating all fishing activity (0-6 knots) in Haisborough Hammond and Winterton EMS 2013 by Nationality.

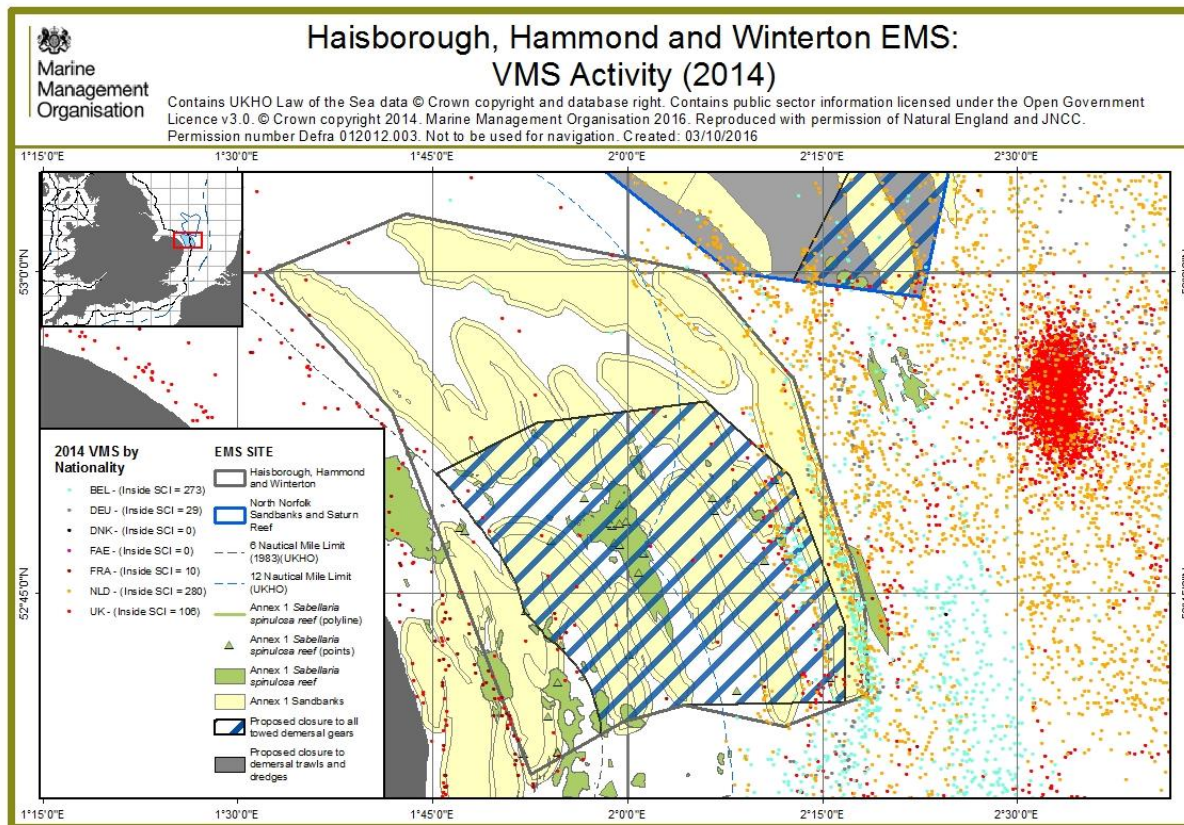


Figure 10: VMS reports indicating all fishing activity (0-6 knots) in Haisborough Hammond and Winterton EMS 2014 by Nationality.

5.5 Fleet activity by gear group – Geographical distribution

In the charts depicted in this section, demersal gears have been classed as all gear types which are to be excluded from the closed area(s) and seines over reef areas as stipulated in the gear tables on pages 10 and 11. The charts show all demersal and non-demersal gear types for each year and each Member State and where possible, the specific gear type recorded has been included.

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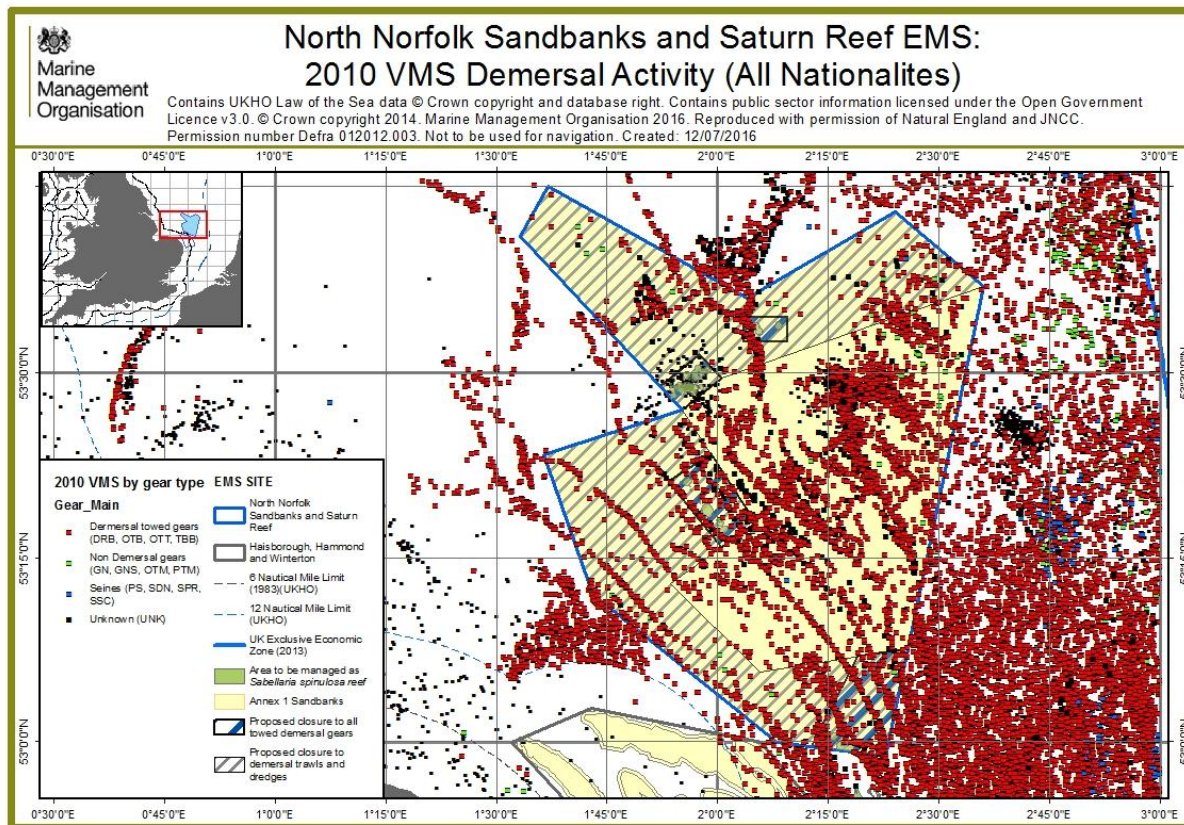


Figure 11: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2010.

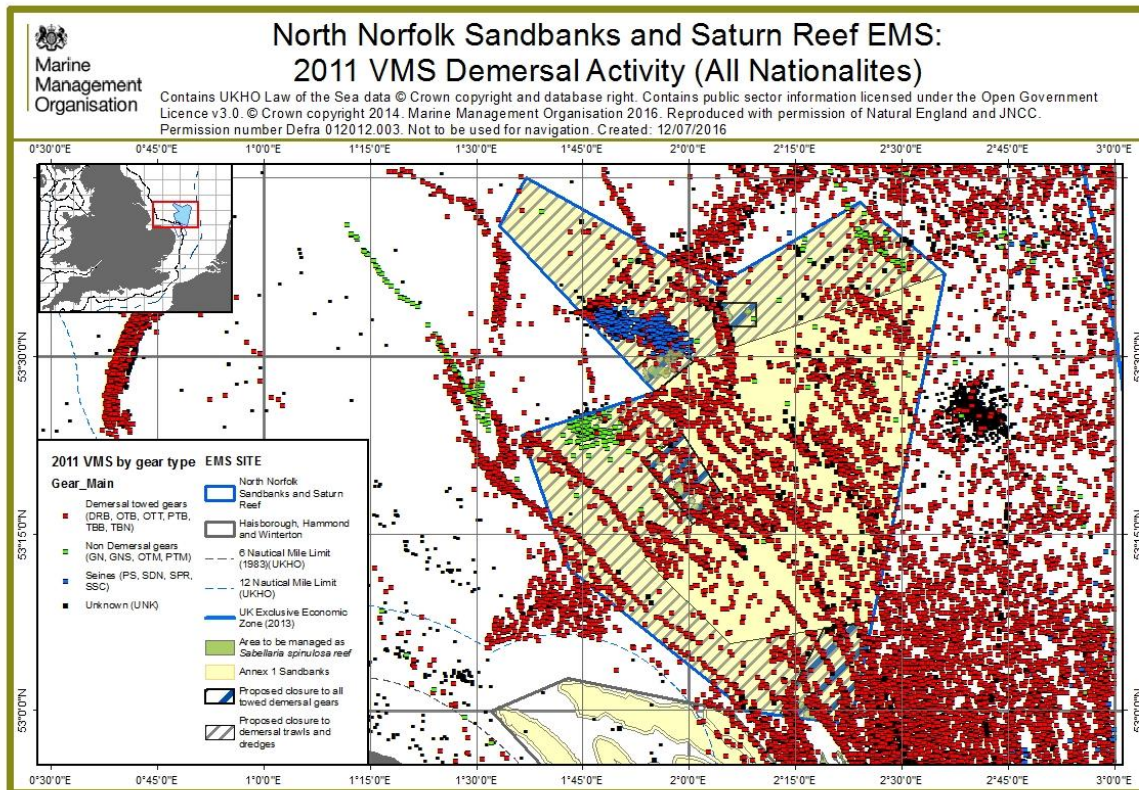


Figure 12: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2011.

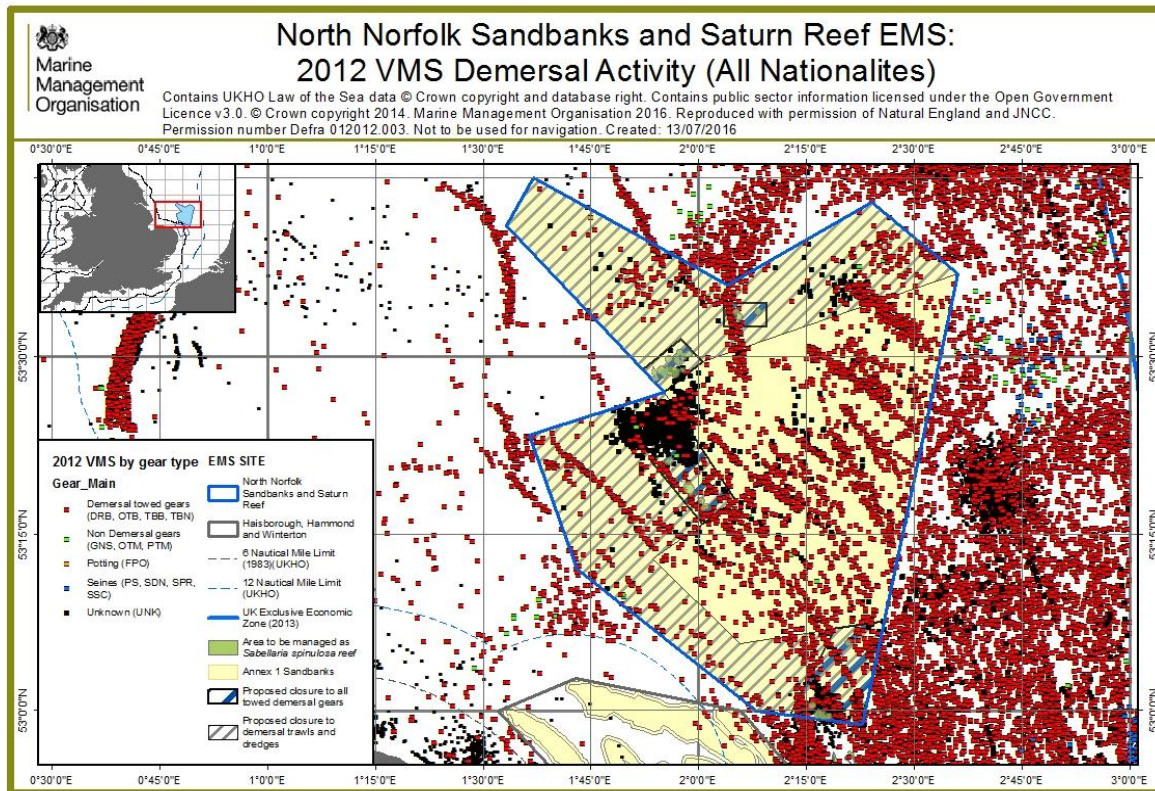


Figure 13: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2012.

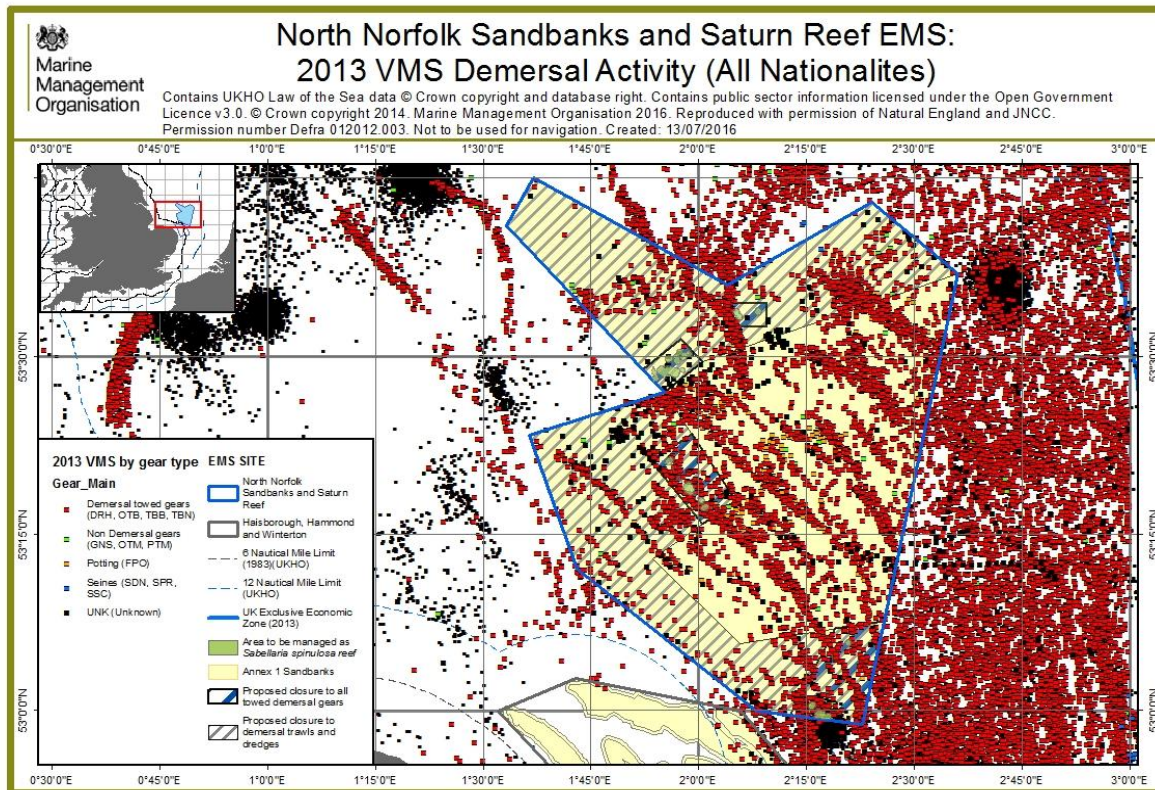


Figure 14: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2013.

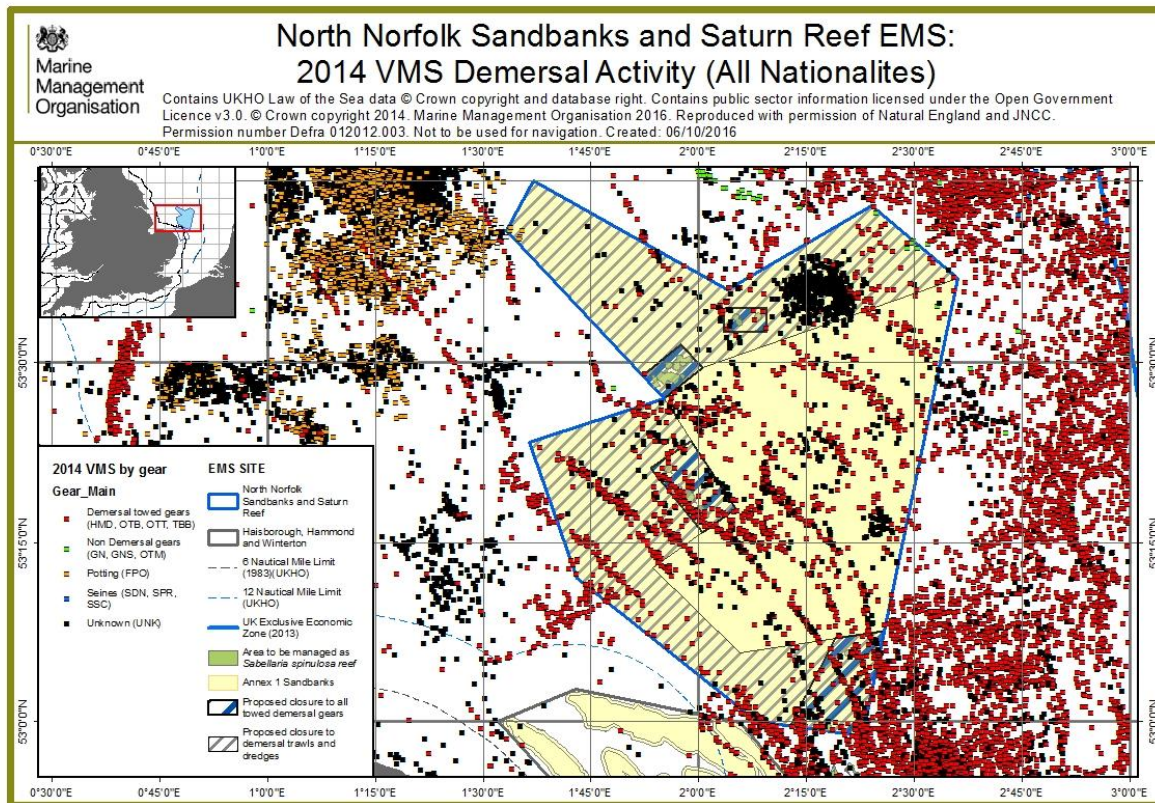


Figure 15: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in North Norfolk Sandbanks and Saturn Reef EMS 2014.

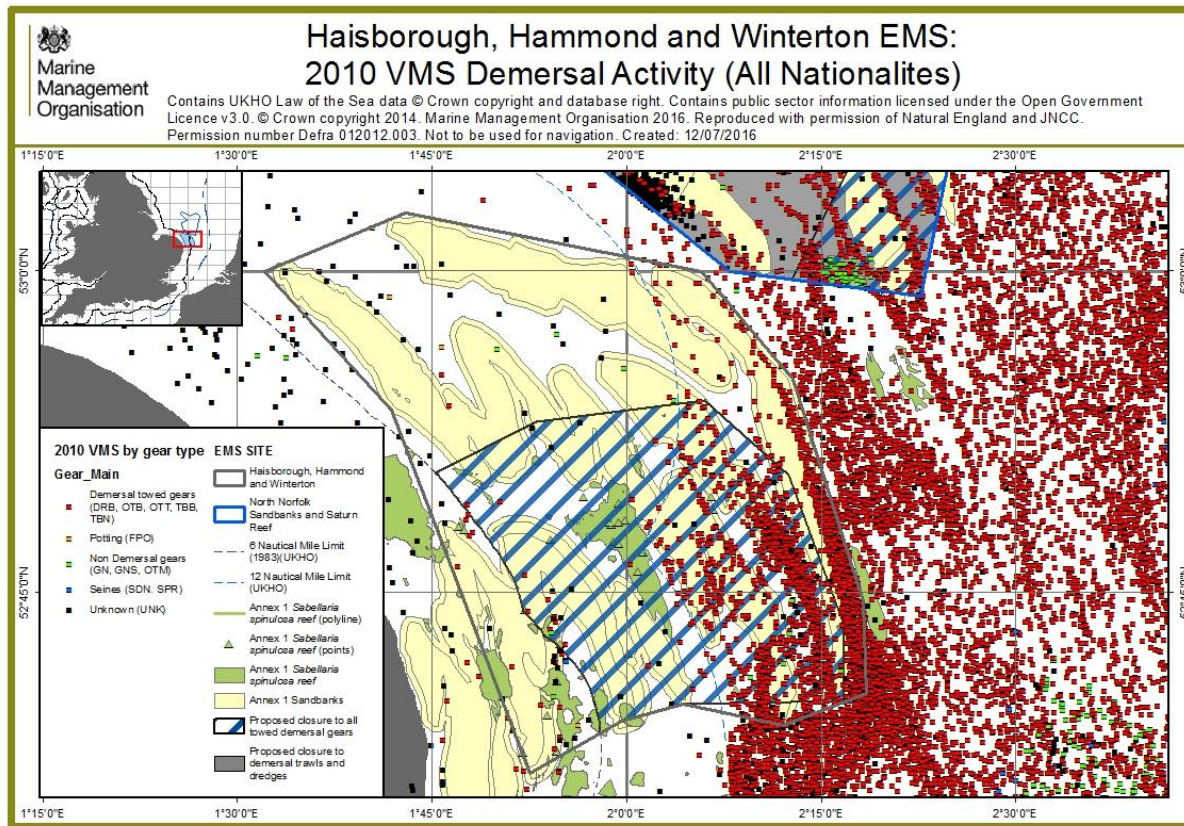


Figure 16: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in Haisborough, Hammond and Winterton EMS 2010.

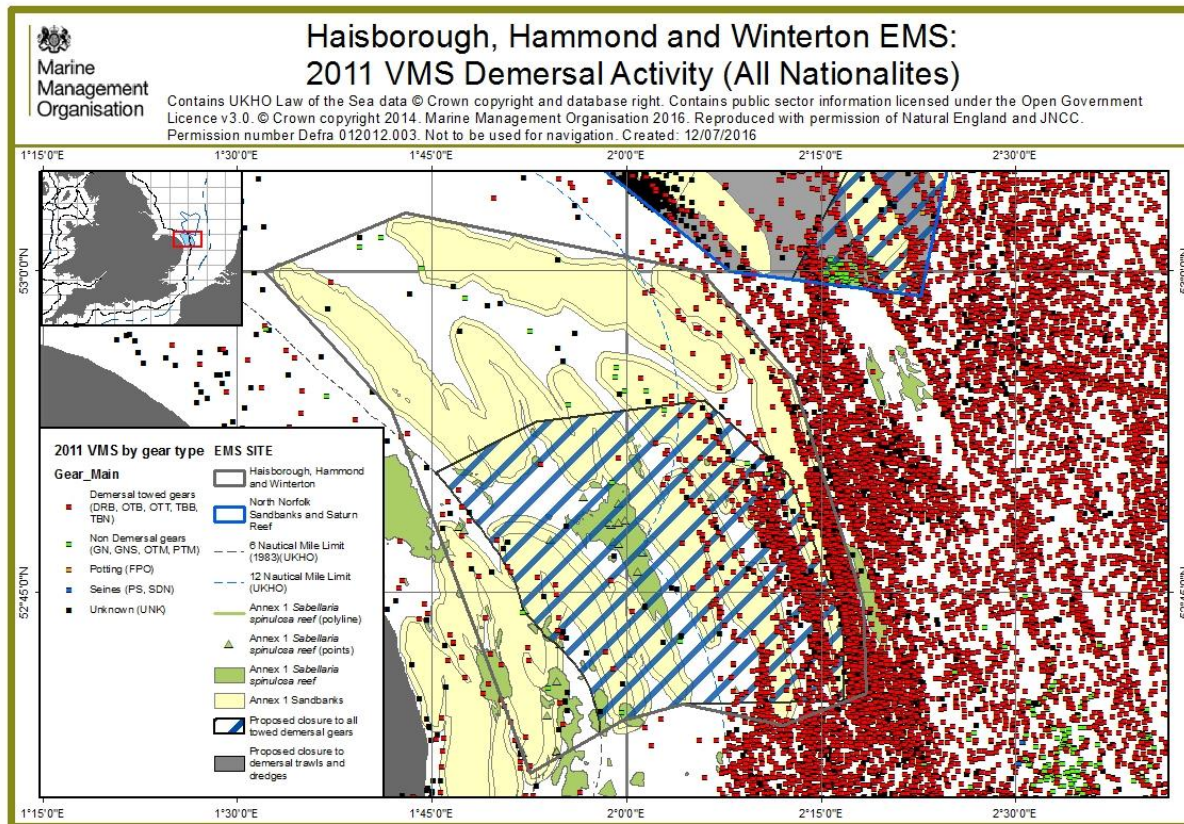


Figure 17: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in Haisborough, Hammond and Winterton EMS 2011.

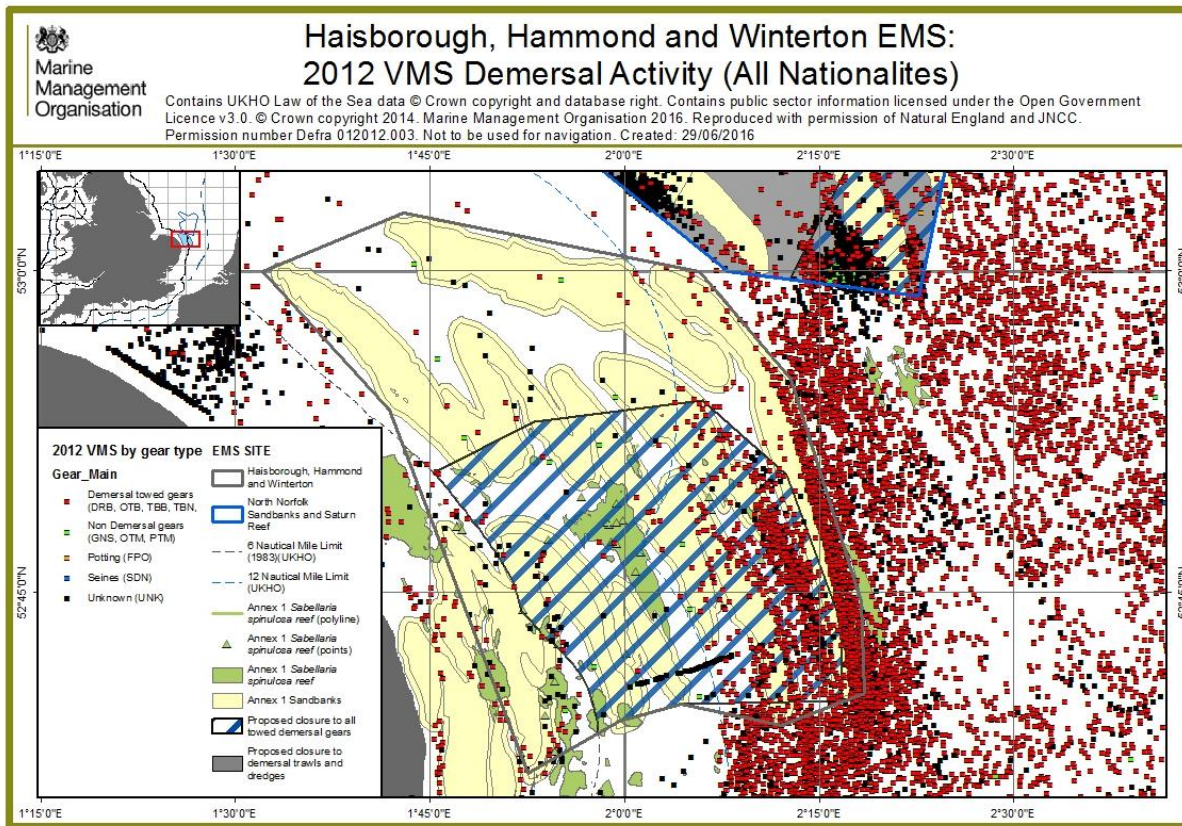


Figure 18: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in Haisborough, Hammond and Winterton EMS 2012.

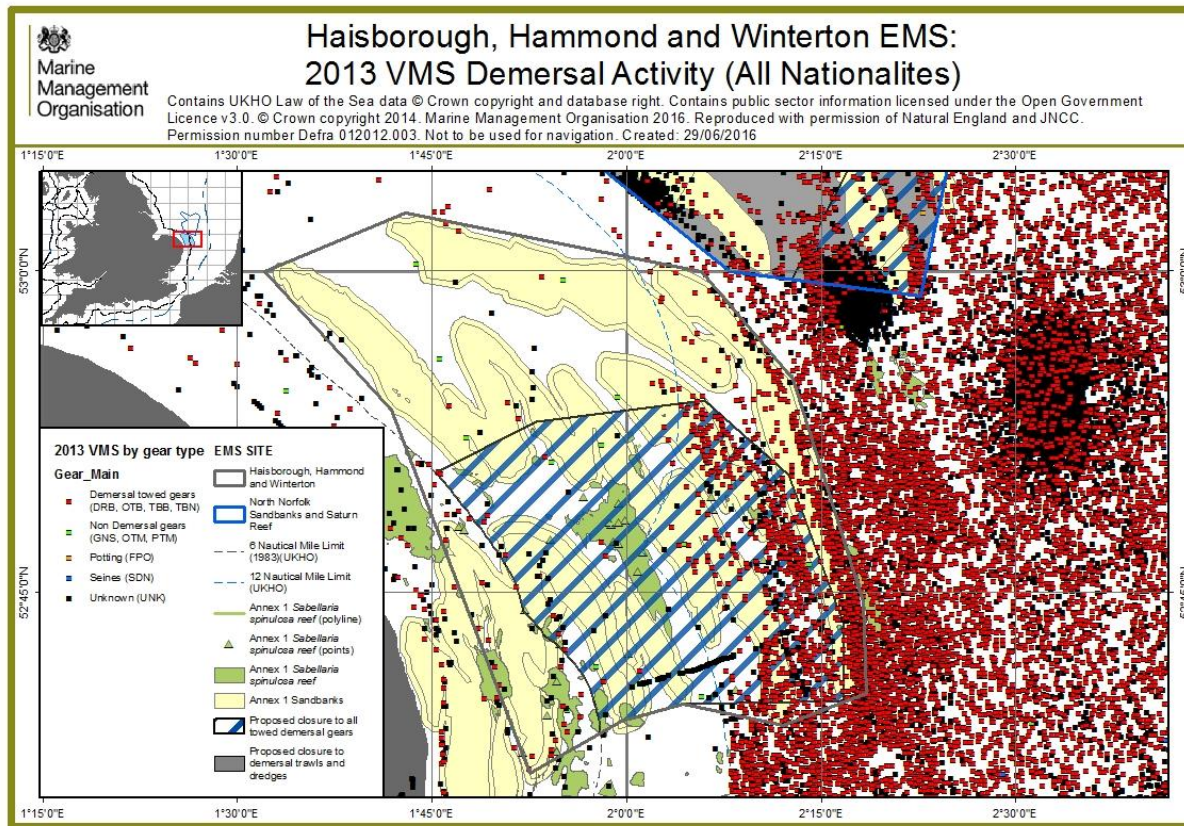


Figure 19: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in Haisborough, Hammond and Winterton EMS 2013.

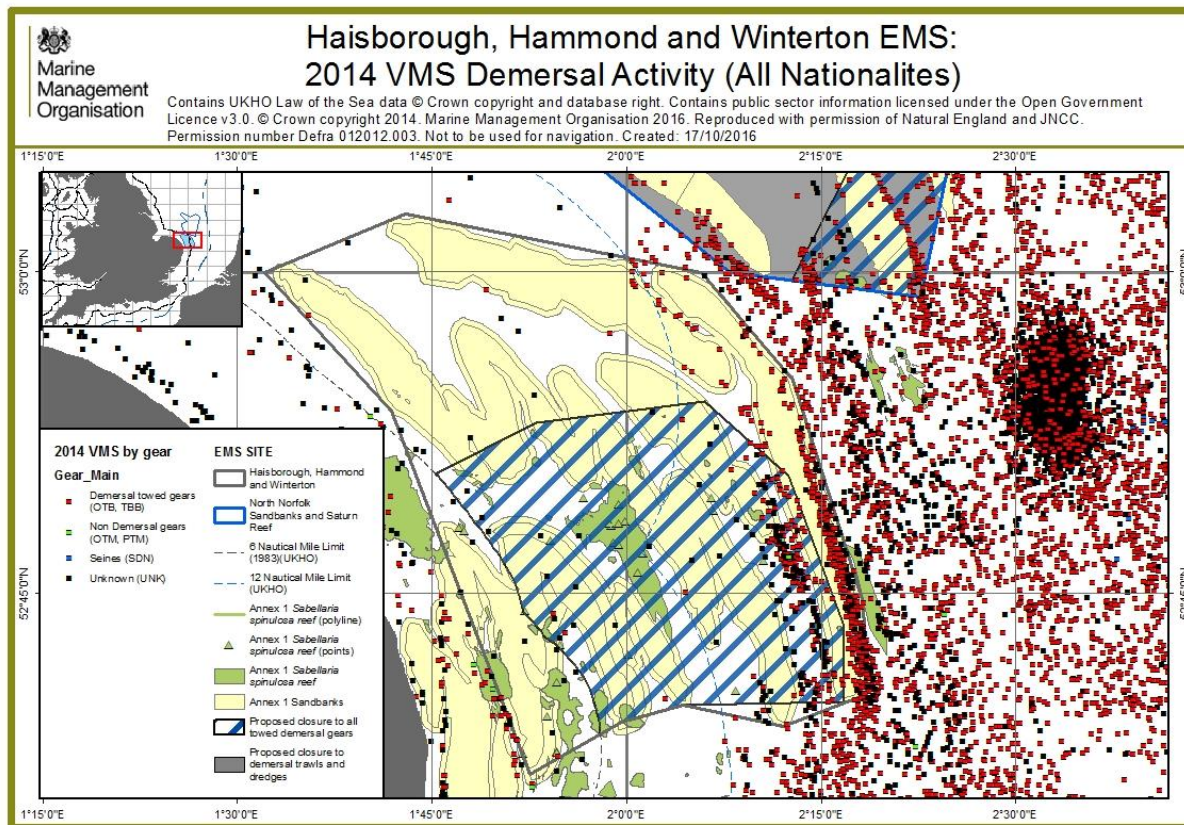


Figure 20: VMS reports indicating all Member States (including UK) demersal fishing activity (0-6 knots) in Haisborough, Hammond and Winterton EMS 2014.

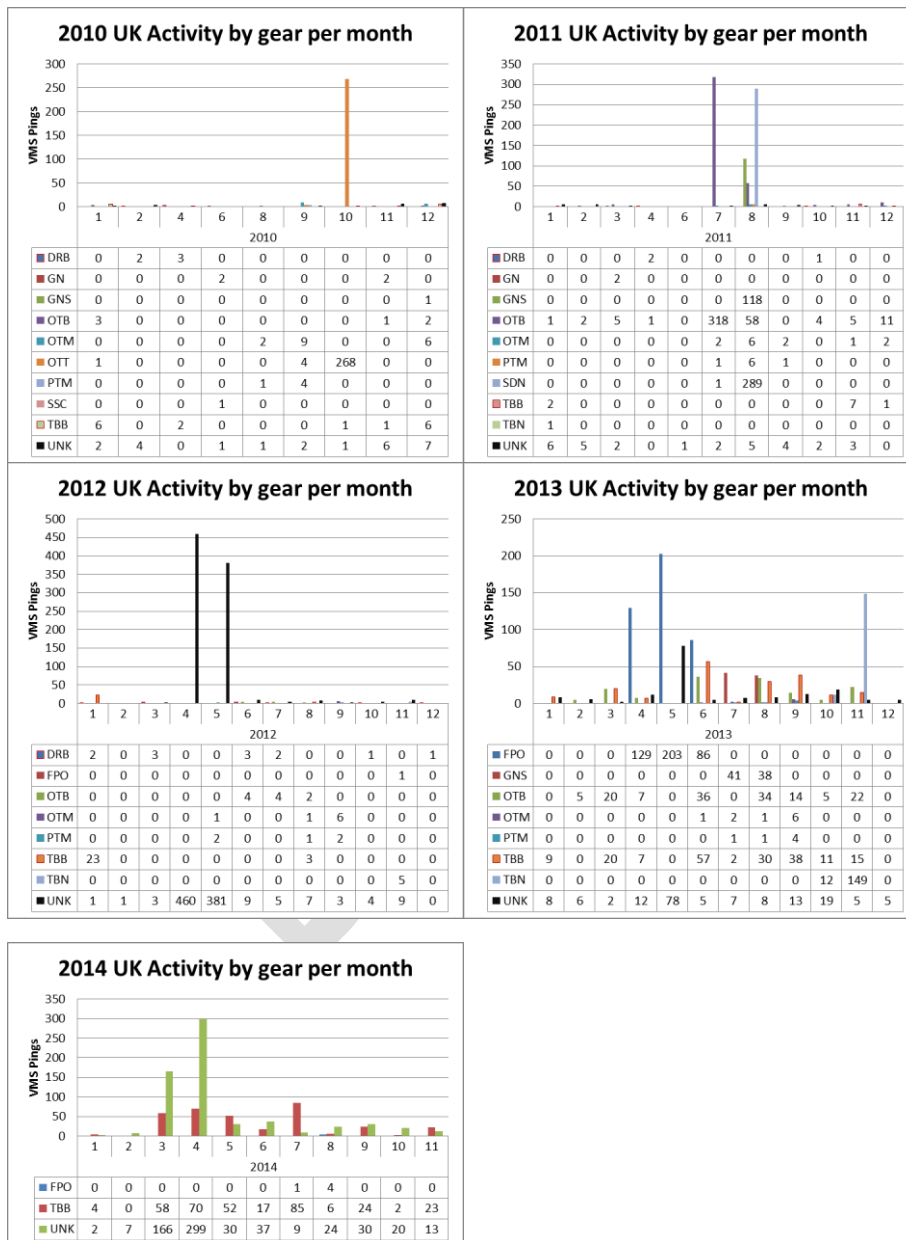
5.7 By-catch

The flatfish fisheries (beam and bottom otter board trawl) land a number of other species as by-catch (e.g. cod, lemon sole). Where these species are landed these are included in the total gross landing value statistics. Cod, sole and plaice may be by-catch species from the Nephrops fishery. Additional species may also be caught as bycatch but are not landed, and there are no current systematic statistics available for these catch components. With the introduction of Common Fisheries Policy reform, which includes a landing obligation (namely a ban on the discard of certain species by certain vessels/within certain circumstances), it may become possible in the future to collate information on bycatch that could contribute to the overall catch and landings statistics in certain areas. A ban on demersal fish discards was introduced at the end of 2015, following a discard ban on pelagic fish introduced at the end of 2014, with a ban on discarding all other quota species by 2016.⁹

⁹ http://ec.europa.eu/fisheries/reform/docs/discards_en.pdf

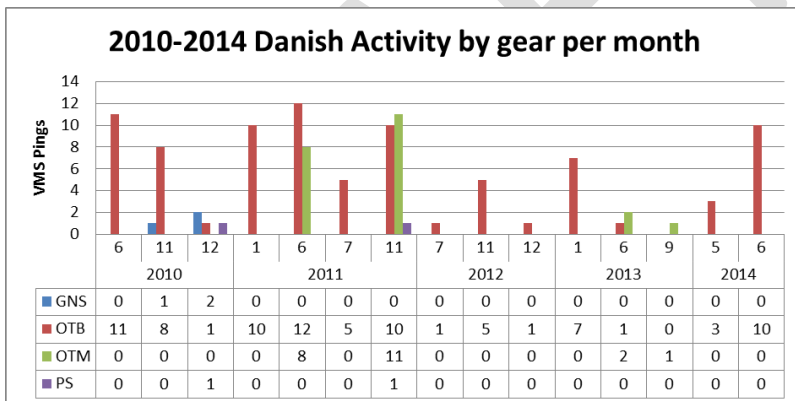
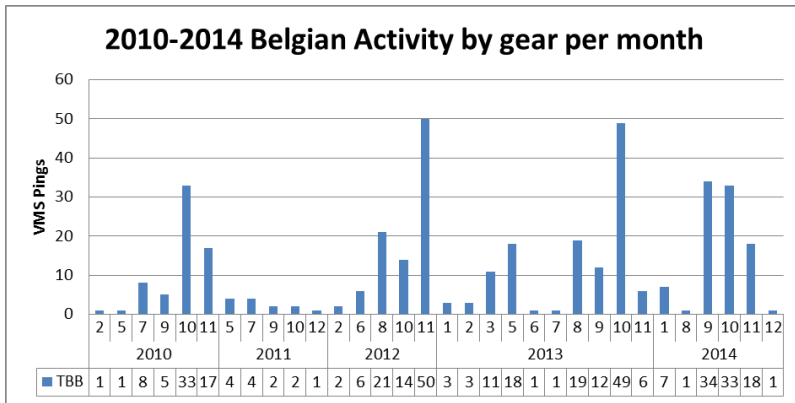
6 Seasonal trends in fisheries over years 2010 to 2014 inclusive

Charts 6.1: Seasonal fishing activity (all gears) for UK vessels only in relevant ICES rectangles for North Norfolk Sandbanks and Saturn Reef SCI per year.

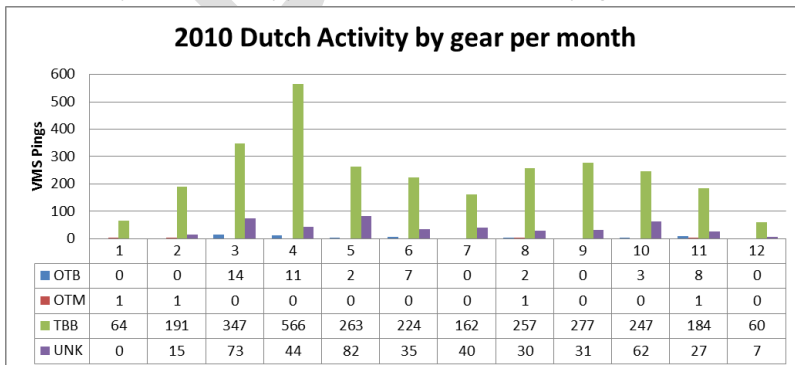


Charts 6.2: Seasonal fishing activity (all gears) per Member State in relevant ICES rectangles for North Norfolk Sandbanks and Saturn Reef SCI per year.

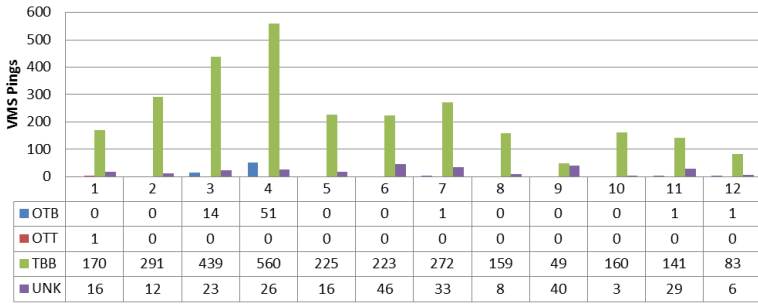
Fishing activity only took place during the months displayed below and the number of VMS reports has been used to indicate fishing activity in each month and year per Member State.



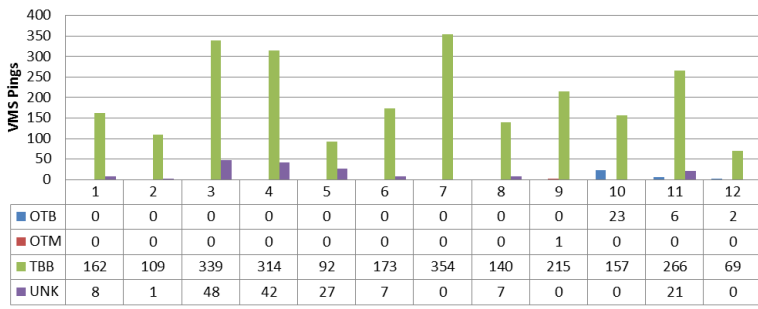
Dutch activity broken down by year due to the volume of VMS pings



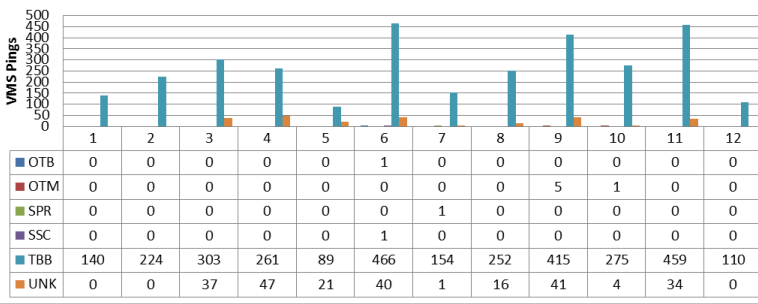
2011 Dutch Activity by gear per month

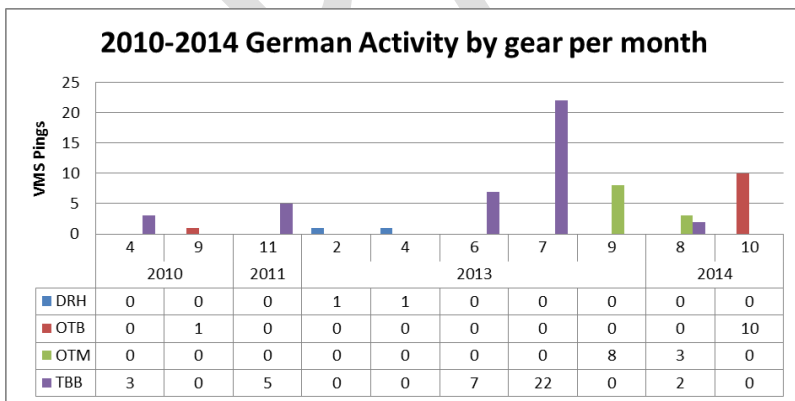
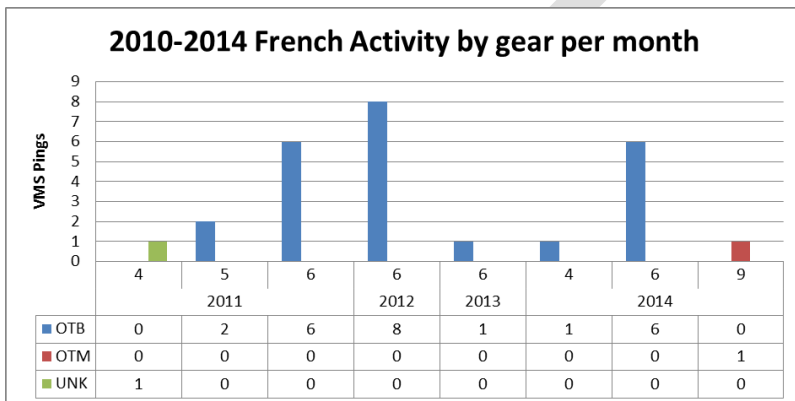
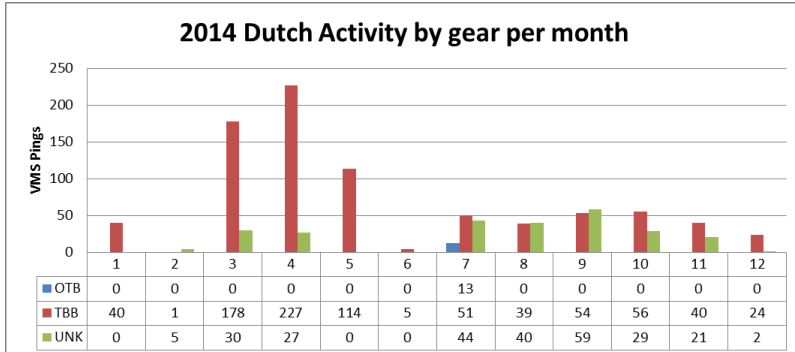


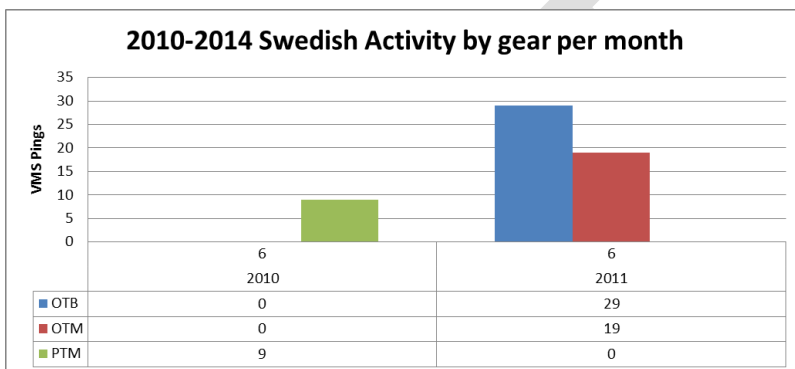
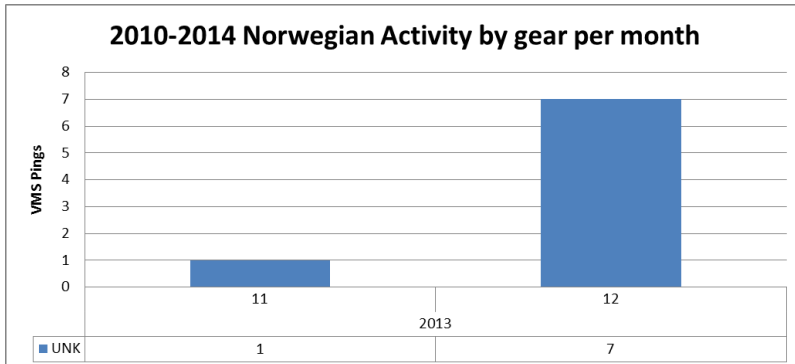
2012 Dutch Activity by gear per month



2013 Dutch Activity by gear per month

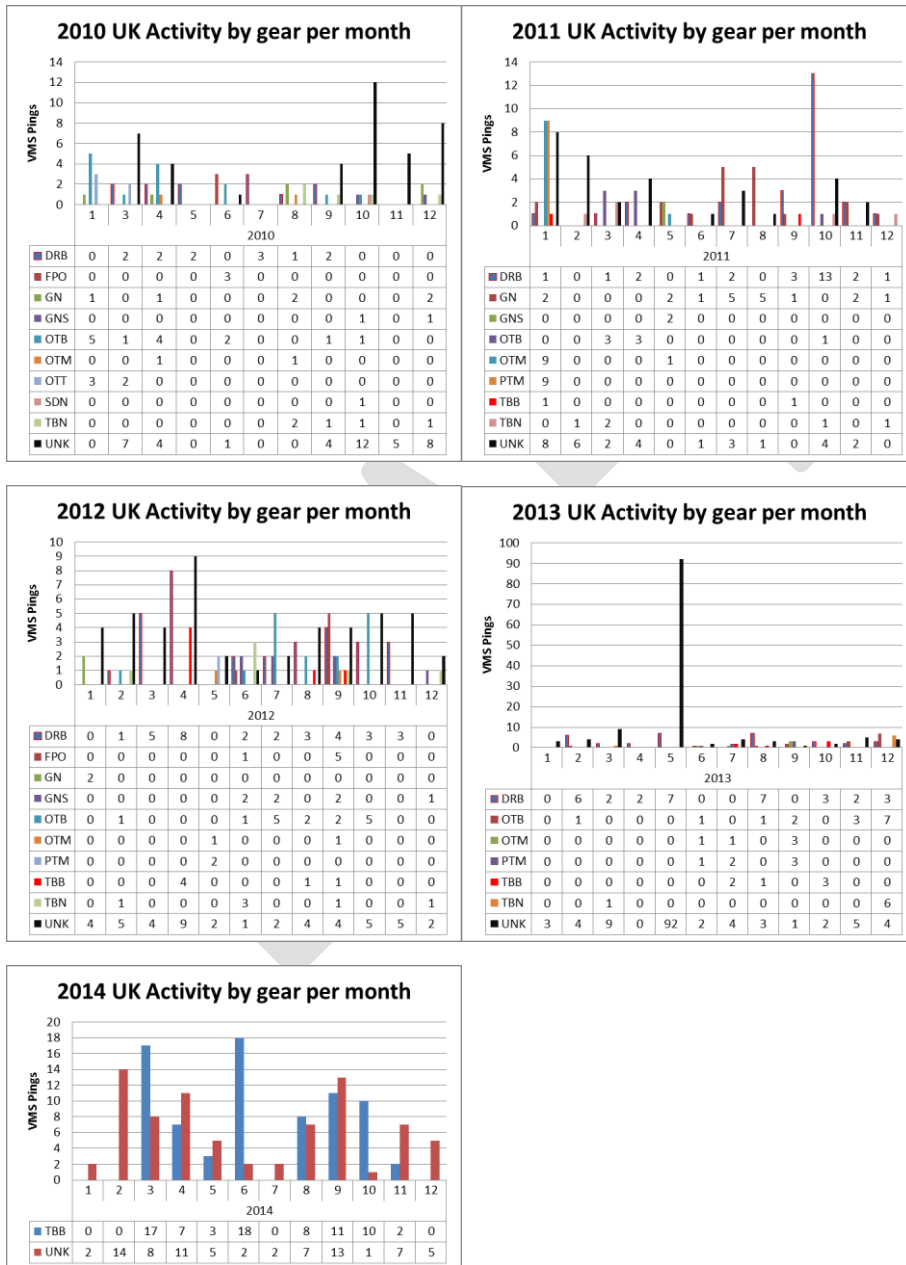






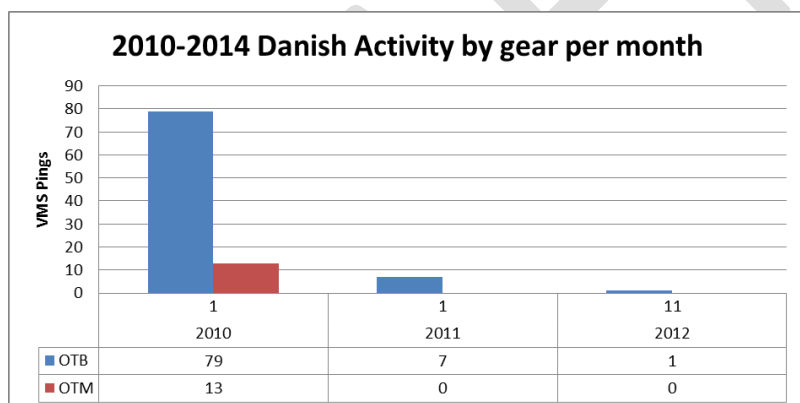
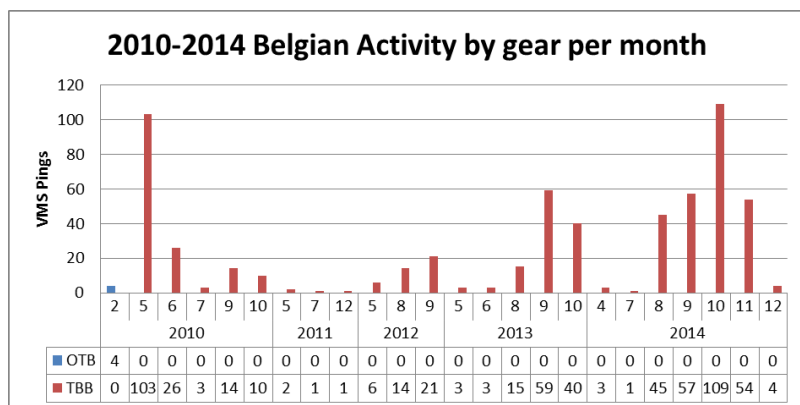
To note: UK did not receive landings data in values and tonnes on Norwegian and Swedish activity for this site. Lithuania is not displayed as this was one vessel on one occurrence in 2014.

Chart 6.3: Seasonal fishing activity (all gears) in relevant ICES rectangles for Haisborough Hammond and Winterton SCI for UK only

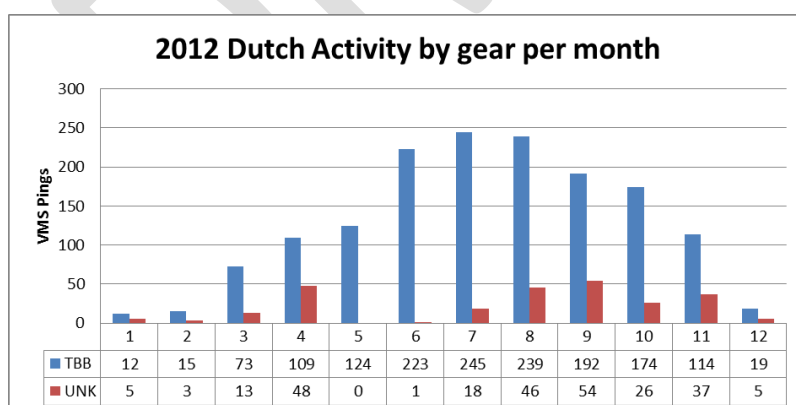
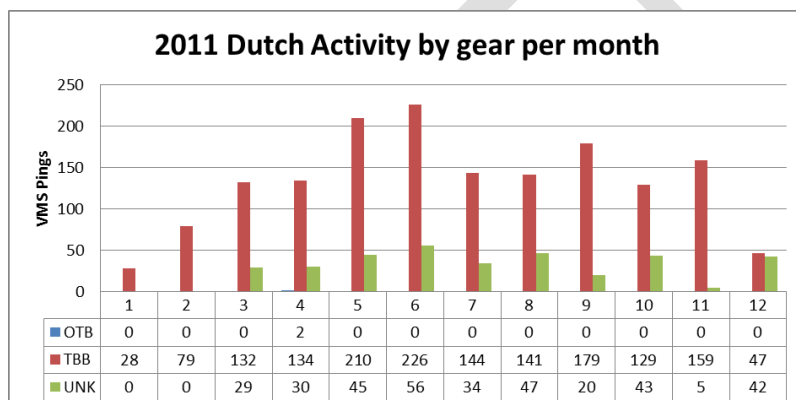
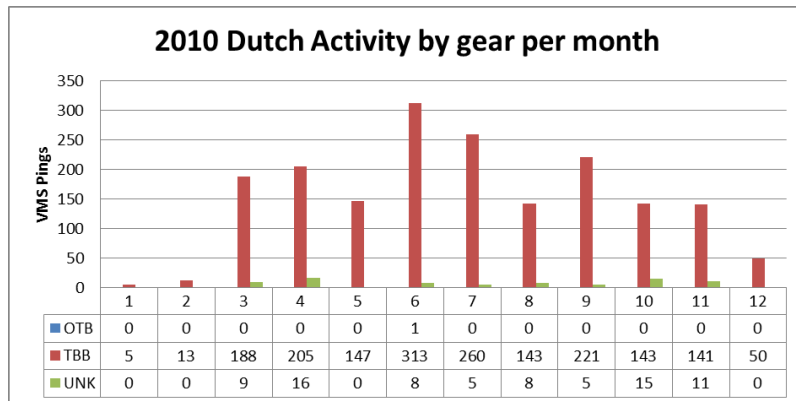


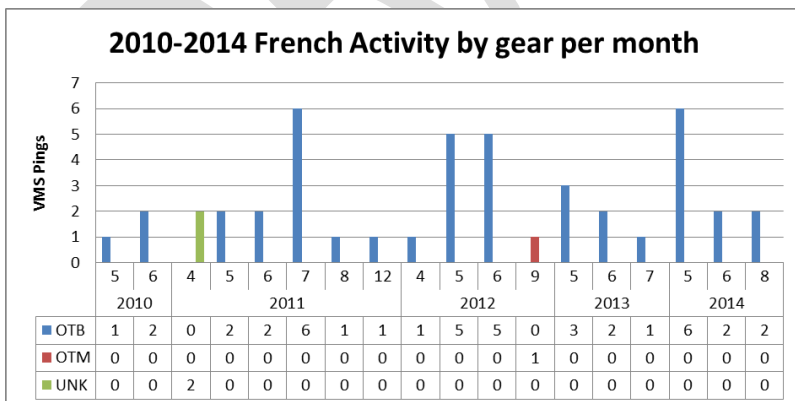
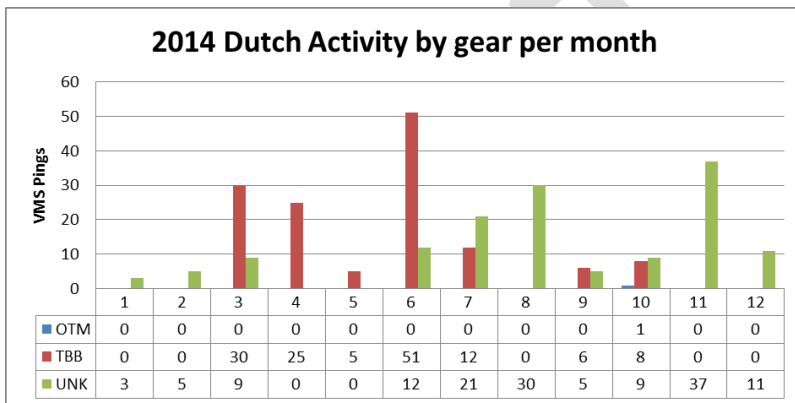
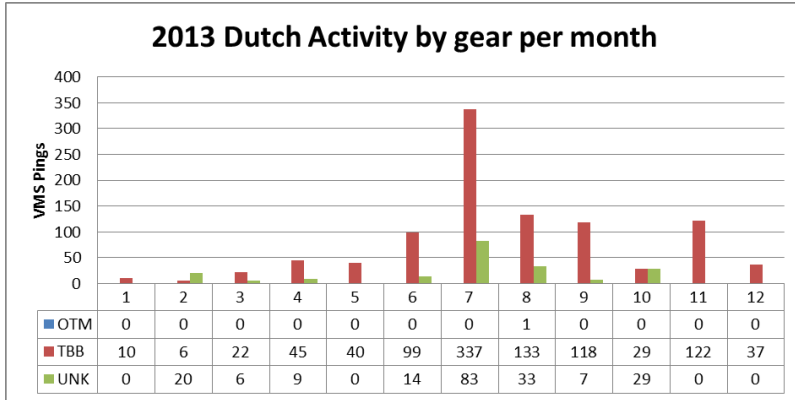
Charts 6.4: Seasonal fishing activity (all gears) per Member State in the relevant ICES rectangles for Haisborough, Hammond and Winterton SCI.

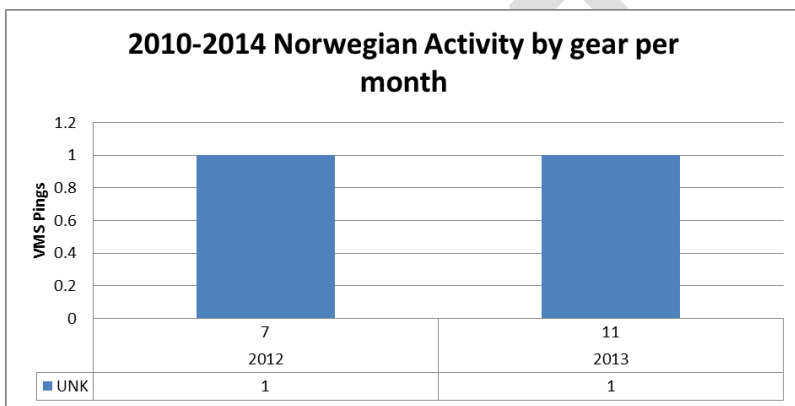
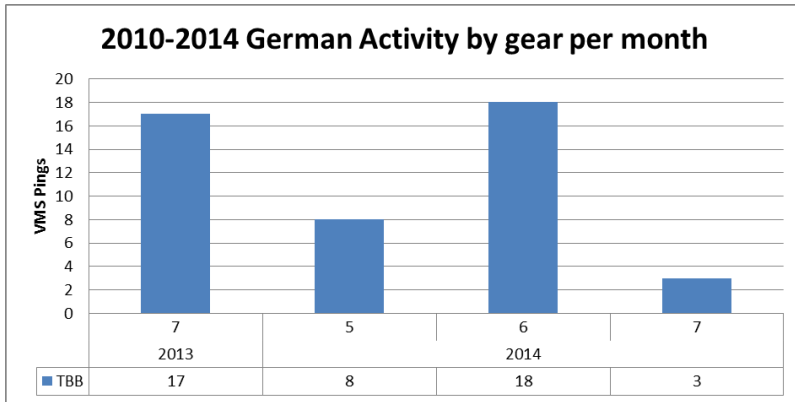
Fishing activity only took place during the months displayed below and the number of VMS reports has been used to indicate fishing activity in each month and year per Member State.



Dutch activity broken down by year due to the volume of VMS pings







The UK did not receive any landings data in values and tonnes on Norwegian activity for this site however, there was one VMS report for Norway in July 2012 and November 2013.

7 Proposed fisheries management measures to maintain the habitat features in favourable condition. Are they proportionate and enforceable? Other conservation measures that apply to the areas

7.1 Options for fisheries management measures

A range of MPA fisheries management options are available to managers, differing in the degree of restriction they would play on fishing operations, and the risk they would pose to achieving the conservation objectives. These have been grouped into three broad categories of possible management: No additional management, additional management to reduce/limit pressures and additional management to remove pressures.

Although it is not generally possible to quantify the degree of risk to achieving the conservation objectives posed by each option, it is possible to identify where risks may exist, and where this could be reduced through the introduction of management measures.

Risks have been evaluated using existing data and information on protected features and our understanding of the relationships between the feature and relevant activities.

Broad management option categories:

- 1) No additional management** – where fisheries managers choose to apply no additional site specific fisheries management within a site. For some gear/feature combinations, where the feature is not considered sensitive to the pressures associated with demersal fishing activity, this management option may pose little or no risk to achievement of the conservation objectives. For features which are considered sensitive to the pressures associated with certain demersal fishing activities, the risk posed to achieving the conservation objectives will increase as the sensitivity of the feature increases. As outlined in the features fisheries impacts section, this will vary between features and gear types.
- 2) Additional management to reduce/limit pressures** – where fisheries managers may wish to consider a range of measures that could be used to reduce the risk posed by fishing activity to achieving the conservation objectives. These could include:
 - Area restrictions: This would involve closing some or all of a specific feature's area. Restrictions could be permanent in some cases or temporary/adaptive in others. The risk of the conservation objectives not being met will increase as the size of areas restricting pressure decrease, or if the pressure reduction across the site relative to natural change is low.

- Gear restrictions: This could involve restricting the use of gears to which a feature is more sensitive.

In situations where there is high uncertainty regarding the impacts of fishing on features, management measures to reduce/limit pressures could be “adaptive”, i.e. changes in the feature’s condition following the introduction of management measures will be monitored and future management may be adapted accordingly.

- 3) Additional management to remove pressures** – where managers choose to exclude fishing activities known to adversely affect a feature. Such exclusions may apply to the parts of the site where the feature is present, or to an entire site. This would reduce the risk of not achieving the conservation objectives to the lowest possible level.

7.2 Proposed management options

The key consideration is to ensure no further deterioration to the sites and that measures are contributing to achieving the sites’ Conservation Objectives. Under this adaptive management approach, measures are appropriate to the scale of risk posed to achieving those Conservation Objectives and the nature and scale, timing, duration and location of measures aim to prevent deterioration or significant disturbance in the site.

Adaptive and flexible management is key to enhancing knowledge of the habitat and the effects of fishing gear on the habitat, in order to ensure the area can be managed effectively. Associated with this are monitoring arrangements that will enable learning about the outcomes of the management actions that may then be used to inform any adjustments to those measures.

North Norfolk Sandbanks and Saturn Reef SCI

Additional management to reduce the pressures resulting from demersal trawling and dredging within the site is the proposed management option to protect H1110 Sandbanks which are slightly covered by sea water all the time (option 2 described in Section 7.1). In recognition of the uncertainty that exists regarding the impacts of demersal trawling and dredging on the feature, an “adaptive management” approach shall be taken, whereby a proportion of the feature will be closed to these gears and subsequently monitored to improve our understanding of impacts and inform future management. This option is deemed suitably precautionary and proportionate to the risk posed to the feature within the site by mobile demersal gear.

Additional management to reduce the pressures resulting from demersal trawling, dredging and seine netting within the site is the proposed management option to protect H1170 Reef (option 2

described in Section 7.1). This option will prohibit the use of mobile demersal gear over all areas to be managed as *S. spinulosa* reef within the site, as identified by the JNNC (see Annex C). This option significantly reduces the risk of damage to the reef feature from fishing activity and will help the site progress towards achieving its conservation objectives. The ephemeral nature of *S. spinulosa* reef poses a challenge to its management. Nevertheless, the current proposal is deemed suitably precautionary and proportionate to the risk posed to the feature within the site by mobile demersal gear. Subsequent monitoring will help improve understanding of *S. spinulosa* reef distribution within the site and inform any future amendments to the management measures implemented.

The proposed closures under these options are illustrated in Figure 1 (page 23) along with their coordinates in Tables 4 and 5 (pages 20 and 21) of the Supporting Documentation. As appropriate, the proposed closures include buffer zones to help reduce the risk of accidental damage occurring to the features and ensure they are enforceable. Further explanation of the application of both buffers and margins to ensure adequate protection of features within the current proposals is provided in Annex E.

No additional management is proposed for demersal seines on sandbanks and demersal static gear for sandbanks and reef as the risk to the achievement of their conservation objectives from the gear type is considered to be sufficiently low. However, if monitoring indicates impacts from these gears, it may be necessary to introduce some degree of management in the future.

A control and enforcement regulation is proposed to accompany management measures. For further information on this, refer to Section 8 and Annex F.

Fishing industry management proposals for the site (see Annex G) were considered during the development of management measures. However, the industry proposals could not be implemented in full because they did not protect all areas requiring management as reef feature within the site, and did not include sufficient coverage of sandbank component habitats and the full range of fishing intensities necessary to inform effective adaptive management of the sandbank feature. Channels within management areas were also requested by industry to aid transit, but could not be included within the proposals because of current enforcement constraints.

Haisborough, Hammond and Winterton SCI

A reduction in the pressures associated with demersal trawling, dredging and seine netting within the site is the proposed management option to protect H1110 Sandbanks which are slightly covered by sea water all the time within the site and H1170 Reef within the site (option 2 described in section 7.1). Given the relatively widespread distribution of the reef feature throughout the site it

was not deemed feasible to have separate management boundaries for the sandbank and reef features in this instance.

In recognition of the uncertainty that exists regarding the impacts of demersal trawling and dredging on the sandbank feature, an “adaptive management” approach shall be taken, whereby a proportion of the feature will be closed to these gears and subsequently monitored to improve our understanding of impacts and inform future management. This option is deemed suitably precautionary and proportionate to the risk posed to the feature within the site by mobile demersal gear.

This option will prohibit the use of mobile demersal gear over all areas to be managed as *S. spinulosa* reef within the site, as identified by the JNNC (see Annex D). This option significantly reduces the risk of damage to the reef feature from fishing activity and will help the site progress towards achieving its conservation objectives. The ephemeral nature of *S. spinulosa* reef poses a challenge to its management. Nevertheless, the current proposal is deemed suitably precautionary and proportionate to the risk posed to the feature within the site by mobile demersal gear. Subsequent monitoring will help improve understanding of *S. spinulosa* reef distribution within the site and inform any future amendments to the management measures implemented.

The proposed closure under this option is illustrated in Figure 2 (page 24) along with its coordinates in Table 7 (page 22) of the Supporting Documentation. As appropriate, the proposed closures include buffer zones to help reduce the risk of accidental damage occurring to the features and ensure they are enforceable. Further explanation of the application of both buffers and margins to ensure adequate protection of features within the current proposals is provided in Annex E.

No additional management is proposed for demersal static gear on sandbanks and reef as the risk to the achievement of their conservation objectives from the gear type is considered to be sufficiently low. However, if monitoring indicates impacts from these gears, it may be necessary to introduce some degree of management in the future.

A control and enforcement regulation is proposed to accompany management measures. For further information on this, refer to Section 8 and Annex F.

Fishing industry management proposals for the site (see Annex H) were considered during the development of management measures. However, the industry proposals could not be implemented in full because they did not protect all areas requiring management as reef feature within the site. Channels within management areas were also requested by industry to aid transit, but could not be included within the proposals because of current enforcement constraints.

7.3 Other fisheries measures which apply to the sites

The Eastern Inshore Fisheries and Conservation Authority (IFCA) is the lead regulator for any required management in the 0-6nm limit of Haisborough, Hammond and Winterton SCI. For further information please contact Eastern IFCA¹⁰.

There is one MMO byelaw measure within Haisborough, Hammond and Winterton SCI. This byelaw bans the use of demersal towed fishing gear within 2 specified areas¹¹. These areas are within the 6-12nm area where there is Belgian historic access. This byelaw was approved in a European Commission decision document in 2013¹². The MMO will review and revoke this byelaw once the measures presented in this Joint Recommendation are put in place.

8 Control measures envisaged by the Member States, possible ecological and control buffer zones to ensure site protection and/or effective control and monitoring measures

8.1 Measures envisaged by Member States for Control, Enforcement and Compliance

The proposed control, enforcement and compliance regime for North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough, Hammond and Winterton SCI consists of reporting zones surrounding the prohibited areas, remote monitoring of vessel position, and at sea surveillance. Such a regime would be in line with future control and enforcement challenges of the Common Fisheries Policy.

8.1.1 Surface surveillance

Surface surveillance of these sites will be continued under the existing surveillance plans for the North Sea. These plans will coordinate the at sea surveillance capacity of the UK which may include Navy fisheries protection vessels, or other, capable vessels and aerial assets. Changes to surveillance will be in line with the MMO's risk based compliance and enforcement strategy.

8.1.2 Remote Vessel Monitoring

Increased Position Reporting

Vessels entering the prohibited areas of these sites will be subject to increased vessel position reporting (every 10minutes). EU fishing vessels over 12m in length are required to report, through satellite, every two hours. Reports can be viewed in real time but this reporting frequency would

¹⁰ <http://www.eastern-ifca.gov.uk/>

¹¹ <https://www.gov.uk/government/publications/haisborough-hammond-and-winterton-european-marine-site-specified-areas-bottom-towed-fishing-gear-byelaw>

¹² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2014:030:0001:0087:EN:PDF>

allow vessels to access the prohibited area of the SCI without being identified between the two hourly reporting times. Increased reporting within the prohibited zone will reduce this risk.

Vessels will be allowed to transit the prohibited zone. Increased reporting will allow the MMO FMC to identify fishing or transiting patterns and identify non-compliance.

Reporting Zone

Vessels fishing within 1nm of the prohibited zones will be subject to 10min reporting.

Fishing patterns are more likely to result in vessels 'clipping' the prohibited zones or cutting across a corner rather than crossing a zone. A reporting zone which surrounds the prohibited area adds additional feature protection and ensures potential non-compliant vessels can be identified

Vessels will still be allowed to fish in the increased reporting zone

8.2 Vessel position monitoring system requirements and estimation of increased reporting costs

Increasing the frequency of vessel position reporting is integral to the preferred control, enforcement and compliance plan.

Increased reporting can be set up using geofences¹³ recognised by the vessel's VMS devices, which would trigger higher frequency reporting if a vessel enters the reporting zone.

In order to improve monitoring and compliance, fishing vessels within these sites and surrounding reporting zones should be required to carry a system capable of:

- Recording high frequency position reports (up to one report per ten minute interval) when within the prohibited area or reporting zone for a site.
- Transmitting position reports via GPRS/GSM 14(when available).
- When GPRS/GSM signal is not available: storing positions and forwarding stored reports when the signal is available.
- Recreating prohibited area and reporting zone coordinates and associated reporting frequency rules in the form of geofences.

¹³ A geofence is a spatial virtual barrier. Programs that incorporate geofencing allow an administrator to set up triggers such as increased reporting so when a device enters (or exits) the boundaries defined by the administrator it performs the trigger and if required a text message or email alert.

¹⁴ General Packet Radio System (GPRS) and Global System for Mobile communications (GSM): These are types of mobile phone technology which meet European telecommunications standards.

- Transmitting an email and/or text message alert via GPRS/GSM (when signal available) to the flag state and MMO FMC when a vessel enters a reporting or prohibited zone for a site.
- High frequency reporting would end when a vessel leaves the reporting area for a site.
- Increased reporting via GPRS/GSM is recommended to reduce the reporting cost (which will be borne by the fishing vessels) as charges are made per report. Satellite reporting, currently used, is costly at high frequency.

Mobile network signal is not currently widely available for offshore sites; enforcement action using this system will therefore be retrospective.

In the UK, vessels which are fitted with a VMS+ device can meet all the above system requirements. The VMS+ device is capable of transmitting increased reporting either through satellite or GPRS/GSM. There is also development work on another device known as I-VMS (inshore vessel monitoring system), which although designed primarily for the English inshore fleet (those vessels under 12m in length), can also meet the above requirements.

Estimation of the increased reporting costings for offshore Marine Protected Areas in English waters.

This information relates to the UK estimates of the increased reporting proposals.

The cost of a VMS report through GPRS¹⁵ is approximately **\$0.06**¹⁶ (As of April 2015). Please find below a table of the total cost of increased after a period of X minutes.

GPRS Costs Reporting rate (X minutes)	Total duration cost after X minutes					
	60	120	180	240	300	360
1 minute	\$3.60	\$7.20	\$10.80	\$14.40	\$18.00	\$21.60
10 minutes	\$0.36	\$0.72	\$1.08	\$1.44	\$1.80	\$2.16
30 minutes	\$0.12	\$0.24	\$0.36	\$0.48	\$0.60	\$0.72

¹⁵ General Packet Radio System (GPRS) and Global System for Mobile communications (GSM): These are types of mobile phone technology which meet European telecommunications standards.

¹⁶ GPRS values are presented in US dollars

60 minutes	\$0.06	\$0.12	\$0.18	\$0.24	\$0.30	\$0.36
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To note: The UK proposes a reporting rate of ten minutes.

Increased reporting caveats:

- These costs are based on a 'pay as you go' (PAYG) service and correct as April 2015.
- Costs will vary depending individual member states VMS service providers.
- GRPS Network roaming may affect overall costs

It should be noted that fishing vessels affected by the proposed closures may potentially modify or change their activities, along with fishing patterns as a result of the implementation of an increased reporting zone.

8.3 Key provisions to include in EC regulation to manage the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough, Hammond and Winterton SCI

Key provisions which should be included in an EC regulation to facilitate control enforcement and compliance include:

- A prohibition on any demersal trawls and seining (where specified) being deployed within the management areas of the SCIs.
- Establishment of a 1nm (1.852) increased reporting zone around the management areas of the North Norfolk Sandbanks and Saturn Reef SCI and the Haisborough, Hammond and Winterton SCI. All fishing vessels within these areas shall be required to record or report vessel positions at 10 minute intervals. These areas are defined by the reporting zones and coordinates displayed in Annex F.
- A requirement for all fishing vessels entering the increased reporting zones to have a system for recording and reporting vessel position which meets prescribed specifications (see Section 8.2 of Annex A for minimal requirements) and is installed and operative. Any fishing vessel entering either North Norfolk Sandbanks and Saturn Reef SCI or Haisborough, Hammond and Winterton SCI, or the reporting zones of these sites, without such a system will be committing an offence.
- A requirement for all fishing vessels transiting the prohibited areas carrying prohibited gears to have all gears on board lashed and stowed.
- A requirement for all fishing vessels transiting the management areas carrying prohibited gears to ensure that the speed during transit is not less than six knots except in the case of

force majeure or adverse conditions. In such cases, the master shall immediately inform the fisheries monitoring centre of the flag Member State which shall then inform the MMO FMC.

The proposal on which gear types to prohibit is formulated in terms of Gear Codes in Annex XI in EU Regulation 404/2011. In general, prohibited gear types are demersal trawls and dredges with the inclusion of seines over closed reef areas. Formulation of the regulation requires clear and precise definitions which distinguish allowed gear types from prohibited gear types. This includes, for trawls which can be operated both with and without bottom contact, distinguishing between these different gear riggings (if such a distinction is not feasible these gear types should be prohibited).

Management measures for these sites will be periodically reviewed in line with advancements in technology, specifically the development of improved remote vessel monitoring and gear in/out technologies.

9 Measures to monitor and assess the maintenance and/or recovery of the features within the sites

JNCC is currently leading a research and development programme to develop an integrated system of monitoring for marine biodiversity across all UK waters. The programme aims to provide a coherent framework for biodiversity monitoring to meet the requirements of existing and future monitoring and assessment obligations including those under the Marine Strategy Framework Directive, Habitats and Birds Directives and the OSPAR Convention. Monitoring and assessment of protected sites constituting the UK network of Marine Protected Areas, including Natura 2000 sites, will be an integral part of this programme. Monitoring within Natura 2000 sites in UK offshore waters will be based on the principles outlined in the JNCC's Common Standards Monitoring Guidance (JNCC 2004).

10 Coordination with neighbouring Member States as appropriate

Fisheries management measures were developed in close coordination with other Member States with a direct management interest in the sites, including: The Netherlands, France, Denmark, Germany, Sweden and Belgium.

Draft management proposals were subject to a six week period of consultation with Member States with a direct management interest in the sites and the North Sea Advisory Council. This was followed by a consultation meeting with representatives from both groups to provide further opportunity for comments and views on the proposals to be raised. At the meeting, support for the proposals amongst other Member States was strong and any outstanding concerns were recorded and

subsequently addressed during the finalisation of the management proposals. A note from the meeting is available upon request.

Finalised management proposals were then presented to other Member States with a direct management interest in the sites for agreement that sufficient information had been provided in order to commence the formal agreement of the proposals as Joint Recommendations. [Following this, ad hoc meetings of the Scheveningen FISH-ENVI Technical Group were held to start formal agreement proceedings for the Joint Recommendations. Any outstanding issues were then addressed before agreement was reached on the Joint Recommendations by members of the Scheveningen High-Level Group and they were submitted to the European Commission to be adopted.]

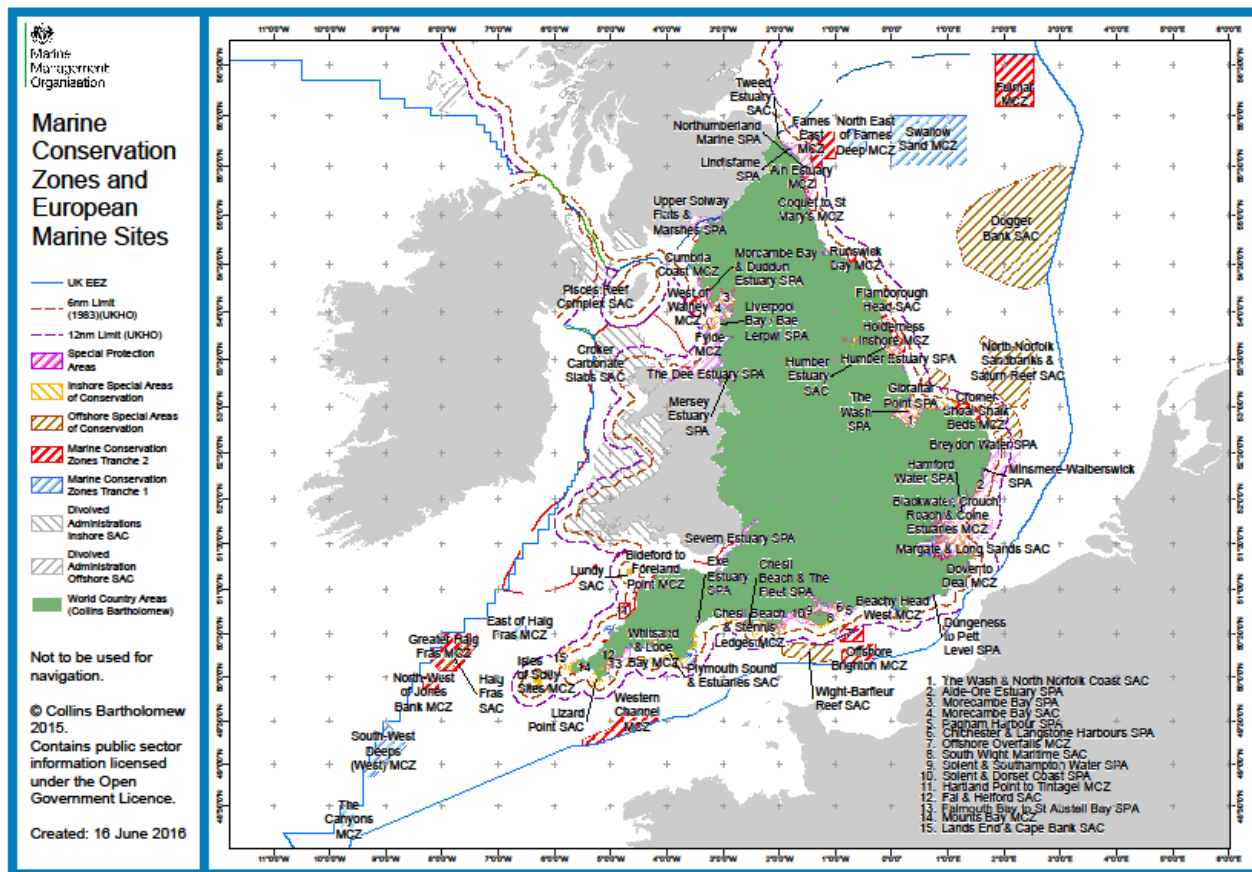
Kommenterede [m2]: To be completed

11 Evaluation of possible displacement of fishing effort and impact on new areas

As both the SCIs will be closed to demersal trawls, dredges and seine netting some displacement is likely to happen, both within and outside of both of the SCIs.

Displacement is difficult to quantify, and it is impossible to predict where exactly activities will be displaced to. As part of the MMOs risk-based enforcement, regular monitoring of fishing activity is collated on a Monitoring Control and Surveillance System (MCSS). MCSS does not analyse fishing trends and activity, but stores information, which can be accessed at any time. The MMOs monitoring of activity in each site could assist in any future considerations relating to displacement and could be used to indicate any changes in fishing trends and activity.

Annex B – Map of English MPA network



Annex C – JNCC advice on Annex I feature extent for North Norfolk Sandbanks and Saturn Reef SCI



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Annex D – JNCC and Natural England advice on Annex I feature extent for Haisborough, Hammond and Winterton SCI



Formal_Advice to
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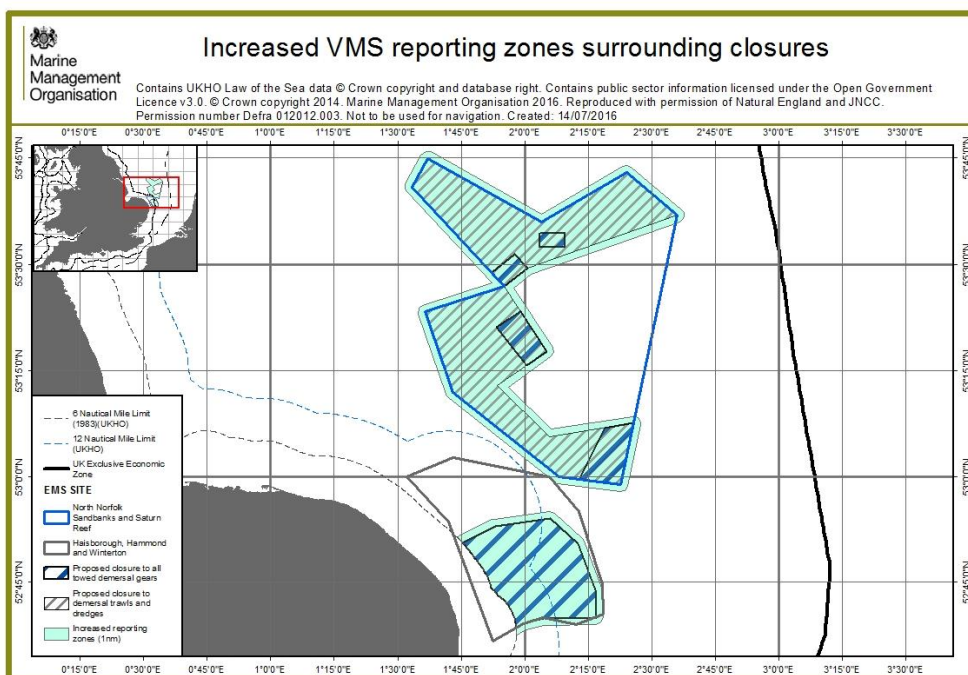
Annex E – JNCC and Natural England advice on the use of margins and buffers

Document to be added to Joint Recommendations following its completion.

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Annex F – North Norfolk Sandbanks and Saturn Reef SCI and Haisborough, Hammond and Winterton SCI increased reporting zones at proposed management level

This zone is the 1nm increased reporting zone around the proposed offshore closures for both Haisborough, Hammond and Winterton EMS and North Norfolk Sandbanks SCI. These zones have been simplified to reduce the volume of coordinates.



North Norfolk Sandbanks and Saturn Reef SCI increased reporting zone coordinates (continued on next page):

	Degrees Minutes (Lat)	Degrees Minutes (Lon)	Degrees Minutes Seconds (Lat)	Degrees Minutes Seconds (Lon)
1	53°45.86520	001°37.84320	53°45'51.9120	001°37'50.5920
2	53°37.15200	002°03.97980	53°37'09.1200	002°03'58.7880
3	53°43.86180	002°23.14800	53°43'51.7080	002°23'08.8800
4	53°43.99800	002°24.07320	53°43'59.8800	002°24'04.3920
5	53°43.76520	002°25.08300	53°43'45.9120	002°25'04.9800
6	53°37.76520	002°37.08060	53°37'45.9120	002°37'04.8360
7	53°37.34160	002°37.57920	53°37'20.4960	002°37'34.7520
8	53°36.82620	002°37.65480	53°36'49.5720	002°37'39.2880
9	53°36.35760	002°37.28700	53°36'21.4560	002°37'17.2200
10	53°36.04680	002°36.50520	53°36'02.8080	002°36'30.3120

11	53°28.65000	002°01.40520	53°28'39.0000	002°01'24.3120
12	53°26.74920	001°57.44400	53°26'44.9520	001°57'26.6400
13	53°18.37560	002°06.54900	53°18'22.5360	002°06'32.9400
14	53°17.65860	002°06.79200	53°17'39.5160	002°06'47.5200
15	53°17.01540	002°06.11100	53°17'00.9240	002°06'06.6600
16	53°12.79680	001°56.16480	53°12'47.8080	001°56'09.8880
17	53°06.81420	002°06.31740	53°06'48.8520	002°06'19.0440
18	53°08.60100	002°25.45440	53°08'36.0600	002°25'27.2640
19	53°08.59260	002°26.10240	53°08'35.5560	002°26'06.1440
20	53°08.29200	002°26.96820	53°08'17.5200	002°26'58.0920
21	53°07.79040	002°27.37920	53°07'47.4240	002°27'22.7520
22	53°07.40040	002°27.36480	53°07'24.0240	002°27'21.8880
23	52°58.65540	002°24.32640	52°58'39.3240	002°24'19.5840
24	52°58.04100	002°23.65560	52°58'02.4600	002°23'39.3360
25	52°57.86880	002°22.49220	52°57'52.1280	002°22'29.5320
26	52°59.00880	002°07.79160	52°59'00.5280	002°07'47.4960
27	52°59.04420	002°07.31820	52°59'02.6520	002°07'19.0920
28	52°59.22180	002°06.96120	52°59'13.3080	002°06'57.6720
29	53°11.26140	001°41.97420	53°11'15.6840	001°41'58.4520
30	53°11.46960	001°41.64720	53°11'28.1760	001°41'38.8320
31	53°11.71620	001°41.43780	53°11'42.9720	001°41'26.2680
32	53°23.06520	001°34.86420	53°23'03.9120	001°34'51.8520
33	53°23.89260	001°34.99500	53°23'53.5560	001°34'59.7000
34	53°24.34440	001°35.93220	53°24'20.6640	001°35'55.9320
35	53°27.43440	001°52.18620	53°27'26.0640	001°52'11.1720
36	53°40.27080	001°32.07420	53°40'16.2480	001°32'04.4520
37	53°40.82340	001°31.63380	53°40'49.4040	001°31'38.0280
38	53°41.42940	001°31.82160	53°41'25.7640	001°31'49.2960
39	53°45.46140	001°35.50440	53°45'27.6840	001°35'30.2640
40	53°45.96540	001°36.56340	53°45'57.9240	001°36'33.8040

Haisborough, Hammond and Winterton SCI increased reporting zone coordinates (continued on next page):

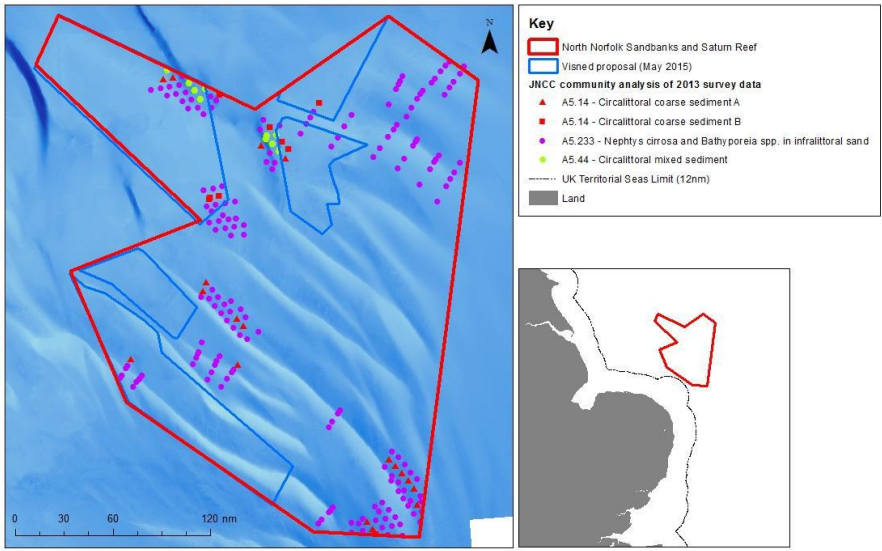
	Degrees Minutes (Lat)	Degrees Minutes (Lon)	Degrees Minutes Seconds (Lat)	Degrees Minutes Seconds (Lon)
	52°51.37680	001°43.99380	52°51'22.6080	001°43'59.6280
	52°51.52320	001°44.48640	52°51'31.3920	001°44'29.1840
	52°53.89200	001°52.25520	52°53'53.5200	001°52'15.3120
	52°53.99040	001°52.78740	52°53'59.4240	001°52'47.2440
	52°54.99060	002°05.79240	52°54'59.4360	002°05'47.5440
	52°54.74520	002°07.09920	52°54'44.7120	002°07'05.9520
	52°51.24420	002°13.59960	52°51'14.6520	002°13'35.9760
	52°50.84760	002°14.04780	52°50'50.8560	002°14'02.8680

52°43.84680	002°18.34440	52°43'50.8080	002°18'20.6640
52°43.49940	002°18.44700	52°43'29.9640	002°18'26.8200
52°39.91920	002°18.44520	52°39'55.1520	002°18'26.7120
52°39.41820	002°18.22260	52°39'25.0920	002°18'13.3560
52°39.05820	002°17.63100	52°39'03.4920	002°17'37.8600
52°38.92200	002°16.82460	52°38'55.3200	002°16'49.4760
52°38.80380	002°04.58760	52°38'48.2280	002°04'35.2560
52°38.07420	002°00.24660	52°38'04.4520	002°00'14.7960
52°37.59300	001°58.86960	52°37'35.5800	001°58'52.1760
52°37.57020	001°58.80420	52°37'34.2120	001°58'48.2520
52°37.57020	001°58.80420	52°37'34.2120	001°58'48.2520

Then follow the 6nm limit (Eastern district boundary) north to point 1.

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Annex G – Fishing industry management proposal for North Norfolk Sandbanks and Saturn Reef SCI



Map projected in WGS 1984 UTM Zone 30N. UK Territorial Sea Limit © Crown copyright and UKHO. All rights reserved. Combining source layers from UKHO, World Vector Shoreline © US Defence Mapping Agency. Not to be used for navigation. © JNCC 2015.


160715 North
Norfolk Sandbanks

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Annex H – Fishing industry management proposal for Haisborough, Hammond and Winterton SCI



150821 Haisborough
Hammond Winterton

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Annex I – References

- Bergmann, M.J.N., & Van Santbrink, J.W. (2000). Fishing mortality and populations of megafauna in sandy sediments. In: Kaiser M.J., & de Groot, S.J. (eds.) *Effects of fishing on non-target species and habitats*. Blackwell, Oxford.
- Dernie, K.M., Kaiser, M.J., & Warwick, R.M. (2003). Recovery rates of benthic communities following physical disturbance. *Journal of Animal Ecology*, 72, 1043 – 1056.
- Donaldson, A., Gabriel, C., Harvey, B.J., & Carolsfield, J. (2010). Impacts of fishing gears other than bottom trawls, dredges, gillnets and longlines on aquatic biodiversity and Vulnerable Marine Ecosystems. DFO Can. Sci. Advis. Sec. Res. Doc. 2010/011. Vi+84pp.
- Eleftheriou A. and Robertson, M.R. (1992). The effects of experimental scallop dredging on the fauna and physical environment of a shallow sandy community. *Netherlands Journal of Sea Research* 30:289-299
- Hall, K., Paramor, O.A.L., Robinson, L.A., Winrow-Giffin, A., Frid, C.L.J., Eno, N.C., Dernie, K.M., Sharp, R.A.M., Wyn, G.C., & Ramsay, K. (2008). Mapping the sensitivity of benthic habitats to fishing in Welsh waters – development of a protocol. CCW (now Natural Resources Wales) [Policy Research] Report No: [8/12], 85 pp.
- Hiddink, J.G., Jennings, S., Kaiser, M.J., Queirós, A.M., Duplisea, D.E. and Piet G.J. (2006). Cumulative impacts of seabed trawl disturbance on benthic biomass, production, and species richness in different habitats. *Canadian Journal of Fisheries and Aquatic Science* 63: 721–736
- Holt, T.J., Rees, E.I., Hawkins, S.J. & Seed, R. (1998). Biogenic reefs (volume IX). An overview of dynamic and sensitivity characteristics for conservation management of marine SACs. Scottish Association for Marine Science (UK Marine SACS Project). 170 pp.
- ABPmer and Ichthys Marine. (2015). Supporting Risk-Based Fisheries Assessments for MPAs, Assessment of Beam Trawling Activity in North Norfolk Sandbanks and Saturn Reef SCI. ABPmer Report No. R.2551A. A report produced by ABPmer and Ichthys Marine Ecological Consulting Ltd. for National Federation of Fishermen’s Organisations, December 2015.
- Jenkins, C., Eggleton, J. Albrecht, J., Barry, J., Duncan, G., Golding, N. & O’Connor, J. (2015). North Norfolk Sandbanks and Saturn Reef cSAC/SCI management investigation report. JNCC/Cefas Partnership Report, No. 7
- JNCC (2004) *Common standards monitoring; introduction to the guidance manual*. Peterborough: JNCC. Available from <http://jncc.defra.gov.uk/page-2201>
- JNCC, (2012). UK guidance on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast. Peterborough: JNCC. Available from: http://jncc.defra.gov.uk/pdf/SACHabBoundaryGuidance_2012Update.pdf
- Jones, L.A., Hiscock, K., & Connor, D.W. (2000). Marine habitat review. A summary of ecological requirements and sensitivity characteristics for the conservation and management of marine SACs. Peterborough: Joint Nature Conservation Committee. (UK Marine SACs Project report).

Kaiser M.J., Clarke, K.R., Hinz, H., Austen, M.C.V., Somerfield P.J. & Karakassis, I. (2006). Global analysis of response and recovery of benthic biota to fishing. *Marine Ecology Progress Series*, 311, 1–14.

Klein, A., (2006). Identification of submarine banks in the North Sea and the Baltic Sea with the aid of TIN modelling. In: VON NORDHEIM, H., BOEDEKER, D. & KRAUSE, J.C. (Eds.). *Progress in Marine Conservation in Europe. Natura 2000 Sites in German Offshore Waters*. Springer, Berlin, Heidelberg, New York, pp. 97-110.

OSPAR. (2010). Quality status report 2010. Case reports for the OSPAR list of threatened and/or declining species and habitats update. Available from: http://qsr2010.ospar.org/media/assessments/Species/p0010_supplements/CH10_04_Sabellaria_spinulosa.pdf

Tillin, H.M., Hull, S.C., & Tyler-Walters, H. (2010). Development of a sensitivity matrix (pressures-MCZ/MPA features). Report to the Department of the Environment, Food and Rural Affairs from ABPMer, Southampton and the Marine Life Information Network (MarLIN) Plymouth: Marine Biological Association of the UK. Defra Contract No: MB102 Task 3a, Report No 22

Suuronen, P., Chopin, F., Glass, C., Løkkeborg, S., Matsushita, Y., Queirolo, D., & Rihan, D. (2012). Low impact and fuel efficient fishing – looking beyond the horizon. *Fisheries Research*. 119-120: 135-146.

UK Biodiversity Action Plan. (2000). UK Biodiversity Group Tranche 2 action plans. Volume V – maritime species and habitats. Peterborough: English Nature (now Natural England), 242 pp.

Vorberg, R. (2000). Effects of shrimp fisheries on reefs of *Sabellaria spinulosa* (Polychaeta). *ICES Journal of Marine Science*, 57: 1416-1420.