

<b>Title:</b> Marine Protected Areas Byelaw 2019	<b>Impact Assessment (IA)</b>
<b>IA No:</b> EIFCA007	<b>Date:</b> 24/04/2019
<b>Lead department or agency:</b> Eastern Inshore Fisheries and Conservation Authority	<b>Stage:</b> Draft version 1
<b>Other departments or agencies:</b>	<b>Source of intervention:</b> Domestic
	<b>Type of measure:</b> Other
	<b>Contact for enquiries:</b> Julian Gregory (CEO) Eastern IFCA, 6 North Lynn Business Village, Bergen Way, King's Lynn, Norfolk, PE30 2JG; tel:01553 775321, email: mail@eastern-ifca.gov.uk
<b>Summary: Intervention and Options</b>	<b>RPC Opinion:</b> Not Applicable

Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANDCB in 2016 prices)	One-In, Three-Out	Business Impact Target Status
£-390,933.06	£-329,166.54	£34,282.20	Not applicable	To be determined

**What is the problem under consideration?**  
 Bottom towed gear and its potential impacts on designated features in the Cromer Shoal Marine Conservation Zone (MCZ) and Haisborough, Hammond and Winterton Special Area of Conservation (SAC) has been assessed and it has been concluded that impacts on site integrity are likely. In addition, shrimp fishing within the Wash and North Norfolk Coast SAC has been assessed and adverse impacts on site integrity cannot be ruled out. Spatial closures are proposed through the Marine Protected Areas Byelaw 2019 which mitigate the risk to the sensitive sub-features (Subtidal Chalk Bed, *Sabellaria spinulosa* (Ross Worm), sub-tidal mixed sediment and subtidal mud) with the effect mitigating the identified impacts.

**Why is government intervention necessary?**  
 The risk to Marine Protected Areas (MPAs) dictates that a regulatory approach is required in relation to the protection of designated habitats.

**What are the policy objectives and the intended effects?**  
 To manage long-term, sustainable fisheries within the Eastern IFC District which do not adversely impact the conservation objectives of marine protected areas by prohibiting the use of any bottom towed gear over habitats which have been assessed as being vulnerable to this fishery. Intended effects: Prevent degradation and /or improve the condition of habitats vulnerable to bottom towed gear within Cromer Shoal MCZ, Haisborough, Hammond and Winterton SAC and the Wash and North Norfolk Coast SAC.

**What policy options have been considered, including any alternatives to regulation?**  
 Option 0. Do nothing.  
 Option 1. Discrete spatial closures of sensitive features and sub features through the Marine Protected Areas Byelaw 2019  
 Option 2. Total closure of Marine Protected Areas where site integrity is at risk  
 The preferred option is option 1 – The proposed byelaw will ensure that fishing activity will not impact negatively on the conservation objectives of the Cromer Shoal MCZ, Haisborough, Hammond and Winterton SAC or the Wash and North Norfolk Coast SAC.

**Will the policy be reviewed?** It will be reviewed. **If applicable, set review date:** 04/2025

Does implementation go beyond minimum EU requirements?	Yes			
Are any of these organisations in scope?	<b>Micro</b> Yes	<b>Small</b> Yes	<b>Medium</b> Yes	<b>Large</b> Yes

What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)	<b>Traded:</b> N/A	<b>Non-traded:</b> N/A
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***I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.***

Signed by the responsible Chief Executive:

Date: xx/xx/xxxx

DRAFT

# Summary: Analysis & Evidence

# Policy Option 1

## Description:

### FULL ECONOMIC ASSESSMENT

Price Base Year 2018	PV Base Year 2016	Time Period Years: 10	Net Benefit (Present Value (PV)) (£)		
			Low: £-767,037	High: £-226,388	Best Estimate: £-390,933

COSTS (£)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant)	Total Cost (Present Value)
Low	0.0	£263,00.7	<b>£226,388.5</b>
High	0.0	£891,10.7	<b>£767,037.3</b>
Best Estimate	0.0	£45,416.7	<b>£390,933.1</b>

#### Description and scale of key monetised costs by 'main affected groups'

Key monetised costs relate to the loss of fishing grounds to fishers that use bottom towed gear as a result of spatial closures. The scale of the impact based on the best estimate is likely to be low and will primarily be in relation to the brown shrimp fishery particularly in relation to the closure within the Wash and North Norfolk Coast SAC.

The actual scale of impact is likely to vary annually given the spatial variability of the shrimp fishery, and any other fisheries that uses bottom towed gear within the sites and the potential for important fishing grounds to co-occur with proposed spatial closures. The best estimate is likely to be an over-estimate given that fishers will likely be able to mitigate losses by fishing in different areas.

#### Other key non-monetised costs by 'main affected groups'

Low costs associated with increased vessel overhead costs (depreciation and fuel costs) as a result of increasing range to accommodate displacement from fishing grounds closed to fishing by bottom-towed-gear. Loss of potential future fishing opportunities in closed areas.

BENEFITS (£)	Total Transition (Constant Price) Years	Average Annual (cl. Transition) (Constant)	Total Benefit (Present Value)
Low	Unknown	Unknown	<b>Unknown</b>
High	Unknown	Unknown	<b>Unknown</b>
Best Estimate	n/a	n/a	<b>n/a</b>

#### Description and scale of key monetised benefits by 'main affected groups'

none identified

#### Other key non-monetised benefits by 'main affected groups'

Protection of the habitats identified as being at risk from bottom towed gear fishing activity will have a positive effect on the overall ecological functioning of the MPAs and potentially improve fishery productivity, including in relation to species other than those targeted using bottom towed gear.

Key assumptions/sensitivities/risks

**Discount rate**

3.5%

Assumptions: Fishing grounds identified through Eastern IFCA catch returns data are accurate, location of habitats assessed as sensitive to bottom-towed-gear is accurate. Sensitivities / risks: Spatial closures cause displacement into other less sensitive areas with the effect of impacting site integrity (unlikely), future fisheries occurring within closed areas.

### BUSINESS ASSESSMENT (Option 1)

<b>Direct impact on business (Equivalent Annual)</b>  <b>Costs: £34,282.2 Benefits: 0.0 Net: -£34,282.2</b>	<b>Score for Business Impact Target (qualifying provisions only) £m: n/a</b>
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# Evidence Base

## Problem under consideration

Defra's revised approach to managing fishing activity in European Marine Sites requires Eastern IFCA to ensure that fishing activity does not have an adverse effect on site integrity in marine protected areas (MPA's) which occur within the IFC District. This requirement derives from Article 6 of the Habitats directive and the Conservation of Habitats and Species Regulations (as amended) 2017 (SI 2017/1012). Furthermore, Eastern Inshore Fisheries and Conservation Authority (IFCA) is required under the Marine and Coastal Access Act 2009 to further the conservation objectives of any marine conservation zones within the Eastern IFC District.

Eastern IFCA also has a duty to act to ensure the sustainable exploitation of fisheries within its district as per section 153 of the Marine and Coastal Access Act 2009. In carrying out its duties Eastern IFCA is obliged to ensure good environmental status of fish and shellfish stocks as per the Marine Strategy Framework Directive (2008/56/EC) namely; sustainable fisheries with high long-term yields, stocks functioning at full reproductive capacity, and to maintain or increase the proportion of older and larger individuals.

The prolific shrimp fishery within the Eastern IFC District co-occurs primarily with the Wash and North Norfolk Coast Special Area of Conservation (SAC) – see figure 1. The fishery was assessed in accordance with s.63 of the Habitats and Species Regulations (as amended) 2017 and it was concluded that management measures are required to prevent an adverse effect on site integrity. Some closures to bottom-towed-gears have already been implemented in relation to this assessment (within The Wash) under the Marine Protected Areas Byelaw 2018. Further assessment has concluded that additional closures within the north Norfolk coast section of this site are also required.

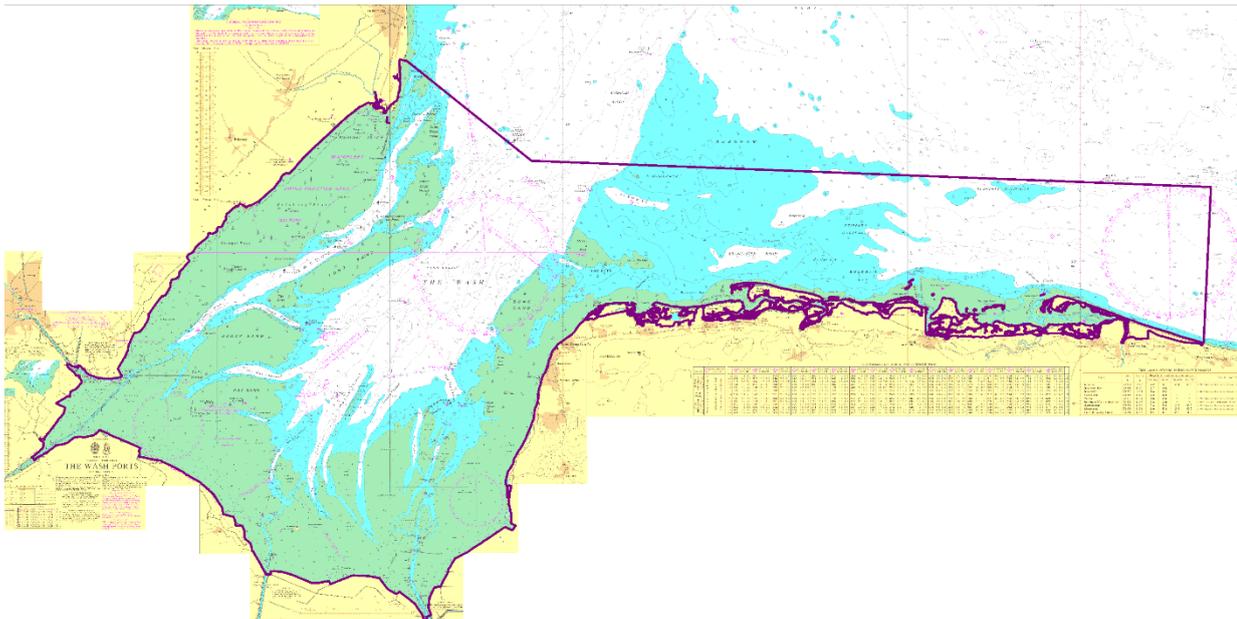
Modelled data provided by Natural England indicated Sabellaria reef (biogenic reef) presence within the Haisborough, Hammond and Winterton Special Area of Conservation (SAC). Eastern IFCA undertook habitat survey work within the area in October 2016. The results, analysed in conjunction with an assessment of raw video data supplied by CEFAS, confirmed the presence of Sabellaria reef within some of the modelled areas.

Given that this feature is considered of 'red-risk' in relation to fishing with bottom towed gear, Defra's revised approach to managing fishing activity in MPA necessitates closures of the area to the fishing activity.

Eastern IFCA has also assessed fishing activity with bottom-towed-gears within the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ). The assessment has identified that fishing with bottom-towed-gear is likely to impact on designated features of the site.

## Wash and North Norfolk Coast SAC

The Wash and North Norfolk brown shrimp fishery is the most important in the UK, accounting for approximately 90% of UK landings (ICES, 2010). The annual first sale value of this fishery has ranged from £538,234 to £2,668,685 with an average value of £1,662,408 (Marine Management Organisation landings data release 23/08/2018). Between 29 and 54 different vessels have operated in the fishery annually from 2010 to 2017 with a total of 82 different vessels having operated over the same time period.



**Figure 1. Chart showing the boundary of the Wash and North Norfolk Coast Special Area of Conservation.**



**Legend**  
 The Wash and North Norfolk Coast Special Area of Conservation (SAC)

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Drawn by: SC  
 Date drawn: 02/07/15  
 Boundary data source: JNCC

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**Not to be used for Navigation**

This is a year-round fishery, but effort and landings typically peak from September to November (Innes et al., 2007; ICES, 2015). In the past, the fishery has been a significant employer in the ports of Boston and King’s Lynn (Innes et al., 2007). Beam trawling for shrimp is one of the main fishing activities occurring within The Wash and North Norfolk Coast SAC. Aviat et al. (2011) reported that approximately 500 vessels and 1,000 fishers are involved in the North Sea brown shrimp fishery (i.e. across the whole of the North Sea brown shrimp fishing area, of which The Wash is a small part). Currently, approximately 37,000 tonnes of shrimp are fished per annum by Dutch (53%), German (33%), Danish (8%), UK (2%), Belgian (2%) and French (1%) vessels, including the Eastern English Channel vessels (Seafish, 2017). Reflecting on these percentages, The Wash and North Norfolk Coast brown shrimp fishery is of huge importance on a local level, however, it is not nearly as extensive or intensive as the continental fishery.

Traditionally, two species were targeted in The Wash and North Norfolk Coast area by this activity; brown shrimp (*Crangon* spp.) and pink shrimp (*Pandalus montagui*), with the pink shrimp fishery being the more important fishery for more than 150 years (MES, 2012). Currently there is no fishing for pink shrimp due to market conditions, competing potting activity and restrictions on towed demersal gear in the available grounds. The pink shrimp fishery used to operate in deeper waters of The Wash and its approaches and is often associated with biogenic reef created by *Sabellaria spinulosa* colonies.

Other species are also thought to be caught from this area using bottom-towed gear although activity is thought to be small compared to the brown shrimp fishery. Notable species include sole, cod and whiting. The vast majority of fishing for shrimp by bottom-towed-gear is thought to be within The Wash with the North Norfolk Coast section of the MPA of lesser importance.

Towed demersal fishing activities on features within the Wash and North Norfolk SAC were assessed in the shrimp fishery Habitats Regulations Assessment for the Wash and North Norfolk Coast SAC<sup>1</sup>. The potential

<sup>1</sup> Full HRA can be found here: <http://www.eastern-ifca.gov.uk/habitats-regulations-assessment-impacts-shrimp-fishery-wash-north-norfolk-coast-special-area-conservation/>

impacts on habitats within the north Norfolk Coast section of the MPA were considered further including in relation to additional advice received from the Statutory Nature Conservation Body, Natural England. This further assessment is set out in Action Item 11 of the 35<sup>th</sup> Eastern IFCA meeting<sup>2</sup>. In summary, it was concluded that the impacts on intertidal sand and muddy sand sub-features on the inshore section of the site could not be ruled out. In addition, the combination of sub-features represented by areas represented by a portion of the north Norfolk Coast further offshore within the site represents an ecologically important area the protection of which is required to effectively rule out adverse effects on site integrity. This includes the potential for impacts on seal food availability as a result on bycatch from shrimp fishing off the North Norfolk Coast SAC.

Haisborough, Hammond and Winterton SAC

Fishing activity within this site is considered to be very low which is in part informed by informal engagement with fishers. However, the sensitivity of the sub-feature *Sabellaria* reef is considered high in relation to bottom-towed-gear. Defra policy dictates the removal of the potential for the interaction in such cases as a 'red-risk' interaction is identified. Location of the 'red-risk' sub feature has been the subject of significant consideration by Eastern IFCA.

Cromer Shoal Chalk Bed Marine Conservation Zone (the MCZ)

Eastern IFCA have assessed the impacts of fishing activity within the MCZ in relation to bottom towed gear. The assessment has concluded that several 'red risk' features are present within in relation to bottom towed gear (table 1 and 2). That is that all fishing pressure must be removed from the features.

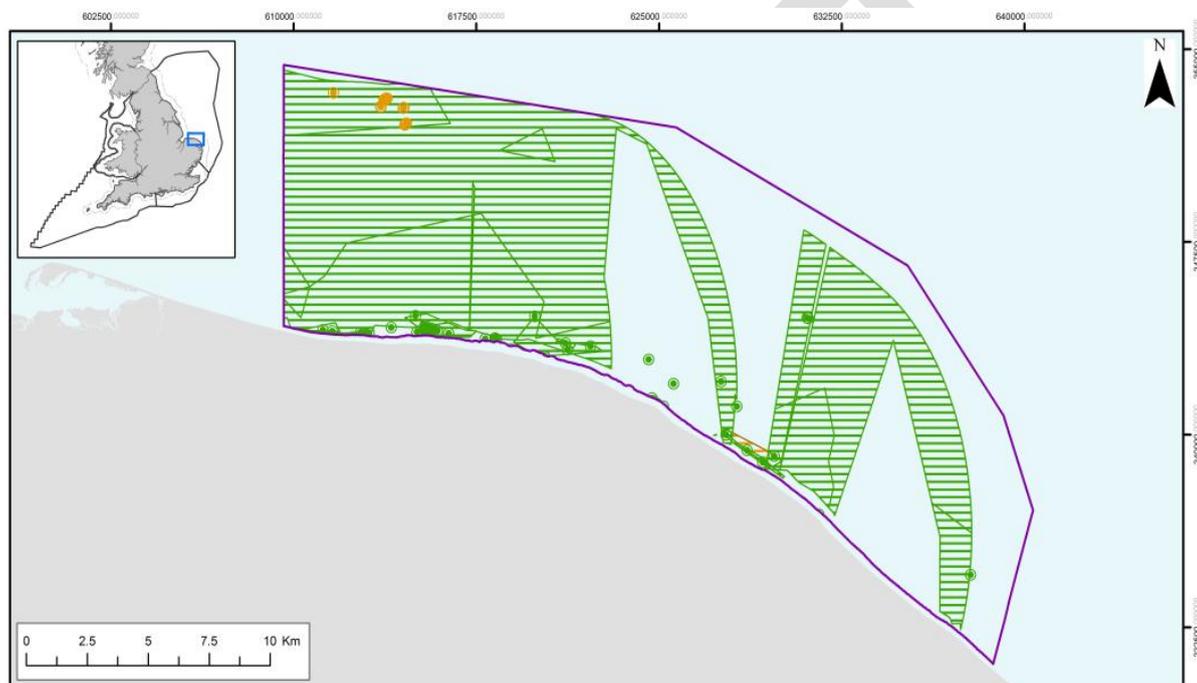
<b>Table 1. extract from Cromer Shoal Chalk Beds Marine Conservation Zone: Commercial Fishing Assessment (version 3.4, 11<sup>th</sup> April 2019) showing the designated features of the MCZ. Those highlighted in grey are considered to be impacted by bottom towed fishing gear.</b>	
<b>Protected features</b>	<b>General management approach</b>
Moderate energy infralittoral rock	Maintain in favourable condition
High energy infralittoral rock	Maintain in favourable condition
Moderate energy circalittoral rock	Maintain in favourable condition
High energy circalittoral rock	Maintain in favourable condition
Subtidal chalk	Maintain in favourable condition
Subtidal coarse sediment	Maintain in favourable condition
Subtidal mixed sediments	Maintain in favourable condition
Subtidal sand	Maintain in favourable condition
Peat and clay exposures	Maintain in favourable condition
North Norfolk Coast (subtidal) (geological feature)	Maintain in favourable condition

The location of the features above are represented in figures 3 to 5 below. Formal advice has been received from the Statutory Nature Conservation Body, Natural England to the effect that these features are likely to be impacted. Natural England have also provided advice regarding the extent of chalk features within the site.

<sup>2</sup> <http://www.eastern-ifca.gov.uk/wp-content/uploads/2016/02/35th-EIFCA.pdf>

**Table 2. extract from Cromer Shoal Chalk Beds Marine Conservation Zone: Commercial Fishing Assessment (version 3.4, 11<sup>th</sup> April 2019) showing consideration of MCZ features in relation to attributable 'generic sub-features' from the European Marine Site fishing interactions matrix.**

Fishing Gear	Generic sub-features	Screening result	Rationale
All towed demersal gears Dredges (towed) – Scallops, and Mussels, Clams, oysters	Intertidal and subtidal chalk reef Subtidal bedrock reef Subtidal boulder and cobble reef	Red Risk – management to be implemented to remove the potential for the interaction.	There is no realistic prospect of potential measures of equivalent environmental benefit to the damage which may be caused to the MCZ, leaving the prevention of the interaction as the only management option.



**Cromer Shoal Chalk Beds MCZ  
Features of Conservation Importance**

- Marine Conservation Zone
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

**Features designated in 2016**

- Peat and clay exposures
- Subtidal chalk
- Peat and clay exposures
- Subtidal chalk

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(www.ukho.gov.uk). Map produced by  
Natural England 2015.  
Reference: Theme ID: 1477590  
Map Projection: British National Grid

Figure 3- Location of features of conservation importance within Cromer Shoal Chalk Beds MCZ. Locations of features derived from Natural England's Advice to Defra on proposed Marine Conservation Zones (pMCZs)

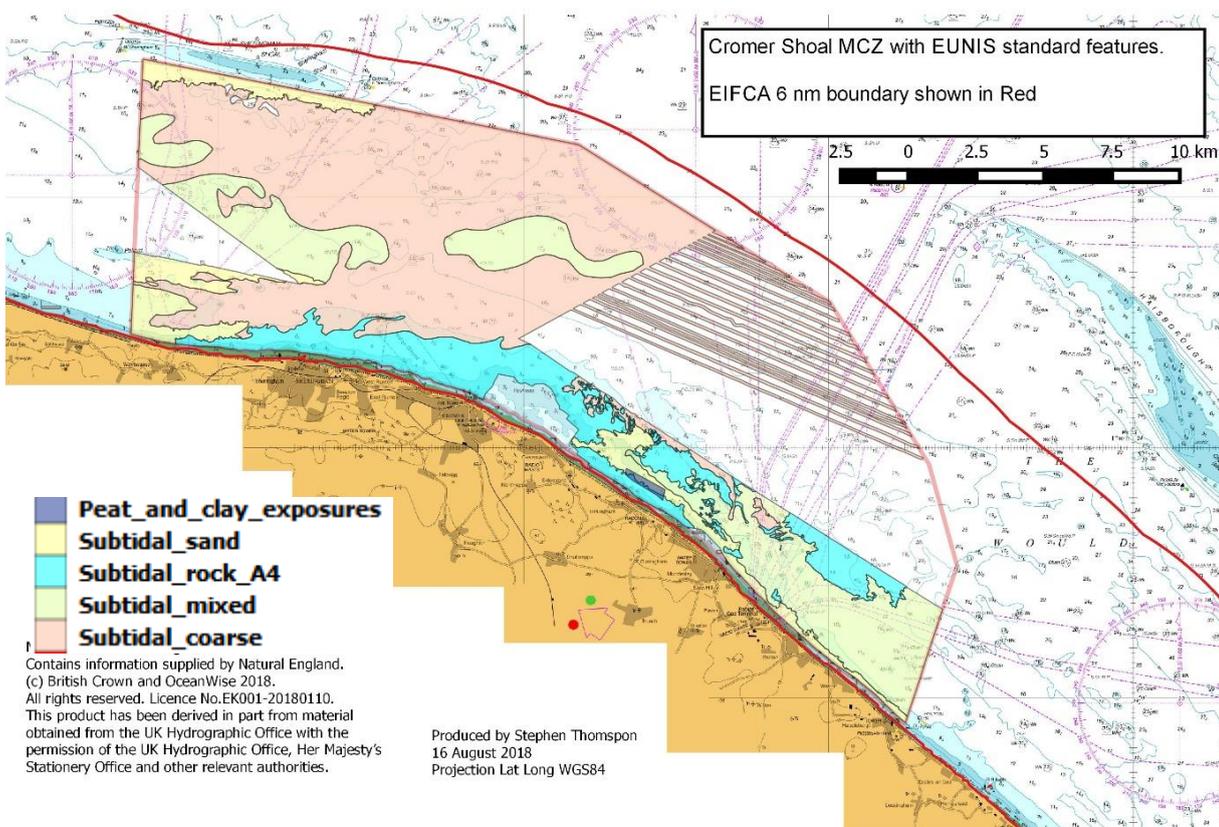


Figure 4 Location of Broad Scale Habitats (EUNIS Level 3) within Cromer Shoal Chalk Beds MCZ. Locations of features derived from Natural England data release April 2017.

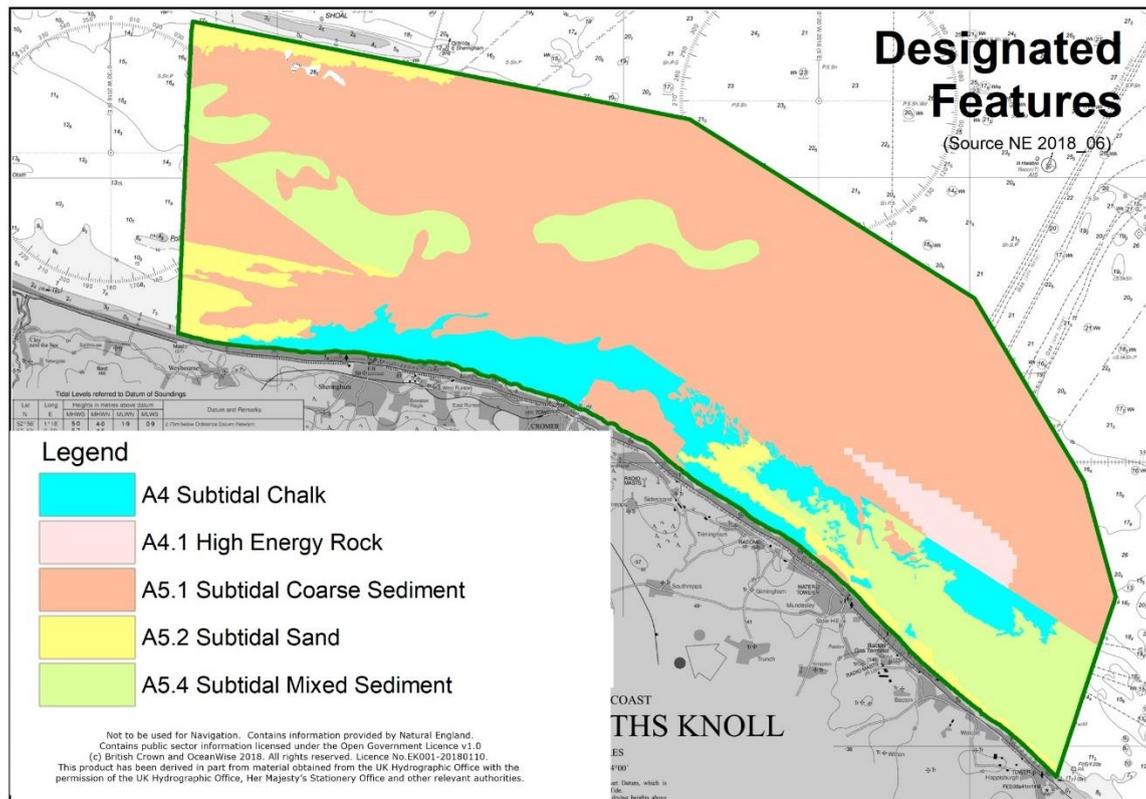


Figure 5 Location of Broad Scale Habitats (EUNIS Level 3) within Cromer Shoal Chalk Beds MCZ. Locations of features derived from Natural England data release June 2018

## Rationale for intervention

IFCAs have a duty to ensure that fish stocks are exploited in a sustainable manner, and that any impacts from that exploitation on designated features in the marine environment are reduced or suitably mitigated, by implementing appropriate management measures. Implementing this byelaw will enable Eastern IFCA to ensure that fishing activities are conducted in a sustainable manner and that the marine environment is suitably protected.

Fishing activities can potentially cause negative outcomes as a result of market failures. These failures can be described as:

1. Public goods and services – a number of goods and services provided by the marine environment such as biological diversity are ‘public goods’ (no-one can be excluded from benefiting from them, but use of the goods does not diminish the goods being available to others). The characteristics of public goods, being available to all but belonging to no-one, mean that individuals do not necessarily have an incentive to voluntarily ensure the continued existence of these goods which can lead to under-protection/provision.
2. Negative externalities – negative externalities occur when the cost of damage to the marine environment is not fully borne by the users causing the damage. In many cases no monetary value is attached to the goods and services provided by the marine environment and this can lead to more damage occurring than would occur if the users had to pay the price of damage. Even for those marine harvestable goods that are traded (such as wild fish), market prices often do not reflect the full economic cost of the exploitation or of any damage caused to the environment by that exploitation.
3. Common goods - a number of goods and services provided by the marine environment such as populations of wild fish are ‘common goods’ (no-one can be excluded from benefiting from those goods however consumption of the goods does diminish that available to others). The characteristics of common goods (being available but belonging to no-one, and of a diminishing quantity), mean that individuals do not necessarily have an individual economic incentive to ensure the long-term existence of these goods which can lead, in fisheries terms, to potential overfishing. Furthermore, it is in the interest of each individual to catch as much as possible as quickly as possible so that competitors do not take all the benefits. This can lead to an inefficient amount of effort and unsustainable exploitation.

IFCA byelaws aim to redress these sources of market failure in the marine environment through the following ways:

- Management measures to conserve designated features of MPAs will ensure negative externalities are reduced or suitably mitigated.
- Management measures will support continued existence of public goods in the marine environment by conserving the range of biodiversity in the sea of the Eastern IFC District.
- Management measures will also support continued existence of common goods in the marine environment by ensuring the long-term sustainability of shrimp stocks in the Eastern IFC District.

## Policy objective

The policy objective is to ensure that the bottom towed gear fisheries within three of the MPAs within

Eastern IFCA's district do not have an adverse effect on site integrity of these sites whilst minimising the economic impact on the fishing industry. The size and shape of the closures are intended to be representative of minimum requirements to ensure conservation objectives are met but also effective, enforceable and clear to impacted stakeholders.

The intended effect of the measures is to prohibit the use of bottom towed gear in areas which contain habitats which are likely to be damaged by their use and with the effect of adversely affecting site integrity.

It is also intended to provide additional clarity to fishers operating in the area regarding closures to bottom towed gear by implementing a requirement to secure and stow bottom towed gear (including the related exemption) in an area closed to different fishing methods under byelaws inherited from Eastern Sea Fisheries Joint Committee.

#### Description of options considered (including status quo):

##### *Option 0 (do nothing) – status quo*

Eastern IFCA has assessed the impacts of fishing with bottom towed gear within three MPAs. The assessment has concluded that adverse impacts on site integrity cannot be ruled out in relation to some sub-features where any level of fishing activity using bottom towed gear is considered likely to have a significant adverse effect. This includes in relation to identified 'red-risk' features where Defra policy dictates the removal of the fishing pressure for 'red-risk' interactions.

Towed demersal fishing activities on features: subtidal biogenic reef: *Sabellaria* spp., and subtidal chalk beds within an MPA are classified as red-risk interactions and require management measures to prevent fishing activities from having harmful effects on the environment.

The 'do nothing' option would have the least economic impact on stakeholders however, is not considered to adequate to reduce the risk of impacts from shrimp fishing and bottom towed gear within Wash and North Norfolk Coast SAC, the Cromer Shoal MCZ or Haisborough, Hammond and Winterton SAC and is therefore not considered a viable option.

##### *Option 1 (preferred option) – Marine Protected Areas Byelaw 2019*

The Marine Protected Areas Byelaw 2019 will introduce additional spatial closures in addition to those in effect from the Marine Protected Areas Byelaw 2018 to prohibit the use of bottom towed gear primarily in relation to the following:

- sub-tidal mixed sediment (Wash and North Norfolk Coast SAC);
- sub-tidal mud (Wash and North Norfolk Coast SAC);
- Intertidal sand (Wash and North Norfolk Coast SAC);
- Harbour seals (the prey source thereof - Wash and North Norfolk Coast SAC);
- Biogenic reef *Sabellaria spinulosa*, (Haisborough, Hammond and Winterton SAC);
- Subtidal Chalk Beds and associated sub-features as at Table 1 (Cromer Shoal Chalk Beds MCZ);
- Peat and Clay exposures (Cromer Shoal Chalk Beds MCZ).

These have been assessed as being sensitive to bottom-towed-gear fishing. Additional closures relate to Restricted Areas 31 to 38 as set out in Charts 3, 4 and 5 of the proposed byelaw. Proposed Restricted Area 31 subsumes four smaller Restricted Areas as in the Marine Protected Areas Byelaw 2018 (Restricted Areas 31 to 35). So as to be effective, closures are proposed which are as simple shape as possible and do not necessarily follow the convoluted extent of sub-features identified. As such, closures will also encompass some habitats and features which are not considered at risk of damage.

The byelaw will also require fishers to 'secure and stow' bottom towed gear such that it cannot readily be used when transiting closed areas. There is an exemption to this requirement to the effect that shrimp beams need only be lifted clear of the water if a vessel has been fishing up to the closed area or will be fishing immediately after leaving a closed area.

The closures will be subject to the exemption regarding fishing activity via a Right of Common. These are specified Rights which relate to registered common land. This exemption is applied generally through the byelaw. None of the additional proposed Restricted Areas coincide with areas of common land and therefore there is no potential impact on sensitive habitats.

Restricted Area 34 includes an area west of the western boundary of the Cromer Shoal MCZ and within the Wash and North Norfolk Coast SAC. The HRA for the Wash and North Norfolk Coast SAC concluded that this area required closure to bottom towed gear to ensure site integrity. This area is closed to use of trawl nets under Byelaw 12: Inshore Trawling restrictions<sup>3</sup> and to towed gear fishing for bivalve mollusc under byelaw 15<sup>4</sup> of Eastern IFCA's byelaws and this was considered sufficient mitigation within the HRA. These byelaws were inherited from Eastern Sea Fisheries Joint Committee under the Marine and Coastal Access Act 2009 (Transitional and Savings Provisions) Order 2011(2011/603). Neither byelaw refers to bottom towed gear being secure and stowed. So as to provide clarity to fishers and implement the 'secured and stowed' restriction consistently within the MPAs where such is required, Restricted Area 34 includes closure of this area and the area closed byelaws 12 and 15 within the Cromer Shoal MCZ.

#### *Option 2 – Closure of MPAs to bottom towed gear*

Closure of the sites would meet the conservation objectives of the site but have disproportionate impacts on the industry. It also goes beyond the minimum requirement to achieve the conservation objectives of the associated MPA. Therefore, this option was not considered viable.

#### Monetised and non-monetised costs and benefits

##### **Option 0 – Do nothing option**

There are no monetised costs associated with the 'do nothing' option.

The key non-monetised costs relate to the impacts on ecosystem functioning resultant of continued fishing activity in the areas proposed to be closed. Impacts on ecosystem function is likely to lead to impacts on the sustainability of the fishery and its productivity.

In addition, the 'do nothing' option is not in keeping with the requirements of the Habitats Directive or the Marine and Coastal Access Act 2009 and as such may lead to infraction proceedings being taken against the UK.

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<sup>3</sup> <http://www.eastern-ifca.gov.uk/byelaw-12-inshore-trawling-restriction/>

<sup>4</sup> <http://www.eastern-ifca.gov.uk/byelaw-15-towed-gear-restriction/>

## Option 1 – Spatial closures through the Marine Protected Areas Byelaw 2019

The key monetised costs associated with the proposed closures are the loss of fishing grounds.

### Impacts on Shrimp Fishery

Eastern IFCA requires fishers to submit returns forms for each shrimp fishing trip within the Wash and North Norfolk Coast SAC under Byelaw 11 (Development of shellfish fisheries) of Eastern IFCA's Byelaws. This data has been used to estimate the level of fishing activity within each of the proposed closed areas (within the North Norfolk coast SAC). Marine Management Organisation (MMO) landings data has been used to determine the monetary impact of the closures.

Fishers provide information regarding the location of each tow during shrimp fishing activity undertaken within the Wash and North Norfolk Coast SAC. These are compared against the location of proposed closures. This provides a 'proportion' of total catch likely to be affected by each closure. MMO landings data for brown shrimp is then used to determine a monetised value associated with each closure (i.e. as a proportion of the total value). MMO landings data is not available at the same resolution as Eastern IFCA data. Eastern IFCA do not collect returns data for shrimp fishing outside of the Wash and North Norfolk Coast SAC. Therefore, estimates of fishing effort are based on the informal consultations and officer knowledge. Landings data for International Council for the Exploration of the Sea (ICES) statistical rectangles 34F0, 35F0, 34F1 and 35F1 were used to estimate monetary values which will have the effect of overestimating impacts as these areas account for a much larger areas including the Lincolnshire coast.

The resolution of the Eastern IFCA data does not allow for an exact estimate as the grids do not correspond with the shape or size of closed areas (with some closed areas being smaller than a single grid box). Eastern IFCA data for 1<sup>st</sup> January to 31<sup>st</sup> December of 2016, 2017 and 2018 is used. MMO landings data from 2010 to 2017 is used to estimate economic impacts.

Shrimp fishing activity within Restricted area 32 and 33 is estimated as 1.2% of the total caught from within the Wash and North Norfolk Coast SAC. However, restricted area 32 includes a seasonal corridor which is intended to mitigate losses resultant of the restriction by allowing fishing activity during periods where the area is not sensitive to impacts of removal of juvenile fish. Informal consultation has indicated however that the majority of this 1.2% is within restricted area 33 which will not be accessible and this is corroborated by Eastern IFCA landings

With regards to shrimp fishing effort within Haisborough Hammond and Winterton SAC and Cromer Shoal Chalk Beds MCZ, much less is known about the level of fishing activity. Eastern IFCA undertook informal consultation with industry to determine the level of fishing effort. Limited responses were received but it indicates that fishing effort is very low.

Haisborough Hammond and Winterton SAC sits within ICES statistical rectangle 34F1. The average annual landed value of shrimp caught from this area is £21,960 with seven different vessels having landed shrimp from this area. However, the restricted areas represent a very small proportion of the total area of the ICES rectangle. In addition, informal dialogue has indicated that the proposed closures will have a limited impact on the traditional fishing grounds.

One fisher has indicated that they fish using bottom towed gear within the Cromer Shoal Chalk Beds MCZ but has not provided information to enable the monetised estimation of this impact. The restricted area sits primarily within ICES statistical rectangles 34F1 and 35F1. Landings from the former are set out above. The value of shrimp landed into 35F1 is £928 per annum. This may be an underestimate of

the value of shrimp catch from the area given that MMO landings data does not include sales of fish by fishers direct to the public. Some smaller scale shrimp fishers are known to operate on the North Norfolk Coast in this way who may be impacted. These are considered further in the non-monetised impacts.

The low estimate impact is £19,125 per year. This reflects the potential losses relating to the restricted area 36, 37, 38. Impacts in relation to Cromer Shoal MCZ cannot be monetised and are therefore not included. In addition, restricted areas related to Haisborough Hammond and Winterton SAC are potentially discrete enough to allow for losses to be mitigated through displacement to other areas.

The high estimate cost is £42,013. This takes into account the cost associated with restricted areas 31, 32 and 33 as above but also includes the value of all shrimp landed within ICES rectangle 34F1 and 35F1 to take into account impacts of restricted areas associated with Haisborough Hammond and Winterton SAC and Cromer Shoal Chalk Beds MCZ. This is likely to be an overestimate given that the associated restricted areas (areas 35, 36, 37 and 38) are not thought to support significant levels of shrimp fishing. No impact is identified in relation to proposed closed area 34 as this coincides with the closure in place under Byelaw 12 and 15.

The best estimate is £19,125 per year. This is considered the most likely scenario from a monetised cost perspective. Further potential costs are set out in the non-monetised section however.

#### Impacts on 'other' fisheries

Use of bottom towed gear within the MPA's considered is thought to be very limited except in relation to shrimp fishing.

MMO landings data shows that between 2010 and 2017, 48 different species were caught within ICES rectangles 34F0, 34F1, 35F0 and 35F1. Excluding scallops and mussel (which are regulated through the Wash Fishery Order 1992 and Byelaw 3: molluscan shellfish methods of fishing), shrimps (which are considered separately and whelks (which are not caught with bottom towed gear and their inclusion in the MMO data is assumed to be a mistake), the average annual landed value is £19,116. Between 2010 and 2017 (inclusive), the annual first sale value of these fisheries ranged from £3538 (in 2017) and £39,922 (in 2011). The restricted areas within these ICES rectangles although makes up only a small proportion of them. The vast majority of this activity is associated with ICES Rectangle 35F0 which is likely to reflect activity along the Lincolnshire coast and outside of the site. This is consistent with anecdotal reports of fishing activity.

As such, the high estimate annual cost is £39,922 which corresponds with the highest recorded annual landed value of 'other species' within associated ICES rectangles for the period 2010 to 2017 inclusive.

The low cost is zero which reflects that it is unlikely that the MPA's represent important fishing grounds for these species and that the majority are thought to be caught on the Lincolnshire coast.

It is most likely that landings of 'other' species from within the MPA's is £19,116. This reflects the average value of catch within the ICES rectangle. It is likely to be an overestimate given that the closed areas are significantly smaller than the combined areas of these ICES rectangle.

#### Costs to Eastern IFCA

Additional compliance activities will be required in addition to education and engagement. The cost of these are estimated to be £7,176 based on six additional sea patrols and 4 additional shore patrols. This is likely to be an underestimate with regards to the initial implementation of the measures during

which time the risk of non-compliance is higher. In addition, the number of patrols will increase if risk associated with the fishery increases as directed through the Tactical Coordinating Group.

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Table 2. showing the breakdown of costs associated with additional compliance needs resultant of introducing a new byelaw.

**Costs associated with 1 sea patrol**

	employment	cost	working days	cost per 7.4-hour day
Crew: -				
Skipper	1	33,760.00	225	150.04
Crew: -	3	29,410.00	227	388.68
Total cost				<hr/> 538.72
"on costs"				
Pension			21.50%	115.83
Employers NI		12,156.97	226	53.79
				<hr/> 708.34
	annual cost		days at sea	
<u>Operation cost of vessel</u>			70	
Maintenance/refit	15,000.00			214.29
Insurance	3,000.00			42.86
				257.14
Total operation cost per day/trip				965.48
<b>6 additional sea patrols</b>				<b>5792.898</b>

**Costs associated with 1 shore patrol**

	employment	cost	working days	cost per 7.4-hour day
Crew: -				
Skipper	0	33,760.00	0	0.00
Crew: -	2	29,410.00	227	259.12
Total cost				<hr/> 259.12
"on costs"				
Pension			21.50%	55.71
Employers NI		6,978.94	226	30.88
				<hr/> 345.71
Total operational cost of shore patrol				345.71
<b>4 additional shore patrols</b>				<b>1382.839</b>

**total additional compliance costs 7175.74**

## **Non-monetised costs**

### Changes in fishing behaviours

Displacement from the proposed closed areas may have the effect of intensifying effort on other shrimp grounds with an impact on the ecological functioning and sustainability of the shrimp fishery and associated habitats. Given that the level of fishing activity over the proposed closures is considered to be relatively low displacement is likely to be limited.

### Impacts on smaller business models

There is limited evidence available to determine the impacts on smaller business models which fall outside of reporting requirements (including Eastern IFCA returns forms and national catch recoding). The impacts on these smaller business models are also likely to be of a greater scale than those of larger business models who are likely to be more adaptable. In particular, some small-scale shrimp fishers have small vessels with a limited range which may not allow for mitigation of the closures by fishing elsewhere.

It is thought that there is limited fishing activity within the North Norfolk coast particularly given that the area hosts a significant potting fishery which limits the ability of trawlers to operate without entangling with static gears.

Whilst these impacts are considered of low scale in a broader sense (i.e. that they will relate to low economic impacts in the context of the whole industry), the impacts on individuals may be of a greater scale, particularly in the context of the inshore fisher's model of diversifying into different fisheries over time.

### Costs to Eastern IFCA

Eastern IFCA intends to undertake monitoring to support the conclusions of the Habitat Regulation Assessment and ensure that adverse effects are not occurring within the site open to fishing. The associated cost cannot be monetised as ultimately the level of monitoring is likely to change annually.

## **Option 2 – Total closure of relevant MPA's to bottom towed gear**

The pink and brown shrimp fisheries in the Eastern IFC District are worth between £584,525 and £2,668,788 per annum. The vast majority of these fisheries are thought to occur within the Wash and North Norfolk Coast SAC although other notable areas are off the Lincolnshire coast and north of this MPA.

Eastern IFCA has undertaken an assessment of the impacts of shrimp fishing within The Wash and North Norfolk Coast SAC and found that some habitats are very sensitive to shrimp fishing activity and require closure (to all bottom towed gear). Other habitats are found to be less sensitive although it is thought that fishing activity could impact these habitats if activity increased.

The potential impact of this option is likely to be underestimated by the landed value of catch. The factories which process the shrimp caught (both of which are based in King's Lynn) rely to a large degree on the shrimp market. The market price for the processed shrimp is likely to be much higher than the landed value and which includes a significant amount of export to foreign markets (primarily Netherlands). There are a significant number of tertiary jobs associated with this fishery and these processing factories (i.e. engineers, factory workers, delivery drivers).

Only a minor increase in fishing effort is anticipated as a result of displacement from the closed areas and fishing at the current levels is assessed to be in keeping with the conservation objectives of The Wash and North Norfolk Coast site. Closure of the whole site would meet the conservation objectives however, it is likely to cause a large impact on stakeholders with little or no additional benefit to site integrity. As such, it is considered disproportionate to close the entire site to shrimp fishing activity as the associated risks to site integrity can be adequately mitigated through effort limitations as required.

With regards to total closure of Haisborough Hammond and Winterton SAC and Cromer Shoal Chalk Beds MCZ, the impacts of total closure would be in the region of £19,116. This reflects the average value of catch other than shrimp within the ICES rectangle coincident with the MPAs. Both of these sites will contribute to the total value of shrimp fisheries although this is not quantifiable. Whilst the MPA's still only make up a proportion of the ICES rectangles, the proportion of coverage is far greater than in the case of the discrete closures proposed.

The closure of the entirety of these sites would also be more likely to result in significant displacement into other areas or alternative fisheries. A significant displacement would be needed to mitigate the impact on the shrimp fishery and the potential for impacts on the wider environment and stocks of other species would be of a high risk.

#### Rationale and evidence that justify the level of analysis used in the IA (proportionality approach)

This assessment has used the following information:

- MMO landings data (2010 to 2017 inclusive)
- Eastern IFCA shrimp fishing database (based on returns data)
- Anecdotal information provided by fishers (during informal engagement)

The analysis has considered the best available evidence to estimate monetised costs where the data will allow such. This has included extensive consultation with stakeholders who are likely to be impacted.

Concerns have been raised by the shrimp fishing industry in relation to the closures and in particular, the closures associated with the north Norfolk coast and central part of the Wash as these include some important shrimp fishing grounds. The shape and size of closures have taken the informal consultation into account where possible whilst ensuring that the mandated protective effect of the measures are not diminished. A summary of how these concerns have been considered is set out in the 'how we listened document' which is found on the Eastern IFCA website<sup>5</sup>.

#### Risks and assumptions

There are limitations in relation to the data used in the above analysis. Eastern IFCA requires shrimp fishers to provide certain fisheries data for each fishing trip however there is known to be a level of non-compliance with this requirement. This is mitigated to a degree given that the assessment only uses this information to estimate relative importance of certain areas as shrimp fishing ground (i.e. number of tows as a proportion of the total) rather than relying on the data to estimate the actual fishing effort in an area.

A combination of Eastern IFCA shrimp fishing data and MMO landings data is used to estimate cost.

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<sup>5</sup> [http://www.eastern-ifca.gov.uk/wp-content/uploads/2018/07/2018\\_07\\_23\\_how\\_we\\_listened.pdf](http://www.eastern-ifca.gov.uk/wp-content/uploads/2018/07/2018_07_23_how_we_listened.pdf)

The resolution of both of these is less than that of the closures. As a result, the costs potentially over-estimate the impacts of the measures.

In addition, as set out above, shrimp fishing grounds are known to move within and between years. As such, the importance of the areas closed to fishing are likely to change over time. The data available to determine the importance of fishing grounds only relates to two years (2016 and 2017) and has its own limitations (as set out above) and as such the actual cost to the industry may change.

#### Summary and preferred option with description of implementation plan

The preferred option is Option 1 – Marine Protected Areas Byelaw 2019. This would close certain areas to use of bottom towed gear and require this gear to be secured and stowed when transiting restricted areas with an exception in certain circumstances.

These closures are in addition to the closures already implemented in the Marine Protected areas Byelaw 2018.

The proposed measures will have the effect of protecting the Wash and North Norfolk Coast SAC from the effects of shrimp fishing activity and other fishing using bottom towed gear but minimise the impact on industry by closing only those areas which will be impacted. Fishing within the rest of the site will be managed through the use of a separate proposed byelaw (Shrimp permit Byelaw 2018) which will ensure there are no impacts on site integrity in relation to habitats and species outside of the restricted areas.

The proposed measures will also have the effect of protecting the Haisborough Hammond and Winterton SAC and Cromer Shoal Chalk beds MCZ from the effects of shrimp fishing activity and other fishing using bottom towed gear but minimise the impact on industry by closing only those areas which will be impacted.

To implement these measures, fishers will be made aware of the additional closures through updates to the Eastern IFCA website and targeted dialogue with fishers. Officers will engage with the industry to educate and engage as per Eastern IFCA's Enforcement Policy and Regulation Strategy<sup>6</sup>.

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<sup>6</sup> <http://www.eastern-ifca.gov.uk/wp-content/uploads/2016/03/RC-Strategy.pdf>

## Annex A: Policy and Planning

Which marine plan area is the MPA and management measure in?

East Inshore Marine Plan

Have you assessed whether the decision on this MPA management measure is in accordance with the Marine Policy Statement and any relevant marine plan?

- Yes

If so, please give details of the assessments completed:

Marine Plan Policy	Policy Text	Policy screened in or out from assessment	Assessment of plan policy
<b>Policy AGG1</b>	Proposals in areas where a licence for extraction of aggregates has been granted or formally applied for should not be authorised unless there are exceptional circumstances.	X	Does not apply.
<b>Policy AGG2</b>	Proposals within an area subject to an Exploration and Option Agreement with The Crown Estate should not be supported unless it is demonstrated that the other development or activity is compatible with aggregate extraction or there are exceptional circumstances.	X	Does not apply.
<b>Policy AGG3</b>	Within defined areas of high potential aggregate resource, proposals should demonstrate in order of preference: a) that they will not, prevent aggregate extraction b) how, if there are adverse impacts on aggregate extraction, they will minimise these c) how, if the adverse impacts cannot be minimised, they will be mitigated d) the case for proceeding with the application if it is not possible to minimise or mitigate the adverse impacts	X	Does not apply.

<p><b>Policy AQ1</b></p>	<p>Within sustainable aquaculture development sites (identified through research), proposals should demonstrate in order of preference:</p> <p>a) that they will avoid adverse impacts on future aquaculture development by altering the sea bed or water column in ways which would cause adverse impacts to aquaculture productivity or potential</p> <p>b) how, if there are adverse impacts on aquaculture development, they can be minimised</p> <p>c) how, if the adverse impacts cannot be minimised they will be mitigated</p> <p>d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts</p>	<p>×</p>	
<p><b>Policy BIO1</b></p>	<p>Appropriate weight should be attached to biodiversity, reflecting the need to protect biodiversity as a whole, taking account of the best available evidence including on habitats and species that are protected or of conservation concern in the East marine plans and adjacent areas (marine, terrestrial).</p>	<p>✓</p>	<p>Eastern IFCA undertook a Habitats Regulations Assessment with regards to the potential impacts of shrimp fishing on site integrity within the Wash and North Norfolk Coast SAC. The assessment concluded that shrimp fishing is likely to have an adverse effect on the site in relation to sub-tidal mud and sub-tidal mixed sediment sub-features. In addition, intertidal mussel beds, Biogenic reef <i>Sabellaria spinulosa</i> within Haisborough, Hammond and Winterton SAC, Subtidal Chalk Beds and Peat and Clay exposures within Cromer Shoal Chalk Beds MCZ have been identified as a 'red-risk' interaction which requires closure under Defra's revised approach to fisheries management in MPA. The proposed byelaw restricts fishing activity in the MPA's.</p>

<p><b>Policy BIO2</b></p>	<p>Where appropriate, proposals for development should incorporate features that enhance biodiversity and geological interests.</p>	<p>×</p>	<p>Closures within the Cromer Shoal Chalk Beds MCZ overlap with areas that are designated for geological features.</p>
<p><b>Policy CAB1</b></p>	<p>Preference should be given to proposals for cable installation where the method of installation is burial. Where burial is not achievable, decisions should take account of protection measures for the cable that may be proposed by the applicant.</p>	<p>×</p>	<p>Does not apply.</p>
<p><b>Policy CC1</b></p>	<p>Proposals should take account of:</p> <ul style="list-style-type: none"> <li>• how they may be impacted upon by, and respond to, climate change over their lifetime and</li> <li>• how they may impact upon any climate change adaptation measures elsewhere during their lifetime</li> </ul> <p>Where detrimental impacts on climate change adaptation measures are identified, evidence should be provided as to how the proposal will reduce such impacts.</p>	<p>✓</p>	<p>Protecting site integrity of MPA's will increase the resilience of the site and its features such that it can better withstand natural phenomenon and events related to climate change.</p>
<p><b>Policy CC2</b></p>	<p>Proposals for development should minimise emissions of greenhouse gases as far as is appropriate. Mitigation measures will also be encouraged where emissions remain following minimising steps. Consideration should also be given to emissions from other activities or users affected by the proposal.</p>	<p>✓</p>	<p>The byelaw will potentially increase emissions as fishers have to travel further (including potentially outside of the relevant MPA's) to fish for shrimp. However, the degree to which this will occur is likely to be limited (displacement estimated as 4%) as parts of the MPA's remain open to fishing (although subject to effort management through the Shrimp Permit Byelaw 2018).</p>

<p><b>Policy CCS1</b></p>	<p>Within defined areas of potential carbon dioxide storage,(mapped in figure 17)proposals should demonstrate in order of preference:  a) that they will not prevent carbon dioxide storage  b) how, if there are adverse impacts on carbon dioxide storage, they will minimise them  c) how, if the adverse impacts cannot be minimised, they will be mitigated  d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts</p>	<p>×</p>	<p>Does not apply.</p>
<p><b>Policy CCS2</b></p>	<p>Carbon Capture and Storage proposals should demonstrate that consideration has been given to the re-use of existing oil and gas infrastructure rather than the installation of new infrastructure (either in depleted fields or in active fields via enhanced hydrocarbon recovery).</p>	<p>×</p>	<p>Does not apply.</p>
<p><b>Policy DD1</b></p>	<p>Proposals within or adjacent to licensed dredging and disposal areas should demonstrate, in order of preference  a) that they will not adversely impact dredging and disposal activities  b) how, if there are adverse impacts on dredging and disposal, they will minimise these  c) how, if the adverse impacts cannot be minimised they will be mitigated  d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts</p>	<p>×</p>	<p>Does not apply</p>
<p><b>Policy DEF1</b></p>	<p>Proposals in or affecting Ministry of Defence Danger and Exercise Areas should not be authorised without agreement from the Ministry of Defence.</p>	<p>×</p>	<p>Does not apply</p>

<b>Policy EC1</b>	Proposals that provide economic productivity benefits which are additional to Gross Value Added currently generated by existing activities should be supported.	✓	The shrimp fishery within the East Inshore Marine Plan Area are of national importance representing circa 90% of UK shrimp landings. The introduction of discrete spatial closures in relation to the fishery will allow for a longer-term, sustainable fishery to be continued without adverse impacts on the MPA's.
<b>Policy EC2</b>	Proposals that provide additional employment benefits should be supported, particularly where these benefits have the potential to meet employment needs in localities close to the marine plan areas.	✓	At least two processor plants (which process shellfish) are known to process shrimp catches from across the district and further – enabling a productive shrimp fishery will support jobs in addition to fishing activity (e.g. factory cleaners, admin etc.).
<b>Policy EC3</b>	Proposals that will help the East marine plan areas to contribute to offshore wind energy generation should be supported.	×	Does not apply.
<b>Policy ECO1</b>	Cumulative impacts affecting the ecosystem of the East marine plans and adjacent areas (marine, terrestrial) should be addressed in decision-making and plan implementation.	✓	The proposed closures will support a healthy marine habitat which in turn, should have a benefit on the biodiversity of the wider ecosystem.
<b>Policy ECO2</b>	The risk of release of hazardous substances as a secondary effect due to any increased collision risk should be taken account of in proposals that require an authorisation.	✓	No additional collision risk identified as a result of the proposed byelaw.
<b>Policy FISH1</b>	Within areas of fishing activity, proposals should demonstrate in order of preference: a) that they will not prevent fishing activities on, or access to, fishing grounds b) how, if there are adverse impacts on the ability to undertake fishing activities or access to fishing grounds, they will minimise them c) how, if the adverse impacts cannot be minimised, they will be mitigated	✓	The purpose of the byelaw is to bottom towed gear fishing from discrete spatial areas within the Wash and North Norfolk Coast SAC, Haisborough, Hammond and Winterton SAC and Cromer Shoal Chalk Beds MCZ for the purpose of meeting requirements of the Habitats Directive. Closures are limited to the most sensitive sub-features where adverse effect from the fishing activity

	d) the case for proceeding with their proposal if it is not possible to minimise or mitigate the adverse impacts		could not be ruled out. For the purpose of creating effective closures, proposed shapes of these areas are as simple as possible and as such do encompass some sub-features which are not considered at risk of damage to the effect of having an impact on site integrity.
<b>Policy FISH2</b>	Proposals should demonstrate, in order of preference: a) that they will not have an adverse impact upon spawning and nursery areas and any associated habitat b) how, if there are adverse impacts upon the spawning and nursery areas and any associated habitat, they will minimise them c) how, if the adverse impacts cannot be minimised they will be mitigated d) the case for proceeding with their proposals if it is not possible to minimise or mitigate the adverse impacts	✓	Spatial closures will have the effect of protecting habitats determined as potentially being impacted by bottom-towed-gear fishing activity. Some displacement may occur (estimated as 4% of total effort) however it is unknown as to whether this will be displaced onto spawning or nursery areas.
<b>Policy GOV1</b>	Appropriate provision should be made for infrastructure on land which supports activities in the marine area and vice versa.	×	Does not apply.
<b>Policy GOV2</b>	Opportunities for co-existence should be maximised wherever possible.	×	Does not apply.
<b>Policy GOV3</b>	Proposals should demonstrate in order of preference: a) that they will avoid displacement of other existing or authorised (but yet to be implemented) activities b) how, if there are adverse impacts resulting in displacement by the proposal, they will minimise them c) how, if the adverse impacts resulting in displacement by the proposal, cannot be minimised, they will be mitigated against or d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts of displacement	✓	Proposed spatial closures are estimated to displace 4% of shrimp fishing activity which currently takes place within The Wash and North Norfolk Coast SAC.

<b>Policy MPA1</b>	Any impacts on the overall Marine Protected Area network must be taken account of in strategic level measures and assessments, with due regard given to any current agreed advice on an ecologically coherent network.	✓	The byelaw will implement spatial closures with the effect of mitigating impacts on site integrity on the Wash and North Norfolk Coast SAC.
<b>Policy OG1</b>	Proposals within areas with existing oil and gas production should not be authorised except where compatibility with oil and gas production and infrastructure can be satisfactorily demonstrated.	X	Does not apply.
<b>Policy OG2</b>	Proposals for new oil and gas activity should be supported over proposals for other development.	X	Does not apply.
<b>Policy PS1</b>	Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance should not be authorised in International Maritime Organization designated routes.	X	Does not apply.
<b>Policy PS2</b>	Proposals that require static sea surface infrastructure that encroaches upon important navigation routes (see figure 18) should not be authorised unless there are exceptional circumstances. Proposals should: a) be compatible with the need to maintain space for safe navigation, avoiding adverse economic impact b) anticipate and provide for future safe navigational requirements where evidence and/or stakeholder input allows and c) account for impacts upon	X	Does not apply.

	navigation in-combination with other existing and proposed activities		
<b>Policy PS3</b>	Proposals should demonstrate, in order of preference: a) that they will not interfere with current activity and future opportunity for expansion of ports and harbours b) how, if the proposal may interfere with current activity and future opportunities for expansion, they will minimise this c) how, if the interference cannot be minimised, it will be mitigated d) the case for proceeding if it is not possible to minimise or mitigate the interference	X	Does not apply.
<b>Policy SOC1</b>	Proposals that provide health and social well-being benefits including through maintaining, or enhancing, access to the coast and marine area should be supported.	X	Does not apply.
<b>Policy SOC2</b>	Proposals that may affect heritage assets should demonstrate, in order of preference: a) that they will not compromise or harm elements which contribute to the significance of the heritage asset b) how, if there is compromise or harm to a heritage asset, this will be minimised c) how, where compromise or harm to a heritage asset cannot be minimised it will be mitigated against or d) the public benefits for proceeding with the proposal if it is not possible to minimise or mitigate compromise or harm to the heritage asset	×	Does not apply.

<p><b>Policy SOC3</b></p>	<p>Proposals that may affect the terrestrial and marine character of an area should demonstrate, in order of preference:</p> <ul style="list-style-type: none"> <li>a) that they will not adversely impact the terrestrial and marine character of an area</li> <li>b) how, if there are adverse impacts on the terrestrial and marine character of an area, they will minimise them</li> <li>c) how, where these adverse impacts on the terrestrial and marine character of an area cannot be minimised they will be mitigated against</li> <li>d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts</li> </ul>	<p>×</p>	<p>Does not apply.</p>
<p><b>Policy TIDE1</b></p>	<p>In defined areas of identified tidal stream resource (see figure 16), proposals should demonstrate, in order of preference:</p> <ul style="list-style-type: none"> <li>a) that they will not compromise potential future development of a tidal stream project</li> <li>b) how, if there are any adverse impacts on potential tidal stream deployment, they will minimise them</li> <li>c) how, if the adverse impacts cannot be minimised, they will be mitigated</li> <li>d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts</li> </ul>	<p>×</p>	<p>Does not apply.</p>
<p><b>Policy TR1</b></p>	<p>Proposals for development should demonstrate that during construction and operation, in order of preference:</p> <ul style="list-style-type: none"> <li>a) they will not adversely impact tourism and recreation activities</li> <li>b) how, if there are adverse impacts on tourism and recreation activities, they will minimise them</li> <li>c) how, if the adverse impacts cannot be minimised, they will be mitigated</li> <li>d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts</li> </ul>	<p>×</p>	

<b>Policy TR2</b>	Proposals that require static objects in the East marine plan areas, should demonstrate, in order of preference: a) that they will not adversely impact on recreational boating routes b) how, if there are adverse impacts on recreational boating routes, they will minimise them c) how, if the adverse impacts cannot be minimised, they will be mitigated d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts	X	
<b>Policy TR3</b>	Proposals that deliver tourism and/or recreation related benefits in communities adjacent to the East marine plan areas should be supported.	X	Does not apply.
<b>Policy WIND1</b>	Developments requiring authorisation, that are in or could affect sites held under a lease or an agreement for lease that has been granted by The Crown Estate for development of an Offshore Wind Farm, should not be authorised unless a) they can clearly demonstrate that they will not compromise the construction, operation, maintenance, or decommissioning of the Offshore Wind Farm b) the lease/agreement for lease has been surrendered back to The Crown Estate and not been re-tendered c) the lease/agreement for lease has been terminated by the Secretary of State d) in other exceptional circumstances	X	Does not apply.
<b>Policy WIND2</b>	Proposals for Offshore Wind Farms inside Round 3 zones, including relevant supporting projects and infrastructure, should be supported.	X	Does not apply.

Charts of additional restricted areas: Marine Protected Areas Byelaw 2019

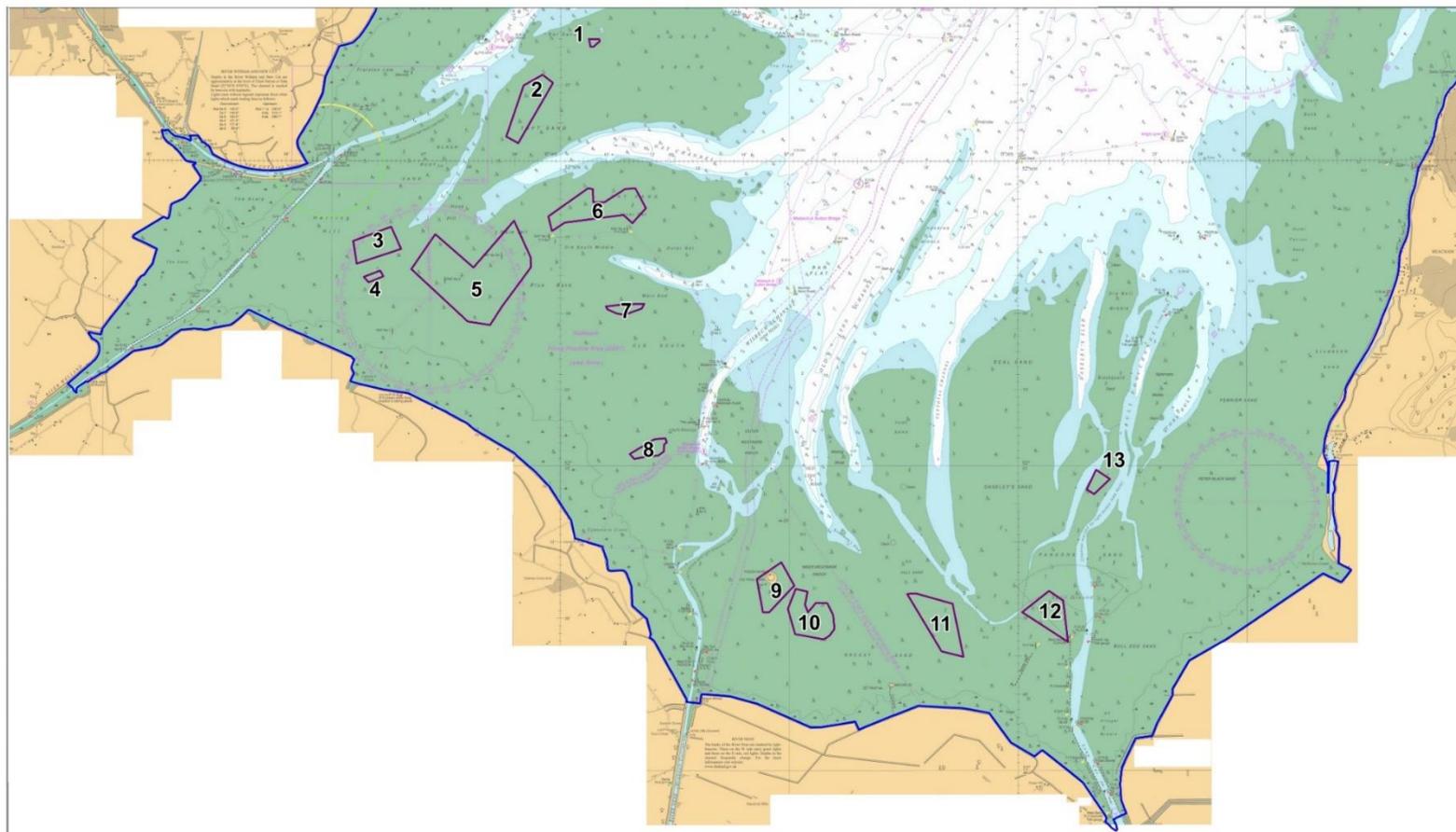


Chart 1: The Wash and North Norfolk Coast SAC – Restricted Areas 1 to 13

- Restricted area to bottom towed gear
- The Wash and North Norfolk Coast SAC boundary

**Not to be used for navigation – for illustrative purposes only**

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Date:28/02/2019  
 Drawn by:SC  
 Projection: Lat Long WSG84  
 EMS boundary:JNCC download -  
 UK\_SACs\_withMarineComponents\_2103821

2019\_02\_Adm\_Wash\_Mussel\_Layout\_Byelaw\_Chart\_1.WOR

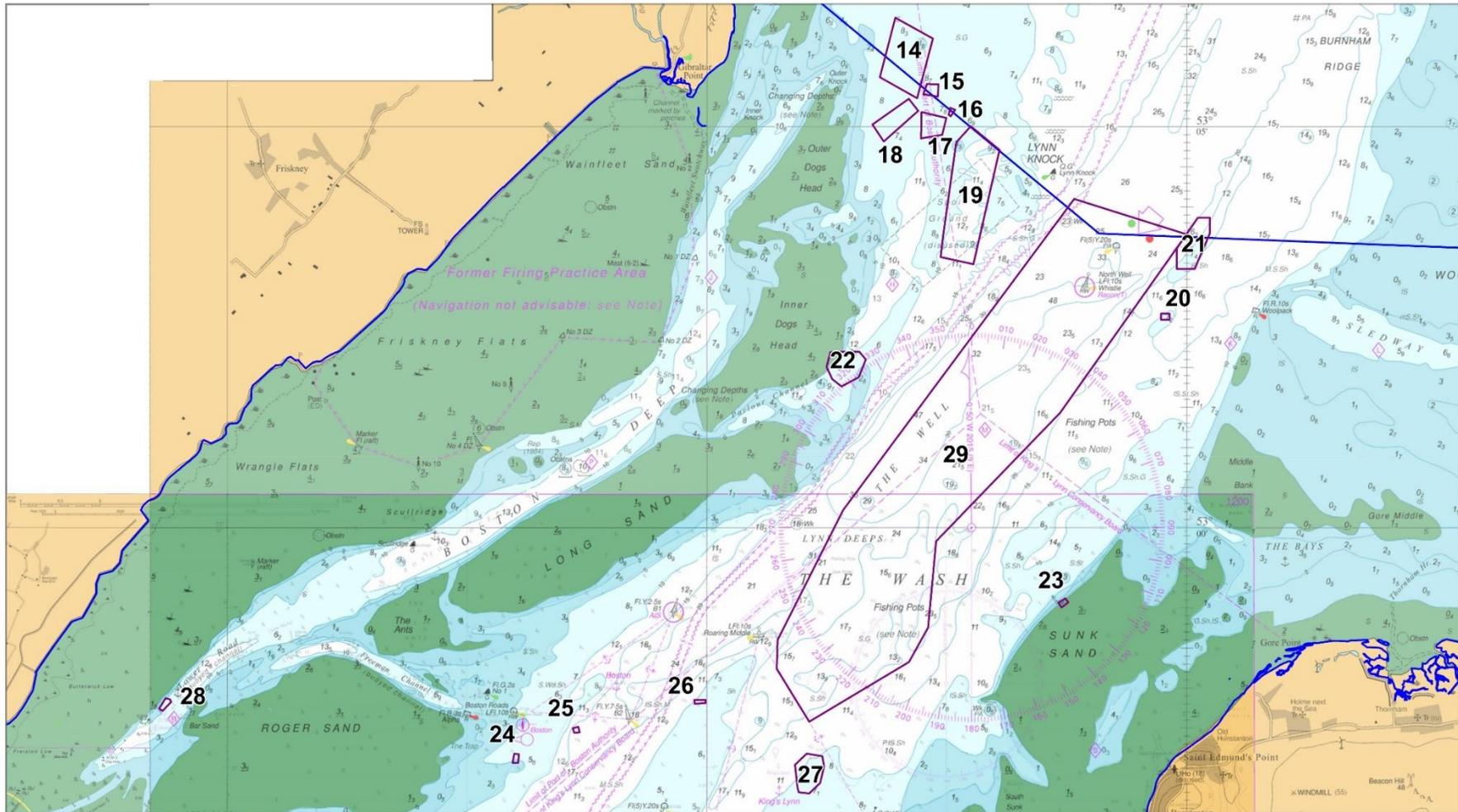


Chart 2: The Wash and North Norfolk Coast SAC – Restricted Areas 14 to 29

- Restricted area to bottom towed gear
- The Wash and North Norfolk Coast SAC boundary

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Date: 28/02/2019  
 Drawn by: SC  
 Projection: Lat Long WSG84  
 EMS boundary: JNCC download -  
 UK\_SACs\_withMarineComponents\_2103821

2019\_02\_Adm\_Wash\_Central\_Layout\_Byelaw\_Chart\_2.WOR

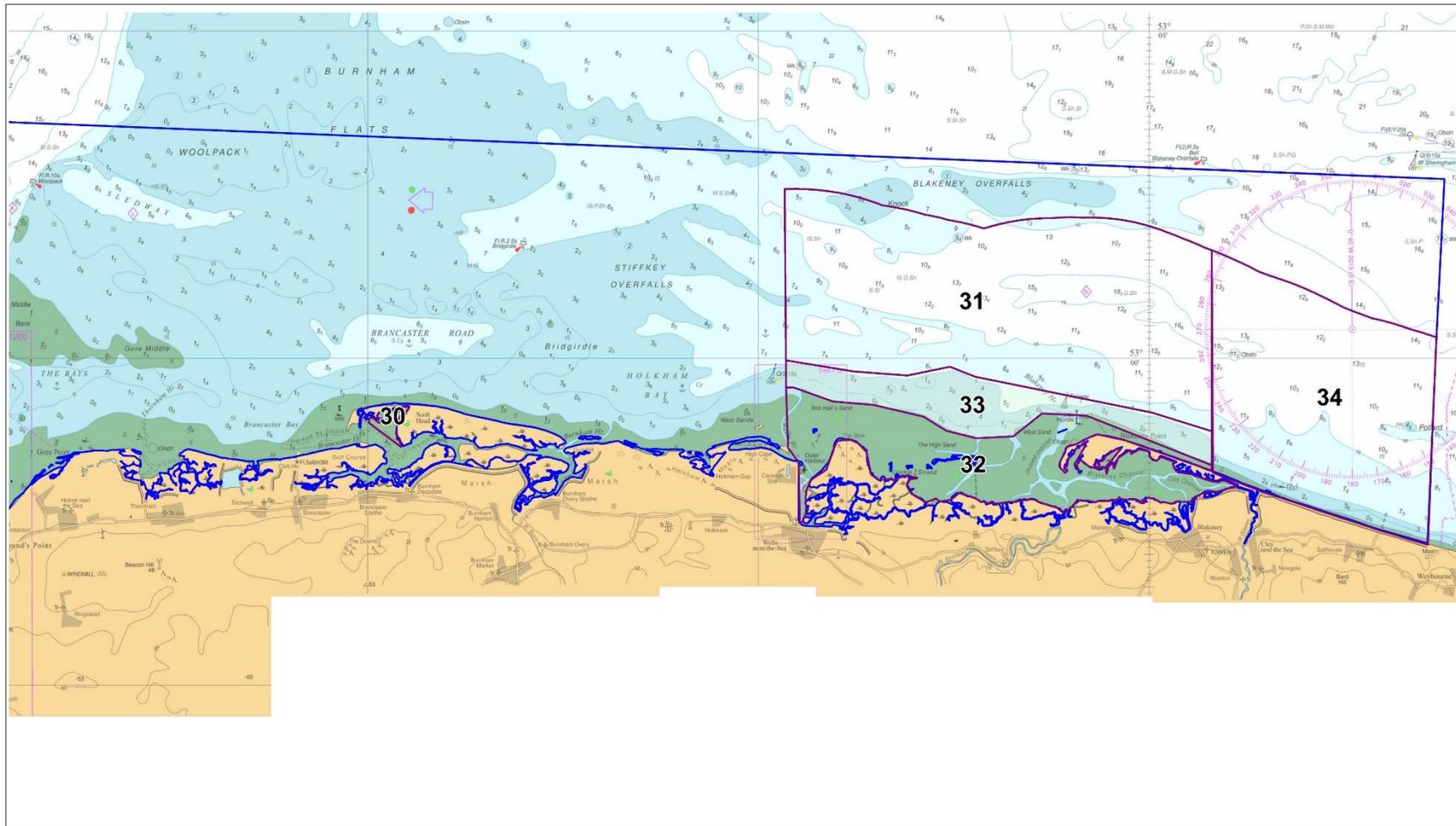


Chart 3: The Wash and North Norfolk Coast SAC – Proposed Restricted Areas 30 to 34

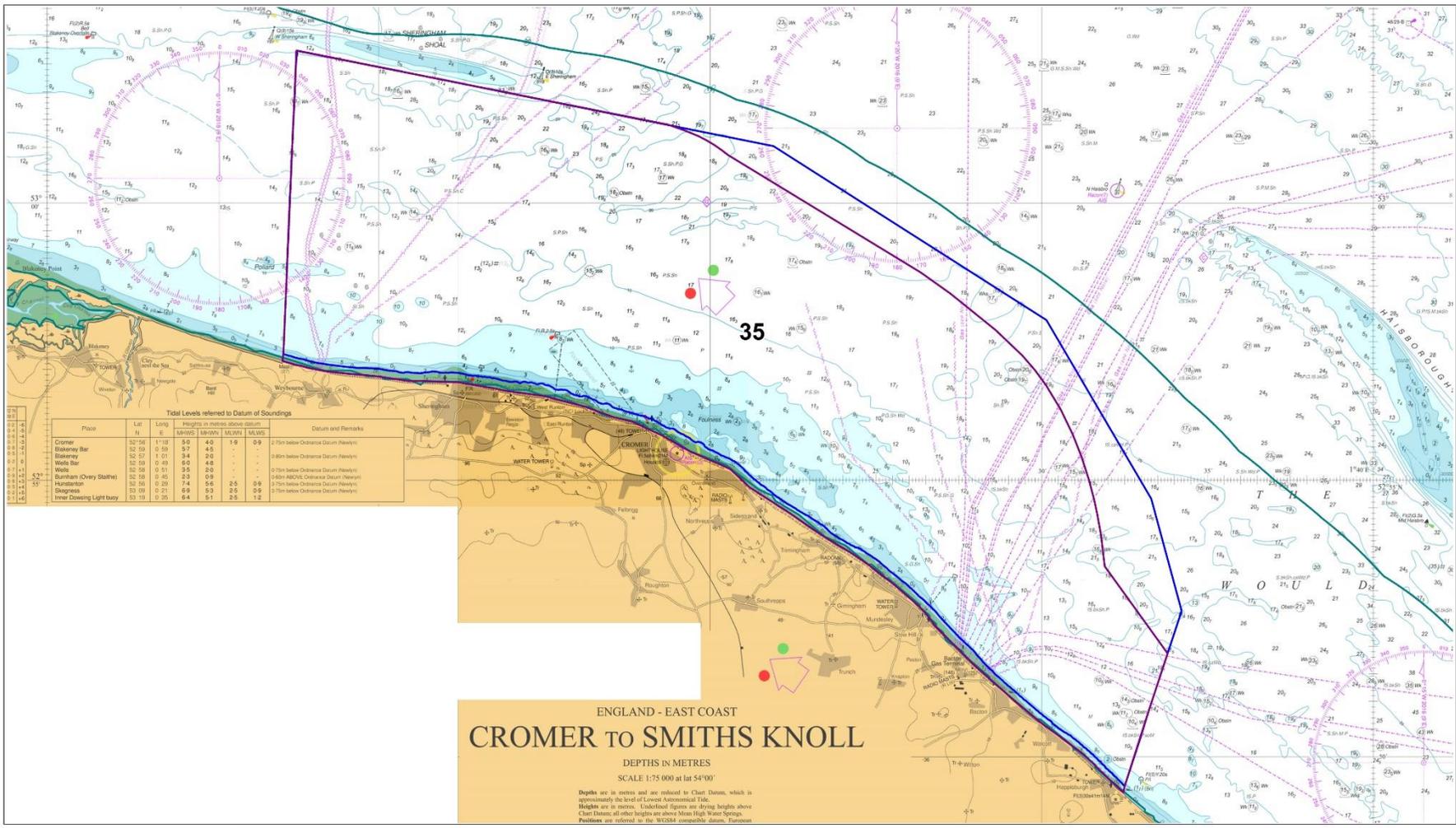
- Restricted area to bottom-towed gear
- The Wash and North Norfolk Coast SAC boundary
- Seasonal corridor (open to the fishery October - April)

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Date: 01/05/2019  
 Drawn by: SC  
 Projection: Lat Long WSG84  
 EMS boundary: JNCC download -  
 UK\_SACs\_withMarineComponents\_2103821

2019\_05\_Adm\_NNC\_Layout\_Byelaw\_Chart\_3.WOR



ENGLAND - EAST COAST  
**CROMER TO SMITHS KNOLL**

DEPTHS IN METRES  
 SCALE 1:75 000 at lat 54°00'

Depths are in metres and are reduced to Chart Datum, which is approximately the level of Lowest Astronomical Tide.  
 Heights are in metres. Unadorned figures are drying heights above Chart Datum; all other heights are above Mean High Water Springs.  
 Positions are referred to the WGS84 coordinate datum, datum.



Chart 4: Cromer Shoal Chalk Beds – Proposed Restricted Area 35

- Restricted area to bottom-towed gear
- Eastern IFCA district boundary
- Cromer Shoal Chalk Beds MCZ boundary

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Chart 5: Haisborough, Hammond & Winterton SAC – Proposed Restricted Areas 36 to 38

- Restricted area to bottom-towed gear
- Eastern IFCA district boundary
- Haisborough, Hammond and Winterton SAC boundary

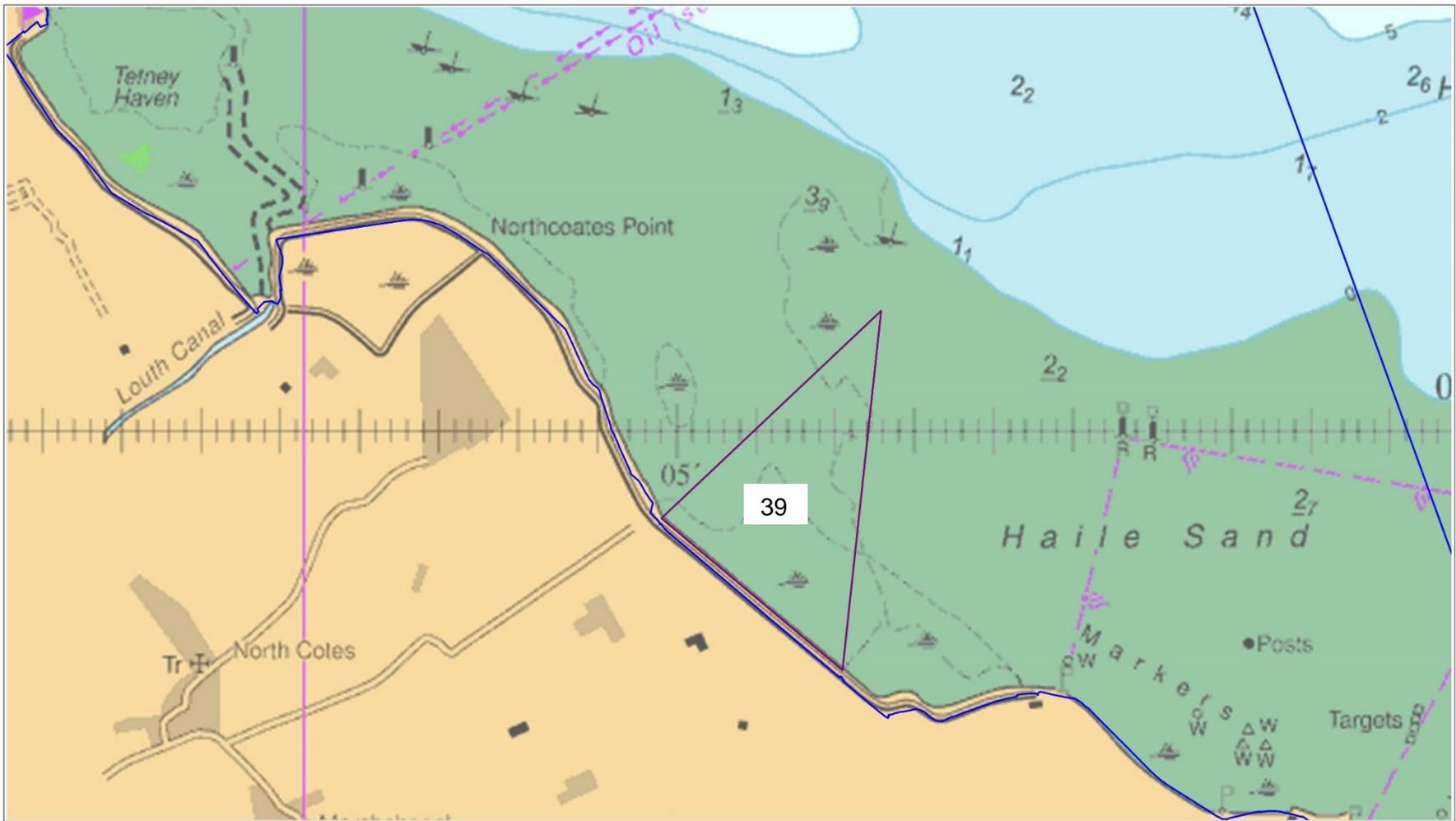
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**Chart 6 – The Humber Estuary SAC: Restricted Area 39**

- Restricted area to bottom towed gear
- The Humber Estuary SAC boundary

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