

Fisheries in EMS Habitats Regulations Assessment for **Amber** risk categories

Site and gear/features interaction(s) assessed:

European Marine Site:	Northumbria Coast SPA
Qualifying feature(s):	Surface Feeding Birds
Gear type(s):	Gill nets
Gear/feature interaction reference(s):	NCSPA - 265

Revision history

The NIFCA HRA Audit document contains a full timeline of the approach to assess the feature/fishery interaction. Work commenced in March 2013 with the matrix assessment of all feature/fishery interactions to determine no effect, tLSE, evidence gaps requiring a full HRA. This HRA is for a feature/fishery interaction which an evidence gap was identified. The dates below are a summary of the final stages of the process, when evidence was collated and determinations carried out.

Date	Revision	Editor
07/03/2016	template created	VR
March-July	Collation of evidence which informs the HRA, i.e. the netting data for the NIFCA district is applicable to various MPAs, relevant data, information and inferences are extracted.	VR, SM, NW (CS)
26/07/2016	Document populated with relevant information	VR
25/10/2016	Reviewed with Natural England (CS). Updated from comments provided	VR
24/11/2016	Reviewed with Natural England (CS) at the NIFCA officer. Updated from the subsequent discussion and comments provided	VR
28/03/2017	final version sent to Natural England	VR
08/01/2018	Monitoring Control Plan Assessment for January 2018 has triggered a re-assessment of this HRA. See Annex 7.	NW

Has Natural England been formally consulted on this tLSE (and do they agree)?	yes
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Date of document completion/'sign-off':	30th March 2017	Dr. C.L. Scott
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**IFCA reference
NCSPA - AA 001**

1. Introduction

1.1 Need for an HRA assessment

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

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

Activity/feature interactions identified within the matrix as red risk have the highest priority for implementation of management measures by the end of 2013 in order to avoid the deterioration of Annex I features in line with obligations under Article 6(2) of the Habitats Directive. Activity/feature interactions identified within the matrix as amber risk require a site-level assessment to determine whether management of an activity is required to conserve site features. Activity/feature interactions identified within the matrix as green also require a site level assessment if there are “in combination effects” with other plans or projects. All blue classifications within the matrix identify where activity / interactions are unfeasible and pose no risk, therefore do not require any site assessments for management to be carried out.

Site level assessments are being carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive. The aim of this assessment is to determine whether management measures are required in order to ensure that fishing activity or activities will have no adverse effect on the integrity of the site. If measures are required, the revised approach requires these to be implemented by 2016.

Northumberland Inshore Fisheries and Conservation Authority (NIFCA) is implementing the site-level assessment process in four phases:

1. simple screening assessment (activity is not occurring/already managed or interaction categorised as blue in the matrix (no interaction with the feature))
2. likely significant effect (LSE) type test (scale or magnitude of effect not likely/likely to be significant)
3. detailed LSE type test
4. appropriate assessment (AA) type test (ascertaining whether the activity will cause an adverse effect on site integrity)

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The other features for this site (estuarine birds) have been classified as blue in the matrix and are therefore not included in this assessment.

An in-combination assessment will be carried out and will include gears screened out from the phase 2/3 assessment¹ for this site (section 8) and other non-fishery related activities.

The purpose of this site specific assessment document is to assess whether or not in the view of **Northumberland Inshore Fisheries and Conservation Authority** the fishing activity of **gill nets** has a likely significant effect on the **surface feeding birds** of **Northumbria Coast SPA**, and on the basis of this assessment whether or not it can be concluded that activity of **gill nets** will not have an adverse effect on the integrity of this EMS.

1.2 Documents reviewed to inform this assessment

- Defra's risk assessment Matrix of fishing activities and European habitat features and protected species²
- NIFCA Patrol sightings data
- NIFCA shellfish permit returns data
- National Trust monitoring breeding programme
- Reference list (Annex 1)
- NIFCA permit sectors map (Annex 2)
- Site boundary map (Annex 3)
- Marine Conservation Society Litter Data, Graph (Annex 4 & 5)
- Northumbria Coast SPA supporting habitat map (Annex 6)
- Monitoring and Control Plan Record and Re-Assessment (Annex 7)

2. Information about Northumbria Coast SPA

Designated in 2000, the Northumbria Coast SPA has a discrete boundary which encompasses the site's features' (Table 1) supporting habitats, covering an area of 1, 107ha between the Tweed and the Tees Estuaries. The supporting habitats of intertidal rocky shores and estuarine mud and sand flats provide important foraging grounds for overwintering birds, while the sandy beaches and adjacent shallow waters provide suitable nesting and foraging grounds for summer breeders.

The expanse of this SPA expands over two IFCA districts, Northumberland and North East, for which each IFCA is responsible for assessment within its remit. Due to its discrete boundary and differing designated features, only part of the SPA is managed. Newton Links/ Long Nanny, situated in Beadnell Bay provides a shallow inlet and bay, a supporting habitat for the breeding seabird populations, for which it has been managed by the National Trust since 1977. The Trust run a monitoring programme over the summer months, where volunteer rangers live on site and work in shifts to provide 24 hour protection to the breeding tern colonies.

This site currently has a proposed amendment as recommended in Stroud *et al.* 2001 SPA review, to include an additional feature (under Article 4.1 Birds Directive) that the site is used regularly by 1% or more of the Great Britain (or in Northern Ireland, the all-Ireland) population of a species listed in Annex I . The

¹ Note: gears screened out of HRA type assessment in phase 2/3 are documented in site audit spreadsheet and are considered in-combination in section 8.

²See Fisheries in EMS matrix:

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

Arctic terns breeding population has increased significantly since the National Trust records began in 1980, currently forming 2.92% of the total GB population.

Table 1 | Northumbria Coast SPA qualifying features³

Feature	Population Size	% of UK Population
EC Birds Directive Annex I Species		
Little Tern <i>Sternula albifrons</i>	40 Pairs 80 individuals	1.7% of GB population
Internationally Important Populations of Migratory Species		
Purple Sandpiper <i>Calidris maritima</i>	787 individuals	1.6% of biogeographic
Turnstone <i>Arenaria interpres</i>	1, 739 individuals	2.6% of biogeographic population
Proposed feature of Northumbria Coast SPA		
Arctic tern <i>Sterna paradisaea</i>	1, 549 pairs 3, 098 individuals	2.92% of GB population

2.1 Overview and qualifying features

- Surface Feeding Birds

This feeding behaviour is descriptive of the designated and proposed features tern species within the SPA, which target small fish species, predominately lesser sandeels and sprat within the top 50cm of the water column. Terns hover above the waters’ surface between three to eight meters and then dive into the water to catch their prey. They will not fully submerge under the surface. Feeding in this manner, little terns can obtain prey from depths up to 30cm and Arctic terns because of their larger size, up to 50cm (JNCC report 2014).

Little Terns, *Sternula albifrons*

Little terns that breed in the UK form part of the European biogeographic population, which nest along the coastlines of Europe from Sweden down towards North Africa. The species nests on the ground and favour sandy shingle beach habitats, with shallow coastal waters. It is only present on their breeding grounds during the summer months, appearing along the UK coast at the end of April and leaving the end of August/ beginning of September. After the breeding season little terns will migrate to their over wintering grounds on the west coast of Africa.

Little terns are listed as an Annex I species under the EC Birds Directive and also a Schedule 1 species under the Wildlife and Countryside Act 1981. This species’ breeding success is extremely vulnerable to predation, prey availability, climatic changes, harsh weather conditions and loss of suitable nesting habitat, which consequently has

³ Population figures taken from Natural England’s Northumbria Coast SPA Departmental brief October 2015.

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led to a UK decline since the 1990s (www.RSPB.org.uk). If breeding pairs are unsuccessful in raising their first clutch the pair will relay a second clutch within the season. To address the population decline a nation- wide five year project funded by EU Life encompasses 29 breeding colonies in which the colony at Long Nanny is involved (LIFE12 NAT/UK/000869). Current number of UK breeding pairs is estimated to be 1,900 (<http://jncc.defra.gov.uk/>).

Long Nanny became a National Trust reserve in 1977 and records of little terns breeding began in 1980, with three pairs. Number of breeding pairs has fluctuated greatly with the highest recorded in 1994 of 57, after which there has been a steady decline (fig. 1). The breeding success of the little terns has also fluctuated greatly, reflecting the vulnerability of this species to a wide range of pressures. Generally the higher productivity rates (number of chicks fledged per nest) have been recorded in years with lower number of breeding pairs.

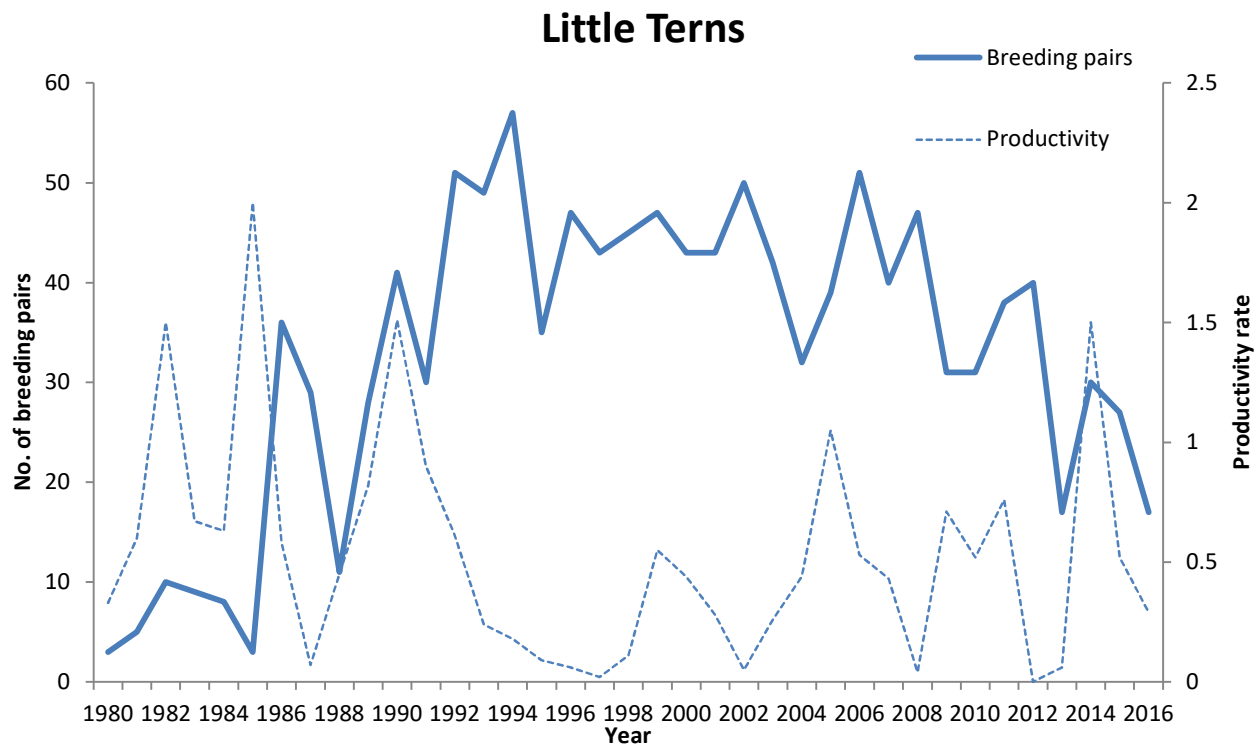


Figure 1 | Data provided by National Trust monitoring program for the breeding success of little terns at Long Nanny, 1980 – 2016.

Arctic Terns, *Sterna paradisaea*

Arctic terns are incredible long distant migrators, breeding in the arctic and sub- arctic regions of the northern hemisphere during the northern summer and over-wintering in the southern hemisphere. Their UK breeding colonies are at the southern boundary of their breeding range. The UK population is estimated at 53,400 breeding pairs and represents 4.7% of their biogeographic population (Europe and N. Atlantic) and 3.1% of the global population (JNCC, 2004). In England there are three large breeding colonies found across Northumberland forming an English estimated population of 3,602 apparently occupied nests (NE-TIN137, 2012). The species is an Annex I listed species of the EC Bird Directive and an Amber-listed UK species of conservation concern (NE-TIN137, 2012).

Arctic terns arrive at their breeding sites during May and are ground nesting birds, favouring sandy shingle beaches with short vegetation, laying one to two eggs in a clutch. They will forage in nearby shallow waters, but have been recorded as far as 30km from their breeding colonies (NE-TIN137, 2012).

Since records began numbers of breeding pair in Long Nanny have increased exponentially from just three pairs in 1980, peaking in 2014 with 2,443, to their current total of 1,100 (figure 2). Recent declines in productivity of this species have been attributed to mammalian predation of the chicks from a local family of stoats (National Trust, 2015).

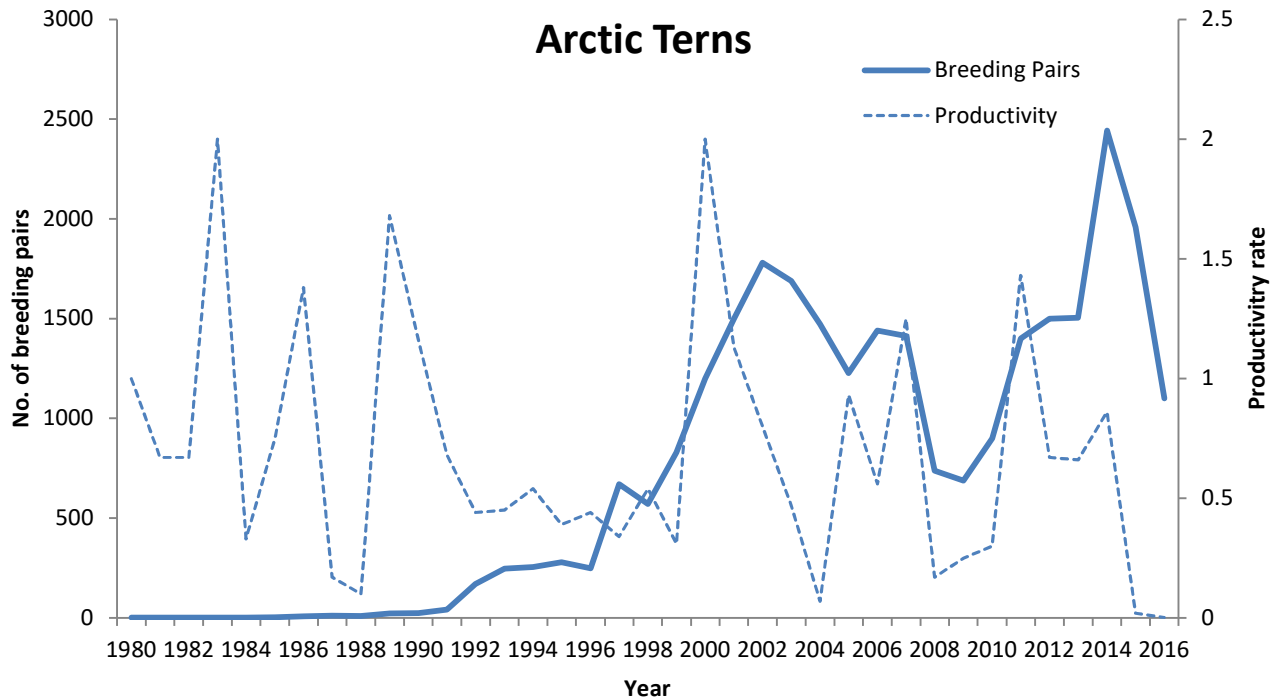


Figure 2 | Data provided by National Trust monitoring program for the breeding success of Arctic terns at Long Nanny, 1980 – 2016.

2.2 Conservation Objectives

Northumbria Coast SPA draft interim conservation advice does not provide a conclusive conservation objective for the combined feature ‘surface feeding birds’, of which none is available for the proposed feature Arctic tern, only little terns. Regulation 33 advice set a conservation objective to ‘Maintain’ in 2000 when 40 breeding little terns were present on site. Since then their numbers (and productivity) have fluctuated and currently have a five year average of 26 breeding pairs. Although no advice is available for the Arctic Tern their breeding numbers have exponentially grown from one pair to 1,110 (1980 to 2016). Therefore the dated ‘Maintain’ conservation objective has been retained for this site, with a medium confidence level.

With regard to this SPA and individual species for which the site has been classified and subject to natural change the conservation objectives relating to are to **Maintain** to favourable condition for the following supporting marine⁴ habitats:

⁴ Conservation objectives relating to solely terrestrial habitats have been omitted.

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- The frequency, duration and/or intensity of disturbance affecting nesting and/or feeding birds should not reach levels that substantially affects the feature.
- the size of the population at a level which is above either the SPA Citation or an alternative baseline-population previously approved by Natural England Chief Scientist or that based on the current mean peak count or equivalent, whichever is the higher.
- safe passage of birds moving between roosting and feeding areas, generally within 6 km of breeding colonies.
- availability of key prey species (e.g. crustacea, annelids, sandeel, herring, clupeidae) at preferred prey sizes.
- the availability of shallow sloping nesting sites, grading to [<30 cm] above water level, or the probability that they will flood.
- vegetation cover (generally $<15\%$) throughout areas used for nesting, providing sufficient bare ground for the colony as a whole.
- the abundance and structure of the assemblage at or above its current or target level (whichever is the higher) through [maintaining/restoring] breeding productivity and adult survival.
- the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding)
- water quality and quantity to a standard which provides the necessary conditions to support the SPA feature, where the supporting habitats of the feature are dependent on surface water

Classified bird species along the Northumbria Coast SPA include purple sandpiper and turnstone in association with the SPA's intertidal rocky reef, on which they are present overwinter, utilising the habitat for foraging and roosting. The tern species within the Northumbria Coast SPA in terms of the extent of the designated area are within the shallow inlet and bay, which provides suitable foraging habitat during their summer breeding season (figure 5).

3. Interest feature feature/fisheries interactions of the Northumbria Coast SPA categorised as 'Red' risk and overview of management measure(s)

No interest features/ fisheries interaction in the Northumbria Coast Island SPA were categorised as a 'Red' risk.

4. Information about fishing activities surrounding the site

In assessing the level of static net fishing within the NIFCA district, two sources of data have been analysed; monthly shellfish permit returns (low to moderate data confidence) and Officers' patrol sighting data (high data confidence). The monthly return forms are submitted by shellfish permit holders only and providing information on netting activity/landings is not mandatory; therefore these may not be capturing total netting activity. Data from 2006 to

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2010 has been excluded from the analysis as this information was captured by the Marine and Fisheries Agency, MFA (MMO predecessor) for under 10m vessels only. During this period information for over 10m vessels was captured through European log sheets, for which NIFCA do not process the data. Data collected during this period is less defined spatially and incomplete and therefore does not provide a descriptive representation of our fleet and is excluded.

Northumbria Coast SPA southern boundary extends further than NIFCA district and where this SPA falls outside NIFCA's boundary, North East IFCA will be responsible for carrying out any assessment and implemented management measures if required. These assessments exclude bait collection and hand gathering activities which are to be assessed 2017/18.

The assessment of T, J and drift nets for the migratory salmonid fishery has been omitted from this Appropriate Assessment, as this activity is regulated by the Environment Agency and who are required to carry out its assessment. This activity is however considered in Section 8 of this document within the in-combination assessments.

4.1 Static fixed and gill nets

Levels of static netting activity (gill, trammel and entangle) within the NIFCA district have declined considerably in recent years and are currently very low, with just 5 boats (NIFCA permit returns 2015) known to set nets on an infrequent basis (Jon Green, per.comms). This is reflected in the number of vessels setting static nets and the total number of days nets sets at sea from 2003- 2015.

The number of vessels setting static nets in the NIFCA district as a whole has dropped from 29 in 2003 to 5 in 2015, with no vessels reporting (NIFCA 2015) setting static nets within the surrounding waters of Beadnell Bay, the nesting colonies of the designated tern species for the Northumbria Coast SPA (Newton to Longstone sector) (fig 3). The annual sum of days in which vessels recorded setting static nets has decreased significantly within the district since 2003 of 827 days to 37 days in 2015 (fig 4). This decreasing trend is mirrored in the use of static net activity within the Newton to Longstone sector, with highest levels of activity recorded in 2002, 60 days at sea to 0 days in 2015. Furthermore the only activity being recorded during the last five years in 2014 was by one vessel for 11 days.

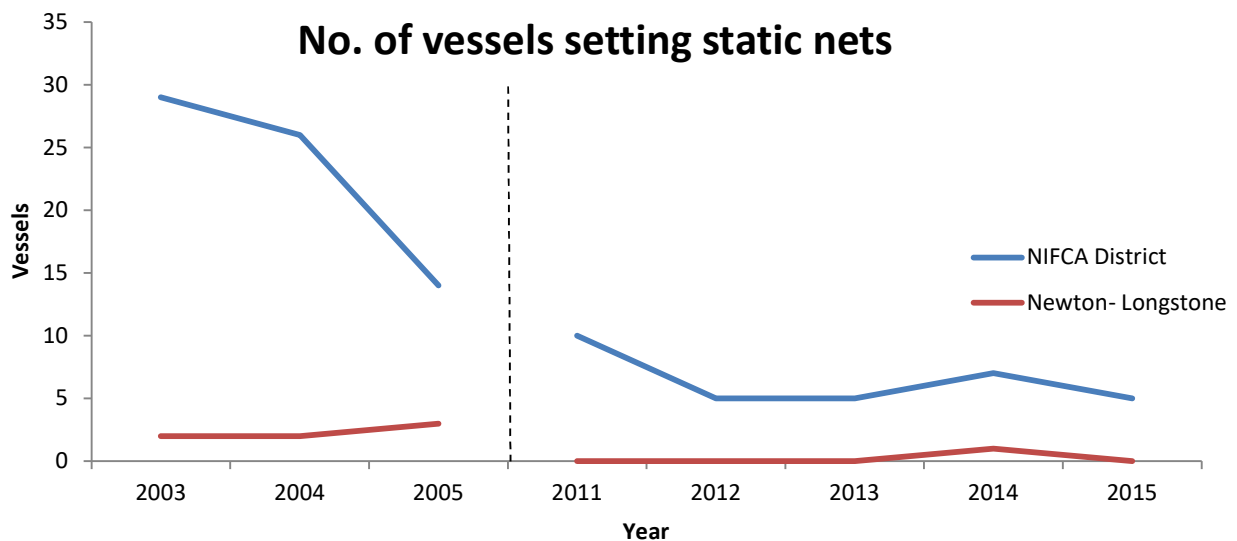


Figure 3 | Total number of vessels reported in shellfish returns using static nets (gill, entangling and trammel nets) throughout the NIFCA district and total within the Newton to Longstone sector (surrounding waters of breeding tern colony) from 2003 to 2015.

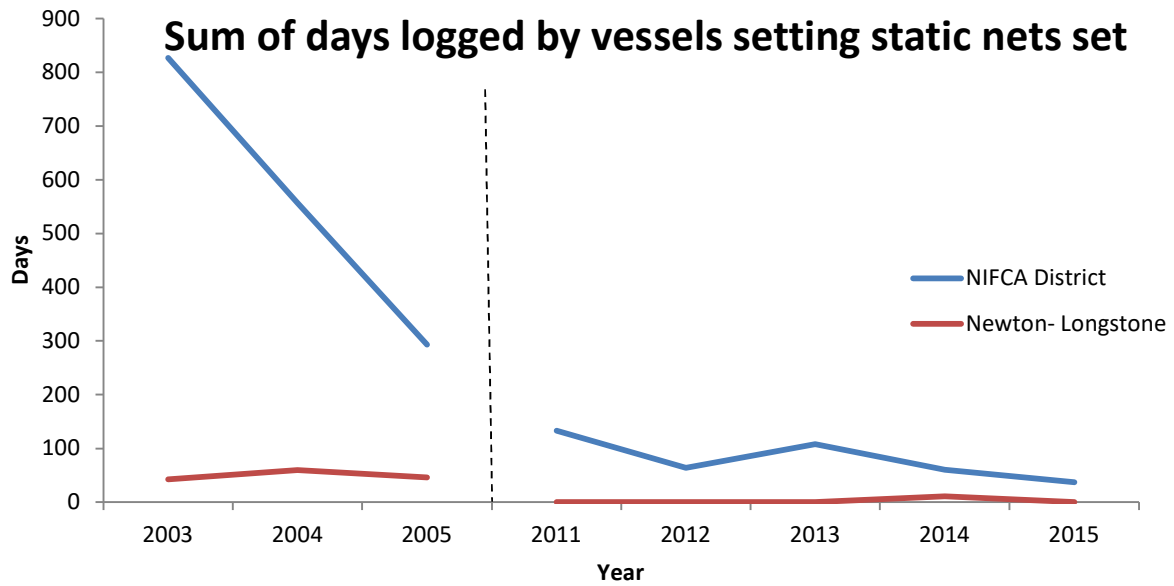


Figure 4 I Total number of days static nets reported in shellfish returns to be set throughout the NIFCA district and those set in the Newton to Longstone sector from 2003 to 2015.

Breeding little and Arctic terns are summer visitors to the Northumbria Coast SPA, present on site from April through to October. No netting activity was reported during 2015 within the vicinity of breeding colonies of the tern species. The last logged activity during 2014 was recorded by one vessel operating static nets a total of 11 days during December, which coincides outside of the SPAs features breeding season.

No vessels without a shellfish entitlement are known to NIFCA officers to be setting gill nets within the district and the declining trend in netting is apparent from the monthly returns forms also correlates with sightings of netting activity from regular NIFCA patrols (Figs. 5 & 6), with only 1 sighting in 2014 and 2015. The sightings also show that static netting activity is concentrated in the southern part of the NIFCA district, which is attributed to harsher tidal and sea conditions north of Amble (CIFCO Al Browne per. comms. 2016). Local expert knowledge combined with permit returns with patrol sightings provides a high confidence level to the data.

Patrol effort increased significantly during 2010 and 2011 with the employment of two more enforcement officers. This sharply changed from 2011 to 2012 due to diversification of the regulatory authority’s role from purely enforcement as the Sea Fisheries Committee to responsibilities towards conservation as IFCA’s under the Marine Coastal Access Act 2010. This effort remained at a lower level during 2014 and 2015 with decommission of the St Oswald until the commission of a new patrol vessel, St Aidan (CIFCO Al Browne per. comms. 2016).

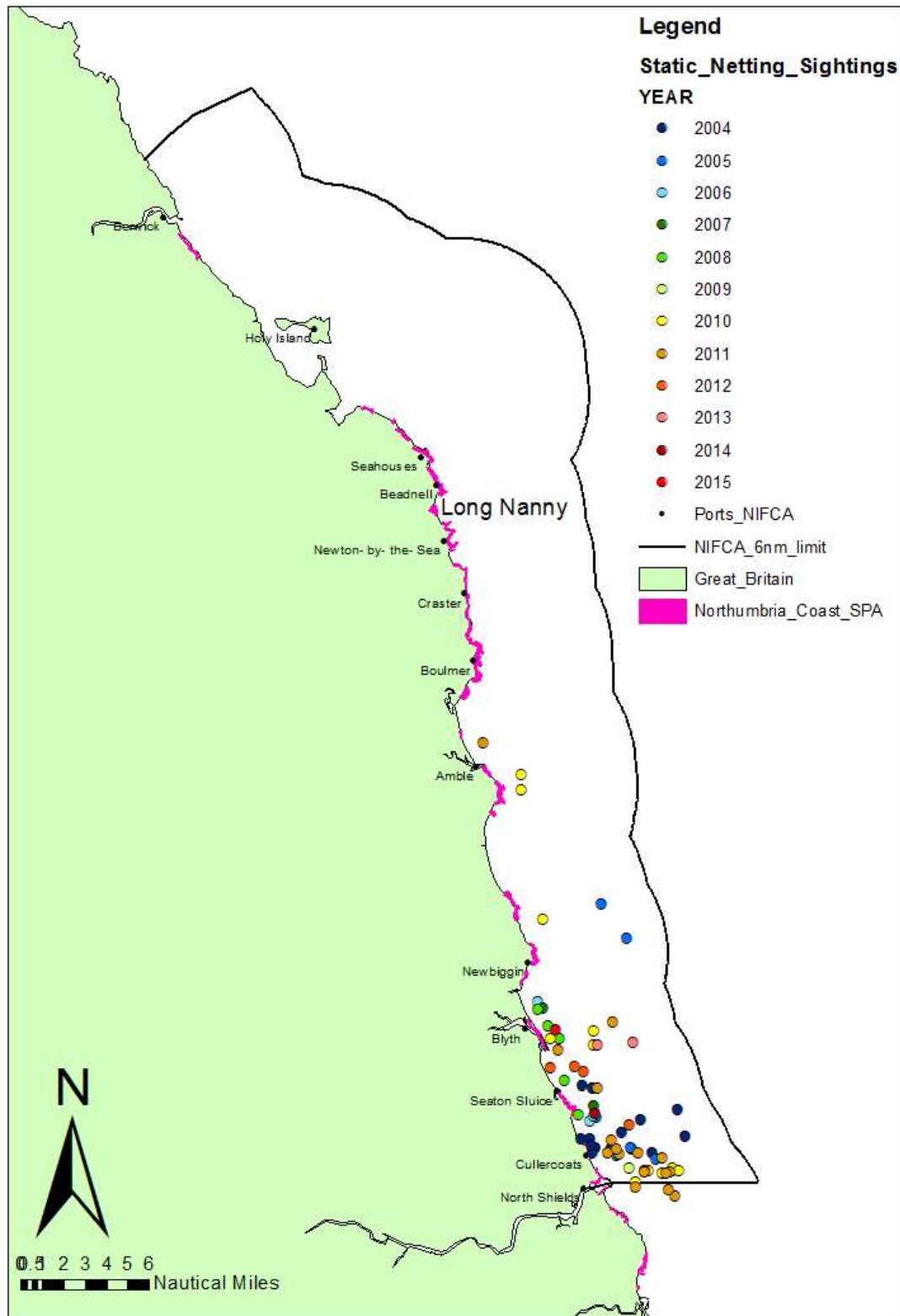


Figure 5 | Map of sightings of fishing vessels deploying/hauling bottom-set static nets from the NIFCA Patrol Vessel St. Oswald during routine patrols from 2003 – 2015. Each point represents an individual sighting. The single breeding colony in the Northumbrian Coast SPA is labelled as Long Nanny.

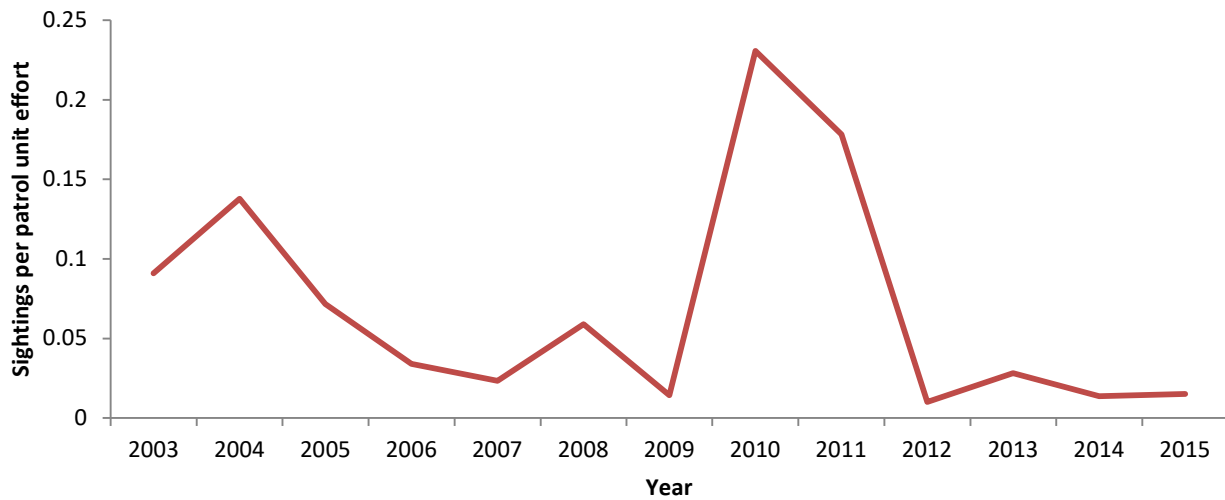


Figure 6 | Number of sightings per unit effort (per sea patrol) of static netting activity within the Northumberland Inshore Fisheries and Conservation Authority district 2003 – 2015.

15-20 years ago, static fixed netting was an important fishery off Northumberland, targeting predominantly cod in the winter and turbot in the summer. Mesh sizes of these nets are dependent on their target species, as specified under Council Regulation (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms. Annex VI states the minimum mesh sizes for fixed gears, applicable to our district, with 140mm being used for Cod and 90- 99mm for Bass. Generally effort was highest during the winter (fig 5), while fishermen turned to their pots in the summer.

Anecdotal evidence indicates that the decline in the use of any type of static fixed nets (gill, trammel and entanglement) within the NIFCA district is due to various factors, but predominantly the introduction of Total Allowable Catches and quotas in 1983 which drove many towards potting for shellfish. Locally, the cessation of dumping sewage sludge at sea around 15 years ago, particularly off the River Tyne and Blyth, is attributed to a decline in local cod stocks which used the dumping grounds for feeding. Furthermore increases in the population of grey seals off the Northumberland coast, particularly the Farne Islands which is home to one of England’s largest colony with over 1000 pups born annually, has also led to a decline in fixed netting within the district as fishermen hold the seals responsible for eating/damaging fish caught within the nets. These interactions have also been witnessed by NIFCA enforcement officers during routine inspections, as fishermen hauled their nets, evidence of predation of the caught fish was clearly visible in addition to seals observed feeding directly from the nets as they were being hauled (NIFCO Stewart-Moore per comms).

4.2 Management (Static fixed nets)

There are various existing management measures in place within the NIFCA district that affect static fixed netting:

NIFCA Byelaw 6 Fixed Engines:

Prohibition 4. A person must not use a fixed engine to fish for or take sea fish at any time during the period 26th March to 31st October inclusive;

- (a) in waters that are less than 7 metres in depth, unless those waters are separated from the shore by waters deeper than 7 metres at any state of the tide;

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- (b) where the headline of the fixed engine is less than 4 metres below the surface of the water at any state of the tide.

NIFCA Byelaw 5 Marking of Fishing Gear and Keep Boxes:

Prohibition 2. A person must not fish for or store sea fish using a pot, keep box or passive gear unless:

- (a) the marker buoy or dahn is clearly visible on the surface of the water; and
- (b) where a string of no more than 5 pots is used, a marker buoy or dahn is attached to one end of the string; or
- (c) where subparagraph 2(b) does not apply, a marker buoy or dahn is fixed to both ends of the pot, keep box or passive gear.

Prohibition 3. A marker buoy or dahn used in accordance with paragraph 2 must display the following information:

- (a) where the marker buoy or dahn is placed from a relevant fishing vessel, the name, port letters and numbers of that relevant fishing vessel;
- (b) where the marker buoy or dahn is not placed from a relevant fishing vessel, the owner’s name and telephone number.

4.3 Other fishing activity within the Northumbria Coast SPA

Potting for European lobster *Homarus gammarus* and brown crab *Cancer pagurus* is the principle fishery within the Northumberland IFCA district, with 115 commercial shellfish permit holders in 2015 and approximately 38,000 [commercial] pots fished within the district (2015). Fishers record which district they have set pots on their monthly returns forms which enable NIFCA to monitor fishing activity within the site. Commercial shellfish permit holders are limited to 800 pots and permitted vessels must not exceed 12 metres in length (Byelaw 4 Crustacea and Molluscs permitting and Pot Limitation). Recreational shellfish permit holders are limited to five pots and must not take more than one lobster, five edible or velvet crabs, 20 whelks or five prawns in any one day. Under NIFCA’s new permitting scheme (January 2016), recreational fishing must pay £10 for a permit which when received permit holders were requested on a voluntary basis to record catch information.

5. Test for Likely Significant Effect (tLSE)

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

NCSPA – 265: Surface feeding birds

1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?	No
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<p>2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)?</p> <p><i>*Sensitivities as listed are based on DRAFT Interim conservation advice. Reference to Regulation 33 advice for the Northumbria Coast SPA and best judgement has been used to determine which of these pressures are truly exerted by the gear type(s).</i></p>	<p>Above water noise (Sensitive) ¹</p> <p>Barrier to species movement (Sensitive)</p> <p>Collision ABOVE and BELOW water with static or moving objects not naturally found in the marine environment (Sensitive)²</p> <p>Introduction or spread of non-indigenous species (Sensitive)³</p> <p>Litter i.e. Ghost fishing (Sensitive)⁴</p> <p>Removal of non-target species i.e. bycatch (Sensitive)⁵ Removal of non-target species (prey species)</p> <p>Visual disturbance (Sensitive)⁶</p>
<p>3. Is the feature potentially exposed to the pressure(s)?</p>	<p>Yes</p>

4. What are the conservation objectives for the feature?

*DRAFT interim conservation advice does not give definitive conservation objectives. However, completing an HRA without COs is difficult. The CO as listed in this document is based on current knowledge of the status, and the pressures, affecting designated features (see sections 4 &5).

Expert judgement has been used to determine which features may be exposed to the pressure(s) resulting in inferred COs. These COs are assigned a degree of uncertainty i.e. a subjective confidence level based on evidence 'High', 'Medium,' 'Low', and 'Unknown'.

Conservation objective for Surface feeding birds: **Maintain***:

- The frequency, duration and/or intensity of disturbance affecting nesting and/or feeding birds should not reach levels that substantially affects the feature.
- the size of the population at a level which is above either the SPA Citation or an alternative baseline-population previously approved by Natural England Chief Scientist or that based on the current mean peak count or equivalent, whichever is the higher.
- safe passage of birds moving between roosting and feeding areas, generally within 6 km of breeding colonies.
- availability of key prey species (e.g. crustacea, annelids, sandeel, herring, clupeidae) at preferred prey sizes.
- the availability of shallow sloping nesting sites, grading to [<30 cm] above water level, or the probability that they will flood.
- vegetation cover (generally $<15\%$) throughout areas used for nesting, providing sufficient bare ground for the colony as a whole.
- the abundance and structure of the assemblage at or above its current or target level (whichever is the higher) through [maintaining/restoring] breeding productivity and adult survival.
- the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding)
- water quality and quantity to a standard which provides the necessary conditions to support the SPA feature, where the supporting habitats of the feature are dependent on surface water

Those conservation objectives that might be affected by gill netting are underlined.

*Confidence level for interim, inferred Conservation Objective: **MEDIUM** (see section 6 for detail).

<p>5. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?</p>	<p>Levels of static netting activity throughout the Northumberland IFCA district have declined significantly in recent years and are currently very low, with just 5/6 boats known to set nets on an infrequent basis (Jon Green, pers. comms.).</p> <p>The NCSPA boundary stretches sporadically along the Northumberland coastline from the river Tweed to Blackhall Rocks (NEIFCA district). The gear/feature interaction risk for surface feeding birds is limited to a 6km radius around Low Newton, identified area for the breeding little terns (<i>Sternula albifrons</i>) within the SPA.</p> <p>NIFCA Byelaw 6 (Fixed Engines) includes a number of technical, spatial and temporal restrictions designed to minimise the potential of accidental bycatch of birds, including a prohibition on the use of bottom-set nets with a headline less than 4 metres below the surface of the water from 26th March – 31st October.</p> <p>Considering the low levels of gill netting activity within the NIFCA district and the area of relevant use of the feature within the SPA, it is highly unlikely to cause a significant effect. However given the status of the species (Annex I) and importance of the supporting feature more information is needed to confirm this.</p>
<p>6. Condition and Conservation Objective Inferences</p>	<p>The Conservation Objective given in the Regulation 33 advice for the Northumbria Coast SPA for little terns is set to 'Maintain'. At the time of publication (June 2000), 40 breeding pairs equating to 1.7% of the UK population were using the site (5 year peak mean 1992-1997). During the 2015 season, 27 (70 nests) breeding pairs of little terns were recorded, and generally numbers have increased since the National Trust began protecting the site in 1977, at which time only 3 breeding pairs were present¹⁰. From 2010-2014 the NCSPA supported an average of 31 breeding pairs of little tern (1.64% of GB breeding population)¹¹. Based on this evidence and in lieu of an up to date conservation objective for the feature, a conservation objective of 'Maintain' has been inferred for little terns, with a medium level of confidence.</p>

<p>7. Is the potential scale or magnitude of any effect likely to be significant?</p>	<p>Alone:</p> <p>No*</p> <p>*However further analysis of netting activity within area is required to assess current scale and magnitude of risk.</p>	<p>OR In-combination</p> <p>No</p>
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6. Appropriate Assessment

If a 'Test of Likely Significant Effect (Section 5) identified the potential for a significant effect on the EMS feature/sub-feature as a result of the gear-type under consideration, or if there is a lack of information regarding the impact of the gear type on the feature, it has been carried forward for a full Appropriate Assessment to assess whether or not the potential LSE is likely to have an adverse effect on the conservation objectives given for the designated features of the site in question. The full appropriate assessment for the gear/feature interaction of static fixed nets/ estuarine birds within the Lindisfarne SPA is given below.

6.1 Potential risks to features

The potential pressures, ecological impacts, levels of exposure and mitigation measures for static fixed netting activity in regards to the designated feature estuarine birds within the Northumbria Coast SPA are summarised in Table 2.

Table 2: Summary of Impacts

Feature/ Sub feature(s)	Conservation Objective	Potential pressure (such as abrasion, disturbance) exerted by gear type(s)	Potential ecological impacts of pressure exerted by the activity/activities on the feature	Level of exposure of feature to pressure	Mitigation measures
<p>Surface feeding birds</p>	<p>The frequency, duration and/or intensity of disturbance affecting nesting and/or feeding birds should not reach levels that substantially affect the feature.</p>	<p>Above water noise</p>	<p>'Whilst activity would cause pressure, impact considered better captured by 'visual disturbance'</p>	<p>N/a</p>	<p>N/a</p>
		<p>Barrier to species movement</p>	<p>'While unlikely this could occur as a result of setting nets in confined water bodies/estuaries'</p>	<p>Only one vessel reported (NIFCA shellfish returns) setting nets within sector six of the NIFAC district within the last five years. The length of net set was 450m within an area approximately 230km². This activity was recorded for 11 days during December, outside of the tern breeding season. Therefore currently static nets are unable to cause adverse disturbance to tern species movement.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>
		<p>Collision ABOVE and BELOW water with static or moving objects not naturally found in the marine environment</p>	<p>Collision can occur as a result of this activity in instances where a vessel is used.</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT</p>

				<p>recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 10m inshore fleet. The absence of operating static netting vessels within the breeding season of the terns' means there is currently no adverse impact of disturbance on the feature.</p>	<p>will ensure any management requirements are met and remain 'fit for purpose'.</p>
		<p>Visual disturbance</p>	<p>May result from installation of the infrastructure and/or spat collection; pressure magnitude will depend on methods used and spatial scale of activity.</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 12m inshore fleet, measuring approximately 9.98m in length. The absence of operating static netting vessels within the breeding season of the terns' means there is currently adverse impact of disturbance on the feature.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>

Maintain the size of the population at a level which is above either the SPA Citation or an alternative baseline-population previously approved by Natural England Chief Scientist or that based on the current mean peak count or equivalent, whichever is the higher.

<p>Collision ABOVE and BELOW water with static or moving objects not naturally found in the marine environment</p>	<p>Collision can occur as a result of this activity in instances where a vessel is used.</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 10m inshore fleet. The absence of operating static netting vessels within the breeding season of the terns' means there is currently no adverse impact of static netting activity on the feature's population size.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>
<p>Barrier to species movement</p>	<p>'While unlikely this could occur as a result of setting nets in confined water bodies/estuaries'</p>	<p>Only one vessel reported (NIFCA shellfish returns) setting nets within sector six of the NIFAC district within the last five years. The length of net set was 450m within an area approximately 230km². This activity was recorded for 11 days during December, outside of the tern breeding season. Therefore currently static nets are unable to cause adverse impact on the population size of the tern species.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>
<p>Litter i.e. Ghost fishing</p>	<p>'Discarded/lost lines, hooks and nets which could be problematic for mobile species.</p>	<p>The Marine Conservation Society conduct marine litter surveys along the UK coastline, which record incidences of dead birds. From 2005- 2015 138 surveys</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to</p>

	<p>Other types of litter generated by activity generally not considered to occur at level that would cause concern.¹¹</p> <p>Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.</p>	<p>have been conducted within the NIFCA district, of which 22 recorded incidences of dead birds and one identified as a tern species found in Annstead, just north of Beadnell Bay. No attribution was given to their death.</p> <p>Fishing net is also recorded in the surveys and the frequency of netting found from 2005 to 2012 has generally decreased from one piece every 54m to every 201m, retrospectively. The highest frequency was recorded in 2013, every 36m, which has since declined to every 107m in 2015.</p>	<p>be assessed for the fixed net fishery and the conservation status of sites' features.</p> <p>Annual assessments of fishing effort and MSCs litter data, in addition to communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p> <p>NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.</p>
<p>Removal of non-target species i.e. bycatch</p>	<p>Pressure may be exerted by by-catch associated with fixed nets and lines. However, vulnerability of feature to pressure will need to be considered on a case-by-case basis.¹²</p> <p>Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.</p>	<p>In 2015 static nets were set for a total of 37 days within the entire district (NIFCA permit forms), 19 of these days nets were set which coincide with the breeding season of the terns. No vessels reported netting activity within the sector containing the terns' breeding colony of Northumbria Coast SPA.</p> <p>NIFCA Byelaw 6 states that all fixed nets' headline must be set at least four meters below the surface at all tides and therefore out of diving range of the tern species.</p> <p>Low levels of gill netting activity, NIFCA Byelaw 6 and lack of by-catch reports pose a low exposure risk to maintaining the feature's population.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features.</p> <p>Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>
<p>Removal of non-target species i.e. features preferred prey species</p>	<p>The availability of an abundant food supply is critically important for successful breeding,</p>	<p>The preferred prey of the SPA features consists primarily of sandeels and sprat. Smaller individuals of the same species are used to feed their chicks.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to</p>

			<p>adult fitness and survival and the overall sustainability of the population. Removal of target and non-target prey species has the potential to impact bird populations.</p>	<p>EU legislation regulates mesh sizes of static nets, which are determined by the target species. This fishery targets much larger species eg. Cod (140mm) and turbot (70mm). Consequently the preferred prey species are too small to be retained in net and therefore the current static net fishery is highly unlikely to cause an adverse effect on the features survival.</p>	<p>be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort from NIFCA returns and MMO data to monitor type and quantity of species landed.</p>
<p>Maintain safe passage of birds moving between roosting and feeding areas, generally within 6 km of breeding colonies.</p>	<p>Collision ABOVE and BELOW water with static or moving objects not naturally found in the marine environment</p>	<p>Collision can occur as a result of this activity in instances where a vessel is used.</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 10m inshore fleet. The absence of operating static netting vessels within the breeding season of the terns' means there is currently no adverse impact of vessel activity restricting the movement of terns from foraging grounds and nesting sites.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>	
	<p>Barrier to species movement</p>	<p>'While unlikely this could occur as a result of setting nets in confined water</p>	<p>Only one vessel reported (NIFCA shellfish returns) setting nets within sector six of the NIFAC district within the last five years. The length of net set was 450m</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to</p>	

		bodies/estuaries'	within an area approximately 230km ² . This activity was recorded for 11 days during December, outside of the tern breeding season. Therefore at current levels, static nets are unable to cause adverse impact on the movement of the tern species between foraging and nesting sites.	be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.
	Litter i.e. Ghost fishing	Discarded/lost lines, hooks and nets which could be problematic for mobile species. Other types of litter generated by activity generally not considered to occur at level that would cause concern. ^{'11} Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.	The Marine Conservation Society conduct marine litter surveys along the UK coastline, which record incidences of dead birds. From 2005- 2015 138 surveys have been conducted within the NIFCA district, of which 22 recorded incidences of dead birds. One was identified as a tern species found in Annstead, just north of Beadnell Bay. No attribution was given to its death. Fishing net is also recorded in the surveys and the frequency of netting found from 2005 to 2012 has generally decreased from one piece every 54m to every 201m, retrospectively. The highest frequency was recorded in 2013, every 36m, which has since declined to every 107m in 2015.	None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and MSCs litter data, in addition to communications with NT will ensure any management requirements are met and remain 'fit for purpose'. NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.
	Removal of non-target species i.e. bycatch	Pressure may be exerted by by-catch associated with fixed nets and lines. However, vulnerability of feature to pressure will need to be considered on a case-by-case basis. ^{'12}	In 2015 static nets were set for a total of 37 days within the entire district (NIFCA permit forms), 19 of these days nets were set which coincide with the breeding season of the terns. No vessels reported netting activity within the sector containing the terns' breeding colony of Northumbria Coast SPA. NIFCA Byelaw 6 states that all fixed nets'	None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT

			<p>Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.</p>	<p>headline must be set at least four meters below the surface at all tides and therefore out of diving range of the tern species. Low levels of gill netting activity, lack of by-catch reports and NIFCA Byelaw 6 pose a low exposure risk of bycatch as adults travel to and from foraging grounds.</p>	<p>will ensure any management requirements are met and remain 'fit for purpose'. NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.</p>
			<p>May result from installation of the infrastructure and/or spat collection; pressure magnitude will depend on methods used and spatial scale of activity</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 12m inshore fleet, measuring approximately 9.98m in length. The absence of operating static netting vessels within the breeding season of the terns' means that no adverse effects are currently occurring to cause obstruction or displacement of tern species between their breeding and foraging grounds.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>

<p>Maintain the availability of key prey species (e.g. crustacea, annelids, sandeel, herring, clupeidae) at preferred prey sizes</p>	<p>Litter i.e. Ghost fishing</p>	<p>Discarded/lost lines, hooks and nets which could be problematic for mobile species. Other types of litter generated by activity generally not considered to occur at level that would cause concern.¹¹ Discarded nets will continue to passively fish, and have the capacity to reduce available prey.</p>	<p>The Marine Conservation Society conduct marine litter surveys along the UK coastline, recording fishing net in the surveys. The frequency of netting found from 2005 to 2012 has generally decreased from one piece every 54m to every 201m, retrospectively (Annex 4). The highest frequency was recorded in 2013, every 36m, which has since declined to every 107m in 2015. The mesh sizes of the static fishery for the target species is 140mm and 70mm for cod and turbot retrospectively. The SPA features predominantly target sandeels or sprat, which are too small to be retained in these nets and hence unlikely to adversely affect the availability of prey.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and MSCs litter data, in addition to communications with NT will ensure any management requirements are met and remain 'fit for purpose'. NIFCA to continue collecting data for NEBBS survey at Beadnell Bay..</p>
	<p>Removal of non-target species i.e. features preferred prey species</p>	<p>The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. Removal of target and non-target prey species has the potential to impact bird populations.</p>	<p>The preferred prey of the adult tern species consists primarily of sandeels and sprat. Smaller individuals of the same species are used to feed their chicks. EU legislation regulate mesh sizes of static nets, which are determined by the target species. This fishery targets much larger species eg. Cod (140mm) and turbot (70mm). Consequently the preferred prey species are too small to be retained in net and therefore the current static net fishery is highly unlikely to cause an adverse effect on the features available prey.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort from NIFCA returns and MMO data to monitor type and quantity of species landed.</p>

<p>Maintain the abundance and structure of the assemblage at or above its current or target level (whichever is the higher) through [maintaining/restoring] breeding productivity and adult survival.</p>	<p>Above water noise</p>	<p>Whilst activity would cause pressure, impact considered better captured by 'visual disturbance'</p>	<p>N/a</p>	<p>N/a</p>
	<p>Collision ABOVE and BELOW water with static or moving objects not naturally found in the marine environment</p>	<p>Collision can occur as a result of this activity in instances where a vessel is used.</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 12m inshore fleet, measuring approximately 9.98m in length. The absence of operating static netting vessels within the breeding season of the terns' means there is currently no adverse impact on the adults' survival rates.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'. NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.</p>
	<p>Litter i.e. Ghost fishing</p>	<p>Discarded/lost lines, hooks and nets which could be problematic for mobile species. Other types of litter generated by activity generally not</p>	<p>The Marine Conservation Society conduct marine litter surveys along the UK coastline, which record incidences of dead birds. From 2005- 2015 138 surveys have been conducted within the NIFCA district, of which 22 recorded incidences of dead birds and one identified as a tern</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features.</p>

		<p>considered to occur at level that would cause concern.^{'11}</p> <p>Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.</p>	<p>species found in Annstead, just north of Beadnell Bay. No attribution was given to their death.</p> <p>Fishing net is also recorded in the surveys and the frequency of netting found from 2005 to 2012 has generally decreased from one piece every 54m to every 201m, retrospectively. The highest frequency was recorded in 2013, every 36m, which has since declined to every 107m in 2015.</p>	<p>Annual assessments of fishing effort and MSCs litter data, in addition to communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p> <p>NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.</p>
	Removal of non-target species i.e. bycatch	<p>Pressure may be exerted by by-catch associated with fixed nets and lines. However, vulnerability of feature to pressure will need to be considered on a case-by-case basis.^{'12}</p> <p>Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.</p>	<p>In 2015 static nets were set for a total of 37 days within the entire district (NIFCA permit forms), 19 of these days nets were set which coincide with the breeding season of the terns. No vessels reported netting activity within the sector containing the terns' breeding colony of Northumbria Coast SPA.</p> <p>NIFCA Byelaw 6 states that all fixed nets' headline must be set at least four meters below the surface at all tides and therefore out of diving range of the tern species.</p> <p>Low levels of gill netting activity, lack of by-catch reports and NIFCA Byelaw 6 pose an extremely low level of risk to the features' ability to successfully breed and adult survival rate.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features.</p> <p>Annual assessments of fishing effort and, in communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p> <p>NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.</p>
	Visual disturbance	<p>May result from installation of the infrastructure and/or spat collection; pressure magnitude will depend on methods used and</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC,</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of</p>

		<p>spatial scale of activity</p>	<p>increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 12m inshore fleet, measuring approximately 9.98m in length. The absence of operating static netting vessels within the breeding season of the terns' means that no adverse effects are currently occurring to inhibit the breeding success or adult survival rates of the tern species.</p>	<p>sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>
<p>Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding)</p>	<p>Above water noise</p>	<p>Whilst activity would cause pressure, impact considered better captured by 'visual disturbance'</p>	<p>N/a</p>	<p>N/a</p>
	<p>Barrier to species movement</p>	<p>'While unlikely this could occur as a result of setting nets in confined water bodies/estuaries'</p>	<p>Only one vessel reported (NIFCA shellfish returns) setting nets within sector six of the NIFAC district within the last five years. The length of net set was 450m within an area approximately 230km². This activity was recorded for 11 days during December, outside of the tern breeding season. Therefore at current levels, static nets are unable to cause adverse impact on the tern's distribution within the supporting habitats essential for breeding success.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>

<p>Collision ABOVE and BELOW water with static or moving objects not naturally found in the marine environment</p>	<p>Collision can occur as a result of this activity in instances where a vessel is used.</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 12m inshore fleet, measuring approximately 9.98m in length. The absence of operating static netting vessels within the breeding season of the terns' means there is currently no adverse impact of this activity within the supporting habitats of the terns.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>
<p>Litter i.e. Ghost fishing</p>	<p>Discarded/lost lines, hooks and nets which could be problematic for mobile species. Other types of litter generated by activity generally not considered to occur at level that would cause concern.¹¹ Activity of SPA feature foraging behaviour places risk of interaction</p>	<p>The Marine Conservation Society conduct marine litter surveys along the UK coastline, which record incidences of dead birds. From 2005- 2015 138 surveys have been conducted within the NIFCA district, of which 22 recorded incidences of dead birds and one identified as a tern species found in Annstead, just north of Beadnell Bay. No attribution was given to their death. Fishing net is also recorded in the surveys and the frequency of netting found from 2005 to 2012 has generally decreased</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and MSCs litter data, in addition to communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>

	(entanglement) resulting in injury or mortality.	from one piece every 54m to every 201m, retrospectively. The highest frequency was recorded in 2013, every 36m, which has since declined to every 107m in 2015.	NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.
Removal of non-target species i.e. bycatch	Pressure may be exerted by by-catch associated with fixed nets and lines. However, vulnerability of feature to pressure will need to be considered on a case-by-case basis. ¹² Activity of SPA feature foraging behaviour places risk of interaction (entanglement) resulting in injury or mortality.	In 2015 static nets were set for a total of 37 days within the entire district (NIFCA permit forms), 19 of these days nets were set which coincide with the breeding season of the terns. No vessels reported netting activity within the sector containing the terns' breeding colony of Northumbria Coast SPA. NIFCA Byelaw 6 states that all fixed nets' headline must be set at least four meters below the surface at all tides and therefore out of diving range of the tern species. Low levels of gill netting activity, lack of by-catch reports and NIFCA Byelaw 6 pose an extremely low level of risk to the features' supporting habitats.	None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort and MSCs litter data, in addition to communications with NT will ensure any management requirements are met and remain 'fit for purpose'. NIFCA to continue collecting data for NEBBS survey at Beadnell Bay.
Removal of non-target species i.e. features preferred prey species	The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. Removal of target and non-target prey species has the potential to impact bird populations.	The preferred prey of the SPA features consists primarily of sandeels and sprat. Smaller individuals of the same species are used to feed their chicks. EU legislation regulates mesh sizes of static nets, which are determined by the target species. This fishery targets much larger species eg. Cod (140mm) and turbot (70mm). Consequently the preferred prey species are too small to be retained in net and therefore the current static net fishery is highly unlikely to cause an adverse effect on the features	None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features. Annual assessments of fishing effort from NIFCA returns and MMO data to monitor type and quantity of species landed.

				<p>available prey.</p>	
		<p>Visual disturbance</p>	<p>May result from installation of the infrastructure and/or spat collection; pressure magnitude will depend on methods used and spatial scale of activity</p>	<p>Historically, vessel activity within the vicinity of Beadnell Bay (Newton to Longstone) has been extremely low, with the highest number of vessels operating in 2005 as three (NIFCA permit returns). Influencing factors such as, low TAC, increasing seal population continue to maintain low levels of this activity. In the last five years only one vessel has recorded using static nets for a total of 11 days in December operating outside of the terns breeding season. This vessel belongs to the under 12m inshore fleet, measuring approximately 9.98m in length.</p> <p>The absence of operating static netting vessels within the breeding season of the terns' means that no adverse effects are currently occurring to restrict the availability of supporting habitats required for breeding success.</p>	<p>None required, except implementation of Monitoring and Control Plan for Static Netting, which outlines the parameters to be assessed for the fixed net fishery and the conservation status of sites' features.</p> <p>Annual assessments of fishing effort and communications with NT will ensure any management requirements are met and remain 'fit for purpose'.</p>

The following conservation objectives for surface feeding birds are not deemed to be at risk from pressures associated with static netting activity within the Northumbria Coast SPA or are outside the remit of Northumberland IFCA:

- the availability of shallow sloping nesting sites, grading to [<30 cm] above water level, or the probability that they will flood.
- vegetation cover (generally $<15\%$) throughout areas used for nesting, providing sufficient bare ground for the colony as a whole.
- water quality and quantity to a standard which provides the necessary conditions to support the SPA feature, where the supporting habitats of the feature are dependent on surface water

7. Conclusion

Current levels of static netting are infrequent and low within the NIFCA district, predominantly occurring in the most southerly sectors (fig 5). Within the surrounding waters of Beadnell Bay, Northumbria Coast SPA (Newton to Longstone sector), netting activity has always been extremely low, with the maximum number of three vessels reporting the use of static set in 2005 and the highest frequency was recorded in 2004 for 60 days by two vessels. No vessel reported setting nets within the Newton to Longstone sector, throughout 2015 (NIFCA permit returns). The last report of this gear activity within this sector recorded a total period of 11 days in August during 2014. The decline of this fishery is due to various factors, namely low quotas and seal predation from an increasing population at a local breeding colony (Jon Green pers comm.). These factors continue to exert influence on maintaining an extremely low activity level which is concentrated at the southern part of the NIFCA district.

The Northumbria Coast SPA has a discrete boundary stretching 130km from the Tweed estuary to the Tees. Its supporting habitats consist of rocky, boulder and cobble beaches, artificial piers and one stretch of sandy shingle beach. The designated tern species breed within the shallow inlet and bay on the sandy shingle beaches at one site within its boundary at Newton Links, using Beadnell Bay shallow waters for foraging. This site is located in NIFCA sector 6, within the northern part of the district. Tern species are listed under Annex I of the EC Bird Directive and their breeding success is threatened by loss of suitable breeding habitat, mammalian and aerial predation, human disturbance, prey availability and harsh climatic conditions and changes (LIFE12 NAT/UK/000869, 2013).

The site is managed by the National Trust, who have systematically monitored the little tern population and their breeding success since 1977, which at the time of designation consisted of 40 breeding pairs, currently supporting 17 pairs (National Trust 2016). A proposed addition to the designation is currently in progress for Arctic terns whose breeding population has grown exponentially from just three pairs to 1, 100 breeding pairs, 2016. Current breeding failings for the site have been attributed primarily to loss of suitable nesting habitat due to increase of anthropogenic activity and development and to lesser extent prey (lesser sandeels) availability for little terns and mammalian predation of eggs and chicks mainly by a stoat for Arctic terns (NT, 2015 Tern Report).

The main pressures identified attributed to static netting are accidental bycatch within the foraging grounds adjacent to the terns' breeding grounds, which is addressed in this AA.

NIFCA byelaw 6, paragraph (4) states that any static net set between 26th March to 31st October must be placed at a depth greater than 7m, with the headline more than 4m from the surface at all tidal states. This period coincides with the breeding seasons of the both tern features and means that nets are set at a depth, out of range from the foraging area of the terns; maximum depth recorded is 50cm for Arctic terns. Therefore interaction between this gear type (while in operation) and the feature is highly unlikely. Bycatch attributed to ghostfishing is largely unknown. Data collected by the Marine Conservation Society Beach Litter surveys along the coastline of Northumberland show a sharp increase in the frequency of fish netting found during the surveys conducted in 2013; once every 36m. Surveys conducted within Beadnell Bay over the last 10 years show that the frequency netting pieces recorded is 7 (Low Newton) and 12 (Embleton). In addition to collecting data on litter, records are made of any dead birds found, of which one was identified as a tern species in 2009 at Annstead, just north of Beadnell Bay. No attribute was given for the cause of death (MCS Beach Litter Surveys).

The static nets set by fishermen target whitefish (cod) and flatfish (plaice) and not sandeels. The average mesh size for a net targeting these species is 120mm (per comms Jon Green), too large to entangle sandeels, for which a mesh size of 5mm is used (at the cod end). Therefore the static nets operating within the Northumberland district will have no adverse effect on local sandeel stock levels and hence food availability for the Northumbria Coast SPA tern features. Research into why the sandeel stocks failed during 2003/2004 attribute low recruitment driven by various factors, climate change (high sea temperatures) and increased predation (by herring *Clupea harengus*) as probable causes (Frederiksen et al. 2007).

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The conclusion of this appropriate assessment is that gill netting within the NIFCA district at **current levels⁵, alone** is **NOT** having an adverse effect on the 'Surface feeding birds' (namely little and Arctic tern), for the spatially restricted breeding colonies at Newton Links within the Northumbria Coast SPA. North East IFCA's assessment of the SPA which falls within their boundary has resulted in no further management being implemented specific to gear/feature interactions of this SPA. These assessments exclude the bait collection and hand gathering which are to be assessed 2017/18.

The Monitoring and Control Plan for static netting outlines the methodology and parameters NIFCA will use to collect data for the continual monitoring of static netting activity and its interaction with this feature. All data (except NE site condition monitoring) will be collated and analysed on an annual basis to assess if further management is required, unless a trigger is initiated to prompt an automatic assessment. This will ensure any risks to the site features will be addressed and management measures will remain appropriate and adaptive. Monitoring and Control Plans for Static Netting can be found on NIFCA's website (www.nifca.gov.uk) at the beginning of 2017.

8. In-combination assessment

Although no vessels currently operate static nets within the surrounding waters of Beadnell Bay within the Northumbria Coast SPA (NIFCA sector 6), potential risks of in combination effects have been considered in Table 3 for current and possible plans and projects and other activities within the vicinity of Beadnell Bay within the Northumbria Coast SPA.

As no vessels are operating static netting gear within the vicinity of the Beadnell Bay Northumbria Coast SPA, there are no adverse effects at this level of this fishing activity in combination with other plans, projects or activities on the feature surface feeding birds.

Table 3 | In- combination assessments of Static netting with other plans and projects within the vicinity of Beadnell Bay, Northumbria Coast SPA.

Plans and Projects		
Activity	Description	Potential Pressure
Harbour dredging [vicinity of SPA]	Harbour dredging	Small scale Appropriate licence conditions/monitoring has been incorporated to mitigate any impacts.
Fishing X fishing	Shellfish potting Trawling Dredging	No adverse effect at current levels, but potential for increase vessel activity and disturbance levels within vicinity of SPA. Fishing effort to be continually monitored and assessment with implementation of Monitoring and Control Plans for Static Netting and Potting. Fisheries permitted by NIFCA. Potting is the main fishery throughout the district with 115 commercial permit holders 2015, of which 20 operate within sector 6. All vessels known to use static nets are shellfish permit holders and are therefore part of the same potting fleet. NT staff and volunteers monitor the site 24/7 during the breeding season.

⁵ Potential activities will be monitored within the relevant NIFCA static netting monitoring and control plan. Link/ref to be included

	T & J Nets	This fishery operates from March through to the end of August and targets migratory species, primarily Salmon. All fishermen must gain a license to fish from the Environment Agency, who are responsible for regulating this fishery. Currently there are 21 T and J nets licensees (2 combined) and 8 drift net licensees across our district and the EA are in the process of rolling out a phasing out scheme. Low risk to pressure at current levels.
Coastal Infrastructure	Outflow pipes Maintenance	Small scale Appropriate licence conditions/monitoring has been incorporated to mitigate any impacts
Anchorage and Mooring	Anchorage and Mooring	There is a small harbour approximately 1.3km north of the tern colony. Anchorage and mooring of pleasure vessels occurs just outside the walls of the harbour.
Coastal management scheme	Flood and erosion risk management	Northumberland and North Tyneside Shoreline Management Plan 2 (05/2009) covers the coastline from the Scottish border to the river Tyne. As stated in Section (2) of the document projects and plans within the SMP are subject to its own Appropriate Assessment for proposed work, which accesses any impacts to Northumbria Coast SPA.
Other activities with potential to occur within vicinity		
Activity	Description	Potential Pressure
Aggregate dredging	Aggregates dredge	No dredging in vicinity
Other activities being considered (which are not plans or projects by definition)		
Activity	Description	Potential Pressure
Recreational angling	Activity levels unknown. NIFCA participating in MMO MCSS MPA activity monitoring trial begin 09/16.	Potential low risk of bycatch and increase of vessel activity and disturbance levels within vicinity of SPA.
Yachting, sailing, watersports.	Site popular with visitors for watersports at north side of the Bay, during summer months. NIFCA participating in MMO MCSS MPA activity monitoring trial begin 09/16.	Increase of vessel activity and disturbance levels within vicinity of SPA. Currently there is no formal code of conduct to reduce potential disturbance, however NT staff and volunteers monitor the site daily during the breeding season and provide information to the public to reduce potential disturbance.

9. Summary of consultation with Natural England

Monthly meetings have been held with Natural England's Lead Advisor for the Northumberland East region from the outset of this process. The creation of this document was supported by ongoing consultation with Natural England and they agree with the conclusions of this assessment. Formal advice was received on 30th March 2017.

10. Integrity test

NIFCA conclude that gill netting activities, either alone or in-combination in the surrounding waters of Beadnell Bay, Northumbria Coast SPA do not adversely affect the surface feeding bird populations of the site at existing low levels.

11. Adaptive risk management

Assessments will be periodically reviewed should activity levels change above existing levels or if new evidence relating to this gear/feature interaction emerges. To monitor activity levels and gear /feature interactions Monitoring and Control Plan documents have been produced; one of which outlines the continual assessment of static netting activity which incorporates the monitoring of the feature condition of SPA bird species, within the NIFCA district. These documents describe the parameters which are to be monitored and the mechanisms in which the data is to be collected. Clear triggers/ thresholds are defined within section 3 of the document, which if reached will initiate action to either mitigate or modify the trigger. Section 4 outlines all possible management tools, which are to be assessed on their ecological and socio-economic outcomes for both the fishery and the feature. These options will be subject to scrutiny through NIFCA's byelaw working group and committee. Any management options decided through this process would be subject to public consultation.

Annex 1: Reference list

<http://www.rspb.org.uk/our-work/conservation/conservation-projects/details/362308-monitoring-conservation-work-for-the-eu-life-nature-little-tern-recovery-project->

2013. LIFE12 NAT/UK/000869- 'LIFE Little Terns- Improving status of the little tern in the UK through targeted action at the most important colonies'

http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4755&docType=pdf

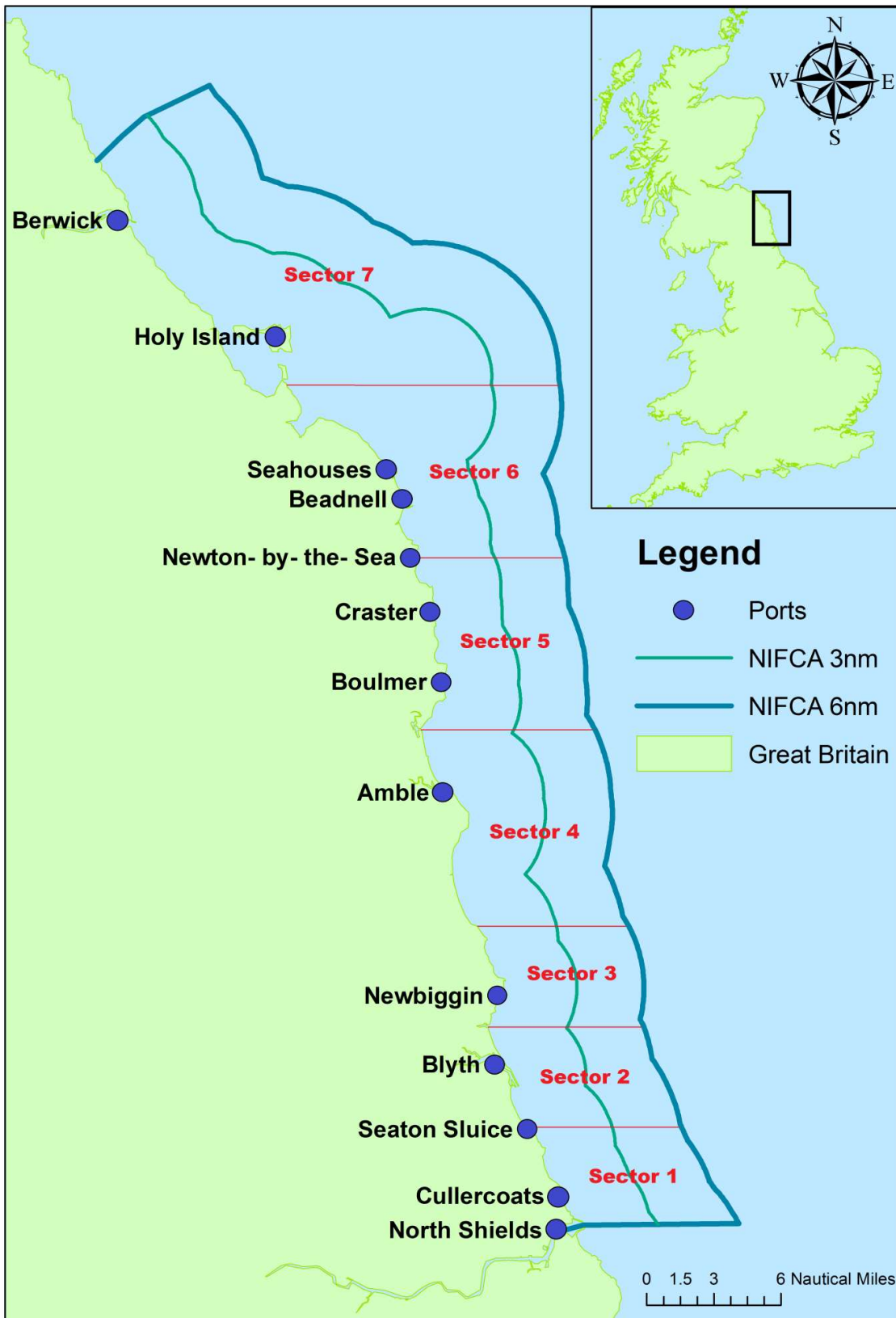
Finan J., Hendry T., Knight V., Rodriguez S.M. & Reid H. 2015. National Trust: Long Nanny tern colony 2015 report.

Morten Frederiksen, Robert W. Furness, Sarah Wanless 2007, 'Regional variation in the role of bottom-up and top-down processes in controlling sandeel abundance in the North Sea' Marine Ecology Progress Series, 337: 279- 286

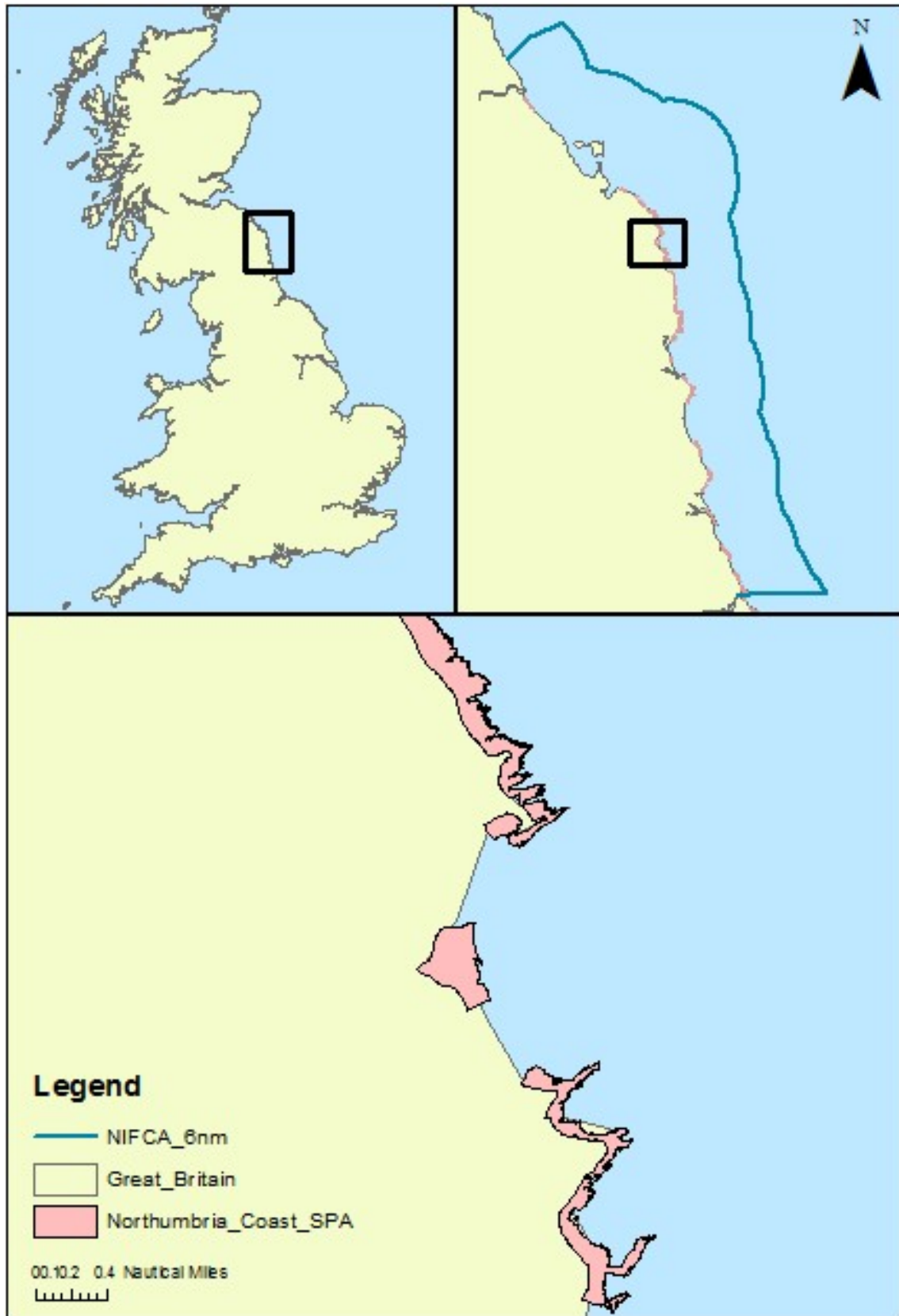
From Detailed tLSE

1. ICES (International Council for Exploration of the Sea), 2013; Stillman et al., 2007; Wildfowl and Wetlands Trust (WWT) Consulting, 2012. "Whilst activity would cause pressure, impact considered better captured by 'visual disturbance". **706 (UK9006131_Northumbria_Coast_SPA_Advice_on_Operations)**
2. Davenport and Davenport, 2006. "Collision can occur as a result of this activity in instances where a vessel in used". **150 (UK9006131_Northumbria_Coast_SPA_Advice_on_Operations)**
3. ICES (International Council for Exploration of the Sea), 2009 'The introduction and movement of invasive non-indigenous species may occur as a result of vessel movements, hull fouling and fishing activities.' **619 (UK9006131_Northumbria_Coast_SPA_Advice_on_Operations)**
4. Wildfowl and Wetlands Trust (WWT) Consulting, 2012. "Discarded/lost lines, hooks and nets which could be problematic for mobile species. Other types of litter generated by activity generally not considered to occur at level that would cause concern." **190 (UK9006131_Northumbria_Coast_SPA_Advice_on_Operations)**
5. Gubbay and Knapman, 1999; ICES (International Council for Exploration of the Sea), 2013; Kaiser et al., 2001; Sewell and Hiscock, 2005; Wildfowl and Wetlands Trust (WWT) Consulting, 2012. "Pressure may be exerted by by-catch associated with fixed nets and lines. However, vulnerability of feature to pressure will need to be considered on a case-by-case basis." **543 (UK9006131_Northumbria_Coast_SPA_Advice_on_Operations)**
6. Stillman et al., 2007; Wildfowl and Wetlands Trust (WWT) Consulting, 2012, "May result from the presence/movement of the vessel and potentially also the presence/movement of the gear. Magnitude of pressure would depend on nature and scale/intensity of activity." **362 (UK9006131_Northumbria_Coast_SPA_Advice_on_Operations)**
10. Finan J., Hendry T., Knight V., Rodriguez S.M. & Reid H. 2015. National Trust: Long Nanny tern colony 2015 report.
11. Natural England, 2015. Departmental brief: Northumberland Marine potential Special Protection Area.

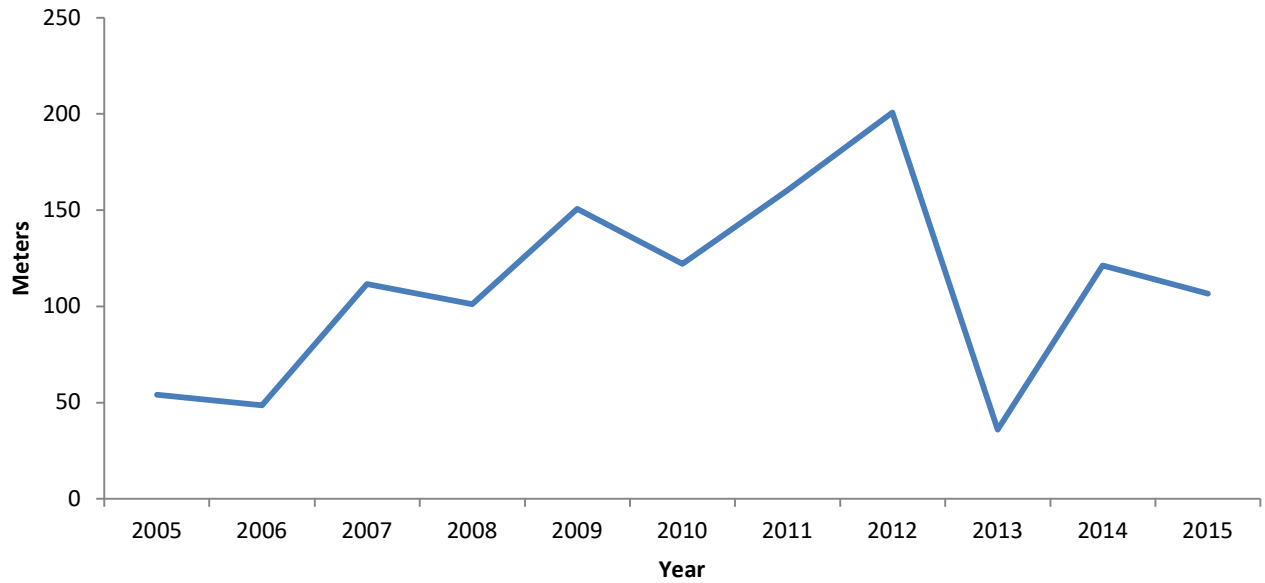
Annex 2: NIFCA district sections



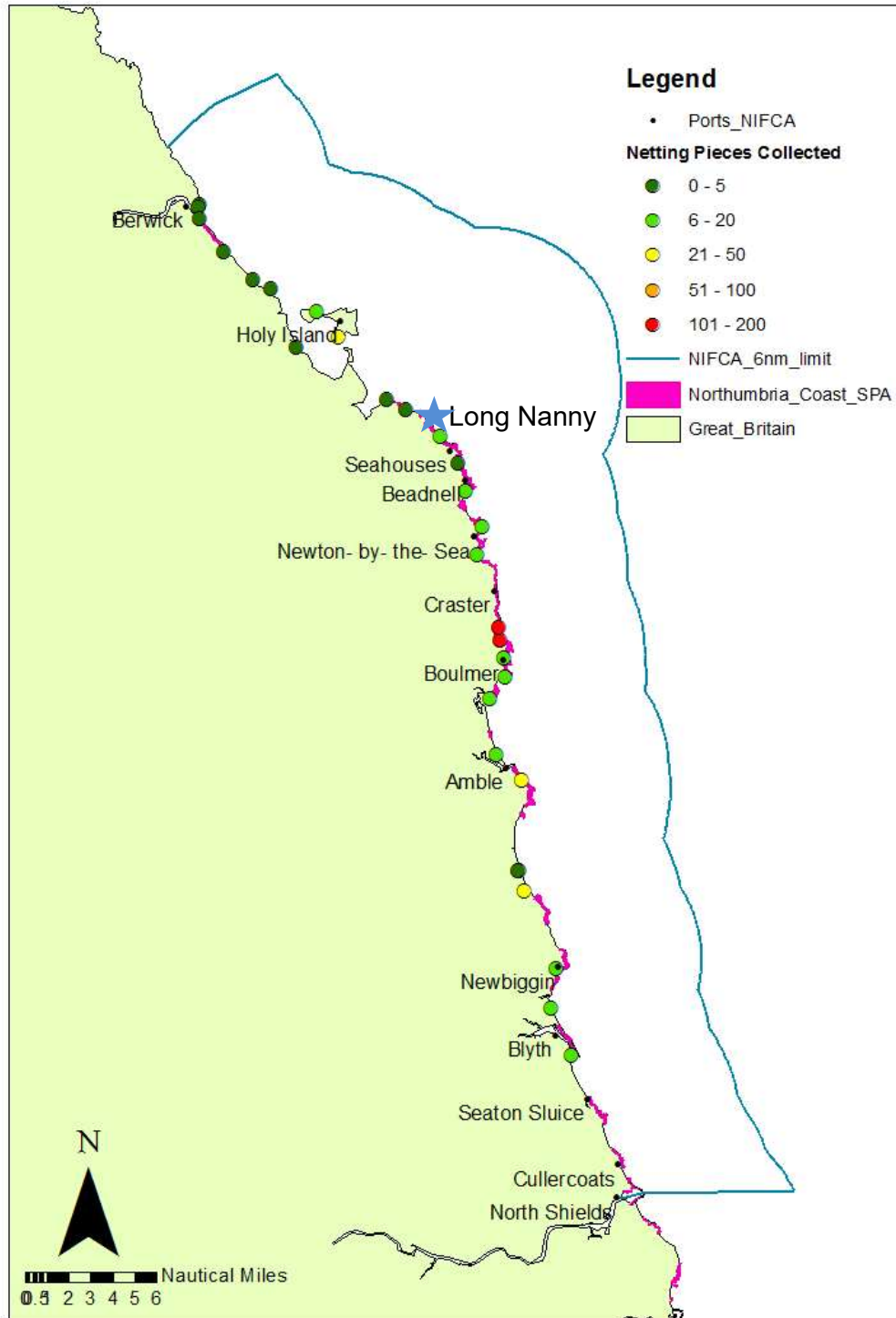
Annex 3: Site boundary map



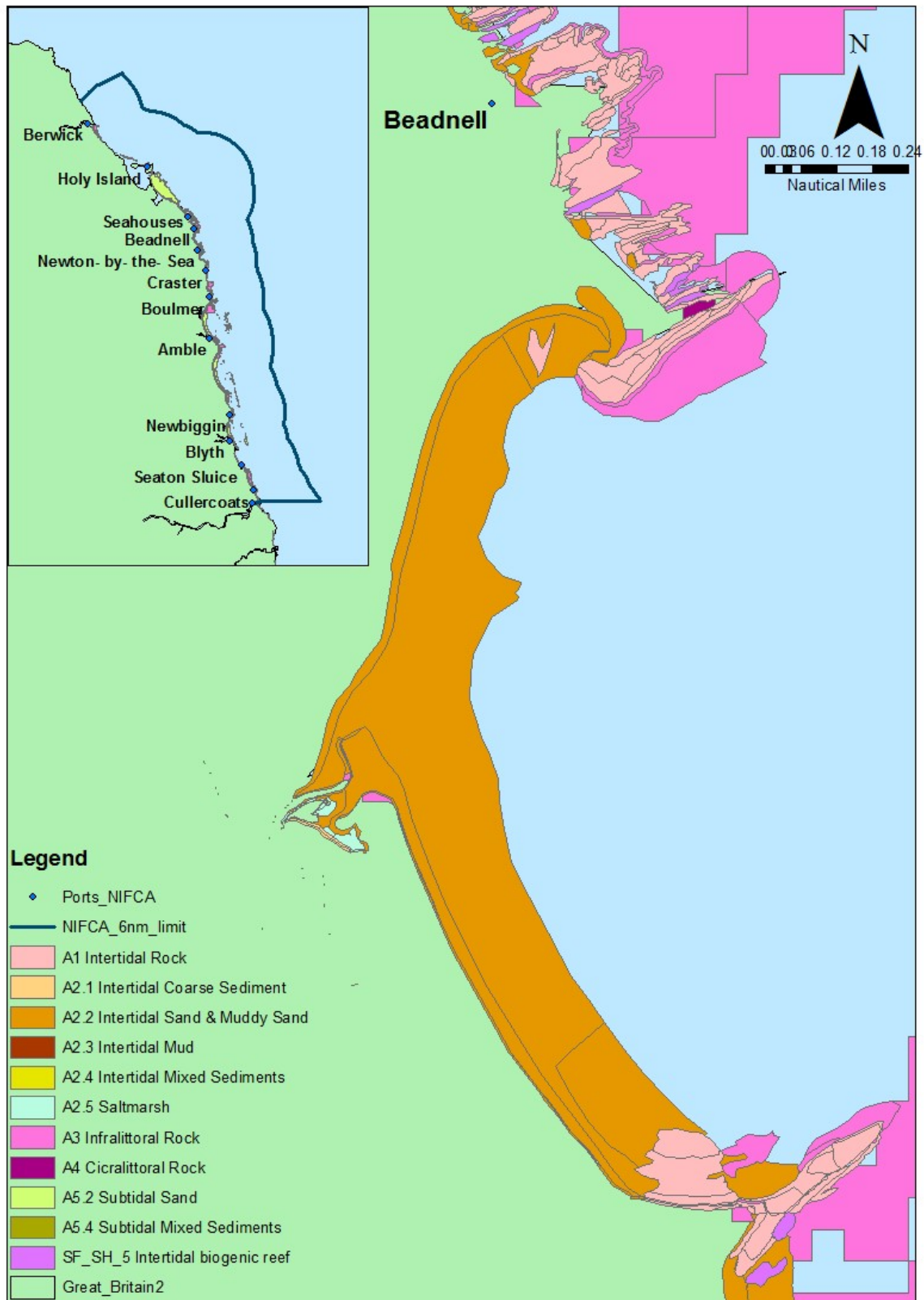
Annex 4: Graph showing the frequency a piece of fish netting was collected during beach litter surveys conducted by the Marine Conservation Society across the NIFCA district. Surveying effort was standardised in the analysis of this data to account for varying number of surveys and length of beach.



Annex 5: Map displaying levels of fishing net recorded in Marine Conservation Society beach litter surveys along NIFCA district coastline over 10 year period. Size of pieces of netting found is classed as small (<50cm) or large (>50cm) and have been grouped together for the purposes of this map.



Annex 6: Extent of supporting habitats for classified birds of Northumbria Coast SPA Long Nanny only. Arc GIS data files provided by Natural England, projected Dec 2016.



Annex 7: Monitoring and Control Plan Record and Re-assessment.

Table 4 | *Static Nets Monitoring and Control Plan Record showing “Year Assessed”, “Date Complete”, Total Risk Score”, “Risk Level”, if the result “Triggers Re-assessment” and whether “Further Management is Required”.*

Year Assessed	Date Complete	Total Risk Score	Risk Level	Triggers Re-assessment?	Further Management Required?
2017					
2018	08/01/2018	75	High	Yes	No
2019					

2018:

The number of vessels fishing within the NIFCA district, number of days nets fished and length of net fished in 2018 have all decreased from the 2015 baseline values. The re-assessment has been triggered due to high scores caused by ghost fishing nets and the associated bycatch which were removed by NIFCA and St Mary’s Seal Watch from Sector 1 in April 2018. The ghost nets have been removed from the marine environment. The fisher responsible has also retired from fishing so there should not be a repeat occurrence by this fisher.

As there has been a decrease in static netting activity within the NIFCA district compared to the 2015 baseline and as the fisher responsible for the ghost fishing incident which triggered this re-assessment is no longer fishing it is felt that no further Management is required at this time. NIFCA will continue to monitor static netting activity and its interaction with features of Northumbria Coast SPA.