

**Habitat Regulations Assessment document: LINSPA – tLSE 024**

<b>Marine Conservation Zone:</b>	<b>Lindisfarne SPA</b>
<b>Generic sub-feature(s):</b>	<b>Intertidal mud, Intertidal mud and sand, Intertidal gravel and sand, Estuarine birds.</b>
<b>Gear type(s):</b>	<b>Digging with forks</b>
<b>NIFCA MCZ Assessment type:</b>	<b>Detailed</b>
<b>Gear/feature interaction reference(s):</b>	<b>LINSPA-623 LINSPA-624 LINSPA-625 LINSPA-626</b>

<b>Revision history</b>		
<b><i>Date</i></b>	<b><i>Revision</i></b>	<b><i>Editor</i></b>
21/09/2018	Document created	AA
25/09/2018	Content added to section 5 for Sediment features.	NW
26/09/2018	Content added to section 5 for Estuarine birds.	NW
01/10/2018	Content added Section 5 for Estuarine birds	NW
12/12/2018	Seagrass feature added	AA
24/02/2024	Seagrass feature removed (assessed separately)	SR
03/03/2025	Reviewed and updated	SR
18/09/2025	Reviewed with NE	SR/AA/CLS/PW
22/09/2025	Edited after NE review	SR
30/10/2025	Signed off and finalised with NE	SR/AA/CLS/PW

**Test for Likely Significant Effect (LSE)**

**LINSPA-623:** Intertidal mud

**LINSPA-624:** Intertidal mud and sand

**LINSPA-625:** Intertidal gravel and sand

<p><b>1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?</b></p>	<p>No</p>
<p><b>2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)?</b></p> <p>Pressures listed are all those for which the feature is deemed to be sensitive. Pressures in bold are Medium-High Risk. The sensitivities listed are based on the 2018 conservation Advice available on Natural England's Designated Site System.</p>	<ul style="list-style-type: none"> <li>- <b>Abrasion/disturbance if the substrate on the surface of the seabed</b></li> <li>- <b>Habitat structure changes – removal of substratum (extraction)</b></li> <li>- <b>Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</b></li> <li>- <b>Removal of non-target species</b></li> <li>- <b>Removal of target species</b></li> <li>- Introduction or spread of invasive non-native species</li> </ul> <p>Intertidal mud and sand only:</p> <ul style="list-style-type: none"> <li>- Deoxygenation</li> <li>- Introduction of light</li> </ul>
<p><b>3. Is the feature potentially exposed to the pressure(s)?</b></p>	<p>Yes</p>

**4. What are the conservation objectives for the feature?**

Conservation advice for the feature is not available for Lindisfarne SPA, therefore advice for the feature from Coquet to St Mary's MCZ available on the Natural England Designated Site System has been used to inform this assessment.

- Maintain the presence and spatial distribution of intertidal communities.
- Maintain the total extent and spatial distribution of intertidal sediment.
- [Maintain OR Recover OR Restore] the abundance of listed species\*, to enable each of them to be a viable component of the habitat.
- Restrict the introduction and spread of non-native species and pathogens, and their impacts.
- Maintain the distribution of sediment composition types across the feature.
- Maintain total organic carbon (TOC) content in the sediment at existing levels.
- Maintain the species composition of component communities.
- Maintain the presence of topographic features, while allowing for natural responses to hydrodynamic regime, by preventing erosion or deposition through human-induced activity.
- Maintain the natural physical energy resulting from waves, tides and other water flows, so that the exposure does not cause alteration to the biotopes and stability, across the habitat.
- Maintain the natural physico-chemical properties of the water.
- Restrict surface sediment contaminants (<1cm from the surface) to below the OSPAR Environment Assessment Criteria (EAC) or Effects Range Low (ERL)
- Maintain sediment transport pathways to and from the feature to ensure the replenishment of habitats that are reliant on the sediment supply.
- Restrict aqueous contaminants to levels equating to High Status according to Annex VIII and Good Status according to Annex X of the Water Framework Directive, avoiding deterioration from existing levels.

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|  | <ul style="list-style-type: none"><li>- Maintain the dissolved oxygen (DO) concentration at levels equating to High Ecological Status (specifically <math>\geq 5.7</math> mg per litre (at 35 salinity) for 95 % of the year), avoiding deterioration from existing levels.</li><li>- Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels.</li><li>- Maintain natural levels of turbidity (e.g. concentrations of suspended sediment, plankton and other material) across the habitat.</li></ul> |
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<p><b>5. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?</b></p> <p><i>(reference to conservation objectives)</i></p>	<p>The physical disturbance of bait digging can:</p> <ul style="list-style-type: none"> <li>- directly damage and kill infauna, or bury them within the sediment to depths where they may be incapable of surviving (Chandrasekara &amp; Frid, 1998).</li> <li>- disrupt the sediment layers, releasing pollutants from the anoxic layer, and increasing the heavy metal content (Howell, 1985; Fowler, 1999).</li> <li>- reduce the amount of organic matter within the sediment (Watson et al., 2017) diminishing food availability for many species.</li> </ul> <p>The impact of bait digging is proportional to the intensity of digging, which means commercial digging will have a greater impact than recreational digging (Anon, 1992 as cited by JNCC and Natural England, 2011). A study by Tinlin-Mackenzie in 2018 found negative impacts from bait digging on mesofaunal and macrofaunal sediment communities and infaunal abundance. This included reduced species richness and altered community structure, but no impacts on diversity. Infaunal recovery rates from this study were calculated as 77 days whereas previous studies in other areas suggest anything from 1 month up to 3 years for the target species to recover or 140 days to 5 years for infaunal species recovery. If bait digging is sustained and in the same area recovery is longer (Tinlin-Mackenzie, 2018).</p> <p>Due to the selective nature of bait digging, only the target species (lugworm) will be taken from the intertidal sediment features where bait collectors are experienced. Appendix 1 shows a map of habitats within the SPA where lugworm may be found and the voluntary bait collection zone.</p> <p>Within the Lindisfarne SPA bait digging is only permitted within the “Lindisfarne Voluntary Bait Digging Zone”. This zone is relatively small approximately 1000m x 700m and bait digging is prohibited (Nature Conservancy Council for England 1998) within the rest of the Lindisfarne National Nature Reserve</p>
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	<p>(NNR) and therefore the Lindisfarne SPA. Bait digging is also prohibited by NIFCA Byelaw 8 within the BNNC SAC (and therefore Lindisfarne SPA) in an area where seagrass is situated.</p> <p>NIFCA have monitored bait digging activity at Lindisfarne during routine patrols and have recorded no observations within Lindisfarne SPA between October 2016 and December 2024 although there are no sightings recorded by NIFCA this does not mean there is no activity in the area. In the past wardens at the Lindisfarne NNR have reported illegal bait digging activity within the reserve particularly in the dark on big tides but after recent discussions with NIFCA at The Lindisfarne Joint Advisory Committee meeting it has been suggested there are no current concerns around bait digging in the SPA due to lack of activity.</p> <p>NIFCA conclude with <b>high/medium</b> confidence that at current levels (zero activity), bait digging in the intertidal zone is unlikely to cause significant adverse impacts to the sediment features in the SPA as bait digging is already heavily regulated within Lindisfarne NNR/SPA no further legislative management is needed. However, due to past reports of illegal activity NIFCA and Lindisfarne NNR will continue to monitor the site and enforce regulations to reduce/prevent further illegal activity occurring within the site.</p>
<p><b>6. Condition and Conservation Objective Inferences</b></p>	<p>No information on the condition of the Lindisfarne SPA intertidal mud, intertidal mud and sand and intertidal gravel and sand features are available on Natural England’s Designated Sites System.</p>

<p><b>7. Is the potential scale or magnitude of any effect likely to be significant?</b></p>	<p><b>Alone:</b></p> <p><b>No</b></p> <p>Due to the low level of bait digging inside the voluntary bait digging zone and no recent reports of illegal activity in the SPA, NIFCA does not consider that at current levels bait digging activity will significantly impact the features of Lindisfarne SPA</p>	<p><b>OR In-combination</b></p> <p><b>No</b></p>
<p><b>8. Have NE been consulted on this LSE test? If yes, what was NE's advice?</b></p>	<p>Yes, NE have been consulted throughout the assessment process and agree with the outcome of this assessment.</p>	
<p><b>9. Date signed off and agreed by Natural England.</b></p>	<p>30/10/2025 (CLS and PW)</p>	

## Test for Likely Significant Effect (LSE)

LINSPA-626: Estuarine birds

<p><b>1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?</b></p>	<p>No</p>
<p><b>2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)?</b></p> <p>Pressures listed are all those for which the feature is deemed to be sensitive. Pressures in bold are Medium-High Risk. The sensitivities listed are based on the 2018 conservation Advice available on Natural England's Designated Site System.</p> <p>*Applies to Red-breasted merganser only **Applies to Little tern and Roseate tern only</p>	<ul style="list-style-type: none"> <li>- <b>Removal of non-target species</b></li> <li>- <b>Visual disturbance</b></li> <li>- <b>Above water noise</b></li> <li>- Collision ABOVE water with static or moving objects not naturally found in the marine environment (e.g., boats, machinery, and structures)</li> <li>- Collision BELOW water with static or moving objects not naturally found in the marine environment*</li> <li>- Introduction of light</li> <li>- Introduction or spread of invasive non-indigenous species (INIS)**</li> <li>- Transition elements &amp; organo-metal (e.g. TBT) contamination</li> <li>- Underwater noise changes*</li> </ul>
<p><b>3. Is the feature potentially exposed to the pressure(s)?</b></p>	<p>Yes</p>

**4. What are the conservation objectives for the feature?**

- Maintain safe passage of birds moving between roosting and feeding areas.
- Restrict the frequency, duration and / or intensity of disturbance affecting roosting, foraging, feeding, moulting so that they are not significantly disturbed.
- Maintain the size of the non-breeding population at :
  - o 490 Ringed plover
  - o 110 Red-breasted merganser
  - o 2,700 Light-bellied brent geese
  - o 900 Shelduck
  - o 160 Sanderling
  - o 2,350 Golden plover
  - o whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.
- Restore the size of the non-breeding population to :
  - o 16,400 Wigeon
  - o 3,500 Greylag geese
  - o 3,600 Redshank
  - o 7,500 Bar-tailed godwit
  - o 9,000 Dunlin
  - o 95 Whooper swan
- Maintain concentrations and deposition of air pollutants below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System ([www.apis.ac.uk](http://www.apis.ac.uk))
- Maintain the structure, function and supporting processes associated with the feature and its supporting habitat through management or other measures and ensure these measures are not being undermined or compromised.
- Maintain the extent, distribution and availability of suitable habitat (either within or outside the site boundary) which supports the feature for all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, feeding). The extent of the following supporting habitats is not currently known: Intertidal

	<p>rock, Intertidal coarse sediment, Intertidal sand and muddy sand, Intertidal mud, Intertidal mixed sediments, Intertidal seagrass beds, Intertidal biogenic reef: Sabellaria spp., Intertidal biogenic reef: mussel beds, Intertidal stony reef, Coastal lagoons, Freshwater and coastal grazing marsh, Saltmarsh, which comprises of the following features: Salicornia and other annuals colonising mud and sand, Spartina swards (<i>Spartinion maritimae</i>), Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>).</p> <ul style="list-style-type: none"> <li>- Maintain the distribution, abundance and availability of key food and prey items (eg. invertebrates, marine worms, crustaceans and molluscs, Arenicola, Nereis, Bathyporeia and Mytilus spat, wrack flies, sandhoppers, cereal grains and potatoes, <i>Lolium perenne</i>, <i>Trifolium repens</i>, <i>Phleum pratense</i>, Poa spp., Festuca spp., earthworm, leatherjacket, beetles, spiders, grassland/marsh invertebrates, <i>Hydrobia</i>, <i>Macoma</i>, Corophium, Hydrobia, hatching midges, Macoma, Crangon, Carcinus, dipertan flies, caddisfly, wasps, sawflies, mayflies, Potomageton, Ranunculus, Chara spp., Elodea, Zostera, Ruppia, cereal grains, rape, potatoes and turnips, <i>Lolium perenne</i>, <i>Alopecurus geniculatus</i>, <i>Phleum pratense</i>, salmon, brook lamprey, minnow, gobies, eels, stickleback, gobies, flatfish, herring, shrimps, Ulva spp., Polygonum, Eleocharis, Rumex, Ranunculus, <i>Agrostis stolonifera</i>, <i>Puccinellia maritima</i>, Salicornia spp., Spergularia, <i>Aster trifolium</i>, Plantago, Salicornia spp, <i>Agrostis stolonifera</i>, <i>Trifolium repens</i>) at preferred sizes.</li> <li>- Maintain the availability of grasslands in close proximity (typically &lt;50 m) to open water bodies.</li> <li>- Maintain the frequency of wide (typically 10-30m) river sections.</li> <li>- Maintain water availability in feeding sites and maintain the area of soggy or flooded land overall.</li> </ul>
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- Maintain water availability within feeding areas to maintain moderately high water tables that provide shallow surface water.
- Maintain the availability of fresh water on mudflats within feeding and resting areas.
- Maintain the availability of fresh water on mudflats within feeding and resting areas.
- Maintain the hydrology of waterbodies used as a feeding site such that water levels are able to fluctuate.
- Maintain a high density of channel networks within intertidal feeding areas and shallow slope gradients to the length/perimeter of ditches, drains, pools and scrapes.
- Maintain a high density of channel networks within intertidal feeding areas.
- Maintain the width of beach sections.
- Maintain open and unobstructed terrain around roosting and feeding sites.
- Maintain open and unobstructed terrain and overall field sizes in and around feeding and roosting areas and no overall reduction in field size where relevant.
- Maintain the extent and distribution of predominantly short grassland swards in areas used for feeding.
- Maintain a vegetation structure of key roost sites dominated by bare ground or a short sparsely-vegetated sward.
- Maintain the number and size of waterbodies of optimal size.
- Maintain the availability of standing water at optimal depths on site.
- Reduce aqueous contaminants to levels equating to High Status according to Annex VIII and Good Status according to Annex X of the Water Framework Directive, avoiding deterioration from existing levels.
- Maintain the dissolved oxygen (DO) concentration at levels equating to High Ecological Status (specifically  $\geq$

	<p>5.7 mg per litre (at 35 salinity) for 95 % of the year), avoiding deterioration from existing levels.</p> <ul style="list-style-type: none"><li>- Restore water quality to mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features.</li></ul> <p>Maintain natural levels of turbidity (e.g. concentrations of suspended sediment, plankton and other material) across the habitat.</p>
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<p><b>5. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?</b></p> <p><i>(reference to conservation objectives)</i></p>	<p>Shore-based fishing activity has the potential to interact with the seabird features of the SPA in two main ways. The first is by targeting the prey species of the seabirds, the second is by causing visual and noise disturbance, which can cause displacement of birds. Shore-based activity could affect the availability of key prey species for seabirds, if carried out at very high level.</p> <p>Removal of non-target species as a pressure is not a concern as the selective nature of bait digging means bycatch of other species is low where bait diggers are experienced. The estuarine bird features in the SPA consume a range of food sources, with many capable of feeding on both terrestrial and marine prey.</p> <p>Removal of target species is not identified as a pressure in the DSS. However, lugworm is a food source for Bar-tailed Godwit, Dunlin, Ringed Plover, and Sanderling, although these birds also consume a range of other foods.</p> <p>Estuarine birds are highly susceptible to human disturbance and the presence of bait diggers has been shown to reduce shore use by estuarine birds within Lindisfarne SPA (Townshend et al., 1993). The activity is now managed by both Natural England and NIFCA.</p> <p>Peak bait worm demand in winter coincides with the presence of over-wintering and migrating populations of wildfowl and waders with international importance (Townshend et al., 1993). Bait digging is reported to have a number of negative impacts on birds:</p> <ul style="list-style-type: none"> <li>• Disturbance of feeding and roosting activities ((Evans &amp; Clark, n.d.; Watson et al., 2017));</li> </ul>
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- Increased energy expenditure (West, 2002; Masero et al., 2008));
- Food competition (West, 2002; Masero et al., 2008));
- Increased winter mortality (Masero et al., 2008; West, 2002)
- Habitat loss (Fowler, 1999);
- Reduction of invertebrate biomass / prey (van den Heiligenberg, 1987; Fowler, 1999; Bowgen et al., 2015)

The following estuarine bird features that use intertidal mud, intertidal mud and sand, intertidal gravel and sand as a supporting habitat may be directly affected by bait digging activity:

- Golden plover
- Grey plover
- Ringed plover
- Shelduck
- Wigeon
- Dunlin
- Bar-tailed godwit
- Sanderling

In addition to using these supporting habitats for foraging and feeding, the ringed plover, bar-tailed godwit, dunlin and sanderling consume lugworm as part of their diet so would potentially be subject to disturbance on the shoreline.

However, due to their varied diet and the low levels of bait digging observed within the SPA (zero activity) it is unlikely that this activity will cause any significant impact to these estuarine birds.

Within the Lindisfarne SPA bait digging is only permitted within the "Lindisfarne Voluntary Bait Digging Zone" (Appendix 1). This zone is relatively small approximately 1000m x 700m and

bait digging is prohibited (Nature Conservancy Council for England 1998) within the rest of the Lindisfarne National Nature Reserve (NNR) and therefore the Lindisfarne SPA. Bait digging is also prohibited by NIFCA Byelaw 8 within the BNNC SAC (and therefore Lindisfarne SPA) in an area where seagrass is situated.

NIFCA have monitored bait digging activity at Lindisfarne during routine patrols and have recorded no observations within Lindisfarne SPA between October 2016 and December 2024. Although there are no sightings recorded by NIFCA, this does not mean there is no activity in the area. In the past wardens at the Lindisfarne NNR have reported illegal bait digging activity outside the voluntary bait digging zone within the reserve particularly in the dark on big tides, but after recent discussions with NIFCA at The Lindisfarne Joint Advisory Committee meeting it has been suggested there are no current concerns around bait digging in the SPA due to lack of activity.

NIFCA conclude with **high/medium** confidence that at current levels (zero activity) bait digging in the intertidal zone is unlikely to cause significant adverse impacts to the estuarine bird features in the SPA as the risk of disturbance to features is low. Bait digging is already heavily regulated within Lindisfarne NNR/SPA and no further legislative management is needed. However, due to past reports of illegal activity NIFCA and Lindisfarne NNR will continue to monitor the site and enforce regulations to reduce/prevent further illegal activity occurring within the site.

**6. Condition and Conservation  
Objective Inferences**

Estuarine Bird population numbers for Lindisfarne SPA are referenced from the British Trust for Ornithology Wetland Bird Counts (Woodward et al., 2023, 2024)

Species	2022/23 Counts	2023/24 Counts
Bar-tailed Godwit	1,584	1,508
Common Scoter	440+	100
Dunlin	5,159	5,795
Eider	303	441
Golden Plover	2,077	2,235
Grey Plover	772	1,352
Greylag Goose	325	10
Little Tern	21+	140
Long-tailed Duck	0	10+
Red-breasted Merganser	43+	46+
Redshank	637	1,543
Ringed Plover	392	643
Roseate Tern	0	3
Sanderling	166	162+
Shelduck	2,052	2,136+
Whooper Swan	0	25+
Wigeon	16,431	19,599

	<p>Seabird species have been adversely impacted by Avian Influenza during the 2022 and 2023 breeding seasons and this has impacted both population number and the breeding success of some species in the SPA, due to the high mortality of adult birds. Data is not yet available to show the full impact at the four main breeding sites that make up the SPA.</p>	
<p><b>7. Is the potential scale or magnitude of any effect likely to be significant?</b></p>	<p><b>Alone:</b></p> <p><b>No</b></p> <p>NIFCA can say with <b>high/medium</b> confidence that adverse effects to estuarine birds is unlikely due to the low level of bait digging inside the voluntary bait digging zone and no recent reports of illegal activity in the SPA.</p> <p>This will be monitored through the monitoring and control plan process which is currently under development for this activity and any significant increase in activity levels will trigger a reassessment in the SPA</p>	<p><b>OR In-combination</b></p> <p><b>No</b></p> <p>See 'in-combination' assessment below</p>

<b>8. Have NE been consulted on this LSE test? If yes, what was NE's advice?</b>	Yes, NE have been consulted throughout the assessment process and agree with the outcome of this assessment.
<b>9. Date signed off and agreed by Natural England.</b>	30/10/2025 (CLS and PW)

**Table 1** In-combination assessment of digging with forks with other activities within Lindisfarne SPA.

<b>Fishing Activity</b>			
<b>Activity</b>	<b>Description</b>	<b>Potential Pressure</b>	<b>Assessment</b>
Potting on	<p>Potting for European lobster (<i>Homarus gammarus</i>) and brown crab (<i>Cancer pagurus</i>) is the principal fishery within the NIFCA district. Most fishers in the district use parlour pots of various sizes and pots are typically worked in fleets of 10-40, dependant on the size of the vessel.</p> <p>Potting occurs predominantly in and around rocky habitat for lobster and brown crab both commercially and recreationally. Commercial potting takes place on subtidal rocky ground with recreational potting generally taking place on intertidal rocky ground.</p>	<p>In 2023 NIFCA issued 85 Commercial Shellfish Permits to fishers, compared to 93 in 2022, 108 in 2021. The total number of pot hauls in the District was 2,464,412 in 2022, compared to 2,766,681 in 2021 and 2,750,768 in 2020. Pots are limited to 800 per shellfish permit and the fishery is governed by multiple IFCA byelaws.</p> <p>In the NIFCA district recreational potting occurs and numbers are monitored through a permit system. A permit allows fishers to use 5 pots, which must be fitted with escape gaps. In 2023 268 recreational permits were issued.</p>	<p>There will be no spatial overlap with bait digging and potting. Lobsters and brown crab are not a prey species of the seabird features.</p> <p>NIFCA can therefore conclude with high confidence that potting and bait digging will not 'in-combination' increase pressures on the listed features of the SPA.</p>
Handwork from Land	<p>Hand gathering involves the collection of periwinkles, shore crab and lobster by hand from the intertidal rocky areas. The activity is highly seasonal concentrated during the summer months. Activities occur on rocky intertidal areas, the habitat of the target species.</p> <p>NIFCA officers record any intertidal fishing activity observed during routine patrols whenever a site visit coincides with low water (<math>\pm 2</math> hours), as well as 'no activity.'</p>	<p>Within Lindisfarne SPA between October 2016 and December 2024 NIFCA officers observed 4 people in total hand gathering for periwinkles on two separate occasions in 2021 and 1 occasion in 2023. There are 6 other instances of hand gathering activity just outside the SPA including one instance of cleeking.</p> <p>No other hand gathering activity was observed by officers on patrol during another 14 site visits.</p>	<p>Whilst digging with forks and hand work from land could co-occur, handwork from land does not occur frequently within Lindisfarne SPA.</p> <p>Handwork from land does not occur on, intertidal mud, intertidal mud and sand and intertidal gravel and sand.</p> <p>NIFCA can therefore conclude with high confidence that bait digging and hand work from land will not 'in-combination' significantly increase pressures on the listed features of the SPA.</p>
Aquaculture	<p>Pacific Oyster Aquaculture</p> <p>There is a pacific oyster aquaculture operation located on Fenham Flats in Lindisfarne NNR. Oysters are grown in</p>	<p>The operation is located on areas of intertidal mud, intertidal mud and sand, and intertidal gravel and sand with the mussel bed.</p>	<p>The operation is consented through Natural England's consenting process in SSSIs. Natural England monitor the size of the operation through regular surveys. They work with the owners to identify and mitigate any areas of concern.</p>

	net bags which are supported by trestles. Trestles are arranged in rows and grouped mainly on the northern edge of the bed.		NIFCA can therefore conclude with high confidence bait digging will not 'in-combination' significantly increase pressures on the listed features of the SPA.
<b>Non-fishing Activity</b>			
<b>Activity</b>	<b>Description</b>	<b>Potential Pressure</b>	<b>Assessment</b>
Mine water discharge	Abandoned mines are one of the biggest sources of water pollution by metals. There is a mine water treatment scheme at Lynemouth and groundwater upwellings have occurred at Hauxley/Hadston as well as water pumped from a mine, discharged through an existing outfall at Hauxley.	Sediments and invertebrate communities could be negatively impacted by mine water discharges. This could occur where mine water is not treated before release into the marine environment. In the majority of cases significant mine water outflow is identified and treated by the Coal Authority.	Appropriate licence conditions/monitoring has been incorporated to mitigate any impacts.
Coastal management scheme - Northumberland and North Tyneside Shoreline Management Plan 2 (05/2009) covers the coastline from the Scottish border to the River Tyne.	Flood and erosion risk management	Any coastal management works along the coast under the aegis of a Coastal Management Scheme.	As stated in Section (2) of the document projects and plans within the SMP are subjected to its own Appropriate Assessment for proposed work, which assesses any impacts to Lindisfarne SPA.
Coastal Infrastructure and Cable Laying.	Any project in the marine area requiring a marine licence.	Any development in the marine environment with an intertidal element, which may impact features of the site as part of the marine licencing process. Assessments for any development must be carried out in consultation with statutory nature conservations bodies.	All marine licence applications are assessed to ensure appropriate licence conditions/monitoring are in place. These assessments must consider impacts to Marine Protected Areas, with an aim to preferably avoid, then minimise and mitigate impacts to the protected features. NIFCA are consulted on all relevant marine applications, as are other bodies such as Natural England.
<b>Other activities being considered (which are not plans or projects by definition)</b>			
<b>Activity</b>	<b>Description</b>	<b>Potential Pressure</b>	<b>Assessment</b>
Recreational Angling from Vessels	NIFCA record sightings of recreational angling vessels observed during patrols.	NIFCA consider recreational angling to be a relatively small-scale activity, with only 90 sightings of recreational angling vessels in 2024 compared to 443 sightings of commercial potting vessels.	Recreational angling is targeting seafish and not lugworm. There will be no spatial overlap with intertidal collection. NIFCA therefore conclude that there will not be an in-combination effect with bait digging.

## Conclusion

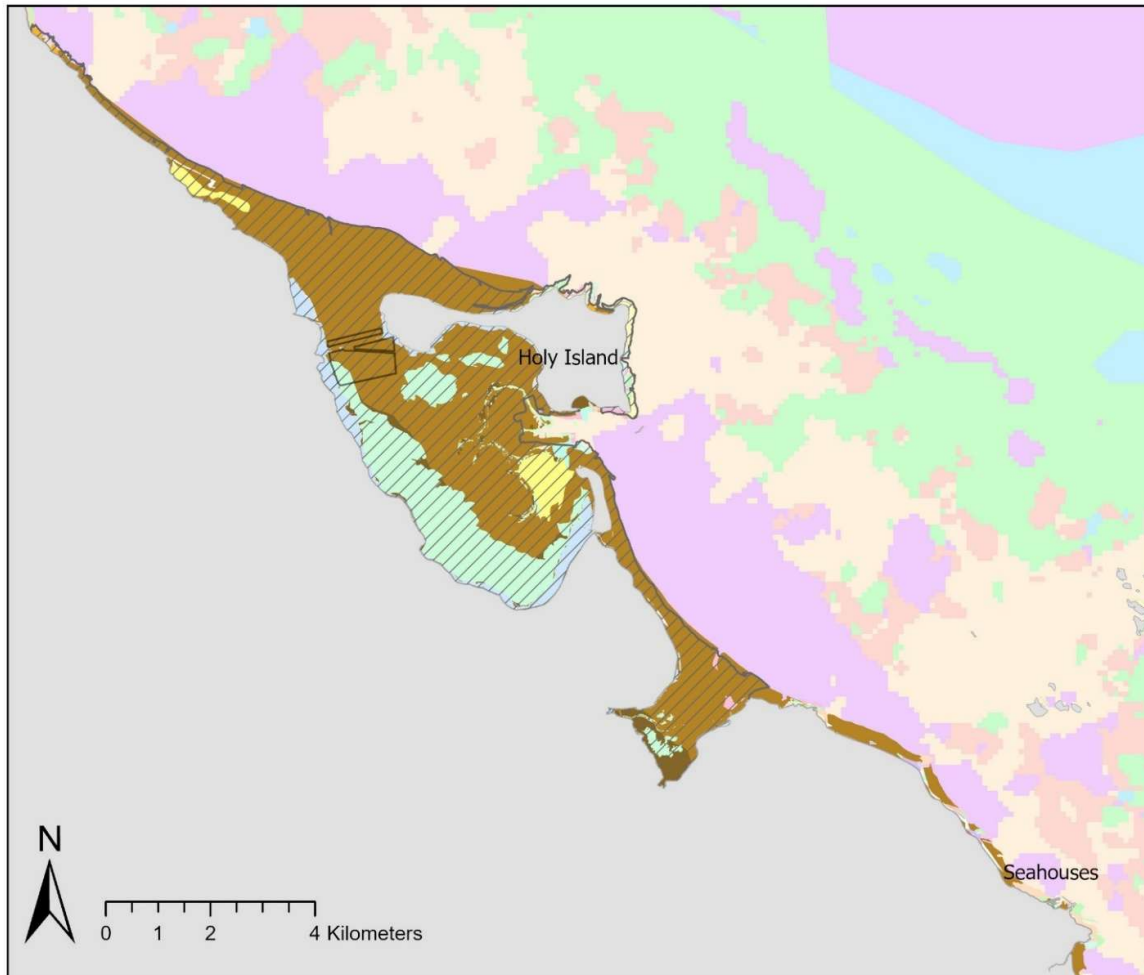
**Is the proposal likely to hinder the conservation objectives of the SPA either 'alone or in combination' on the Lindisfarne SPA?**

No, due to the low level of bait digging inside the voluntary bait digging zone and no recent reports of illegal activity in the SPA, NIFCA believes that bait digging does not hinder the conservation objectives in Lindisfarne SPA. Areas of the SPA, in particular parts of the voluntary bait digging zone contain seagrass beds which are protected by the NIFCA Seagrass protection byelaw therefore reducing the frequency of permitted bait digging activities.

<b>Has Natural England been formally consulted on this tLSE (and do they agree)?</b>	Yes, Natural England have been consulted throughout the process and agree with the conclusions of the assessment.
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<b>Date of document completion/'sign-off':</b>	30/10/2025 (CLS and PW)
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**Appendix 1 – Lindisfarne SPA map and EUNIS habitats.**



**Legend**

Lindisfarne SPA	A2.1 Littoral coarse sediment	A2.8 Features of littoral sediment	A5 Sublittoral sediment
Bait Digging Zone	A2.2 Littoral sand and muddy sand	A3.1 High energy infralittoral rock	A5.1 Sublittoral coarse sediment
<b>Habitat</b>	A2.3 Littoral mud	A3.2 Moderate energy infralittoral rock	A5.2 Sublittoral sand
A1 Littoral rock and other hard substrata	A2.4 Littoral mixed sediments	A3.3 Low energy infralittoral rock	A5.3 Sublittoral mud
A1.1 High energy littoral rock	A2.5 Coastal saltmarshes and saline	A4.1 High energy circalittoral rock	A5.4 Sublittoral mixed sediments
A1.2 Moderate energy littoral rock	A2.6 Littoral sediments dominated by aquatic angiosperms	A4.2 Moderate energy circalittoral rock	A5.6 Sublittoral biogenic reefs
A1.3 Low energy littoral rock	A2.7 Littoral biogenic reefs	A4.3 Low energy circalittoral rock	B3.1 Supralittoral rock (lichen or splash zone)
A1.4 Features of littoral rock			

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