

Conservation Advice for North East of Farnes Deep Highly Protected Marine Area

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This resource forms part of the North East of Farnes Deep HPMA Conservation Advice, and is available on JNCC’s Resource Hub at <https://hub.jncc.gov.uk/assets/5c5def7f-e1a0-4a7f-8078-a0ff3050a4fb>.

Background to JNCC's formal conservation advice on Highly Protected Marine Areas

Purpose of this advice

This document forms part of JNCC's formal conservation advice for the North East of Farnes Deep Highly Protected Marine Area and must be read in conjunction with JNCC and Natural England's [High-level Conservation Advice for Public Authorities on Highly Protected Marine Areas](#). The most up-to-date conservation advice for this HPMA can be downloaded from the conservation advice tab in the [Site Information Centre \(SIC\)](#) and [JNCC's Resource Hub](#).

The purpose of this advice is to support Public Authorities to exercise their functions in a manner that furthers, or least hinders, the conservation objective for the North East of Farnes Deep Highly Marine Protected Area (HPMA) under Sections 125 and 126 of the [Marine & Coastal Access Act \(2009\)](#). Given that the HPMA overlaps entirely with the North East of Farnes Deep Marine Conservation Zone (MCZ), this HPMA site-level advice supersedes JNCC's previously published conservation advice on the North East of Farnes Deep MCZ.

JNCC's role in providing conservation advice

Under [Section 127 of the Marine & Coastal Access Act \(2009\)](#), JNCC may give advice and guidance as to:

- matters which are capable of damaging, or otherwise affecting, the protected feature;
- matters which are capable of affecting any ecological or geomorphological process on which the conservation of the protected feature is dependent; and
- how the conservation objective stated for the site may be furthered, or least hindered.

How the advice has been prepared

The conservation advice for this site has been developed using best available evidence and expert interpretation in accordance with [JNCC's Evidence Quality Assurance Policy](#), following best practice as set out in [Defra's 2012 Habitats Directive Implementation Review recommendations](#). This advice includes information on the anticipated conservation benefits that the site provides locally and to the wider marine environment.

When to refer to the site's conservation advice

You must refer to this advice if you are:

- intending to carry out any licensed activity in or near the site and need to find out how to operate within the law;
- an authority providing advice on specific proposals;
- an authority responsible for putting management measures in place; and/or
- preparing or providing information for an impact assessment.

You can find further information on undertaking MCZ impact assessments on the [Marine Management Organisation's marine licensing webpage](#).

You may also find it useful to refer to this advice if you are intending to carry out an activity in or near the site that does not require a license.

Using the advice

Our scientific understanding of the ecology and status of the site will change over time and the advice will be periodically updated to reflect this. Updates to the conservation advice for this site will be delivered through the conservation advice section on the [Site Information Centre](#). Users must always refer to JNCC's website for the most up-to-date version of advice, rather than use previously downloaded (or printed) versions.

This document forms part of JNCC's formal conservation advice for the site and must be read in conjunction with other documents listed below:

- [High-level Conservation Advice](#), advising more broadly on activities which are capable of damaging or otherwise affecting the protected feature and thereby likely to hinder the conservation objective of a Highly Protected Marine Area;
- [Advice on Operations workbook](#), providing information on those human activities that are known to occur or could feasibly occur and are considered capable of impacting the protected feature of the HPMA. These activities are grouped into those which are likely to hinder the site's conservation objective and those which may not hinder the site conservation objective if carried out at non-damaging levels; and
- [Advice on Operations guidance](#), explaining the contents of the Advice of Operations and how they can be considered when assessing the impacts on the site from human activities.

Should you have any queries regarding the conservation advice for this site or know of any information pertinent to the site that we should be aware of, please contact us at OffshoreMPAs@jncc.gov.uk.

Site description

As set out by Defra in their [consultation](#), a Highly Protected Marine Area (HPMA) is defined as an:

Area of the sea designated for the protection and recovery of marine ecosystems. It prohibits extractive, destructive, and depositional uses, allowing only non-damaging levels of other activities to the extent permitted by international law.

As set out in the [Designation Order](#) for the site, the feature to be afforded protection is the 'marine ecosystem of the area', (i.e. the whole marine ecosystem within the site boundary) and is defined as:

All marine flora and fauna, all marine habitats and all geological or geomorphological interests, including all abiotic elements and all supporting ecosystem functions and processes, in or on the sea bed, water column and the surface of the sea.

Water column – means the vertically continuous mass of water from the surface of the sea to the sea bed.

The site overlaps entirely with the North East of Farnes Deep Marine Conservation Zone (MCZ) designated in 2013. It is located beyond the 12 nautical mile territorial sea limit in the Northern North Sea Region. It is situated to the east of Berwick-upon-Tweed approximately 55 km from the coast, covering an area of just under 492 km² and ranges in depth from approximately 50 m to 100 m below sea level. Visit [JNCC's MPA Mapper](#) to view and explore data for this HPMA. Please note that because the HPMA protects the entire marine ecosystem, JNCC's MPA Mapper will not display all possible data holdings for the site.

North East of Farnes Deep HPMA has been designated as an HPMA to afford protection to a marine ecosystem which has relatively high levels of biodiversity in comparison to the wider Northern North Sea region. Available evidence indicates a range of habitats and species are present, some of national and international

conservation importance. Please see the evidence section of the [Site Information Centre](#) for more detail of the evidence available for the habitats and species recorded as present in the site.

Species of conservation importance that have previously been recorded in the site include phosphorescent sea-pen and the long-lived ocean quahog, a type of mollusc which is under threat across the broader North-east Atlantic. The seabed in this site comprises four offshore circalittoral sediment types: offshore circalittoral coarse sediment, offshore circalittoral sand, offshore circalittoral mud, and offshore circalittoral mixed sediments. The complex seabed habitats in this area support the key life-cycle stages (spawning and nursery habitats) for at least ten commercially important fish species such as Haddock, Surmullet and Whiting. The area also supports mobile species such as the rare and regionally distinctive European smelt, which is prey for larger fish, seabirds, and mammals. At least ten nationally important seabird species and five marine mammal species have been recorded in the area including Harbour porpoise and White-beaked dolphin.

Geological/geomorphological seabed forms are present in the site and are of a depositional glacial nature and comprise part of the North-East Bank seabed mound or pinnacle.

Conservation objective

The conservation objective for the site is to:

- (a) achieve full recovery of the protected feature, including its structure and functions, its qualities and the composition of its characteristic biological communities present within the North East of Farnes Deep Highly Protected Marine Area, to a natural state, and***
- (b) prevent further degradation and damage to the protected feature, subject to natural change.***

Such that within the site:

1. The ecosystem is allowed to fully recover in the absence of damaging activities such that:
 - a. The ecosystem structure consists of a diverse range of benthic and pelagic communities, habitats and species, including biotic and abiotic components of the ecosystem. These fulfil a variety of functional roles, including supporting key life cycle stages and/or behaviours of marine species.
 - b. The physical, biological and chemical ecosystem processes and functions proceed unhindered, so that the site realises its full ecological potential to deliver goods and services, including habitats and species considered important to the long-term storage of carbon.
 - c. The ecosystem is resilient to change and stressors.
2. Any ecosystem changes brought about by the process of removing anthropogenic pressures should be considered in the context of a naturally recovering ecosystem.
3. The HPMA supports our understanding of how marine ecosystems change and recover in the absence of impacting activities.

Note that this does not prevent human intervention to enable or facilitate recovery or the prevention of degradation or damage.

Conservation benefits

HPMAs take a ‘whole site approach’ in that the whole marine ecosystem within the site is to be afforded protection. If afforded adequate protection, it is expected that the feature will fully recover over time to deliver ecosystem services, summarised in **Table 1**, to the wider marine environment and society.

Table 1. Potential ecosystem services, and societal benefits associated with the North East of Farnes Deep Highly Protected Marine Area.

Ecosystem Service type	Description
Supporting	Restoring the complexity of ecosystems by providing habitats for: <ul style="list-style-type: none"> • Restoring biodiversity; • Preserving biodiversity; • Refugia for life history phases; and • Connectivity between populations (Marcos <i>et al.</i>, 2021)
Provisioning	Providing opportunity for: <ul style="list-style-type: none"> • Increasing biomass of commercial fish species in the wider area through the “spill over effect” (Sala and Giakoumi, 2018). Providing a habitat for both: <ul style="list-style-type: none"> • A variety of fauna which enhances the availability of prey for seabirds, marine mammals and commercially important fish species; and • Nursery and spawning grounds of at least ten commercially important species of fish (Katara <i>et al.</i>, 2021).
Regulating	Nature-based solutions to support climate change mitigation: <ul style="list-style-type: none"> • Offshore circalittoral mud covers 27.63 km² (5.6%) of the site and is thought to be an important habitat in the absorption and storage of atmospheric carbon (JNCC, 2021); and • The potential to fix and store organic carbon from the water column for decades to centuries (Diaz <i>et al.</i>, 2023 and Gregg <i>et al.</i>, 2021).

By achieving full recovery to a natural state, the site will also contribute to delivering against the following ambitions and commitments:

- Leaving nature in a better state than we found it, as set out in Defra's [25 Year Environment Plan](#);
- Achieving good environmental status of UK seas; as set out in the [UK Marine Strategy](#);
- Conserving at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information as set out in the [United Nations Sustainable Development Goal \(SDG\) 14: Conserve and sustainably use the oceans, seas and marine resources](#);
- Safeguard at least 30% of the world's ocean by 2030, as set out under the Convention of Biological Diversity [Kunming-Montreal Global Biodiversity Framework](#);
- An ecologically coherent network of MPAs which are well managed under the Convention for the Protection of the Marine Environment of the North-east Atlantic ([OSPAR Convention](#)), specifically within OSPAR Region II Greater North Sea.

Feature condition

JNCC advises that the marine ecosystem feature of the HPMA is not in a fully recovered condition and so the site's conservation objective is not being met.

This view is supported by a recent monitoring report for the underlying North East of Farnes Deep MCZ (Gallyot *et al.*, in press), which shows that benthic trawling is influencing the presence and distribution of benthic communities within the site.

Information on human activities supports the fact that the marine ecosystem has been exposed to damaging pressures associated with activities listed in **Table 2**, which are considered capable of impacting the condition of the protected feature. For information about different pressures associated with the activities that are considered to already take place, or could conceivably take place, within or near to

the HPMA and whether they are considered capable of hindering the achievement of the site's conservation objective, please see the [Advice on Operations Workbook](#).

Please see the [High-Level Conservation Advice for Public Authorities on HPMA](#)s for more information about the approach used to determine whether an activity is likely to hinder or may not hinder the conservation objective of an HPMA.

JNCC advises that in order to achieve full recovery of the feature (i.e. marine ecosystem of the area), activities listed in **Table 2** which are likely to hinder the conservation objective for the HPMA must be avoided unless a Public Authority MCZ assessment determines otherwise, and those which may not hinder the conservation objective for the HPMA should only be allowed to occur if at non-damaging levels as established through an assessment.

Table 2. Activities that are considered to already take place, or have previously taken place, within the North East of Farnes Deep HPMA and whether they likely to hinder or may not be likely to hinder the achievement of the conservation objective. (Note descriptions are taken from JNCC's [Pressures-Activities database](#)).

Operation	Activity	Description	Likely to hinder	May not hinder
Defence and national security	Aerial military activity	Military exercises undertaken that involve the use of the air space above the sea (e.g. Aircraft flying, air to sea or ground firing with exploding shells).		✓
Energy Generation	Seismic survey (for oil and gas exploration)	Any survey that uses airguns, including 2D/3D/4D and OBC (On Bottom Cabling) surveys and any similar techniques that use airguns.	✓	
Extraction of living resources	Demersal seine netting	Activity includes demersal anchor/Danish seines and Scottish seines, as well as beach seines that come into contact with the seabed.	✓	
Extraction of living resources	Demersal trawling	Activity includes beam trawls, demersal otter trawls, demersal pair trawls (excludes electronic pulse fishing).	✓	
Extraction of living resources	Diving (incl. removal of living resources)	Collection of target species by divers, snorkelers. Includes recreational diving.	✓	
Extraction of living resources	Dredging (shellfish)	Activity includes dredging (non-hydraulic) for shellfish (e.g. scallops, oysters, mussels (including seed), clams & cockles). Includes dredges towed by vessels and tractors.	✓	
Extraction of living resources	Pelagic fishing (or fishing activities that do not interact with seabed)	Activity includes gears that do not interact with the seabed (e.g. pelagic/mid water trawls, drift nets, pelagic seines and pelagic long lines). Also includes handlines and rod & line angling (vessel-based) (*where no anchoring occurs*).	✓	
Extraction of living resources	Set (fixed) net fishing	The targeted removal of fish species using static nets that are left in place for a period of time before being recovered to retrieve the caught fish. Example gear types: gillnets (GEN, GN, GNC, GND, GNS, GTR) and boat operated lift nets (LNB).	✓	

Operation	Activity	Description	Likely to hinder	May not hinder
Other man-made structures	Cultural and heritage sites (e.g. wrecks, sculptures, foundations, etc.)	Presence of historic anthropogenic structures such as wrecks, sculptures, and foundations.	✓	
Recreation and leisure	Powerboating or sailing with an engine	Includes impacts from installed moorings, impacts from anchors and impacts of boat when at anchor or mooring. Impacts from boats getting to and from moorings should be assessed in the 'participation' category.	✓	
Recreation and leisure	Sailing without an engine	Includes impacts from installed moorings, impacts from anchors and impacts of boat when at anchor or mooring. Impacts from boats getting to and from moorings should be assessed in the 'participation' category.	✓	
Transport	Vessel discharges/emissions	Includes operational, incidental and accidental discharges/emissions from all types of vessels, including exhaust fumes, wastes and waste water, sewerage, oils, lubricants and chemicals, marine litter and other flotsam and jetsam.	✓	
Transport	Vessel movements	Movement of all commercial or 'non-recreation' vessels of all scales, from container ships, tankers, cruise liners to pilot vessels, tugs and small water craft. (Including fishing vessels when not fishing.)		✓

Advice on operations

The [Advice on Operations workbook](#) covers activities that are known to take place, or could conceivably take place, within or close to the HPMA. It provides advice on which activities are associated with pressures that:

- Are likely to hinder the site's conservation objective and should be avoided unless the public authority's MCZ assessment determines otherwise; and
- May not hinder the site's conservation objective and should be assessed to establish non-damaging levels.

This advice draws from our understanding of what activities are occurring or could feasibly occur within or near to the site and Section 6 of the [High-level Conservation Advice for HPMA's](#), which provides more detail on how activities were assessed as likely to hinder or may not hinder the conservation objective according to the likelihood of pressures being exerted by activities and the sensitivity of a range of protected habitats and species in the English MPA network.

[Advice on Operations guidance](#) has been created to support application of the [Advice on Operations workbook](#) and how to apply it to undertake an assessment. The workbook should be used in conjunction with the specific details of a proposed plan or project (e.g. indirect and/or additive impacts, activity duration, time of year, scale, etc.) and site-specific ecological information, to undertake assessments of impacts to the marine ecosystem feature. You may find ecological site information available on the [Site Information Centre](#) useful for an assessment.

References

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