

Draft Fisheries Assessment – Darwin Mounds SAC

August 2024

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Executive Summary

The scope of this fisheries assessment is the [Darwin Mounds Special Area of Conservation \(SAC\)](#) located approximately 160 km north-west of Cape Wrath, Scotland, at the north end of the Rockall Trough and varies in depth from 710 meters to 1,129 meters. This site occurs in the offshore region (12-200 nautical miles, nm).

The site is designated for Annex I Reef; stony, bedrock and biogenic reef. The conservation objectives for the site are for the feature to be in favourable condition thus ensuring site integrity in the long term and contribution to Favourable conservation status of Annex I Reefs. [JNCC conservation statements](#) provide the view that the overall condition of the site's qualifying feature is in unfavourable condition and therefore needs to be restored to favourable condition.

In Part A, fishing activities currently occurring within the site (data from 2015 – 2019) were screened and grouped into aggregated gear types. Throughout this draft fisheries assessment the data from 2015-2019 is referred to as the current levels of activity. There were no gear types considered relevant to the Annex I Reefs which could be aggregated. Mid-water trawl were the only identifiable gear type occurring within the site. The pressures exerted from this pelagic gear were assessed against the sensitivities of the protected reef feature. Due to the pressures exerted from the gears and the lack of interaction with the seabed, no pressure-feature interactions were identified.

As no fishing activity were identified and assessed as having the potential to have a Likely Significant Effect (LSE) on the protected feature or adverse effect on site integrity, no further assessment (Part B & C) was undertaken.

Considering the management already within the site and no fishing activity being present which could potentially have a significant effect on the protected feature or result in adverse effect on site integrity, Scottish Ministers did not identify any further management options for consideration.

The decision as to any management measures to be taken forward will be made following a statutory public consultation exercise and will be taken in the light of all relevant obligations incumbent upon the Scottish Ministers in relation to the exercise of their functions.

1. Introduction

1.1 Scope of the Darwin Mounds SAC assessment

The geographic scope of this assessment covers the whole of the Darwin Mounds SAC (Figure 1) in the offshore region (12-200 nautical miles, nm). The purpose of this assessment is to determine whether the current levels of fishing activity occurring within the site are compatible with the conservation objectives of the Darwin Mounds SAC and to identify options for management measures.

In this assessment, Scottish Ministers use the best available evidence to review the site characteristics and current fishing activity (Part A) both taken alone and in combination with other relevant activities (Part C), to determine if there is the potential for these activities to have a likely significant effect (LSE) on the protected feature of the site (Annex I Reef). Any fishing activities with the potential for LSE, either alone or in combination with other relevant activities, are considered further to assess whether they could result in an adverse effect on site integrity (Part B).

Where there is the potential for an adverse effect on site integrity, management measures are identified for the site by Scottish Ministers. These measures are considered in light of the conservation objectives, biological characteristics of protected features, current fishing activity and existing fisheries restrictions for Darwin Mounds SAC. A final decision on which measures, if any, are to be adopted will follow upon a statutory consultation exercise and will take into account all relevant statutory obligations incumbent upon Scottish Ministers

A methodology document has been prepared to aid understanding of these assessments.

1.2 Site description

The [Darwin Mounds SAC](#) is located approximately 160 km north-west of Cape Wrath at the north end of the Rockall Trough. The protected reef feature types within the site are stony, bedrock and biogenic reefs.

The site contains an extensive area of sandy mounds, each capped with multiple thickets of cold-water corals. Unlike most cold-water corals which attach to hard-surfaces, at this site the corals grow on sand. The thickets of coral range in size from one to several metres in diameter and support many other species, such as starfish, sponges and large populations of xenophyophores. Xenophyophores are the world's largest single-celled organisms and are only found in deep-sea environments. They provide shelter for a range of small sea creatures, many of which are prey for larger species, and act as an elevated perch for filter feeders such as brittlestars.

The reef habitat on top of the mounds within the site is formed primarily from *Lophelia pertusa*, another cold-water coral – *Madrepora oculata* – is also present. The thickets of cold-water corals provide a habitat for echinuran worms, brittlestars, brisingiid starfish and sponges. Various fish have been observed among the mounds, but not at higher densities than the wider environment.

The Conservation Objectives for the Annex I Reef at Darwin Mounds are:

Subject to natural change, maintain or restore the reef in/to favourable condition, such that:

- The extent and distribution of the qualifying habitat in the site;
- The structure and function of the qualifying habitat in the site; and
- The supporting processes on which the qualifying habitat relies

are maintained or restored, thereby ensuring the integrity of the site and also making an appropriate contribution to favourable conservation status of the Annex 1 habitats (see the [Darwin Mounds SAC Relevant Documentation and & Conservation Advice 2018](#)). More information regarding the Designation Orders for the Darwin Mounds SAC is available in the [Standard Data Form](#).

More information regarding the conservation objectives for the protected feature of Darwin Mounds SAC is available within the site's conservation advice package available on [JNCC's Darwin Mounds site information centre](#).

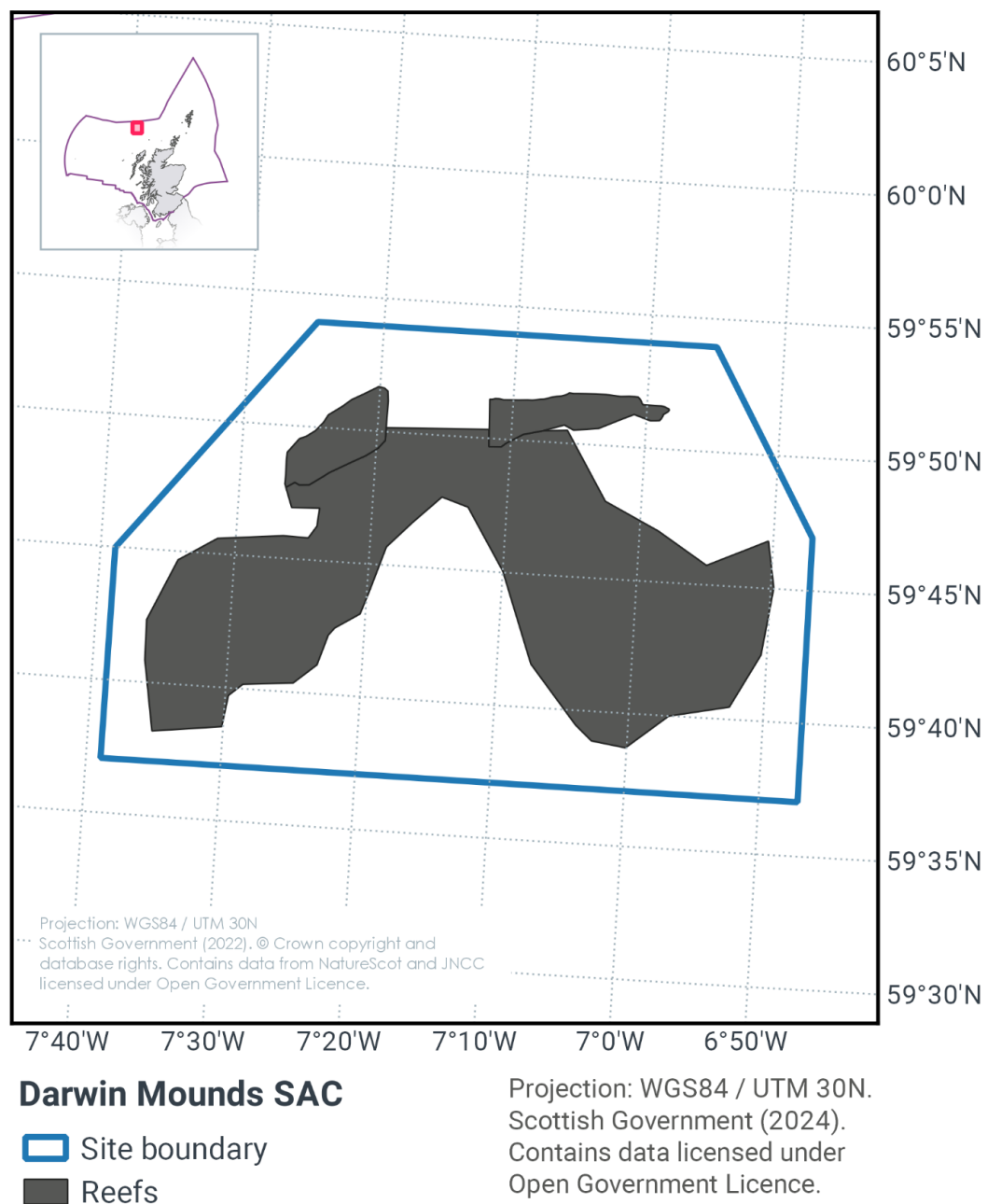


Figure 1. Darwin Mounds SAC site boundary and distribution of protected features.

1.3 Activities assessed

The process followed to conduct this 'Fisheries Assessment' is in line with the process for a Habitats Regulation Appraisal, as required under [Article 6\(3\) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora \(the Habitats Directive\)](#); for sites within the offshore region under [Regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017](#).

In this context, fishing activity within the SAC is considered to be the plan or project, and the implications of the fishing activity in view of the conservation objectives for the SAC are being assessed through the fisheries screening stage (Part A), the fisheries assessment (Part B), and the in combination (cumulative effect) assessment (Part C).

Fisheries assessments use the best available evidence to fully consider potential impacts of commercial fishing activity, and in-combination (cumulative) effects with other plans and projects, against the conservation objectives for the site. If the assessment concludes that use of certain fishing gear types is not compatible with the conservation objectives of the site, management measures will be considered.

Commercial sea fishing activity has the potential to vary in nature and intensity over time. This assessment considers fishing activity based on activity levels and type between 2015-2019. This date range was considered to provide the best available data on current fishing activity levels for the assessment. Using a five year date range provides an average view of fishing activity within the site; latter years (2020 – 2021) were not considered representative of regular fishing activity due to the Covid pandemic. The selected date range (2015 – 2019) was used consistently across all assessments within the consultation package. Changes in fishing activity after this time period may be considered in future reviews of this assessment (see Section 4).

2. Part A Assessment – fisheries screening

2.1 Fisheries screening overview

Part A of this assessment meets the 'likely significant effect (LSE)' test under [Article 6\(3\) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora \(the Habitats Directive\)](#); for sites within the offshore region under [Regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017](#). The test for likely significant effect under [Regulation 28\(2\)\(b\) of the Conservation of Offshore Marine Habitats and Species Regulations 2017](#) is not required for activities which are directly connected with or necessary to the management of the site. Fishing activities are not considered to be directly connected with or necessary to the management of the site unless otherwise indicated.

In line with the guidance within [EU Commission guidance on the Assessment of plans and projects significantly affecting Natura 2000 sites; a methodological guidance on the provisions of Article 6 \(3\) and \(4\) of the Habitats Directive 92/43/EEC](#), this assessment considers an LSE as any effect that may reasonably be

predicted as a consequence of a plan or project that would negatively and significantly affect the conservation objectives established for the designated habitats and species of the protected area. If any likely significant effect of a plan or project cannot be excluded beyond reasonable doubt, then a full appropriate assessment should be undertaken.

In Part A of this assessment the pressure-feature interactions were assessed to determine the potential for LSE and risk to the conservation objectives. This section looks at the pressures exerted by the fishing activity occurring in the site (within the assessment period) in relation to the sensitivities of the protected features. The potential for an LSE was identified where there was both a medium-high risk of a pressure arising from the fishing activity and if any of the features were considered sensitive to that pressure. These pressure-features interactions were then taken forward to the appropriate assessment stage (Part B) to determine whether the plan or project would have an adverse impact on site integrity. For each activity assessed in Part A, there were three possible outcomes for each identified pressure-feature interaction:

For each activity assessed in Part A, there were two possible outcomes for each identified pressure-feature interaction:

1. The pressure-feature interactions were not included for Part B:
 - a. If the feature is not exposed to the pressure, and is not likely to be in the future; or
 - b. If the effect/impact of the pressure is not likely to be significant.
2. The pressure-feature interactions were included for assessment in Part B:
 - a. If the feature is exposed to the pressure, or is it likely to be in the future; and
 - b. If the potential scale or magnitude of any effect is likely to be significant; or
 - c. If it is not possible to determine whether the magnitude of any effect is likely to be significant.

Part B of the assessment aligns with the requirements for an Appropriate Assessment under the [Conservation of Offshore Marine Habitats and Species Regulations](#) 2017 (as amended) and considers the potential impact to site integrity by assessing the impact of fishing gears identified in Part A. This involves determining the potential level of interaction between the feature and the fishing activity, assessing the potential impact on the feature, and subsequently if fishing activities are liable to affect the conservation objectives of the site and thus the integrity of the site

This involves determining the level of interaction between the feature and the fishing activity, assessing the potential impact on the feature, and subsequently if fishing activities are liable to affect the conservation objectives of the site and thus the integrity of the site (as amended) and considers the potential impact to site integrity by assessing the impact of fishing gears identified in Part A. This involves determining the level of interaction between the feature and the fishing activity,

assessing the potential impact on the feature, and subsequently if fishing activities are liable to affect the conservation objectives of the site and thus the integrity of the site.

Consideration of exposure to and the effect of a pressure on a protected feature of the SAC includes the consideration of exposure to and the effect of that pressure on any ecological or geomorphological process on which the conservation of the protected feature is wholly or in part dependant.

The JNCC [Advice package](#) (JNCC, 2018) and [Advice on Operations](#) (JNCC, 2018) has been used to inform this assessment. This is the most recent assessment package available.

2.2 Activities taking place within Darwin Mounds SAC

To screen out fishing activities that were not taking place within the site or likely to take place in the future, vessel monitoring system (VMS) data within Darwin Mounds SAC from 2015 – 2019 were analysed to identify the gear types being used in the site and the aggregated gear method. The data shows that the only form of fishing activity taking place within this is mid-water trawl, which has been classed as Pelagic fishing.

Existing management measures in place (Figure 2) within Darwin Mounds SAC were implemented through the technical regulations process. An emergency fisheries closure for demersal towed gear under Regulation (EC) 602/2004 was introduced at the site in August 2003 to protect deep-water coral reefs. In March 2004, this became a permanent fisheries closure for demersal towed gear and has since been implicitly repealed and replaced by an SAC designation in 2015 and [Regulation \(EU\) 2019/1241](#), protecting sensitive habitats including vulnerable marine ecosystems (VMEs). This regulation prohibits the deployment of any bottom trawl or similar towed nets across the full area of the site.

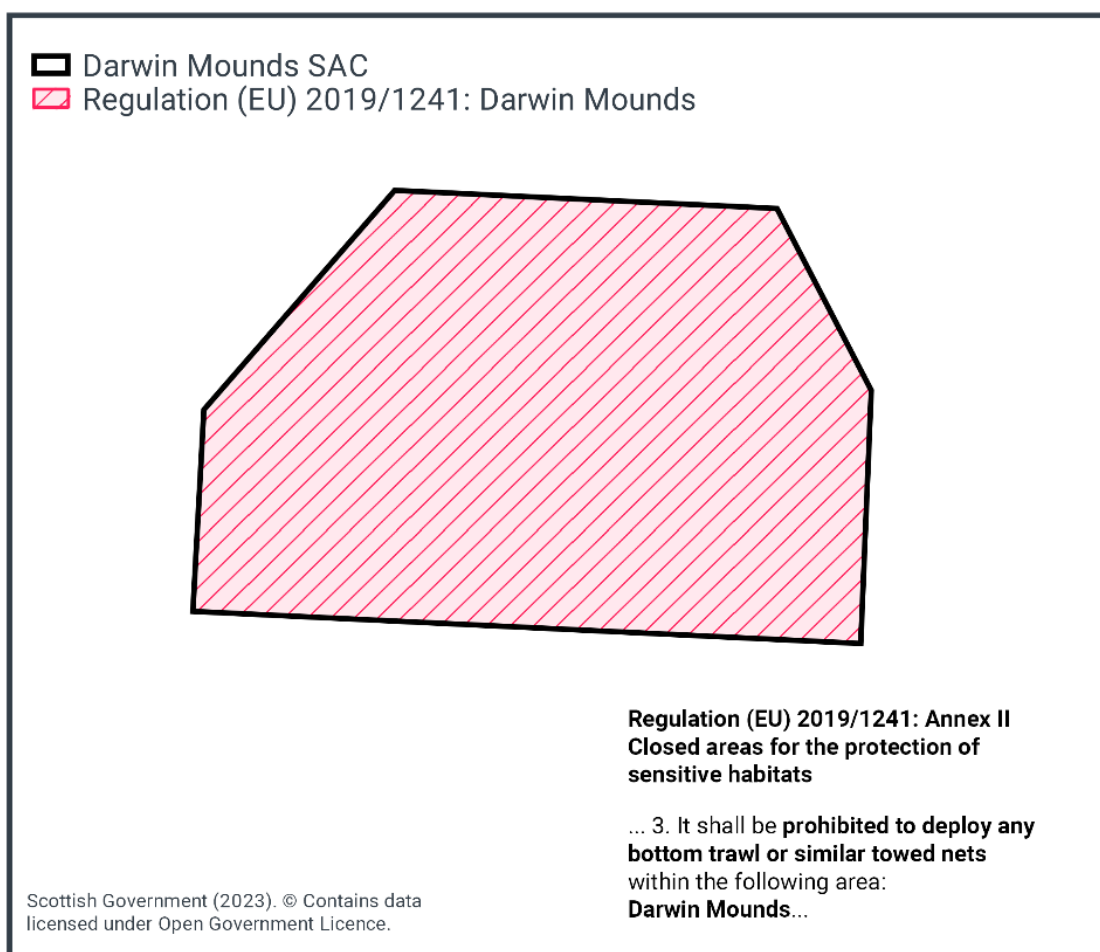


Figure 2. Darwin Mounds SAC site boundary with existing fisheries management measures: prohibiting all bottom trawl and similar towed nets within the SAC.

2.3 Potential Pressures exerted by site fishing activity on protected features

Pelagic fishing, in particular mid-water trawl, whilst occurring in the site do not contact the seabed. Accordingly, as per the [JNCC Advice on Operations Workbook V1.0](#), pelagic mid-water trawl fishing has been classified as not relevant to the protected features within the site. This has been established using best available evidence which indicates there is no interaction of concern between the pressure and the feature OR the activity and the feature could not interact. As a result, pelagic gear is not considered further in this assessment.

No other fishing activities have been identified taking place within the site during the assessment period (2015-2019).

2.4 Part A Conclusion

Considering the information on pressures and sensitivity above, and guidance within the [EU Commission guidance on the Assessment of plans and projects significantly affecting Natura 2000 sites; a methodological guidance on the provisions of Article 6 \(3\) and \(4\) of the Habitats Directive 92/43/EEC](#) in relation to European Sites, and the

absence of any fisheries activity which may interact with the protected features of Darwin Mounds SAC, Scottish Ministers conclude there is no fishing activities occurring which have the potential for LSE to the protected features. Therefore no further assessment through Part B (fisheries assessment) and Part C (in-combination) is required.

3. Management Options

3.1 Overview of management options

Management measures are being considered by Scottish Ministers and any decision as to which measures out to be taken forward will follow upon a statutory public consultation exercise. Any such decision will also be taken in line with the Scottish Ministers obligations in relation to the exercise of their functions.

The socioeconomic impacts and costs of the proposed management option (no additional measures) have been assessed within the Socio-Economic Impact Assessment (SEIA) and Sustainability Appraisal (SA) and are not discussed within this fisheries assessment. Nor are other considerations, statutory and non-statutory, which the Scottish Ministers may be required to take into account when assessing whether the imposition of a particular measures is appropriate.

This section assesses the suitability of the proposed management options in light of the conservation objectives, biological characteristics, and current activity levels for Darwin Mounds SAC.

For Darwin Mound SAC, no fishing activity was identified above requiring management measures as a result of current fisheries management in place across the full SAC. These are show in Figure 2 and described further in Section 2.2 in the sections above. Scottish Ministers consider that that no additional management for fishing activity would be sufficient to avoid an adverse effect on site integrity.

3.2 Management options conclusion

Scottish Ministers consider that adopting no additional management measures for fishing activity would be sufficient to avoid an adverse effect on site integrity.

No fishing activities were found to occur within the site during the assessment period (2015 – 2019) that were identified as incompatible with the conservation objectives of the site and could result in an adverse effect on site integrity.

Scottish Ministers consider that the current technical measures in place suitably restrict any fishing activity which could have an adverse impact on site integrity and no additional fisheries management are required.

The decision on which management option is to be taken forward will be taken in light of all relevant duties incumbent upon the Scottish Ministers in relation to the exercise of their functions and following upon a statutory public consultation exercise in which views on the options under consideration are invited.

4. Monitoring and review

Scottish Ministers will review this assessment as required. A review of this assessment may be required be in response to updated conservation advice; updated advice on the condition of the feature; new information on the sensitivity of the feature to pressures arising from activities within the site; or information on changes in fishing activity within the site.

To coordinate the collection and analysis of information regarding activity levels a monitoring and control plan may be developed for this site. Although management measures for other fishing activity (excluding demersal mobile and demersal static) are not currently proposed for this site, should activity levels increase, or monitoring show evidence of detrimental effects, management measures may need to be reassessed.

5. Conclusion

Scottish Ministers have had regard to best available evidence and conclude that, as a result of current measures, there is no fishing activity occurring within the site that is considered incompatible with the conservation objectives of this Special Area of Conservation or which may have an adverse impact on site integrity.

References

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The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

ISBN: 978-1-83601-402-7 (web only)

Published by The Scottish Government, August 2024

Produced for The Scottish Government by APS Group Scotland, 21 Tennant Street, Edinburgh EH6 5NA
PPDAS1470938 (08/24)

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