Regulated commercial use of traps/pots to catch wrasse in Scottish inshore waters

Fisheries Assessment

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Scottish Government
Riaghaltas na h-Alba

Contents

1. Introduction 4
   1.1 Background 4
   1.2 Management measures in place 2020 – 2024 5
   1.3 Wrasse ecology, habitat association and implications for management 6
   1.4 Developments for the 2025 season 7
   1.5 Fisheries Assessment 8
2. Assessment of the wrasse fishery on rocky reefs in SACs 10
   2.1 Sites affected 10
   2.2 High-level Conservation Objectives 11
   2.3 Is the plan or project directly connected with or necessary to the site management for nature conservation? 12
   2.4 Screening for likely significant effect (LSE) 12
   2.5 Appropriate Assessment: Assessment of implications of fishing activity on rocky reefs in view of the conservation objectives 17
   2.6 Assessment of cumulative and in combination effects of fishing activities with other plans or projects 30
   2.7 Do the current and/or proposed management measures within the fishery allow it to be ascertained that there will be no adverse effect on the integrity of the site? 30
   2.8 Conclusion 30
   2.9 Monitoring and Review 31
3. Assessment of the wrasse fishery on kelp and seaweed communities on sublittoral sediment in NCMPAs 32
   3.1 Sites affected 32
   3.2 High-level conservation objectives 33
   3.3 Marine Protected Area assessment 34
   3.4 Assessment of the impacts of the fishing for wrasse on kelp and seaweed communities on sublittoral sediment within the sites 37
   3.5 Assessment of cumulative and in combination effects of the wrasse fishery with other activities 49
   3.6 Taking account of management measures 49
   3.7 Conclusion 49
   3.8 Monitoring and Review 50
4. Assessment of the wrasse fishery on other benthic features in SACs 51
   4.1 Site affected 51
   4.2 High-level conservation Objectives 51
   4.3 Is the plan or project directly connected with or necessary to the site management for nature conservation? 52

4.4 Screening for likely significant effect (LSE) 52
4.5 Conclusion 53
5. Assessment of the wrasse fishery on other benthic features in NC MPAs 54
5.1 Sites affected 54
5.2 High level conservation objectives 55
5.3 Marine Protected Area assessment 56
5.4 Conclusion 60
6. Assessment of the wrasse fishery on otter (*Lutra lutra*) in SACs 61
6.1 Sites affected 61
6.2 Conservation Objectives 62
6.3 Habitat Regulations Assessment 63
6.4 Appropriate Assessment: Assessment of implications of fishing activity on otters in view of the conservation objectives 67
6.5 Assessment of cumulative and in combination effects of the wrasse fishery with other activities 72
6.6 Taking account of management measures 72
6.7 Conclusion 72
6.8 Monitoring and Review 73
7. Assessment of the wrasse fishery on mobile species (Minke whale (*Balaenoptera acutorostrata*) and Basking shark (*Cetorhinus maximus*)) in NCMPAs 74
7.1 Sites affected 74
7.2 Conservation objectives 74
7.3 Marine Protected Area assessment 75
7.4 Assessment of the impacts of the fishing for wrasse on minke whale and basking shark within Sea of the Hebrides NC MPA 77
7.5 Assessment of cumulative and in combination effects of the wrasse fishery with other activities 84
7.6 Taking account of management measures 84
7.7 Conclusion 84
7.8 Monitoring and Review 85
8. Minimum landing size of ballan wrasse 86
9. References 87

1. Introduction

The wild wrasse fishery has developed in Scotland since the late 1980s. Baited wrasse traps/pots are used to fish for five species of wrasse: ballan (*Labrus bergylta*), corkwing (*Syphodus melops*), cuckoo (*Labrus mixtus*), goldsinny (*Ctenolabrus rupestris*) and rock cook (*Centrolabrus exoletus*).

In Scotland, the wrasse fishery primarily occurs in shallow inshore waters, typically 10 metre or less in depth. Ballan wrasse is the most common reported and landed species of wrasse by weight, accounting for 71.6% (average annual %) of the landings between 2017 and 2024 in Scotland. Wrasse species are landed live and used as a biological control mechanism to treat sea lice in salmon farms, as an alternative to other potential treatments such as mechanical, thermal and pharmaceutical methods. Fisheries for that purpose also exist in Northern European coastal states such as Norway and Ireland but predominant species landed can vary between countries.

Access to the wrasse fishery in Scotland is restricted. All participating vessels (typically 6 – 12 metres in length) must hold a domestic fishing licence as well as a specific letter of derogation issued by the Scottish Government following an application process, during which proof of an appropriate contract with an aquaculture business must be supplied. The letter of derogation contains specific conditions appropriate to the management of the fishery, including minimum/maximum landing sizes, a seasonal closure aligned to spawning periods and limits on the number of baited traps/pots which may be deployed in a 24-hour period (detailed in section 1.2).

1.1 Background

Voluntary arrangements in respect of catching wrasse species using baited traps/pots in Scottish inshore waters were introduced in 2018 jointly by the Scottish Government and Salmon Scotland due to growing concerns over the long-term sustainability of the fishery and lack of specific management measures.

In March 2020, the Marine Directorate of the Scottish Government set out new proposals for managing the wrasse fishery, including mandatory controls over harvesting, access to the fishery and data reporting. The consultation 'Wild Wrasse Harvesting: Consultation on Proposed New Mandatory Fishing Measures' (Scottish Government, 2020a) invited views on whether the Marine Directorate should introduce mandatory measures to control the harvesting of live wrasse for the salmon farming industry.

The consultation concluded in May 2020 and attracted 154 responses from a range of interests including fishers, salmon farm operators, environmental groups, industry representative groups and members of the public (Scottish Government, 2020b). Most of the proposals received strong support and, as a result, the new scheme put in place mandatory measures controlling access to the fishery. All sea fishing licences, which provides a general authority to fish in the UK EEZ, issued by the Scottish Ministers were varied by the addition of a new licence condition which

closes the wrasse fishery to all licence holders unless they have been issued with a letter of derogation.

In early 2025, Marine Directorate officials have undergone a period of engagement with wrasse fishers to improve understanding of their operations, including technical features of traps/pots and improving geospatial information and knowledge on the Scottish fishery.

1.2 Management measures in place 2020 – 2024

All fishers wishing to participate in the commercial wrasse fishery must apply, on an annual basis, for a wrasse letter of derogation. If issued, the fisher must abide by the following conditions:

1. The licence holder is permitted to fish within the Scottish zone (as defined by section 126(1) of the Scotland Act 1998, as amended) for the species of wrasse, between 1 May and 30 November.

2. The minimum and maximum landing sizes for wrasse are as follows:

Goldsinny (*Ctenolabrus rupest*ris)	12cm – 17cm
Rock Cook (*Centrolabrus exoletus*)	12cm – 17cm
Corkwing (*Symphodus melops*)	12cm – 17cm
Ballan (*Labrus bergylta*)	12cm – 24cm
Cuckoo (*Labrus mixtus*)	12cm – 24cm

3. Only wrasse traps specifically designed to target and catch live wrasse and ensure their welfare may be used to fish for wrasse.

4. The traps used to fish for wrasse must have otter exclusion devices, such as a fixed eye aperture at the entrance to the trap and traps must feature escape hatches.

5. All reasonable precautions must be taken to ensure that traps used to fish for wrasse are lifted in a manner that ensures the best possible welfare of the wrasse and a maximum rate of six metres per minute must not be exceeded when lifting traps.

6. It is prohibited to deploy traps used for fishing wrasse when the water into which they would otherwise be deployed is at a temperature exceeding 17°C.

7. A vessel may deploy a maximum of 250 wrasse within any 24-hour period.

8. Fishers targeting any species of wrasse will be required to accept observers if requested subject to operational practicalities.

9. Vessels must operate active spatial monitoring equipment when required by Marine Scotland.

10. The licence holder must hold a valid, current, contract to supply wrasse to a person who carries on a business of fish farming and who is authorised as an aquaculture production business under The Aquatic Animal Health (Scotland) Regulations 2009) and, where requested by Marine Scotland to do so, supply a copy of such contract in order to evidence the same.

11. In addition to the statutory requirements to provide accurate landings details on Form FISH1, Log Books and landings declarations, the licence holder must submit in writing to the licence holder's local Marine Scotland Fishery Office on a weekly basis, one week in arrears by no later than 2359 hours each Monday, the following information[1]

    a) an accurate record of the total number of wrasse, by species and per ICES rectangle, landed for each trip made in each given week; and
    b) an accurate record of the total number of under and over-sized wrasse, by species, returned to the sea for the first 20 traps deployed in each given week.

12. If required by Scottish Ministers, the licence holder shall install vessel tracking or remote electronic monitoring equipment in the vessel to which their licence relates and participate in interviews and data gathering exercises where the activity has been approved by the Scottish Ministers.

13. All fishers targeting wrasse will be required to accept observers if requested subject to operational practicalities.

14. The Letter of Derogation granted must be retained aboard the vessel at all times to be made available for inspection on request by a British Sea Fishery Officer.

These management measures are based on the best available evidence and kept under review by the Scottish Government. The controls are administered and varied by licence condition which ensures that if they need to be amended based on emerging evidence, this can be done so swiftly.

1.3 Wrasse ecology, habitat association and implications for management

Wrasse species are closely associated with inshore rocky reefs and macroalgal habitats. These environments provide essential ecological functions, including refuge from predators, foraging grounds, and nesting sites. Algal cover, especially kelp and other canopy-forming species, plays a critical role in supporting the structural complexity that wrasses rely on throughout their life cycles.

A key ecological trait of many wrasse species is their strong site fidelity, particularly during the spawning season (Villegas-Ríos et al., 2013). Male ballan wrasse, for example, have been observed defending the same territory (often a single rock or a small cluster of rocks) for multiple years (Mucientes et al., 2019). These territories

[1] These are recorded at the species level to enable continued monitoring of the impact of the fishery on different species and life history stages.

are important for individual survival but also for maintaining the spatial structure of populations. In both ballan and corkwing wrasse, male nest-guarding behaviour enhances egg survival and recruitment success, making territorial stability a vital component of population resilience.

Reproductive strategies differ between wrasse species, with important implications for management. Ballan wrasse are protogynous hermaphrodites: all individuals are born female, and some transition to male as they grow, typically in response to local sex ratios. This makes larger males particularly important for population dynamics and suggests that size-selective fishing could disproportionately affect reproductive output. In contrast, corkwing wrasse are gonochoristic, maintaining fixed sexes throughout life, and exhibit alternative reproductive tactics, including sneaker males that mimic females to gain access to nests.

Spawning in wrasse typically occurs during the spring and summer months, with peak activity varying by region. In Scotland, authorised vessels may only participate in the wrasse fishery from 1 May to 30 November in order to protect spawning individuals. Evidence from UK waters shows that the highest Gonadosomatic Index (GSI) for ballan wrasse, the dominant species in the Scottish fishery, occurs between January and April, with peak values of 5–9% recorded in March and April (White & Ellis, 2025). In contrast, GSI values recorded during the open season (May to November) between 2022 and 2024 were consistently ≤1%, indicating reproductive quiescence during this period (Pritchard, 2025a).

1.4 Developments for the 2025 season

- We have identified areas where our data gathering can be focussed and improved, including a reworked scientific data return sheet that all fishers will be required to submit on a weekly basis (we will keep this form under review).

- For relevant sites (identified below) proposals to reduce the impact of the wrasse fishery in these include zoning to avoid protected features and account for the site fidelity and home range of wrasse. Ballan wrasse display extreme site fidelity, sometimes to a single rock or a small group of rocks, especially during the spawning season (Mucientes et al. 2019). This strong site fidelity suggests that even small marine reserves could be effective for protecting ballan wrasse (Mucientes et al. 2019). For this reason, zoning 170m around protected features (assessed as reported home range by Villegas-Ríos, 2013) will provide protection for wrasse that rely on/service the protected features within the relevant sites.

- In relation to the minimum landing size for ballan wrasse, the Scottish Government has been undertaking modelling work to determine potential sizes of maturation to inform minimum landing sizes, given the absence of empirical gonad histological observations. We anticipate that work continuing through summer 2025. Whilst that work is being undertaken, inshore science advisors have recommended it would be a sensible approach to increase the minimum landing size at this time, with the understanding that there is a requirement for further work. Until the modelling work is completed, the MLS

for ballan wrasse in Scotland will be increased from 12cm to 14cm. Further details are provided in Section 9.

- Since the introduction of mandatory controls in 2021, a consistent seasonal trend has been observed in the Scottish wrasse fishery. Landings typically peak in August, with lower levels of fishing activity in late May and early November. Given that March and April are critical months for wrasse reproduction, and that fishing activity generally begins in late May, it is unlikely that males are being removed from the population during their nest-guarding phase. Furthermore, sampling of landings between 2022 and 2024 indicates that the current maximum landing size of 240 mm is effective in excluding males: 100% of sampled ballan wrasse below this size were female. To further reduce any residual risk, the fishery will open later in May in future seasons, aligning more closely with actual landing patterns and ensuring additional protection for nesting males.

- For the 2025 wild wrasse fishery, we will seek to improve the geospatial data for the fishery (i.e. the granularity of data we hold about where wrasse fishing is taking place) by using appropriate and proportionate onboard technology. The Scottish Government has already signalled that we will increase the use of tracking devices (i-VMS) on under 12 metre Scottish vessels in 2025/2026, a procurement exercise for the project is ongoing at the time of writing but the intention is that the vessels participating in the 2025 wild wrasse fishery will be early adopters of such technology.

1.5 Fisheries Assessment

This document comprises Habitats Regulations Appraisals (for Special Areas of Conservation (SACs)) and Marine Protected Area assessments (for Nature Conservation Marine Protected Areas (NCMPAs)) for the regulated commercial use of traps/pots to catch wrasse within relevant sites in Scottish inshore waters (together referred to as a 'Fisheries Assessment').

Scotland's Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are areas which have been designated (or classified) as such under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) for inshore waters and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) for offshore waters, hereafter referred to as the Habitats Regulations. Nature Conservation MPAs are areas designated as such under the Marine (Scotland) Act 2010.

Regulation 48 and regulation 28 of the inshore and offshore Habitats Regulations respectively, provide for the Habitats Regulations Appraisal (HRA) process. In terms of this process, there is a requirement for an appropriate assessment to be undertaken for any plan or project proposed which is not directly connected with or necessary to the management of a SAC that is likely to have a significant effect on that site, either individually or in combination with other plans or projects. In the context of this Fisheries Assessment, the commercial fishing for wrasse with traps/pots within SACs are considered to be the plan or project.

No equivalent requirement is in place for NCMPAs. However Scottish Ministers have taken the decision to assess the impact of relevant commercial fishing activities within NCMPAs to determine whether those activities pose a significant risk of hindering the achievement of the conservation objectives for the NCMPA in question.

The primary focus of the assessment is understanding the risks to SACs and NCMPAs arising from the regulated commercial use of traps/pots to catch wrasse in Scottish inshore waters within those sites, in view of their conservation objectives.

The Scottish Government sought advice from NatureScot to inform this Assessment, that advice has been published.

2. Assessment of the wrasse fishery on rocky reefs in SACs

This assessment considers the targeted removal of wrasse and their role as part of rocky reefs and the associated ecosystem. It also considers the impact of the use of the fishing gear (traps) on rocky reefs.

2.1 Sites affected

The following 17 SACs have rocky reef as a protected feature. Due to the association of wrasse with rocky reefs there could be an interaction with the wrasse fishery in these sites.

Firth of Lorn SAC
Dornoch Firth and Morrich More SAC
East Mingulay SAC
Isle of May SAC
Loch Laxford SAC
Lochs Duich, Long and Alsh Reefs SAC
Loch nam Madadh SAC
Mousa SAC
North Rona SAC*
Papa Stour SAC
St Kilda SAC
Sanday SAC
Solway Firth SAC*
Sound of Barra SAC
Sullom Voe SAC
Sunart SAC
Treshnish Isles SAC

Sites where Conservation and Management Advice (CMA) is not yet publicly available are marked with *

2.2 High-level Conservation Objectives

The high-level conservation objectives for all the sites are:

1. To ensure that the reefs are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of the site is maintained/restored in the context of environmental changes by meeting objectives 2a, 2b and 2c:

    2a. Extent and distribution of reefs within the site.

    2b. Structure and function of reefs and the supporting environment on which it relies.

    2c. Distribution and viability of typical species of reefs.

Site specific advice is given in the relevant CMA.

2.3 Is the plan or project directly connected with or necessary to the site management for nature conservation?

No, in this assessment, commercial wrasse fishing activity taking place within the site is the plan or project and is not directly connected or necessary to the site management for nature conservation.

2.4 Screening for likely significant effect (LSE)

2.4.1 Fishing activities considered capable of affecting the qualifying/classified features

Commercial fishing – static gear (traps)

Site	Advice to support management	Relevant pressures
Firth of Lorn; Dornoch Firth & Morrich More; East Mingulay; Isle of May; Loch Laxford; Lochs Duich, Long & Alsh; Loch nam Madadh; Mousa; North Rona; Papa Stour; Sanday; Sound of Barra; Sullom Voe; Treshnish Isles	**Reduce or limit pressures** – measures should be considered for fishing with static gear (traps)	Removal of target species (including lethal), surface abrasion, removal of non-target species (including lethal)
St Kilda	No additional management required	Removal of target species (including lethal), surface abrasion, removal of non-target species (including lethal)
Solway Firth, Sunart	CMA not publicly available	Removal of target species (including lethal), surface abrasion, removal of non-target species (including lethal)

2.4.2 Potential effect mechanisms from fishing with static gear (wrasse traps) and likely significant effect conclusions on rocky reef feature

Sites where fishing activity has occurred and where there is an indication of future demand.

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
Firth of Lorn SAC	Reduce or limit pressures is recommended	Potential interaction with shallower records. Feature extends from the shore down to depths of more than 200m.	LSE	LSE	LSE
Loch nam Madadh SAC	Reduce or limit pressures should be considered for fishing with static gear including for wrasse.	Potential interaction with shallower records.	LSE	LSE	LSE

Sites where no recent recorded wrasse fishing activity has occurred and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in the sites below unless following appropriate review of this assessment.

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
Dornoch Firth and Morrich More SAC	Reduce or limit pressure should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
East Mingulay SAC	Lophelia pertusa reef - remove or avoid pressures Rocky reef - Management measures to reduce or limit static fishing gear from rocky reefs should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Isle of May SAC	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Loch Laxford SAC	Reduce or limit pressures should be considered for fishing with static gear including for wrasse.	No interaction – no fishery currently permitted	N/A	N/A	N/A
Lochs Duich, Long and	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A

Alsh Reefs SAC					
Mousa SAC	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
North Rona SAC	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Papa Stour SAC	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Sanday SAC	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Solway Firth SAC	CMA not publicly available	No interaction – no fishery currently permitted	N/A	N/A	N/A
Sound of Barra SAC	Reduce or limit pressures should be considered for fishing with static gear including for wrasse.	No interaction – no fishery currently permitted	N/A	N/A	N/A
Sullom Voe SAC	Reduce or limit pressures should be considered for fishing with static gear including for wrasse.	No interaction – no fishery currently permitted	N/A	N/A	N/A
Treshnish Isles SAC	Reduce or limit pressures should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A

St Kilda SAC	No additional management required	No interaction – no fishery currently permitted	N/A	N/A	N/A
Sunart SAC	CMA not publicly available	No interaction – no fishery currently permitted	N/A	N/A	N/A

Likely significant effect has been concluded for:

Removal of target species (including lethal) within Firth of Lorn SAC and Loch nam Madadh SAC.
Surface abrasion within Firth of Lorn SAC and Loch nam Madadh SAC.
Removal of non-target species (including lethal) within Firth of Lorn SAC and Loch nam Madadh SAC.

No likely significant effect has been concluded for:

Removal of target species (including lethal) within Dornoch Firth and Morrich More SAC; East Mingulay SAC; Isle of May SAC; Loch Laxford SAC; Lochs Duich, Long and Alsh Reefs SAC; Mousa SAC; North Rona SAC; Papa Stour SAC; Sanday SAC; Solway Firth SAC; Sound of Barra SAC; Sullom Voe SAC; Treshnish Isles SAC; St Kilda SAC and Sunart SAC as there is currently no fishery within these sites and no wrasse fishing activity will be authorised in these sites unless following appropriate review of this assessment.

Surface abrasion within Dornoch Firth and Morrich More SAC; East Mingulay SAC; Isle of May SAC; Loch Laxford SAC; Lochs Duich, Long and Alsh Reefs SAC; Mousa SAC; North Rona SAC; Papa Stour SAC; Sanday SAC; Solway Firth SAC; Sound of Barra SAC; Sullom Voe SAC; Treshnish Isles SAC; St Kilda SAC and Sunart SAC as there is currently no fishery within these sites and no wrasse fishing activity will be authorised in these sites unless following appropriate review of this assessment.

Removal of non-target species (including lethal) within Dornoch Firth and Morrich More SAC; East Mingulay SAC; Isle of May SAC; Loch Laxford SAC; Lochs Duich, Long and Alsh Reefs SAC; Mousa SAC; North Rona SAC; Papa Stour SAC; Sanday SAC; Solway Firth SAC; Sound of Barra SAC; Sullom Voe SAC; Treshnish Isles SAC; St Kilda SAC and Sunart SAC as there is currently no fishery within these sites and no wrasse fishing activity will be authorised in these sites unless following appropriate review of this assessment.

2.5 Appropriate Assessment: Assessment of implications of fishing activity on rocky reefs in view of the conservation objectives

2.5.1 Extent and distribution of habitat within the site

Site Specific Advice	Assessment of risk from identified effect mechanisms
Firth of Lorn SAC Maintain the current extent and distribution of all rocky reefs within the site.	The area of rocky reef within the site is 10,475 ha. Large areas of bedrock, boulder and cobble reefs provide a variety of littoral and sublittoral habitats throughout the Firth of Lorn. Rocky reefs extend from the shore down to depths of more than 200m in some areas close inshore on the west of the main island chain (Jura, Scarba, Lunga, Luing, Seil and Easdale). To the south-east of the Garvellachs the seabed slopes down gradually to a depth of 230m. On the west coast of the Garvellachs are extensive areas of sublittoral reefs of sheltered bedrock and boulders along with exposed rock faces. Due to the physical nature of this habitat (hard bedrock and boulders/cobbles) it is not expected that the reef would change in its extent, or modify its distribution in a significant way through interaction with static gear. **Fishing for wrasse with static gear is not considered to undermine this objective in Firth of Lorn SAC.**
Loch nam Madadh SAC Maintain the current extent and distribution of reefs within the site.	The area of reef within the site is predicted as 74ha (Miller et al., 2017). Loch nam Madadh's reef habitats and associated communities vary from the exposed outer margins and deep water reefs to the sheltered inner basins, narrow shallow channels, tidal rapids and reefs that extend into the intertidal areas. The site contains a large number of inlets, islands and channels encompassing reef including within the two major tidal rapids at Leireabhagh and Sponais. Due to the physical nature of this habitat (hard bedrock and boulders/cobbles) it is not expected that the reef would change in its extent, or modify its distribution in a significant way through interaction with static gear.

	Fishing for wrasse with static gear is not considered to undermine this objective for Loch nam Madadh SAC.

2.5.2 Structure and function of habitat and supporting environment on which it relies

Site Specific Advice	Assessment of risk from identified effect mechanisms
Firth of Lorn SAC Maintain the physical structure of the reefs within the site.	The structure of reefs varies throughout the Firth of Lorn according to the local conditions of exposure and tidal flow. In less exposed and less tide swept areas kelps dominate the rocky reef reducing the wave action further in the intertidal and providing habitat for other encrusting organisms and food for grazers such as the common sea urchin. In more exposed tide swept areas, fauna such as soft corals and sponges dominate. The area of reef within the 5-15m depth band which fishery operates in within this site is 7% of the total reef area within the site. Much of assessment of the impact on the reef features within the Firth of Lorn is reliant on fishing intensity information. This fishery is licensed from May to November. When considering the available fishable area of the protected feature (6.6km^2) the level of activity proposed results in a density of creels (traps/pots) which is considered to be 'low' based on thresholds described in Rees et al. (2021). The use of creel limits (traps/pots) for licenced wrasse vessels and the licensing requirements for new vessels entering the fishery mean that this intensity will not change without due consideration of the impacts. Due to the physical nature of this habitat (hard bedrock and boulders/cobbles) we would not expect the physical structure of the feature to change in a significant way from static fishing activity though the three-dimensional structure created by fauna and flora might.

Maintain the three-dimensional structure created by fauna and flora (e.g. kelp, sponges, sea fans) that are associated with reefs.	There are strong associations between all wrasse species and shallow water, algae and kelp covered rocky reefs, wrasse are recognised as a significant component of coastal rocky reefs in UK and Northern European waters. Wrasse are thought to play an important role in maintaining balance in rocky and biogenic reef systems. The removal of target species (wrasse) from rocky reefs could influence the three-dimensional structure created by fauna and flora due their predation on grazers. Wrasses tend to eat hard-bodied prey, with the relative proportions of food items consumed differing between species, and across sizes within a species. For example, larger ballan wrasse are capable of eating large bivalves which smaller individuals or other wrasse species cannot. Such niche partitioning between species has been found in Scotland, with the feeding activity of ballan wrasse thought to play an influential role in the ecological functioning of algae-covered rocky reefs (for example, preying on algivorous invertebrates thereby preventing overgrazing in algal habitats). A study from the Azores suggests ballan wrasse are an important predator of sea urchins and keep populations of these grazers in check on algal habitats (Figueiredo et al., 2005), however it is unknown if this function is also performed by ballan wrasse in Scotland. *Laminaria hyperborea* biotopes are partially reliant on low (or no) populations of sea urchins, primarily the species; *Echinus esculentus*, *Paracentrotus lividus* and *Strongylocentrotus droebachiensis*, which graze directly on macroalgae, epiphytes and the understorey community. Removal of urchin predators such as wrasses may result in a shift away from *Laminaria hyperborea* biotopes. Studies on the impact of creeling on rocky reefs show mixed findings, with some research indicating abrasion-related damage to epifaunal communities, while others suggest no measurable long-term effects. The effects are linked to sensitivity of the species and the intensity of fishing effort, with no studies finding measurable impacts in areas of low fishing intensity.

	Stephenson et al. (2017) examined the effects of experimental creeling on *Laminaria hyperborea* kelp forests over 2 months. They found no decline in species abundance. They concluded that even where creeling activity causes damage to erect species, the frequency with which a creel would be expected to impact the same area twice means that species would be able to recover (recovery time given as 6–36 months) sufficiently between fishing events. This is particularly relevant for the wrasse fishery as it is time-limited (closed December to May). At low intensities such as those predicted for the Firth of Lorn SAC there is unlikely to be a long-lasting impact on rocky reef habitats as a result of abrasion. Non-target removal of species, through fishing, may lead to impacts similar to abrasion. In some cases, removal of more sensitive features can lead to a change in the biotopes or a reduction of diversity. The significance of removal of a species may be linked to that species' role. At low levels of fishing intensity there is unlikely to be an impact through non-target removal of species. Most of the kelp biotopes within the 5-15m depth band (e.g. *Laminaria hyperborea* on tide-swept, infralittoral rock, mixed *Laminaria hyperborea* and *Saccharina latissima* forest on sheltered upper infralittoral rock, grazed *Laminaria hyperborea* forest with coralline crusts on upper infralittoral rock) are of medium sensitivity to the removal of target species, abrasion and removal of non-target species.
Maintain the environmental conditions (processes) required to support healthy functioning reefs. Maintain the functions provided by reefs to the wider ecosystem.	Fishing gear is unlikely to influence the overall water body condition status or the environmental conditions (processes) required to support a healthy functioning reef. The functions provided by reefs to the wider ecosystems (except as a result of impacting the structure of the reef) could be impacted through impacts to the three dimensional structure created by the associated flora or through impacts and subsequent impacts to the distribution and viability of the typical species of the habitat. Reefs provide habitat for kelp, hydroids, crinoids, crustaceans and small fish which provide a consequential supply of larvae/gametes that are carried

	through currents to other reefs, so any impact on these species could impact reefs elsewhere. A healthy functioning reef particularly when supporting kelp beds and other macroalgal communities where biomass production is high, have a role in nutrient cycling. Healthy reefs also provide a natural resilience to invasive non-native species (INNS) and disease. The reefs at Firth of Lorn also provide a physical barrier and, when dominated by dense kelp, can have a particularly strong role in coastal protection (i.e. absorbing the force of waves and storm surges). At low levels of fishing intensity, it is unlikely that the functions provided by reefs to the wider ecosystem are impacted. Since 2018, the Scottish Government introduced and has continued to develop and review management measures which regulate the wrasse fishery. The management regime, based on specific licensing conditions, is flexible in that it can swiftly react to new evidence and changing circumstances, more so than if conditions were legislative based. While further information is required to be able to adequately understand the impact of removal of wrasse on the ecosystem, the low intensity of fishing proposed within the Firth of Lorn is unlikely to impact the structure and function of the reef feature. **Fishing for wrasse with static gear is not considered to undermine this objective in Firth of Lorn SAC.**
Loch nam Madadh SAC	The central part of Loch nam Madadh is characterised by strong tidal streams through narrow, shallow channels and the reefs are colonised by many species characteristic of exposed open coast conditions. Most of the channels comprise mixed boulders, stones and coarse sediments on bedrock, supporting dense kelp forests below which there is a rich red algal turf. Fauna found here include cup corals, worms, crustaceans, brittlestars, sea squirts, starfish and sea urchins. The area of reef within the 5-10m depth band which fishery operates in within this site is 13% of the total reef area within the site. Much of assessment of the impact

Maintain the physical structure of the reefs within the site including reefs within tidal rapids. Maintain the three-dimensional structure created by fauna and flora (e.g. kelp, sponges, seafans) that are associated with this habitat.	on the reef features within the Loch nam Madadh SAC is reliant on fishing intensity information. This fishery is licensed from May to November. When considering the available fishable area of the protected feature (0.08km^2) the level of activity proposed results in a density of creels (traps/pots) which is considered to be 'high' based on thresholds described in Rees et al (2021) (although, habitats in the Rees study were fished continuously throughout the year whereas the wrasse fishery is closed from December to May so is not directly comparable). Due to the physical nature of this habitat (hard bedrock and boulders/cobbles) we would not expect the physical structure of the feature to change in a significant way from static fishing activity though the three-dimensional structure created by fauna and flora might. There are there are strong associations between all wrasse species and shallow water, algae and kelp covered rocky reefs, wrasse are recognised as a significant component of coastal rocky reefs in UK and Northern European waters. Wrasse are thought to play an important role in maintaining balance in rocky and biogenic reef systems. The removal of target species (wrasse) from rocky reefs could influence the three-dimensional structure created by fauna and flora due their predation on grazers. Wrasses tend to eat hard-bodied prey, with the relative proportions of food items consumed differing between species, and across sizes within a species. For example, larger ballan wrasse are capable of eating large bivalves which smaller individuals or other wrasse species cannot. Such niche partitioning between species has been found in Scotland, with the feeding activity of ballan wrasse thought to play an influential role in the ecological functioning of algae-covered rocky reefs (for example, preying on algivorous invertebrates thereby preventing overgrazing in algal habitats). A study from the Azores suggests ballan wrasse are an important predator of sea urchins and keep populations of these grazers in check on algal habitats (Figueiredo et al., 2005), however it is unknown if this function is also performed by ballan wrasse in Scotland. *Laminaria hyperborea*

	biotopes are partially reliant on low (or no) populations of sea urchins, primarily the species; *Echinus esculentus*, *Paracentrotus lividus* and *Strongylocentrotus droebachiensis*, which graze directly on macroalgae, epiphytes and the understorey community. Removal of urchin predators such as wrasses may result in a shift away from *Laminaria hyperborea* biotopes. The introduction of minimum and maximum landing sizes has resulted in the protection of the larger Ballan wrasse, and will likely mitigate against an increase in algivorous invertebrates that might otherwise happen with removal of wrasses, particularly in areas with higher fishing intensities. Studies on the impact of creeling on rocky reefs show mixed findings, with some research indicating abrasion-related damage to epifaunal communities, while others suggest no measurable long-term effects. The effects are linked to sensitivity of the species and the intensity of fishing effort. In areas with higher fishing intensities (such as those predicted for Loch nam Madadh SAC) there is a higher likelihood of an impact of abrasion on rocky reef habitats (Rees, 2021, Gall, 2020), although a number of studies found no impact of fishing with static gear on rocky reefs (Stephenson et al., 2017, Coleman et al., 2013, Eno et al., 2001) leading to uncertainty in the assessment. Stephenson et al. (2017) examined the effects of experimental creeling on *Laminaria hyperborea* kelp forests over 2 months. They found no decline in species abundance. They concluded that even where creeling activity causes damage to erect species, the frequency with which a creel would be expected to impact the same area twice means that species would be able to recover (recovery time given as 6–36 months) sufficiently between fishing events. This is particularly relevant for the wrasse fishery as it is time-limited (closed December to May) which may limit the impact of the fishery even at high densities of creels (traps/pots). Non-target removal of species, through fishing, may lead to impacts similar to abrasion. In some cases, removal of more sensitive features can lead to a change

	in the biotopes or a reduction of diversity. The significance of removal of a species may be linked to that species' role. There is the potential for kelp or epifaunal organisms such as sponges to be entangled by static fishing gear or be drawn up during retrieval. At high levels of fishing intensity there is more likely to be an impact on non-target species, although there is no consensus within the literature on these impacts, leading to uncertainty in the assessment. Most of the kelp biotopes within the 5-10m depth band (e.g. *Laminaria hyperborea* park and foliose red seaweeds on moderately exposed lower infralittoral rock, grazed *Laminaria hyperborea* forest with coralline crusts on upper infralittoral rock, mixed *Laminaria hyperborea* and *Laminaria saccharina* park on sheltered lower infralittoral rock) are of medium sensitivity to the removal of target species, abrasion and removal of non-target species.
Maintain the environmental conditions (processes) required to support healthy functioning reefs.	Environmental conditions and supporting processes including water movement patterns, water quality, water clarity and nutrient cycling are important in maintaining reefs. Adjacent habitats play an important role in maintaining larval and gamete supplies to the reefs. The current status of these parameters provides suitable conditions for sustaining the reefs. A change in these environmental conditions could detrimentally affect the quality and variety and therefore functions of the reefs in the loch. Fishing with static gear is unlikely to influence the overall water body condition status or the environmental conditions (processes) required to support a healthy functioning reef.
Maintain the functions provided by reefs to the wider ecosystem.	The key functions provided by reefs at Loch nam Madadh are: habitat for other species, larval/gamete supply, biomass production, nutrient cycling, carbon storage and climate regulation. Reef provides habitat for kelp, hydroids, crinoids, crustaceans and small fish which provide a consequential supply of larvae/gametes that are carried through currents to other reefs. A healthy functioning reef particularly when supporting kelp beds and other macroalgal communities where biomass production is high, have a role in nutrient cycling, carbon storage and climate regulation. Healthy reefs also provide a natural

	resilience to invasive non-native species (INNS) and disease. Fishing with static gear over 13% of the reef is unlikely to affect the key functions provided by reefs to the wider ecosystem, even at higher fishing intensities. Since 2018, the Scottish Government introduced, and has continued to develop and review, management measures which regulate the wrasse fishery. The management regime, based on specific licensing conditions, is flexible in that it can swiftly react to new evidence and changing circumstances, more so than if conditions were legislative based. Further information is required to be able to adequately understand the impact of removal of wrasse on the ecosystem, and the high intensity of fishing proposed on the protected feature within Loch nam Madadh SAC is likely to impact the structure and function of the reef. **There is potential for static gear fishing for wrasse to undermine the ability to maintain the three-dimensional structure created by fauna and flora (e.g. kelp, sponges, seafans) that are associated with the reef feature in Loch nam Madadh SAC.**

2.5.3 Distribution and viability of the typical species of the habitat

Site Specific Advice	**Assessment of risk from identified effect mechanisms**
Firth of Lorn SAC Maintain the diversity, abundance and distribution of typical species associated with the reefs (including *Tubularia indivisa*, *Corynactis viridis*, sponges, *Swiftia pallida*,	Many of the impacts on kelp species and associated epifauna have been described above. Wrasse species are recognised as vital components of temperate coastal rocky reef ecosystems, often forming specific associations with algae-covered reefs. Although the composition of wrasse assemblages varies seasonally in terms of abundance, these species consistently represent a significant portion of the

Lithophyllum incrustans as well as kelp species)	resident fish community across various rocky reef habitats throughout the year (Magill & Sayer, 2002). Wrasse are among the most abundant fish species on shallow rocky reefs and coastlines in Northern Europe (Halvorsen et al., 2017a). While individual wrasse species exhibit seasonal variation in abundance, they remain a prominent and consistent component of rocky reef habitats year-round. As such, wrasse can be considered typical species of rocky reefs and kelp beds. A reduction in the abundance of any wrasse species may affect algae-covered rocky reefs by: (i) reducing the presence of key characteristic species (wrasse), (ii) altering benthic habitat and fish community structure, and (iii) disrupting the trophic structure of food webs associated with the reef feature. The current management regime, based on specific licensing conditions, is designed to be adaptive and responsive to new evidence. Key measures include the introduction of minimum and maximum landing sizes. It is predicted that ballan wrasse, the primary commercial species in Scotland, will benefit from these measures which help protect both immature females and rare larger males. However, due to differences in life-history strategies among the five target species (e.g., maturation schedules), their susceptibility to overexploitation under the current regime is likely to vary. Additional management measures include a closed season (December to May) and a requirement for traps to be fitted with escape panels to reduce bycatch. An analysis of the live wrasse fishery identified up to 60 coastal fish species potentially caught by the gear, although only five are used as cleaner fish. A risk assessment concluded that few of these species are at risk of overexploitation, as non-target species are returned to the sea using methods intended to preserve their health and welfare. To mitigate barotrauma, gear hauling speed is limited to six metres per minute, although compliance and the post-release survival of discards have not yet been evaluated.

	Ballan and cuckoo wrasse are considered particularly vulnerable to overfishing, partly due to their long life histories and hermaphrodite biology (Pritchard et al., 2025b). A recent study sampled approximately 1,800 Scottish ballan wrasse caught commercially. None were identified as males, suggesting that maximum landing sizes is effectively protecting larger males. Additionally, none of the sampled fish were spawning, indicating that the closed season is protecting spawning individuals. However, commercial fishing gear was found capable of capturing wrasse outside the designated size limits, potentially exposing wrasse to predation by larger non-target species within traps (Pritchard, 2025a). Currently, there is no stock assessment for wrasse species or any stock information, and the number of individuals removed per haul remains unclear. Although proposed fishing in the Firth of Lorn involves low creeling (trap/pot) densities, it cannot be concluded that there is no effect on the diversity, abundance, and distribution of typical species – particularly given the concern around over exploitation of ballan wrasse. **There is potential for static gear fishing for wrasse to undermine the ability to maintain the diversity, abundance and distribution of typical species associated with reefs in Firth of Lorn SAC.**
Loch nam Madadh SAC Maintain the diversity, abundance and distribution of typical species associated with reefs in this site (including *Axinella infundibuliformis, Swiftia palida* and *Caryophylia smithii* as well as kelp forests).	Many of the impacts on kelp species and associated epifauna have been described above. Wrasse species are recognised as vital components of temperate coastal rocky reef ecosystems, often forming specific associations with algae-covered reefs. Although the composition of wrasse assemblages varies seasonally in terms of abundance, these species consistently represent a significant portion of the resident fish community across various rocky reef habitats throughout the year

Maintain the diversity, abundance and distribution of typical species associated with the reefs within the tidal rapids in this site (including kelp species, *Halidrys siliquosa*, sponges and anemones).	(Magill & Sayer, 2002). Wrasse are among the most abundant fish species on shallow rocky reefs and coastlines in Northern Europe (Halvorsen et al., 2017a). While individual wrasse species exhibit seasonal variation in abundance, they remain a prominent and consistent component of rocky reef habitats year-round. As such, wrasse can be considered typical species of rocky reefs and kelp beds. A reduction in the abundance of any wrasse species may affect algae-covered rocky reefs by: (i) reducing the presence of key characteristic species (wrasse), (ii) altering benthic habitat and fish community structure, and (iii) disrupting the trophic structure of food webs associated with the reef feature. The current management regime, based on specific licensing conditions, is designed to be adaptive and responsive to new evidence. Key measures include the introduction of minimum and maximum landing sizes. It is predicted that ballan wrasse, the primary commercial species in Scotland, will benefit from these measures which help protect both immature females and rare larger males. However, due to differences in life-history strategies among the five target species (e.g., maturation schedules), their susceptibility to overexploitation under the current regime is likely to vary. Additional management measures include a closed season (December to May) and a requirement for traps to be fitted with escape panels to reduce bycatch. An analysis of the live wrasse fishery identified up to 60 coastal fish species potentially caught by the gear, although only five are used as cleaner fish. A risk assessment concluded that few of these species are at risk of overexploitation, as non-target species are returned to the sea using methods intended to preserve their health and welfare. To mitigate barotrauma, gear hauling speed is limited to six metres per minute, although compliance and the post-release survival of discards have not yet been evaluated.

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2.6 Assessment of cumulative and in combination effects of fishing activities with other plans or projects

The wrasse fishery under consideration operates in shallow, nearshore, rocky reef and kelp habitats. Due to the specific habitat requirements there is limited spatial and operational overlap with demersal towed gear fisheries such as trawling or dredging, which are generally confined to deeper, softer sediment habitats. As such, the potential for in-combination effects with demersal towed gear is considered negligible.

However, there is a greater likelihood of interaction with other static gear fisheries, particularly creel fisheries targeting crab and lobster, which may also operate in similar shallow, rocky environments. Currently, comprehensive spatial data on the distribution and intensity of these creel fisheries is limited, but as the main concern with the wrasse fishery is primarily to do with the impact of removing the target species, rather than abrasion to the seabed, the potential for significant in-combination effects with other static gear fisheries is considered low. Nevertheless, the possibility of localised ecological interactions cannot be entirely ruled out.

There are no active licences or applications for plans or projects within Loch nam Madadh or Firth of Lorn that are assessed to impact qualifying features of the site in combination with the wrasse fishery – any plans or projects do not overlap the rocky reefs within the sites.

2.7 Do the current and/or proposed management measures within the fishery allow it to be ascertained that there will be no adverse effect on the integrity of the site?

The above appraisal suggests that the wild wrasse fishery could interact with the rocky reef features of the Firth of Lorn SAC and Loch nam Madadh SAC, primarily through the removal of the target species. Wrasse are ecologically important within reef systems, and their removal may influence trophic dynamics and community structure. As such, careful management is required to ensure that the fishery does not compromise the conservation objectives of these sites - competent authority must not authorise a plan or project unless it can show *beyond reasonable scientific* doubt that the plan or project will not adversely affect the integrity of a site.

Current management of the fishery includes a range of measures implemented through a derogation system. These include seasonal restrictions, size limits, gear specifications, welfare-based hauling practices, and mandatory reporting. While these measures provide a baseline level of control, they do not yet fully address the concerns around removing wrasse from within Firth of Lorn SAC and Loch nam Madadh SAC.

2.8 Conclusion

The Firth of Lorn SAC and Loch nam Madadh SAC will not be opened to the wrasse fishery unless following appropriate review of this assessment.

2.9 Monitoring and Review

Scottish Ministers will review this assessment as required. A review of this assessment may be in response to updated conservation advice; updated advice on the extent, distribution or 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.

3. Assessment of the wrasse fishery on kelp and seaweed communities on sublittoral sediment in NCMPAs

This assessment considers the targeted removal of wrasse and their role as part of the relevant feature and the associated ecosystem. It also considers the impact of the use of the fishing gear (traps) on specific benthic features. Wrasse are known to interact with kelp and seaweed habitats, both as predators of invertebrates and as part of the broader reef-associated community structure. Their removal may have indirect effects on the ecological balance within these habitats, particularly where they contribute to controlling grazer populations that influence seaweed cover. Additionally, the deployment and retrieval of traps on sublittoral sediment may pose a risk of physical disturbance. This assessment therefore evaluates both direct and indirect pressures arising from the fishery in relation to the conservation objectives of the NCMPAs.

3.1 Sites affected

The following MPAs have been identified by NatureScot as sites where ‘kelp and seaweed communities’ are a protected feature and where the Scottish wrasse fishery could potentially exert pressures on features which are sensitive to the removal of wrasse, or the use of traps to catch wrasse.

Fetlar to Haroldswick NC MPA
South Arran NC MPA
Wyre and Rousay Sounds NC MPA
Wester Ross NC MPA

3.2 High-level conservation objectives

High level conservation objectives for the sites are that the protected features:

- so far as already in favourable condition, remain in such condition; and
- so far as not already in favourable condition, be brought into such condition, and remain in such condition.

“Favourable condition”, with respect to a marine habitat, means that:

a) its extent is stable or increasing; and
b) its structures and functions, its quality, and the composition of its characteristic biological communities are such as to ensure that it is in a condition which is healthy and not deteriorating.

In paragraph (b) the reference to the composition of the characteristic biological communities of a marine habitat includes a reference to the diversity and abundance of species of marine flora and fauna forming part of, or inhabiting, that habitat.

Site specific conservation objectives are given in the relevant CMA.

3.3 Marine Protected Area assessment

3.3.1 Screening for activities capable of affecting, other than insignificantly, the protected features within the site

Relevant fishing activities are defined as commercial fishing gears (traps) that currently operate or could conceivably operate in the future within this site for the prosecution of wrasse.

Site	Advice to support management	Relevant pressures
Fetlar to Haroldswick NC MPA; South Arran NC MPA; Wyre and Rousay Sounds NC MPA; Wester Ross NC MPA	No additional management required	Removal of target species, surface abrasion, removal of non-target species (incidental bycatch)

3.3.2 Potential effect mechanisms from fishing activities and conclusions on whether these are capable of affecting the kelp and seaweed communities on sublittoral sediment other than insignificantly

Sites where fishing activity has occurred and where there is an indication of future demand.

Site	**Advice to support management - Static gear**	**Potential interaction with the wrasse fishery (typically <10m depth)**	**Removal of target species (including lethal)**	**Surface abrasion**	**Removal of non-target species (including lethal)**
Fetlar to Haroldswick NC MPA	No additional management required	Potential interaction – records within the 2-10m depth band of the fishery	Capable of affecting feature	Capable of affecting feature	Capable of affecting feature
Wyre and Rousay Sounds NC MPA	No additional management required	Potential interaction – records within the 2-15m depth band of the fishery	Capable of affecting feature	Capable of affecting feature	Capable of affecting feature
Wester Ross NC MPA	No additional management required	Potential interaction – records within the 2-20m depth band of the fishery	Capable of affecting feature	Capable of affecting feature	Capable of affecting feature

Site where no recent recorded wrasse fishing activity has occurred and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in the site below unless following appropriate review of this assessment.

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
South Arran NC MPA	No additional management required	No interaction – no fishery currently permitted	N/A	N/A	N/A

3.4 Assessment of the impacts of the fishing for wrasse on kelp and seaweed communities on sublittoral sediment within the sites

3.4.1 Habitat assessment - its extent is stable or increasing

Site Specific Advice	Assessment of risk from identified effect mechanisms
Fetlar to Haroldswick NC MPA Conserve the current extent and distribution of kelp and seaweed communities on sublittoral sediment within the site so that it is stable or increasing.	The kelp and seaweed communities on sublittoral sediment is naturally highly fragmented where recorded in shallow waters around Scotland's coastline. There are several distinct and separate areas of the different component biotopes that comprise the feature across the MPA including within Basta Voe, Uyea and Skuda Sound, Balta Sound and to the East of Unst. The largest area of this feature is within the Uyea and Skuda Sound (2km^2). The main species of kelp in this site is *Saccharina latissima*. The area of the kelp and seaweed communities on sublittoral sediment feature has been estimated to be 3.07km^2 with the feature present between 0-20m depth. It is likely to be more widely distributed on suitable substrates in the infralittoral zone (down to ca. 20 m) than existing records suggest. Assessments based on expert knowledge suggest that creeling is of limited concern to coarse sediments (Roberts et al., 2010; Hall et al., 2008; JNCC and NE, 2011). Stephenson et al. (2017) found no impact on kelp abundance from experimental creeling. **The impact of fishing for wrasse with creels (traps/pots) is unlikely to significantly affect the extent of kelp and seaweed communities on sublittoral sediment in Fetlar to Haroldswick MPA.**

Wyre and Rousay Sounds NC MPA Conserve the current extent and distribution of kelp and seaweed communities on sublittoral sediment within the site so that it is stable or increasing.	The kelp and seaweed communities on sublittoral sediment is naturally highly fragmented where recorded in shallow waters around Scotland's coastline. There are several distinct and separate areas of the different component biotopes that comprise the feature across the MPA including within Wyre Sound (0.36 km^2) and Rousay Sound (1.62 km^2), with a total estimated area of 1.98 km^2. Given the highly fragmented nature of this feature, it is likely to be more widely distributed on suitable substrates in the infralittoral zone (down to ca. 20 m) than existing records suggest. The main species of kelp in this site is *Saccharina latissima* Assessments based on expert knowledge suggest that creeling is of limited concern to coarse sediments (Roberts et al., 2010; Hall et al., 2008; JNCC and NE, 2011). Stephenson et al. (2017) found no impact on *Saccharina latissima* abundance from experimental creeling. **The impact of fishing for wrasse with creels (traps/pots) is unlikely to significantly affect the extent of kelp and seaweed communities on sublittoral sediment in Wyre and Rousay Sounds MPA.**
Wester Ross NC MPA Conserve the current extent and distribution of kelp and seaweed communities on sublittoral sediment within the site so that it is stable or increasing.	The kelp and seaweed communities on sublittoral sediment protected feature is naturally highly fragmented where recorded in shallow waters around Scotland's coastline, and there are several distinct and separated areas of the different component biotopes that comprise the feature across the MPA. The key characterising species of this feature such as sugar kelp *Saccharina latissima* and the bootlace weed *Chorda filum* are widespread, occurring in other sedimentary and rocky habitats, so this fragmentation is natural and unlikely to affect recruitment and population maintenance. Assessments based on expert knowledge suggest that creeling is of limited concern to coarse sediments (Roberts et al., 2010; Hall et al., 2008; JNCC and NE, 2011). Stephenson et al. (2017) found no impact on *Saccharina latissima* abundance from experimental creeling.

	The impact of fishing for wrasse with creels (traps/pots) is unlikely to significantly affect the extent of kelp and seaweed communities on sublittoral sediment in Wester Ross MPA.

3.4.2 Habitat assessment - its structures and functions, its quality, and the composition of its characteristic biological communities are such as to ensure that it is in a condition which is healthy and not deteriorating

Site Specific Advice	Assessment of risk from identified effect mechanisms
Fetlar to Haroldswick NC MPA Conserve the physical structure of the kelp and seaweed communities on sublittoral sediment.	The proposed fishing depths (2-10m) in this site cover 48% of the kelp and seaweed communities on sublittoral sediment extent, however the feature is estimated to be more widely distributed than existing records suggest. Assessments based on expert knowledge suggest that creeling is of limited concern to coarse sediments (Roberts et al., 2010; Hall et al., 2008; JNCC and NE, 2011). Stephenson et al. (2017) found no impact on *Saccharina latissima* abundance from experimental creeling. The removal of target species (wrasse) from habitats could influence the three-dimensional structure created by fauna and flora due their predation on grazers. Wrasses tend to eat hard-bodied prey, with the relative proportions of food items consumed differing between species, and across sizes within a species. For example, larger ballan wrasse are capable of eating large bivalves which smaller individuals or other wrasse species cannot. Such niche partitioning between species has been found in Scotland, with the feeding activity of ballan wrasse thought to play an influential role in the ecological functioning of algae-covered rocky reefs (for example, preying on algivorous invertebrates thereby preventing overgrazing in algal habitats). A study from the Azores suggests ballan wrasse are an important predator of sea urchins and keep populations of these grazers in check on algal habitats (Figueiredo et al., 2005), however it is unknown if this function is also performed by ballan wrasse in Scotland. *Saccharina latissima* can

	be transient in nature and has the potential to rapidly recover following disturbance with a 'high' resilience rating (Stamp et al., 2022). The proposed fishing activity will result in 'high' densities of creels on the feature (as defined in Rees et al., 2021), however *Saccharina latissimi* has high resilience and there is limited evidence of impact of creeling on kelp habitats due to abrasion or non-target removal of species.
Conserve the functions provided by kelp and seaweed communities on sublittoral sediment and the environmental conditions that support them.	Several key functions are provided by kelp and seaweed communities on sublittoral sediment in Fetlar to Haroldswick MPA. The communities also provide shelter for juvenile fish and invertebrates, particularly in association with kelp beds, and will connect to other reef habitats through the supply of larvae/gametes. The high diversity associated with kelp and seaweed communities on sublittoral sediment helps the environment to have a natural resilience to INNS and disease. The kelp beds have a role in nutrient cycling and carbon storage and climate regulation through the production of biomass. Kelp and seaweed communities can also provide coastal protection and waste breakdown & detoxification of water and sediments.
Conserve the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral sediment (including the algae *Saccharina latissima*, *Saccorhiza polyschides* and *Chorda filum*).	Wrasse species are recognised as vital components of temperate algae dominated systems. Although the composition of wrasse assemblages varies seasonally in terms of abundance, these species consistently represent a significant portion of the resident fish community across various rocky reef habitats throughout the year (Magill & Sayer, 2002). Wrasse are among the most abundant fish species on shallow rocky reefs and coastlines in Northern Europe (Halvorsen et al., 2017a). While individual wrasse species exhibit seasonal variation in abundance, they remain a prominent and consistent component of rocky reef habitats year-round. As such, wrasse can be considered typical species of rocky reefs and kelp beds.

	A reduction in the abundance of any wrasse species may affect algae-covered rocky reefs by: (i) reducing the presence of key characteristic species (wrasse), (ii) altering benthic habitat and fish community structure, and (iii) disrupting the trophic structure of food webs associated with the reef feature. The current management regime, based on specific licensing conditions, is designed to be adaptive and responsive to new evidence. Key measures include the introduction of minimum and maximum landing sizes. It is predicted that ballan wrasse, the primary commercial species in Scotland, will benefit from these measures which help protect both immature females and rare larger males. However, due to differences in life-history strategies among the five target species (e.g., maturation schedules), their susceptibility to overexploitation under the current regime is likely to vary. Additional management measures include a closed season (December to May) and a requirement for traps to be fitted with escape panels to reduce bycatch. An analysis of the live wrasse fishery identified up to 60 coastal fish species potentially caught by the gear, although only five are used as cleaner fish. A risk assessment concluded that few of these species are at risk of overexploitation, as non-target species are returned to the sea using methods intended to preserve their health and welfare. To mitigate barotrauma, gear hauling speed is limited to six metres per minute, although compliance and the post-release survival of discards have not yet been evaluated. Ballan and cuckoo wrasse are considered particularly vulnerable to overfishing, partly due to their long life histories and hermaphrodite biology (Pritchard et al., 2025b). A recent study sampled approximately 1,800 Scottish ballan wrasse caught commercially. None were identified as males, suggesting that maximum landing sizes is effectively protecting larger males. Additionally, none of the sampled fish were spawning, indicating that the closed season is protecting spawning

	individuals. However, commercial fishing gear was found capable of capturing wrasse outside the designated size limits, potentially exposing wrasse to predation by larger non-target species within traps (Pritchard, 2025a). Currently, there is no stock assessment for wrasse species or any stock information, and the number of individuals removed per haul remains unclear. The predicted intensity of fishing within Fetlar to Haroldswick MPA is high so currently it cannot be concluded that there is no effect on the diversity, abundance, and distribution of typical species – particularly given the concern around over exploitation of ballan wrasse. **There is a significant risk the wrasse fishery hindering the achievement of conserving the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral sediment Fetlar to Haroldswick MPA.**
Wyre and Rousay Sounds NC MPA Conserve the physical structure of the kelp and seaweed communities on sublittoral sediment.	The proposed fishing depths (5-15m) cover 77% of the kelp and seaweed communities on sublittoral sediment extent, however the feature is estimated to be more widely distributed than existing records suggest. Assessments based on expert knowledge suggest that creeling is of limited concern to coarse sediments (Roberts et al., 2010; Hall et al., 2008; JNCC and NE, 2011). Stephenson et al. (2017) found no impact on *Saccharina latissima* abundance from experimental creeling. The removal of target species (wrasse) from habitats could influence the three-dimensional structure created by fauna and flora due their predation on grazers. Wrasses tend to eat hard-bodied prey, with the relative proportions of food items consumed differing between species, and across sizes within a species. For example, larger ballan wrasse are capable of eating large bivalves which smaller individuals or other wrasse species cannot. Such niche partitioning between species has been found in Scotland, with the feeding activity of ballan wrasse thought to play an influential role in the ecological functioning of algae-covered

	rocky reefs (for example, preying on algivorous invertebrates thereby preventing overgrazing in algal habitats). A study from the Azores suggests ballan wrasse are an important predator of sea urchins and keep populations of these grazers in check on algal habitats, however it is unknown if this function is also performed by ballan wrasse in Scotland (Figueiredo et al., 2005). *Saccharina latissima* can be transient in nature and has the potential to rapidly recover following disturbance with a 'high' resilience rating (Stamp et al., 2022). The proposed fishing activity will result in 'high' densities of creels (traps/pots) on the feature (as defined in Rees et al., 2021), however *Saccharina latissima* has high resilience and there is limited evidence of impact of creeling on kelp habitats.
Conserve the functions provided by kelp and seaweed communities on sublittoral sediment and the environmental conditions that support them.	The kelp and seaweed communities on sublittoral sediments in Wyre and Rousay Sounds MPA are naturally fragmented which may limit the services they offer. For example, their relative contribution to services such as nutrient cycling, carbon storage & climate regulation and biomass production may be low when considering their contribution across Scotland. They have been assessed as having a medium contribution to larval/gamete supply (supporting connectivity) due to the presence of tidal flushing.
Conserve the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral (including the algae *Saccharina latissima*, *Laminaria hyperborea*, and *Phyllophora crispa*, bryozoans, sea urchins and goby).	Wrasse species are recognised as vital components of temperate algae dominated systems. Although the composition of wrasse assemblages varies seasonally in terms of abundance, these species consistently represent a significant portion of the resident fish community across various rocky reef habitats throughout the year (Magill & Sayer, 2002). Wrasse are among the most abundant fish species on shallow rocky reefs and coastlines in Northern Europe (Halvorsen et al., 2017a). While individual wrasse species exhibit seasonal variation in abundance, they remain a prominent and consistent component of rocky reef habitats year-round. As such, wrasse can be considered typical species of rocky reefs and kelp beds.

	A reduction in the abundance of any wrasse species may affect algae-covered rocky reefs by: (i) reducing the presence of key characteristic species (wrasse), (ii) altering benthic habitat and fish community structure, and (iii) disrupting the trophic structure of food webs associated with the reef feature. The current management regime, based on specific licensing conditions, is designed to be adaptive and responsive to new evidence. Key measures include the introduction of minimum and maximum landing sizes. It is predicted that ballan wrasse, the primary commercial species in Scotland, will benefit from these measures which help protect both immature females and rare larger males. However, due to differences in life-history strategies among the five target species (e.g., maturation schedules), their susceptibility to overexploitation under the current regime is likely to vary. Additional management measures include a closed season (December to May) and a requirement for traps to be fitted with escape panels to reduce bycatch. An analysis of the live wrasse fishery identified up to 60 coastal fish species potentially caught by the gear, although only five are used as cleaner fish. A risk assessment concluded that few of these species are at risk of overexploitation, as non-target species are returned to the sea using methods intended to preserve their health and welfare. To mitigate barotrauma, gear hauling speed is limited to six metres per minute, although compliance and the post-release survival of discards have not yet been evaluated. Ballan and cuckoo wrasse are considered particularly vulnerable to overfishing, partly due to their long life histories and hermaphrodite biology (Pritchard et al., 2025b). A recent study sampled approximately 1,800 Scottish ballan wrasse caught commercially. None were identified as males, suggesting that maximum landing sizes is effectively protecting larger males. Additionally, none of the sampled fish were spawning, indicating that the closed season is protecting spawning

	individuals. However, commercial fishing gear was found capable of capturing wrasse outside the designated size limits, potentially exposing wrasse to predation by larger non-target species within traps (Pritchard, 2025a). Currently, there is no stock assessment for wrasse species or any stock information, and the number of individuals removed per haul remains unclear. The predicted intensity of fishing within Wyre and Rousay Sounds MPA is high over 77% of the feature so currently it cannot be concluded that there is no effect on the diversity, abundance, and distribution of typical species – particularly given the concern around over exploitation of ballan wrasse. **There is a significant risk the wrasse fishery hindering the achievement of conserving the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral sediment Wyre and Rousay Sounds MPA.**
Wester Ross NC MPA Conserve the physical structure of the kelp and seaweed communities on sublittoral sediment.	The proposed fishing depths (2-20m) cover 76% of the kelp and seaweed communities on sublittoral sediment extent, however the feature is estimated to be more widely distributed than existing records suggest. Assessments based on expert knowledge suggest that creeling is of limited concern to coarse sediments (Roberts et al., 2010; Hall et al., 2008; JNCC and NE, 2011). Stephenson et al. (2017) found no impact on *Saccharina latissima* abundance from experimental creeling. The removal of target species (wrasse) from habitats could influence the three-dimensional structure created by fauna and flora due their predation on grazers. Wrasses tend to eat hard-bodied prey, with the relative proportions of food items consumed differing between species, and across sizes within a species. For example, larger ballan wrasse are capable of eating large bivalves which smaller individuals or other wrasse species cannot. Such niche partitioning between species has been found in Scotland, with the feeding activity of ballan wrasse

	thought to play an influential role in the ecological functioning of algae-covered rocky reefs (for example, preying on algivorous invertebrates thereby preventing overgrazing in algal habitats). A study from the Azores suggests ballan wrasse are an important predator of sea urchins and keep populations of these grazers in check on algal habitats, however it is unknown if this function is also performed by ballan wrasse in Scotland (Figueiredo et al., 2005). *Saccharina latissima* can be transient in nature and has the potential to rapidly recover following disturbance with a 'high' resilience rating (Stamp et al., 2022). The proposed fishing activity will result in 'low' densities of creels (traps/pots) on the feature (as defined in Rees et al., 2021), and as *Saccharina latissima* has high resilience and there is limited evidence of impact of creeling on kelp habitats the risk to this objective is considered to be low.
Conserve the functions provided by kelp and seaweed communities on sublittoral sediment and the environmental conditions that support them.	Several key functions are provided by kelp and seaweed communities on sublittoral sediment in Wester Ross MPA. The communities also provide shelter for juvenile fish and invertebrates, particularly in association with kelp beds, and will connect to other reef habitats through the supply of larvae/gametes. The high diversity associated with kelp and seaweed communities on sublittoral sediment helps the environment to have a natural resilience to INNS and disease. The kelp beds have a role in nutrient cycling and carbon storage and climate regulation through the production of biomass. Kelp and seaweed communities can also provide coastal protection and waste breakdown & detoxification of water and sediments.
Conserve the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral (including the algae *Saccharina latissima*, *Laminaria hyperborean*, and *Phyllophora crispa*, bryozoans, sea urchins and goby).	Wrasse species are recognised as vital components of temperate algae dominated systems. Although the composition of wrasse assemblages varies seasonally in terms of abundance, these species consistently represent a significant portion of the resident fish community across various rocky reef habitats throughout the year (Magill & Sayer, 2002). Wrasse are among the most abundant

	fish species on shallow rocky reefs and coastlines in Northern Europe (Halvorsen et al., 2017a). While individual wrasse species exhibit seasonal variation in abundance, they remain a prominent and consistent component of rocky reef habitats year-round. As such, wrasse can be considered typical species of rocky reefs and kelp beds. A reduction in the abundance of any wrasse species may affect algae-covered rocky reefs by: (i) reducing the presence of key characteristic species (wrasse), (ii) altering benthic habitat and fish community structure, and (iii) disrupting the trophic structure of food webs associated with the reef feature. The current management regime, based on specific licensing conditions, is designed to be adaptive and responsive to new evidence. Key measures include the introduction of minimum and maximum landing sizes. It is predicted that ballan wrasse, the primary commercial species in Scotland, will benefit from these measures which help protect both immature females and rare larger males. However, due to differences in life-history strategies among the five target species (e.g., maturation schedules), their susceptibility to overexploitation under the current regime is likely to vary. Additional management measures include a closed season (December to May) and a requirement for traps to be fitted with escape panels to reduce bycatch. An analysis of the live wrasse fishery identified up to 60 coastal fish species potentially caught by the gear, although only five are used as cleaner fish. A risk assessment concluded that few of these species are at risk of overexploitation, as non-target species are returned to the sea using methods intended to preserve their health and welfare. To mitigate barotrauma, gear hauling speed is limited to six metres per minute, although compliance and the post-release survival of discards have not yet been evaluated.

	Ballan and cuckoo wrasse are considered particularly vulnerable to overfishing, partly due to their long life histories and hermaphrodite biology (Pritchard et al., 2025b). A recent study sampled approximately 1,800 Scottish ballan wrasse caught commercially. None were identified as males, suggesting that maximum landing sizes is effectively protecting larger males. Additionally, none of the sampled fish were spawning, indicating that the closed season is protecting spawning individuals. However, commercial fishing gear was found capable of capturing wrasse outside the designated size limits, potentially exposing wrasse to predation by larger non-target species within traps (Pritchard, 2025a). Currently, there is no stock assessment for wrasse species or any stock information, and the number of individuals removed per haul remains unclear. The predicted intensity of fishing within Wester Ross MPA is low but covers 76% of the feature so currently it cannot be concluded that there is no effect on the diversity, abundance, and distribution of typical species – particularly given the concern around over exploitation of ballan wrasse. **There is a significant risk the wrasse fishery hindering the achievement of conserving the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral sediment Wester Ross MPA.**

3.5 Assessment of cumulative and in combination effects of the wrasse fishery with other activities

The wrasse fishery under consideration operates in shallow, nearshore, rocky reef and kelp habitats. Due to the specific habitat requirements there is limited spatial and operational overlap with demersal towed gear fisheries such as trawling or dredging, which are generally confined to deeper, softer sediment habitats. As such, the potential for in-combination effects with demersal towed gear is considered negligible.

However, there is a greater likelihood of interaction with other static gear fisheries, particularly creel fisheries targeting crab and lobster, which may also operate in similar shallow, rocky environments. Currently, comprehensive spatial data on the distribution and intensity of these creel fisheries is limited, but as the main concern with the wrasse fishery is primarily to do with the impact of removing the target species, rather than abrasion to the seabed, the potential for significant in-combination effects with other static gear fisheries is considered low. Nevertheless, the possibility of localised ecological interactions cannot be entirely ruled out.

There are no active licences or applications for other plans or projects within the Fetlar to Haroldswick, Wyre and Rousay Sounds and Wester Ross NC MPAs.

3.6 Taking account of management measures

The above appraisal suggests that there is a significant risk the wrasse fishery hindering the achievement of conserving the diversity, abundance and distribution of characteristic species associated with the kelp and seaweed communities on sublittoral sediment, primarily through the removal of the target species. Wrasse are ecologically important within reef systems, and their removal may influence trophic dynamics and community structure. As such, careful management is required to ensure that the fishery does not compromise the conservation objectives of these sites.

Management measures already in place and those planned for the 2025 season are described in detail above. Plans to reduce the impact of the wrasse fishery in these sites include zoning to avoid fishing activity on relevant protected features whilst also accounting for the site fidelity and home range of wrasse. Ballan wrasse exhibit extreme site fidelity, remaining within a home range of up to 0.091 km2 (Villegas-Ríos et al., 2013). This strong site fidelity suggests that even small marine reserves could be effective for protecting local populations. For this reason, in these sites, zoning 170m around relevant protected features (assessed from reported home range by Villegas-Ríos, 2013) will provide additional protection for wrasse. The number of vessels authorised to fish in these relevant sites will be limited and they will be required to carry onboard operational onboard electronic technology that provides high resolution spatial data to the Scottish Government.

3.7 Conclusion

Provided that zoning of wrasse fishing activity is implemented throughout the sites, and vessels authorised to operate there are required to carry onboard electronic

technology that provides high resolution spatial data to the Scottish Government, it is possible to ascertain that there is no significant risk of hindering the achievement of the conservation objectives for the assessed sites from the fishing activities subject to this assessment.

3.8 Monitoring and Review

Scottish Ministers will review this assessment as required. A review of this assessment may be in response to updated conservation advice; updated advice on the extent, distribution or 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.

4. Assessment of the wrasse fishery on other benthic features in SACs

This assessment considers the targeted removal of wrasse and their role as part of the relevant feature and the associated ecosystem. It also considers the impact of the use of the fishing gear (traps) on specific sensitive benthic features.

4.1 Site affected

The following SAC has been identified by NatureScot as a site where the use of wrasse traps/pots (also including any associated ropes and end weights) could potentially exert pressures on benthic features, excluding reef.

Loch Laxford SAC

4.2 High-level conservation Objectives

The high-level conservation objectives for the site are:

1. To ensure that the reefs are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of the site is maintained/restored in the context of environmental changes by meeting objectives 2a, 2b and 2c:

    2a. Extent and distribution of reefs within the site.

    2b. Structure and function of reefs and the supporting environment on which it relies.

    2c. Distribution and viability of typical species of reefs.

Site specific advice is given in the relevant CMA.

4.3 Is the plan or project directly connected with or necessary to the site management for nature conservation?

No, in this assessment, commercial wrasse fishing activity taking place within the site is the plan or project and is not directly connected or necessary to the site management for nature conservation.

4.4 Screening for likely significant effect (LSE)

4.4.1 Fishing activities considered capable of affecting the qualifying/classified features

Commercial fishing – static gear (traps)

Site	Advice to support management	Relevant pressures
Loch Laxford	Reduce or limit pressures is recommended. **Remove or avoid** pressure on maerl beds is recommended	Removal of target species (including lethal), surface abrasion, removal of non-target species (including lethal)

4.4.2 Potential effect mechanisms from fishing with static gear (wrasse traps) and likely significant effect conclusions on benthic features

Site where no recent recorded wrasse fishing activity has occurred and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in the site below unless following appropriate review of this assessment.

Site (feature)	**Advice to support management - Static gear**	**Potential interaction with the wrasse fishery (typically <10m depth)**	**Removal of target species (including lethal)**	**Surface abrasion**	**Removal of non-target species (including lethal)**
Loch Laxford SAC (Large shallow inlets and bays)	Reduce or limit pressures is recommended. **Remove or avoid** pressure on maerl beds is recommended	No interaction – no fishery currently permitted	N/A	N/A	N/A

4.5 Conclusion

There is no interaction between the wrasse fishery and the protected features in Loch Laxford SAC as there is currently no fishery occurring in this site, and no wrasse fishing activity will be authorised in the site unless following appropriate review of this assessment.

5. Assessment of the wrasse fishery on other benthic features in NC MPAs

This assessment considers the targeted removal of wrasse and their role as part of the relevant feature and the associated ecosystem. It also considers the impact of the use of the fishing gear (traps) on specific sensitive benthic features.

5.1 Sites affected

The following 11 NC MPAs have been identified by NatureScot as sites where benthic features (excluding kelp and seaweed communities on sublittoral sediment) are a protected feature and where the Scottish wrasse fishery could potentially exert pressures on features which are sensitive to the removal of wrasse, or the use of traps to catch wrasse.

Small Isles NC MPA
Loch Carron NC MPA
Lochs Duich, Long and Alsh NC MPA
Upper Loch Fyne and Loch Goil NC MPA
Wester Ross NC MPA
Fetlar to Haroldswick NC MPA
Noss Head NC MPA
Loch Sween NC MPA
South Arran NC MPA
Wyre and Rousay Sounds NC MPA
Shiant East Bank NC MPA

5.2 High level conservation objectives

High level conservation objectives for the sites are that the protected features:

- so far as already in favourable condition, remain in such condition; and
- so far as not already in favourable condition, be brought into such condition, and remain in such condition.

“Favourable condition”, with respect to a marine habitat, means that:

a) its extent is stable or increasing; and
b) its structures and functions, its quality, and the composition of its characteristic biological communities are such as to ensure that it is in a condition which is healthy and not deteriorating.

In paragraph (b) the reference to the composition of the characteristic biological communities of a marine habitat includes a reference to the diversity and abundance of species of marine flora and fauna forming part of, or inhabiting, that habitat.

Site specific conservation objectives are given in the relevant CMA.

5.3 Marine Protected Area assessment

5.3.1 Screening for activities capable of affecting, other than insignificantly, the protected features within the site

Relevant fishing activities are defined as commercial fishing gears (traps) that currently operate or could conceivably operate in the future within this site for the prosecution of wrasse.

Site	Advice to support management	Relevant pressures
Small Isles NC MPA; Loch Carron NC MPA; Upper Loch Fyne and Loch Goil NC MPA; Wester Ross NC MPA; Fetlar to Haroldswick NC MPA; Noss Head NC MPA; Loch Sween NC MPA; South Arran NC MPA; Wyre and Rousay Sounds NC MPA; Shiant East Bank NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	Removal of target species, surface abrasion, removal of non-target species (incidental bycatch)

Sites where fishing activity has occurred and where there is an indication of future demand.

Site	Advice to support management - static gear	Potential interaction with the wrasse fishery	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
Fetlar to Haroldswick NC MPA Circalittoral sand and mixed sediment communities Horse mussel beds Maerl beds Shallow tide-swept coarse sands with burrowing bivalves	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction expected	N/A	N/A	N/A
Wyre and Rousay Sounds NC MPA Maerl	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction expected	N/A	N/A	N/A

Site	Advice to support management - static gear	Potential interaction with the wrasse fishery	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
Wester Ross NC MPA Flame shell beds Maerl beds Maerl or coarse shell gravel with burrowing sea cucumbers	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction expected	N/A	N/A	N/A
Loch Sween NC MPA Burrowed mud Maerl beds Native Oysters Sublittoral mud and mixed sediment communities	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction expected	N/A	N/A	N/A

Sites where no recent recorded wrasse fishing activity has occurred and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in the sites below unless following appropriate review of this assessment.

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
Small Isles NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Loch Laxford NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Upper Loch Fyne and Loch Goil NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Loch Carron NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Lochs Duich, Long and Alsh NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Noss Head NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of target species (including lethal)	Surface abrasion	Removal of non-target species (including lethal)
South Arran NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A
Shiant East Bank NC MPA	**Reduce or limit** pressures associated with static gear (creels) should be considered	No interaction – no fishery currently permitted	N/A	N/A	N/A

5.4 Conclusion

While there is fishing activity within identified MPAs, it is not considered to have an overlap with the protected features listed above due to wrasse having such a strong association with rocky reefs and kelp communities (Bailey et al., unpublished). Therefore it is assessed that the wrasse fishery is not capable of affecting the conservation objectives for benthic habitats (other than kelp and seaweed communities on sublittoral sediment) within Fetlar to Haroldswick MPA, Wyre and Rousay Sounds MPA, Wester Ross MPA and Loch Sween MPA.

The remaining sites have no recent recorded wrasse fishing activity and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in these sites unless following appropriate review of this assessment.

6. Assessment of the wrasse fishery on otter (*Lutra lutra*) in SACs

Otter (*Lutra lutra*) could potentially be impacted by the Scottish wrasse fishery due to the risk of entrapment in wrasse traps set in coastal waters. There is likely to be overlap between habitat favoured by wrasse and that used to feed by coastal-dwelling otters. Otters may be attracted to wrasse caught in the traps and may become trapped and drowned in the process. The risk of entrapment is particularly relevant in locations where fishing activity occurs in shallow coastal waters in or adjacent to SACs where otters are a feature.

6.1 Sites affected

The following SACs have been identified by NatureScot as locations where the Scottish wrasse fishery could potentially exert pressures due to shallow coastal waters in or adjacent to SACs where otter are a feature.

Dornoch Firth and Morrich More SAC
Hascosay SAC‡
Loch nam Madadh SAC
Yell Sound Coast SAC
Sunart SAC*
Ardvar and Loch a' Mhuilinn Woodlands SAC‡
Durness SAC‡
Glen Beasdale SAC‡
Kinloch and Kyleakin Hills SAC‡*
Loch Moidart and Loch Shiel Woods SAC‡*
Mull Oakwoods SAC‡
Rum SAC‡
South Uist Machair SAC‡*
Taynish and Knapdale Woods SAC‡*
Tayvallich Juniper and Coast SAC‡

Sites marked with ‡ are terrestrial and have Conservation Advice Packages (CAPs) instead of CMAs. Sites where the CMA or CAP is not yet publicly available are marked with*.

6.2 Conservation Objectives

The high-level conservation objectives for all the sites are:

1. To ensure that the qualifying features of the site are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of the site is maintained in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

> 2a. Otters are a viable component of the site.
> 2b. The distribution of otters throughout the site is maintained by avoiding significant disturbance.
> 2c. The supporting habitats and processes relevant to otters and their food resources are maintained

Site specific advice is given in the relevant CMA or CAP

6.3 Habitat Regulations Assessment

Is the plan or project directly connected with or necessary to the site management for nature conservation?

No, in this assessment, commercial wrasse fishing activity taking place within the site is the plan or project and is not directly connected or necessary to the site management for nature conservation.

6.3.1 Screening for likely significant effect (LSE)

Commercial fishing – static gear (traps)

Site	Advice to support management	Relevant pressures
Dornoch Firth and Morrich More SAC; Loch nam Madadh SAC; Yell Sound Coast SAC; Sunart SAC	**Reduce or limit pressures** (entanglement) associated with entanglement should be considered by ensuring creels are set in water deeper than 10m.	Removal of non-target species (including lethal)
Hascosay SAC; Ardvar and Loch a' Mhuilinn Woodlands SAC; Durness SAC; Glen Beasdale SAC; Kinloch and Kyleakin Hills SAC; Loch Moidart and Loch Shiel Woods SAC; Mull Oakwoods SAC; Rum SAC; South Uist Machair SAC; Taynish and Knapdale Woods SAC; Tayvallich Juniper and Coast SAC	**N/A**	Removal of non-target species (including lethal)

Potential effect mechanisms from fishing with static gear (wrasse traps) and likely significant effect conclusions on otter feature

Sites where fishing activity has occurred and where there is an indication of future demand.

Site	Advice to support management - Static gear	Removal of non-target species (including lethal)
Loch nam Madadh SAC	**Reduce or limit pressures** (entanglement) associated with entanglement should be considered by ensuring creels are set in water deeper than 10m.	LSE
Yell Sound Coast SAC	**Reduce or limit pressures** (entanglement) associated with entanglement should be considered by ensuring creels are set in water deeper than 10m.	LSE
Ardvar and Loch a' Mhuilinn Woodlands SAC	**N/A**	LSE
Kinloch and Kyleakin Hills SAC	**N/A**	LSE
Loch Moidart and Loch Shiel Woods SAC	**N/A**	LSE

Sites where no recent recorded wrasse fishing activity has occurred and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in the sites below unless following appropriate review of this assessment.

Site	Advice to support management - Static gear	Removal of non-target species (including lethal)
Dornoch Firth and Morrich More SAC	**Reduce or limit pressures** (entanglement) associated with entanglement should be considered by ensuring creels are set in water deeper than 10m.	N/A
Sunart SAC	**Reduce or limit pressures** (entanglement) associated with entanglement should be considered by ensuring creels are set in water deeper than 10m.	N/A
Hascosay SAC	**N/A**	N/A
Durness SAC	**N/A**	N/A
Glen Beasdale SAC	**N/A**	N/A
Mull Oakwoods SAC	**N/A**	N/A
Rum SAC	**N/A**	N/A
South Uist Machair SAC	**N/A**	N/A
Taynish and Knapdale Woods SAC	**N/A**	N/A
Tayvallich Juniper and Coast SAC	**N/A**	N/A

Likely significant effect has been concluded for:

Removal of non-target species (including lethal) as result of the wrasse fishery in Loch nam Madadh SAC; Yell Sound Coast SAC; Ardvar and Loch a' Mhuilinn Woodlands SAC; Kinloch and Kyleakin Hills SAC and Loch Moidart and Loch Shiel Woods SAC.

No likely significant effect has been concluded for:

Removal of non-target species (including lethal) as result of the wrasse fishery in Dornoch Firth and Morrich More SAC, Sunart SAC; Hascosay SAC; Durness SAC; Glen Beasdale SAC; Mull Oakwoods SAC; Rum SAC; South Uist Machair SAC; Taynish and Knapdale Woods SAC and Tayvallich Juniper and Coast SAC as there is no current fishery in these sites, and no fishery will be authorised unless following appropriate review of this assessment.

6.4 Appropriate Assessment: Assessment of implications of fishing activity on otters in view of the conservation objectives

Sites identified by NatureScot	Brief description and Site Condition Monitoring of otter
Loch nam Madadh SAC	The SAC is a large, sheltered maritime area which is bordered by an extensive area of shoreline and contains numerous small islets and islands. The rocky shore, shallow inshore waters and nearby small islands provide excellent habitat for otters. Otters are a wide-ranging and highly mobile species that are likely to occupy the entire coastline as well as the numerous islets of Loch nam Madadh. Coastal populations will be predominately feeding at sea however inland locations for shelter and freshwater habitats will also be used on a daily basis. Otter: Favourable Maintained (2012)
Yell Sound Coast SAC	Within Shetland, the Yell Sound area has the highest density of otter. The site is believed to support more than 2% of the entire GB otter population. The site consists of a complex of islands and coastline, selected to include the areas of highest otter density. The areas are characterised by low-lying peaty coastlines with large numbers of otter holts and easy access to fresh water. The adjacent marine areas have extensive algal beds which are used for foraging. Otter: Unfavourable (2012)
Ardvar and Loch a' Mhuilinn Woodlands SAC	Otters associated with the SAC are likely to feed and to have holts or resting places near the site boundary as well as within the site itself. Several burns and lochans lie within the site and these, together with the rocky shore and woodland, provide habitat for otters. The population at the SAC is reliant on suitable habitat in the surrounding wider terrestrial and marine environments. It is unlikely to be viable (capable of functioning) in isolation. At this SAC otter will partly feed in coastal waters that lie outwith the boundary of the site along the coast of Eddrachilles Bay and into Loch a’ Chàirn Bhàin, Loch Glencoul and Loch Glendhu. Otter: Favourable Maintained (2014)

Kinloch and Kyleakin Hills SAC	Conservation Advice Package is not yet publicly available.
Loch Moidart and Loch Shiel Woods SAC	Conservation Advice Package is not yet publicly available.

6.4.1 The populations of qualifying species are viable components of the site

Advice	**Assessment of risk from identified effect mechanisms**
Maintain/restore the population of otters at a stable or increasing trend: **Loch nam Madadh SAC** **Yell Sound Coast SAC** **Ardvar and Loch a' Mhuilinn Woodlands SAC** **Kinloch and Kyleakin Hills SAC** **Loch Moidart and Loch Shiel Woods SAC**	The wild wrasse fishery in Scotland is not an open fishery, the Marine Directorate controls access to it. Each year, vessel owners apply to take part in the fishery which is open from May – December. Successful applications are authorised to participate in the fishery as an additional dispensation (which takes the form of a derogation certificate issued to the vessel owner) granted under domestic fishing licences. All derogation certificates issued are subject to strict Terms and Conditions, including a restriction on the number of wrasse traps/pots that each vessel is authorised to use (250 traps/pots). Whilst there is some uncertainty in the literature about the typical diving depths of coastal-dwelling otters, some wrasse traps/pots used in the Scottish fishery are likely to be deployed at depths less than 10 metres and therefore there is potential spatial overlap with otter foraging activities. To that end, regardless of where a vessel is fishing (i.e. not only in relation to the sites identified), since 2021 any vessel authorised to participate in the wild wrasse fishery has been required to only use traps/pots that have an otter exclusion device, such as a fixed eye aperture to the entrance. The Vincent Wildlife Trust investigated the design of various otter guards, particularly in relation to the eel fishery and designing guards for fitting to fyke

	nets, allowing free passage of eel, but preventing otters from passing into the traps end of the net. The study collated information on the dimensions of otters (male otters are larger than female otters with cubs not appearing to be vulnerable to entering a fyke net so long as the mother, on which they are dependent, is sufficiently deterred) and proposed the largest sizes which could be used for rings on the gear was 95mm diameter (female otters have passed through 115mm diameter rings); rigid square grids at 85mm bar length (diagonal 105mm) and flexible nets at 75mm bar length (circumference, 300mm). These otter exclusion device dimensions were transcribed into the rules governing eel net/trap fishing in England and Wales and, in the context of the Scottish wrasse fishery, is a useful precedent from other fisheries where otter interaction can be an issue. Whilst wrasse traps/pots are clearly a different gear to fyke nets, the intended outcome is the same – i.e. to avoid the entrapment of otters in the fishing gear. To a large extent, requiring an otter exclusion device is 'self-policing', in that fishers themselves wish to exclude otters from their traps/pots, for example to avoid loss of targeted catch and loss of fishing opportunity. Engagement with fishers in 2025 who deploy wrasse traps/pots has shown that the otter exclusion devices being used in the Scottish fishery are compatible (or more restrictive) with the dimensions required in the eel fishery and, to avoid any doubt, the Terms and Conditions of the derogation document now clearly stipulates the required dimensions. Fishers are also required to report incidences of otter interaction on scientific returns. Given management measures in place, including restricted access to the fishery, its temporal operation, gear restrictions and the requirements for otter exclusion devices, the wild wrasse fishery is unlikely have an adverse impact on the population of the species and integrity of the relevant sites.

Ensure otters can move safely between the site and important areas of functionally linked land and sea out with the site.	Authorised activity in the wild wrasse fishery is unlikely to create a barrier to movements and are therefore unlikely to affect movement of otters between areas of sea, freshwater bodies and land.

6.4.2 The distribution of the qualifying feature throughout the site is maintained by avoiding significant disturbance of the species.

Site Specific Advice	Assessment of risk from identified effect mechanisms
Loch nam Madadh SAC **Yell Sound Coast SAC** **Ardvar and Loch a' Mhuilinn Woodlands SAC** **Kinloch and Kyleakin Hills SAC** **Loch Moidart and Loch Shiel Woods SAC** Ensure otters continue to have access to and can utilise all habitats suitable for all relevant aspects of their life cycle associated within the site.	This objective seeks to ensure otters can continue to use all areas within and adjacent to the relevant SACs, including breeding, shelter, resting, bathing and feeding, including safe passage when moving between marine and freshwater areas. 'Significant disturbance' is described by NatureScot as to mean disturbance that affects the integrity of the SAC through alteration of the distribution of otter such that recovery cannot be expected or effects can be considered long term. It is expected that significant disturbance will lead to more than a transient effect on the distribution of otter. It may result in the following types of effect: • Contributes to the long-term decline in the use of the site by otter. • Changes to the distribution of otter on a continuing or sustained basis. • Changes to otter behaviour such that it reduces the ability of the species to survive, breed or rear their young. Otters are a wide-ranging and highly mobile species that are likely to occupy both marine and freshwater habitats, using inland locations for shelter and freshwater habitats for bathing. The wild wrasse fishery is a restricted fishery with gear restrictions in place (250 traps/pots per vessel). These small inshore vessels (typically 6-12m in length) typically haul/deploy their gear during daylight hours rather than at night/dusk when otters are generally most active.

	The wild wrasse fishery is unlikely to create a barrier to otter movements and are therefore unlikely to reduce access to supporting habitats. Authorised fishing activity for wild wrasse will not cause 'significant disturbance'.

6.4.3 The supporting habitats and processes relevant to qualifying features and their prey resources are maintained.

Site Specific Advice	Assessment of risk from identified effect mechanisms
Loch nam Madadh SAC **Yell Sound Coast SAC** **Ardvar and Loch a' Mhuilinn Woodlands SAC** **Kinloch and Kyleakin Hills SAC** **Loch Moidart and Loch Shiel Woods SAC** Maintain the variety, abundance and availability of food resources within the site. Maintain the condition of supporting habitats and associated processes. Maintain marine and freshwater water quality particularly avoiding increases in nutrients, turbidity and contaminants	Otters are opportunistic predators. Primarily, they are carnivores, relying on fish (freshwater and/or marine species), crustaceans, birds and other mammals. Their broad dietary range will vary depending on location, season and availability of prey. Many of the relevant sites provide a range of marine, terrestrial and freshwater habitats for foraging and feeding. In a marine context, within an otters diving range (discussed in Table *6.4.1. Maintain or restore the population of otter as a viable component of the relevant site*), available prey species include eelpout, butterfish, rocklings, gobies, wrasse, seasnails and shore crabs. Most of these species have low commercial value and there is no targeted fishery for them. Therefore, activity authorised in the wild wrasse fishery is unlikely to impact the prey of otters. Activity authorised in the wild wrasse fishery is unlikely to impact upon the condition of supporting habitats, particularly freshwater and terrestrial habitats.

6.5 Assessment of cumulative and in combination effects of the wrasse fishery with other activities

The wrasse fishery under consideration operates in shallow, nearshore, rocky reef and kelp habitats. Due to the specific habitat requirements there is limited spatial and operational overlap with demersal towed gear fisheries such as trawling or dredging, which are generally confined to deeper, softer sediment habitats. As such, the potential for in-combination effects with demersal towed gear is considered negligible.

However, there is a greater likelihood of interaction with other static gear fisheries, particularly creel fisheries targeting crab and lobster, which may also operate in similar shallow, rocky environments. Currently, comprehensive spatial data on the distribution and intensity of these creel fisheries is limited, but as the main concern with the wrasse fishery is primarily to do with the impact of removing the target species, rather than abrasion to the seabed, the potential for significant in-combination effects with other static gear fisheries is considered low. Nevertheless, the possibility of localised ecological interactions (such as competition for space or cumulative removal of reef-associated species) cannot be entirely ruled out.

There are no active licences or applications for plans or projects within the assessed SACs which would in combination with the wrasse fishery result in an adverse effect on site integrity.

6.6 Taking account of management measures

The above appraisal suggests that the wild wrasse fishery could have an interaction with the otter feature at designated sites. Otters are known to forage in coastal and nearshore environments, including areas where wrasse fishing activity may occur. However, based on the current management framework, it is concluded that the fishery does not pose an adverse effect on the integrity of the otter feature.

Several key management measures are in place to minimise potential interactions:

- Access to the fishery is restricted, with each vessel required to obtain specific authorisation from the Marine Directorate through a Letter of Derogation.
- The fishery is seasonal, operating only between May and 30 November.
- Effort is controlled, with each authorised vessel subject to limits on the number of wrasse traps/pots it may deploy.
- All traps used in the fishery must be fitted with otter exclusion devices, such as fixed eye apertures at the trap entrance, which are specifically designed to prevent otters from entering and becoming trapped.

These measures collectively reduce the likelihood of direct interaction between otters and fishing gear, while also limiting the spatial and temporal footprint of the fishery.

6.7 Conclusion

Given the existing management measures, particularly the use of otter exclusion devices, seasonal restrictions, and controlled access to the fishery, it can be

concluded that the activity authorised under the wild wrasse fishery will not cause an adverse effect on the integrity of the otter feature at the relevant sites.

6.8 Monitoring and Review

Scottish Ministers will review this assessment as required. A review of this assessment may be in response to updated conservation advice; updated advice on the extent, distribution or 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.

7. Assessment of the wrasse fishery on mobile species (Minke whale (*Balaenoptera acutorostrata*) and Basking shark (*Cetorhinus maximus*)) in NCMPAs

Marine animal entanglement has the potential to cause injury or mortality, so can impact species by reducing their population size and connectivity, and consequently could risk the achievement of the conservation objectives of relevant MPAs.

Within the MPA network, the wrasse fishery has the potential to interact with certain species at risk of entanglement.

7.1 Sites affected

The following MPAs have been identified by NatureScot as sites where minke whale and/or basking shark are a protected feature and where the Scottish wrasse fishery could potentially exert pressures on the features.

Sea of the Hebrides MPA
Southern Trench MPA

7.2 Conservation objectives

High level conservation objectives for the sites are that the protected features:

- so far as already in favourable condition, remain in such condition
- so far as not already in favourable condition, be brought into such condition, and remain in such condition

“Favourable condition”, with respect to a mobile species of marine fauna, means that:

a) the species is conserved or, where relevant, recovered to include the continued access by the species to resources provided by the MPA for, but not restricted to, feeding, courtship, spawning or use as nursery grounds;
b) the extent and distribution of any supporting features upon which the species is dependent is conserved or, where relevant, recovered; and
c) the structure and function of any supporting feature, including any associated processes supporting the species within the MPA, is such as to ensure that the protected feature is in a condition which is healthy and not deteriorating.

Site specific conservation objectives are given in the relevant CMA.

7.3 Marine Protected Area assessment

7.3.1 Screening for activities capable of affecting, other than insignificantly, the protected features within the site

Relevant fishing activities are defined as commercial fishing gears (traps) that currently operate or could conceivably operate in the future within this site for the prosecution of wrasse.

Minke whale

Site	Advice to support management	Relevant pressures
Sea of the Hebrides NC MPA	**Reduce or limit pressures** The further development and adoption of existing best practice to reduce or limit the risk of entanglement of minke whales in creel ropes and long lines is recommended.	Removal of non-target species (including lethal)
Southern Trench NC MPA	**Reduce or limit pressures** The further development and adoption of existing best practice to reduce or limit the risk of entanglement of minke whales in creel ropes and long lines is recommended.	Removal of non-target species (including lethal)

Basking shark

Site	Advice to support management	Relevant pressures
Sea of the Hebrides NC MPA	**Reduce or limit pressures** The further development and adoption of existing best practice to reduce or limit the risk of entanglement of basking sharks in creel ropes and long lines is recommended.	Removal of non-target species (including lethal)

Site where fishing activity has occurred and where there is an indication of future demand.

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of non-target species (including lethal)
Sea of the Hebrides NC MPA	Reduce or limit	Minke whale Basking shark	Capable of affecting feature

Site where no recent recorded wrasse fishing activity has occurred and there is no indication that there will be a future demand. From 2025, no wrasse fishing activity will be authorised in the site below unless following appropriate review of this assessment.

Site	Advice to support management - Static gear	Potential interaction with the wrasse fishery (typically <10m depth)	Removal of non-target species (including lethal)
Southern Trench NC MPA	Reduce or limit	Minke whale	N/A

7.4 Assessment of the impacts of the fishing for wrasse on minke whale and basking shark within Sea of the Hebrides NC MPA

Relevant site & species	Brief description and Site Condition Monitoring of relevant mobile species
Sea of the Hebrides NC MPA Minke whale & Basking shark	The MPA protects high densities of basking sharks and minke whales, compared to other parts of Scottish territorial waters, particularly during the months of April to October. The basking sharks and minke whales are drawn to the abundant food source in the area. Basking shark: Favourable (2019) Minke whale: Favourable (2019)

7.4.1 Mobile species assessment - the species is conserved or, where relevant, recovered to include the continued access by the species to resources provided by the MPA for, but not restricted to, feeding, courtship, spawning or use as nursery grounds

Feature	Site specific advice	Assessment of risk from identified effect mechanisms
Basking shark	Basking shark within the Sea of the Hebrides MPA are not at significant risk from injury or killing. Conserve the access to resources provided by the MPA for feeding, courtship like behaviour and breeding. Conserve the distribution of basking shark within the site by avoiding significant disturbance	Higher numbers of shark are present are particularly notable during the months of June to October when they spend most of their time close to the surface feeding and often in aggregations (Speedie, 2009, Doherty et al., 2017). The areas in which these aggregations occur more frequently have been termed basking shark awareness zones. There are tentative estimates of basking shark numbers from smaller areas within the MPA (Booth et al., 2003, Gore, et al., 2016), but there are no population assessments for basking sharks that could be used for assessments in relation to this Conservation Objective at present. This Objective seeks to conserve basking shark by minimising the risk to the animals from injury or killing. For the purposes of MPA assessments basking shark are only protected when they are within the site. Any activities that take place within or outside the MPA that could potentially kill or injure minke whale in the MPA should be considered in assessments. The interpretation of 'significant' risk from killing or injury will depend on factors including the scale of the impact, the duration of the activity and measures that are put in place to minimise the risk. An important consideration is whether any killing or injury would result in reduced densities within the site, from which recovery to above average densities cannot be expected. Basking sharks are classed as Endangered in the North East Atlantic region. The MPA is one of very few areas in this region which attract consistent and significant aggregations of individuals. Significant levels of killing or injury within the MPA therefore could

		affect basking shark numbers at a wider scale due to importance of the MPA for feeding, aggregating and potentially breeding. The wild wrasse fishery in Scotland is not an open fishery, the Marine Directorate controls access to it. Each year, vessel owners apply to take part in the fishery which is open from May – December. Successful applications are authorised to participate in the fishery as an additional dispensation (which takes the form of a derogation certificate issued to the vessel owner) granted under domestic fishing licences. All derogation certificates issued are subject to strict Terms and Conditions, including a restriction on the number of wrasse traps/pots that each vessel is authorised to use (250 traps/pots). Engagement with wrasse fishers suggests there may be five vessels active to some degree in the MPA during the open season. Given the nature of the wild wrasse fishery, the quality and physical appearance of live fish is of vital importance. Fishers typically set/haul their fishing gear on a daily basis, in shallow inshore waters less than 10 metres in depth within the MPA, reducing the potential interaction basking shark and adopting best practice measures regarding minimising soak time of fishing gear. Activity authorised under the wild wrasse fishery is compatible with NatureScot's advice that static gear fisheries should be reduced or limited in the MPA, with a recommendation that best practice is adopted to reduce or limit the risk of entanglement of basking sharks in the ropes of the fishing gear.
Minke whale	Minke whale in the Sea of the Hebrides MPA are not at significant risk from injury or killing.	Sightings of minke whale within the MPA are highest during the late summer months, however, there is evidence that minke whale are present throughout the year, albeit in lower numbers (Anderwald and Evans 2007, Paxton et al., 2014). This Objective seeks to conserve minke whale by minimising the risk to the animals from injury or killing. For the purposes of the MPA assessments minke whale are only protected when they are within the site.

	Conserve the access to resources (e.g. for feeding) provided by the MPA for various stages of the minke whale life cycle. Conserve the distribution of minke whale within the site by avoiding significant disturbance.	Any activities that take place within or outside the MPA that could kill or injure minke whale in the MPA should be considered in assessments. The interpretation of 'significant' will depend on factors including the scale of the impact, the duration of the activity and measures that are put in place to minimise the risk. An important consideration is whether any killing or injury would result in reduced densities within the site, from which recovery to above average densities cannot be expected. The wild wrasse fishery in Scotland is not an open fishery, the Marine Directorate controls access to it. Each year, vessel owners apply to take part in the fishery which is open from May – December. Successful applications are authorised to participate in the fishery as an additional dispensation (which takes the form of a derogation certificate issued to the vessel owner) granted under domestic fishing licences. All derogation certificates issued are subject to strict Terms and Conditions, including a restriction on the number of wrasse traps/pots that each vessel is authorised to use (250 traps/pots). Engagement with wrasse fishers suggests there may be five vessels active to some degree in the MPA during the open season. Given the nature of the wild wrasse fishery, the quality and physical appearance of live fish is of vital importance. Fishers typically set/haul their fishing gear on a daily basis, in shallow inshore waters less than 10 metres in depth within the MPA, reducing the potential interaction with minke whales and adopting best practice measures regarding minimising soak time of fishing gear. Activity authorised under the wild wrasse fishery is compatible with NatureScot's advice that static gear fisheries should be reduced or limited in the MPA, with a recommendation that best practice is adopted to reduce or limit the risk of entanglement of minke whale in the ropes of the fishing gear.

7.4.2 Mobile species assessment the structure and function of any supporting feature, including any associated processes supporting the species within the MPA, is such as to ensure that the protected feature is in a condition which is healthy and not deteriorating.

Feature	Site specific advice	Assessment of risk from identified effect mechanisms
Basking shark	Conserve the extent and distribution of any supporting feature upon which basking are dependent. Conserve the structure and function of supporting features, including processes to ensure basking shark are	Resources in the context of basking shark are zooplankton prey and the fronts that influence the presence and concentration of zooplankton. The areas where zooplankton are concentrated are particularly important as they offer efficient feeding grounds for basking sharks. NatureScot advise that there are two main ways in which access to resources could be restricted and basking shark distribution affected: 1) large scale physical barriers or 2) significant disturbance which alters their distribution within the site or disrupts important behaviours. Only large-scale physical barriers or obstructions within basking shark awareness zones (as shown in Figure 3 of the Conservation and Management Advice) are likely to prevent or restrict access to resources to an extent that may result in significant impacts on feeding, courtship-like behaviour and potentially breeding. Disturbance is also of particular relevance within basking shark awareness zones. NatureScot consider that 'significant disturbance' may result in the following effects: • contributes to long-term decline in the use of the site by basking sharks. • changes to the distribution of basking sharks within the site, with particular emphasis on the basking shark awareness zones, on a continuing or sustained basis.

	healthy and not deteriorating	• changes to basking shark behaviour such that it reduces the ability of the species to feed efficiently, breed or survive. There is very limited, if any, authorised wild wrasse fishing within the identified basking shark awareness zone. Vessels participating in the fishery are typically local inshore vessels, hugging the coastline with their fishing activity and not transiting significantly within the MPA. Therefore, the wild wrasse fishery will not create a large-scale physical barrier or obstruction, or cause significant disturbance. Activity authorised under the wild wrasse fishery is unlikely to significantly alter water flow, currents, topography or nutrient availability and therefore unlikely to affect the species composition, abundance or concentration and distribution of zooplankton available to basking sharks.
Minke whale	Conserve the extent and distribution of any supporting feature upon which minke whale is dependent. Conserve the structure and function of supporting features,	Resources in this context are their prey and particular areas of the MPA or habitats that may be used during feeding and for supporting various stages of their lifecycle. NatureScot advise that there are two main ways in which minke whale's access to resources could be restricted and disturbance affected: 1) large scale physical barriers or 2) significant disturbance which alters their distribution within the site or disrupts important behaviours. Only large-scale physical barriers or obstructions within or outside the MPA may prevent or restrict access to resources to an extent that may result in significant impacts on stages of their life cycle, including feeding. NatureScot consider that 'significant disturbance' should be interpreted to mean disturbance that affects the distribution of minke whale within the site such that recovery cannot be expected. Effects of activities which last beyond the average generation time of minke whale are more likely to constitute

	including processes to ensure minke whale are healthy and not deteriorating.	significant disturbance. ‘Significant disturbance’ may result in the following effects: • contributes to long term decline in the use of the site by minke whale. • changes to the distribution of minke whale within the site on a continuing or sustained basis. • changes to the behaviour such that it reduces ability of the species to feed efficiently, breed or survive. Vessels participating in the fishery are typically local inshore vessels, hugging the coastline with their fishing activity and not transiting significantly within the MPA. Activity authorised under the wild wrasse fishery is unlikely to significantly alter the hydrography of the area or alter the composition of the substrate and therefore unlikely to affect species composition, abundance or concentration of prey species available to minke whale.

7.5 Assessment of cumulative and in combination effects of the wrasse fishery with other activities

The wrasse fishery under consideration operates in shallow, nearshore, rocky reef and kelp habitats. Due to the specific habitat requirements there is limited spatial and operational overlap with demersal towed gear fisheries such as trawling or dredging, which are generally confined to deeper, softer sediment habitats. As such, the potential for in-combination effects with demersal towed gear is considered negligible.

However, there is a greater likelihood of interaction with other static gear fisheries, particularly creel fisheries targeting crab and lobster, which may also operate in similar shallow, rocky environments. Currently, comprehensive spatial data on the distribution and intensity of these creel fisheries is limited, but as the main concern with the wrasse fishery is primarily to do with the impact of removing the target species, rather than abrasion to the seabed, the potential for significant in-combination effects with other static gear fisheries is considered low.

There are no active licences or applications for plans or projects within Sea of the Hebrides MPA which would, in combination with the wrasse fishery, hinder the achievement of the conservation objectives.

7.6 Taking account of management measures

The above appraisal suggests that the wild wrasse fishery could have an interaction with the minke whale and basking shark feature. However, due to existing management measures in place and the nature of fishing operations, it is unlikely that there is a significant risk of the wrasse fishery hindering the achievement of the conservation objectives.

Key management measures that help minimise potential impacts include:

- Restricted access to the fishery.
- Effort controls, with limits on the number of wrasse traps/pots that each authorised vessel may deploy.
- Shallow water operation, as wrasse traps are predominantly deployed in depths of 10 metres or less, which is generally outside the preferred foraging or transit depths of minke whales and basking sharks.
- Frequent hauling of gear, typically on a daily basis, which reduces the likelihood of entanglement or prolonged gear presence in the water column.

These operational characteristics, combined with regulatory controls, significantly reduce the potential for entanglement or disturbance to these marine mammals.

7.7 Conclusion

Given the existing management measures and the shallow inshore nature of the fishery, it can be concluded that the activity authorised under the wild wrasse is not capable of affecting, other than insignificantly, the basking shark or minke whale feature at the relevant sites.

7.8 Monitoring and Review

Scottish Ministers will review this assessment as required. A review of this assessment may be in response to updated conservation advice; updated advice on the extent, distribution or 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.

8. Minimum landing size of ballan wrasse

Recent UK studies provide conflicting recommendations for wrasse minimum landing sizes in relation to harvestable proportion.

The current ballan wrasse landing sizes imposed by the Scottish Government are calculated to target 30% of the total wrasse population, ensuring that 70% of the ballan wrasse population is outwith the landing range sizes and is unexploited (SlotLim/SlotLim). Rules-of-thumb for Maximum Sustainable Yield (MSY) theory suggest that MSY lies within 30-40% (Pauly & Froese 2021). Here instead of depleting 30%-40% of the stock, the Scottish ballan wrasse fishery only targets 30% of the stock.

Scottish data suggests 12-24 cm may be adequate for limiting the ballan wrasse population to 30% which are targeted by the fishery whilst reports of English wrasse fisheries recommend increasing the MLS for ballan wrasse to 18cm based on literature reviews and stakeholder consultation as opposed to biological inference of maturation or population sustainability (SlotLim/SlotLim; Henly, 2022).

Many of the estimates of length at maturity estimates (16-25cm) are based on lower latitude populations drawn from literature relating to Portugal (Costa, 2007), Galicia (Villegas-Ríos et al., 2013a), Turkey (Artüz, 2005) and France (Quignard, 1966). Northern European estimates from gonad histological reading is limited to work from the Isle of Man, however the work did not provide a length estimate, only ages (Dipper, 1976). Similarly, a gonad staging observations paper for Norwegian samples, omit such detail of the size of the fish the gonads are extracted from (Muncaster et al., 2010).

Whilst noting the limitations of applying the findings to a wild fishery, hatchery raised ballan wrasse in Scotland have been found to start to maturate at around 11cm (Palma et al., 2023).

The Scottish Government considers that there are several methodological, geographical and scientific limitations to the publication Darwall et. al., 1992 and do not consider that it should be used as the primary evidence source to determine minimum maturation size for ballan wrasse in Scotland. The Scottish Government also notes that some of the more recent academic studies relating to ballan wrasse CRS are based, to differing extents, on the same cited literature (Pritchard et al., 2025; Henly, 2023).

The Scottish Government has been undertaking modelling work to determine potential sizes of maturation to inform minimum landing sizes, given the absence of empirical gonad histological observations. We anticipate that work continuing through summer 2025. Whilst that work is being undertaken, Marine Directorate's Science, Evidence, Data and Digital (SEDD) portfolio have recommended it would be a sensible approach to increase the minimum landing size at this time, with the understanding that there is a requirement for further work.

Until the modelling work is completed, the MLS for ballan wrasse in Scotland will be increased from 12cm to 14cm.

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