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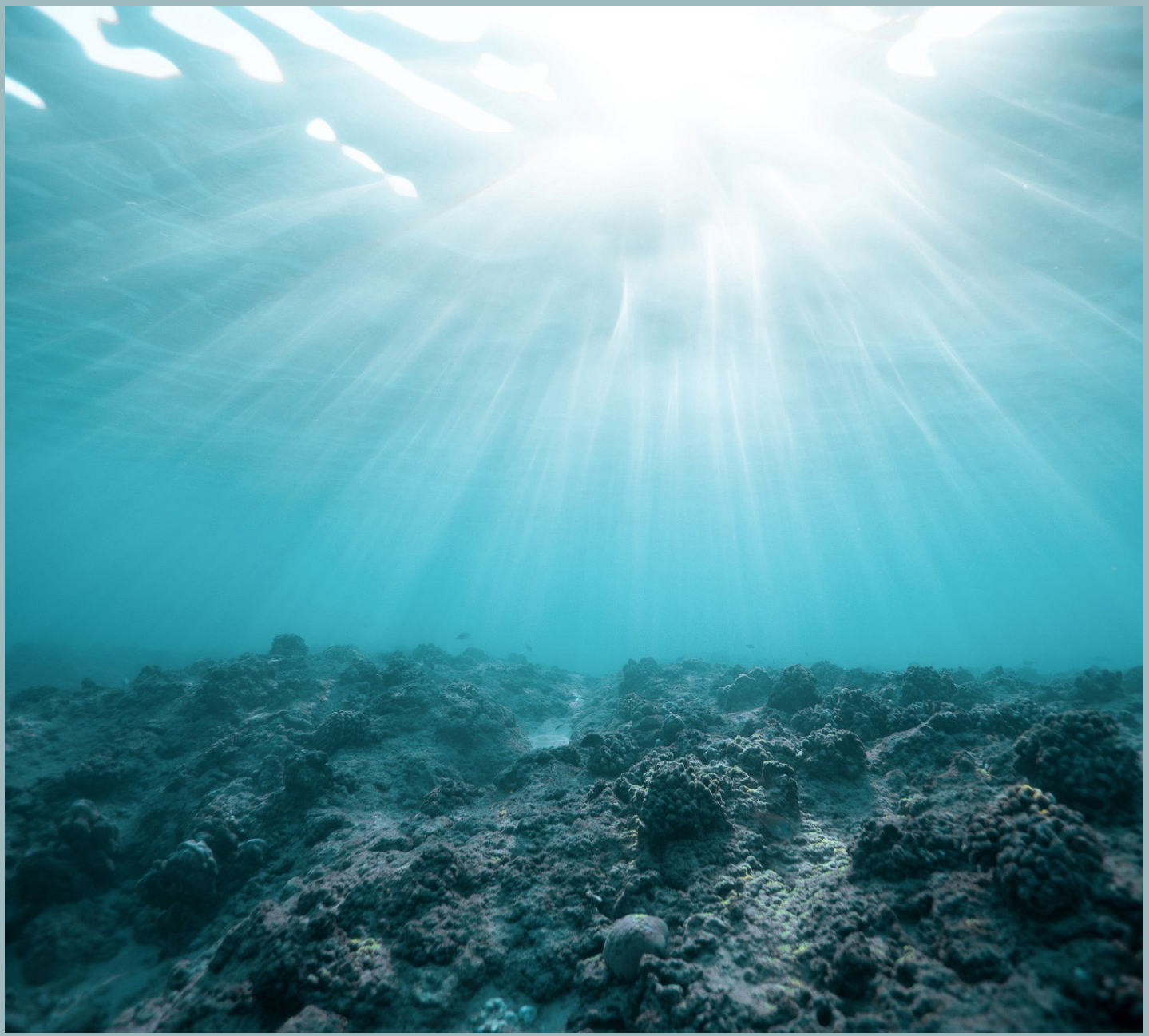
# Ensuring the effectiveness of the Marine Protected Area Network in Scotland

Professor James Harrison - University of Edinburgh | November 2023



# Executive Summary

**The Scottish Government has publicly stated its ambition to be a global leader in marine conservation, including through its commitment to put in place a world-leading suite of Marine Protected Areas (MPAs). Whilst much progress has been made in designating sites to contribute to the Scottish/UK MPA Network in the past decade, recent academic research on protected areas has underlined the importance of considering the degree of protection that is offered by networks of protected areas. The emphasis on 'effectively conserved and managed' and 'equitably governed' protected areas is also reflected in the global target for MPAs contained in the Kunming-Montreal Global Biodiversity Framework adopted in December 2022. This instrument, along with other international treaties and policy instruments adopted at the global and regional levels, provide important legal and policy drivers for the further development of the Scottish MPA network.**

The focus of this report is on the protection offered to MPAs through the legal and policy framework applicable in Scotland. Currently, the Scottish MPA Network is made up of 233 sites in total, comprising 65 Sites of Special Scientific Interest (SSSIs), 58 Special Protection Areas (SPAs), 58 Special Areas of Conservation (SACs), 23 Nature Conservation MPAs (NCMPAs), 13 Offshore MPAs and 16 Ramsar sites. With the exception of Ramsar sites, which receive no special protection under domestic law but rely upon the protection offered by a parallel designation, each type of MPA receives general statutory protection from the point of designation, with consequential obligations on public authorities to promote MPA conservation objectives when making regulatory and other relevant decisions. Furthermore, the legislation confers powers for the adoption of more specific management measures to further the conservation objectives of the sites. Yet, there are subtle differences between the level of protection offered to each type of MPA. The report therefore reviews the legal framework for each of these types of MPA, with a view to identifying recommendations aimed at clarifying the scope and substance of protection that is offered by the legal framework. Furthermore, the report considers how management powers have been used in practice and highlights opportunities to further develop management of the MPA network.

The overarching conclusion of the analysis is that there are significant gaps in management measures. Even where management measures have been put in place, the prevailing approach emphasises sustainable use of marine areas, with no MPAs offering high levels of protection to the site as a whole. This finding is reinforced by applying the IUCN protected area classification scheme to the MPAs making up the network, with almost all sites classified as habitat/ species management areas (category IV) and a small number of sites qualifying as natural monuments or features (category III). In contrast, there are no sites in the current MPA network which qualify as strict nature reserves (category Ia), wilderness areas (category Ib), or national parks (category II). Applying other classification frameworks, such as the MPA Guide developed by Grorud-Colvert and others, reinforces this finding that the overall level of protection offered by Scottish MPAs tends to be limited. The lack of MPAs which benefit from stricter management contrasts with international guidance on MPA management developed under the Convention on Biodiversity (CBD), which recommends a balance within MPA networks between sites where all extractive activities are prohibited in order to ensure nature resilience or recovery and sites where sustainable use is permitted. Whilst the CBD leaves it to individual states to determine how to strike that balance, states must demonstrate that they have acted with due diligence in the overall design of their

network. The need for strict protection of MPAs is also promoted by other international actors. The International Union for the Conservation of Nature (IUCN), an international body made up of both governments and nature conservation organisations, has called for its members, which includes the UK, to ensure that at least 30% of their MPAs have no extractive activities. Similarly, the EU Biodiversity Strategy, includes a commitment that by 2030 'at least 30% of the land and 30% of the sea should be protected in the EU', with 'at least one third of protected areas – representing 10% of EU land and 10% of EU sea – should be strictly protected.' An ambition of leadership in marine environmental protection suggests that the Scottish Government should follow suit in developing its MPA network to offer stricter levels of protection in at least some sites.

The report goes on to consider a number of routes to achieving a better balance of protection across the Scottish MPA network. Whilst the Scottish Government has recently dropped its commitment to designate at least 10% of Scottish waters as Highly Protected Marine Areas (HPMAs) by 2026, the report recommends that dialogue on enhancing marine protection should continue. The Scottish Government must provide leadership and promote innovative means of bringing diverse voices around the table in order to seek consensus on the best way forward.

Even though the continued development of a suite of HPMAs may not be an option in the short term, the report recommends a number of additional options to enhance the diversity of management approaches within the MPA network. One option is to include National Nature Reserves and privately managed nature reserves in the MPA network. These sites are primarily managed for nature conservation purposes and so they offer a high level of protection, although in practice they are clustered around coastal areas. For marine sites, higher levels of protection could be introduced through the extended use of existing powers to manage pressures within established MPAs. Developing further management within existing MPAs would not extend the spatial footprint of the MPA network, but it could offer additional protection, with the potential for some parts of existing MPAs to be managed as zones of strict protection. The Lamlash Bay no-take zone with the South Arran NCMPA offers a model for this approach. As with all forms of marine management, consultation with interested stakeholders is vital in order to understand the potential effects of proposals and to make an informed decision. In addition, the report highlights the need to promote coherent and coordinated MPA management, suggesting that some existing tools, such as cross-cutting management schemes and regional marine plans, could be better utilised to achieve this end. The establishment of a potential coastal and marine National Park could also contribute to coordinated management of MPAs within the boundaries of such a park.

Diversifying the level of protection across the MPA network should be informed by ongoing monitoring of the status of protected features. The report considers existing data on the condition of protected features, observing that data is often not available or is often outdated. Where reliable data does exist, the picture is mixed, with a number of MPAs a long way from achieving their conservation objectives. This observation points to the need to review management of the range of pressures that might be affecting these sites. It is also an opportune time to revise the Scottish Government's MPA Monitoring Strategy with a view to ensuring the relevant authorities have the information they need to make informed decisions on MPA management.

In addition, the report recommends the development of statutory targets for the achievement of MPA conservation objectives as part of an ambitious and complete suite of targets driving a requirement for nature restoration across land and sea, inside and outside of protected areas, in line with broader international commitments.

Finally, the report highlights the importance of having an effective enforcement framework in order to ensure that management measures are followed in practice. The report makes several recommendations concerning reform of penalties for MPA infringements with a view to ensuring that the legal framework provides an appropriate incentive for actors to comply with management measures that are in place. In particular, the report encourages the alignment of fine levels across the different statutory frameworks and the development of sentencing guidelines in order to ensure that penalties are adequate if a case does reach court. The system of fixed penalty notices, which are applied to most MPA offences in the first instance, should also be reviewed and revised to make sure it provides an effective deterrent.

Whilst there are a number of concrete steps that can be taken to strengthen the MPA network, it must be remembered that MPAs are only one part of the overall marine biodiversity strategy in Scotland. Progress on MPAs should not come at the cost of losing sight of other important marine conservation objectives. What is ultimately needed is a comprehensive and coherent marine conservation strategy, with clear targets and means to hold public bodies to account for meeting their commitments.

# Acknowledgements

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James Harrison

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# Contents

# 1. Introduction

The Scottish Government has publicly stated its ambition to be a global leader in marine conservation.[1] The Scottish Government's Strategy for Marine Nature Conservation in Scotland's Seas sets out a three-pillar approach, which includes species conservation, site protection, and wider seas policies and measures.[2] Marine Protected Areas (MPAs) are the main tool used to promote the second of these pillars and the Scottish Government has committed to put in place a 'world-leading' suite of MPAs.[3]

On the face of it, significant progress has been made by the Scottish Government in developing the Scottish/UK MPA network in furtherance of its duties under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009. The Scottish Government claims that the MPA network covers approximately 37% of Scottish marine waters.[4] Yet, as recent academic research on protected areas has underlined, it is important not to focus exclusively on the spatial extent of designation, but also to consider the degree of protection that is offered by networks of protected areas.[5] Work in relation to terrestrial protected areas in the UK indicates that claims to have achieved effective protection may have been overstated, with a need for future work to focus on quality of protection as well as quantity of protected areas.[6] This mirrors preliminary work also carried out in relation to MPAs in Scotland.[7]

The emphasis on 'effectively conserved and managed' and 'equitably governed' protected areas is also reflected in the global target for MPAs contained in the recently concluded Kunming-Montreal Global Biodiversity Framework:

> 'Target 3: Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures…'[8]

To work towards the achievement of an effectively conserved and managed MPA network in Scotland, a better understanding is required of what MPAs are currently in place, the scope of legislative powers available to protect MPAs, how these powers have been exercised in practice, and what gaps exist. The purpose of this report is to consider these questions and to present recommendations about how the Scottish MPA network can be developed in the years ahead. In doing so, it presents both an analysis of the legal framework for the establishment and management of MPAs, as well as a quantitative and qualitative analysis of the current state of the MPA network.

The report recognises that marine protection is sometimes a controversial issue with differing viewpoints on the values that should shape government policy in this area. This diversity of opinion has been particularly prevalent in recent debates about Highly Protected Marine Areas (HPMAs). Yet, the lack of agreement on this particular policy is not a reason to abandon an ambitious agenda for enhanced environmental protection.

[1] N Sturgeon, Keynote Speech at Scotland's International Marine Conference 2019, 20 February 2019, available at https://www.gov.scot/publications/scotlands-international-marine-conference-2019-first-ministers-speech/ <accessed 29 September 2023>.
[2] Scottish Government, *A Strategy for Marine Nature Conservation in Scotland's Seas* (2014) 11.
[3] See e.g. Scottish Government and Scottish Green Party Shared Policy Programme (September 2021) 46.
[4] See https://www.gov.scot/policies/marine-environment/marine-protected-areas/ <accessed 25 August 2023>.
[5] R Crofts et al, 'Putting Nature on the Map: A report and recommendations on the Use of the IUCN System of Protected Area Categorisation in the UK' (IUCN National Committee UK 2014).
[6] T Starnes et al, 'The Extent and Effectiveness of Protected Areas in the UK' (2021) 30 *Global Ecology and Conservation* e01745.
[7] J Harrison, 'The Establishment and Expansion of the Scottish Marine Protected Area Network', Saving our Seas through Law Policy Brief No. 1 (2019) https://www.law.ed.ac.uk/sites/default/files/2020- 09/Marine%20Briefing%201%20(final)_3.pdf <accessed 25 August 2023>.
[8] Kunming-Montreal Global Biodiversity Framework (December 2022) Target 3. See further section 3 below.

Evidence of degradation and damage to marine ecosystems is clear, even if the policy responses are contested. Recent assessments of the Scottish marine environment reveal that the seas are under considerable stress from cumulative pressures.[9] The key findings of this assessment highlight that 'climate change is the most critical factor affecting Scotland's marine environment' while 'pressures associated with bottom-contacting and pelagic fishing continue to be the most geographically widespread, direct pressures across the majority of the Scottish Marine Regions and Offshore Marine Regions.'[10] That is not to say that there are not other localised pressures as well.

A well-designed and effectively managed network of MPAs is a vital tool in order to respond to these challenges with a view to ensuring the long-term health of the marine species and habitats, which provide a range of ecosystem goods and services to all sectors of society. Yet, successful deployment of an effective legal and policy framework requires consideration, and ultimately balancing, of a number of competing factors, including both ecological and socio- economic objectives. Therefore, any further development of the MPA network will have to be carried out in a transparent and collaborative manner with the involvement of all key stakeholders[11], and ensuring acknowledgement and respect for the range of views that are expressed.

The report is divided into 7 sections, including this introduction. Section 2 of the report explains the scope of the study, by considering the definition of a MPA and the distinction between this concept and other area-based management tools. Section 3 sets out the overarching legal and policy context relating to the development of the MPA network in Scotland by reference to key domestic and international instruments. Section 4 presents a legal analysis of the relevant statutory and policy context for the designation of the six main types of protected areas that currently make up the Scottish portion of the UK MPA network, namely Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Nature Conservation MPAs (NCMPAs), Offshore MPAs, and Ramsar sites. For each type of protected area, the analysis will explain how such sites are designated and what legal protection may be offered to the site once designated. Section 5 then offers a quantitative and qualitative analysis of the current extent of the MPA network in Scotland and the level of protection that is afforded to designated protected area sites. In particular, the section will classify Scotland's MPAs according to International Union for Conservation of Nature (IUCN) criteria and other relevant classification frameworks, before carrying out more detailed analysis of the specific management measures that have been put in place to achieve the conservation objectives of these MPAs. The analysis will also consider available data concerning the condition of MPAs in order to assess the effectiveness of the MPA network in achieving its conservation objectives. Section 6 turns to look at how the rules relating to MPAs are enforced, considering both challenges of collecting evidence that an offence has been committed, as well as the sufficiency of penalties where an offence can be proven. Finally, section 7 offers some general conclusions on the current state of the MPA network and the key considerations for ensuring further effective measures are taken to secure Scotland's rich and varied marine species and habitats. The recommendations that are made throughout this report are also gathered and presented at the end of section 7.

[9] Scottish Government, *Scotland's Marine Assessment 2020*, available at https://marine.gov.scot/sma/ <accessed 24 July 2023>.

[10] Scottish Government, *Scotland's Marine Assessment 2020*, Headlines, available at https://marine.gov.scot/sma/sites/default/files/hns_02_headlines_next_steps.pdf <accessed 29 August 2023>.

[11] See e.g. CR Hopkins et al, 'Scotland's Marine Protected Area Network: Reviewing progress towards achieving commitments for marine conservation' (2016) 71 *Marine Policy* 44, 48: 'the inclusion of stakeholders and resource users in the MPA process is important to the eventual effectiveness of MPAs, recognising that policy can fail through a lack of public engagement and reluctance of decision makers and stakeholders to work together.'

# 2. Scope of Study and Definitions

This section will explain the scope of the study. In this context, it will clarify the core definition of a Marine Protected Area (MPA) and it will also distinguish between MPAs and Other Effective Area- based Conservation Measures (OEACMs).

## a. Marine Protected Areas

The focus of this report is on the establishment and effective management of MPAs and it is appropriate to begin by considering the definition of this term in order to understand the scope of the study. MPAs are a form of area-based management tool, widely recognised as contributing to the conservation and sustainable use of marine biodiversity. However, there are a wide variety of other area-based management tools, which do not constitute MPAs. Therefore it is important to be clear about what qualifies an area-based management tool as an MPA and what sorts of measures may not qualify as an MPA, but may nevertheless contribute to marine conservation.

Whilst the term MPA is widely used in legal and policy documents, there is no single definition for this concept. The most commonly used definition of a MPA is provided by the International Union for the Conservation of Nature (IUCN):

> 'any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical or cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.'[12]

This provides some core meaning to the concept, but IUCN guidance also makes clear that this definition must be understood and applied in the broader context of the generic definition of a protected area[13], namely:

> 'a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the longterm conservation of nature with associated ecosystem services and cultural value.'[14]

This definition of protected area is itself closely related to the use of the term within the context of the Convention on Biological Diversity (CBD)[15], which is one of the main legal and policy drivers for the establishment of MPA networks, as discussed in section 3 below.

What is central to this definition of 'protected area' is the primacy of nature conservation as the objective of the designation.[16] Nevertheless, as recognised by IUCN guidance, it still covers a wide array of different types of protected areas with diverse management objectives. It is for this reason that IUCN has developed further classifications of protected areas based upon their conservation objectives, as discussed in section 5.

For present purposes, three key consequences arise from this definition of the term MPA.

Firstly, it also follows from the conceptual definition of an MPA that not all sites that are called an MPA will necessarily meet the relevant criteria.[17] What is critical is the management objectives of the site. For example, the Marine (Scotland) Act 2010 permits the Scottish Government to designate three types of MPAs: Nature Conservation MPAs (NCMPAs), Demonstration and Research MPAs (D&R MPAs), and Historic MPAs.[18] Yet it is only the first of these designations that

[12] IUCN Resolution 17.38: Protection of the Coastal and Marine Environment (1988) para. 2(b).

[13] Indeed, the MPA definition is considered to have been superceded by the generic protected area definition; see N Dudley (ed), *Guidelines for Applying Protected Area Management Categories* (IUCN 2008) 56.

[14] J Day et al, *Guidelines for Applying the IUCN protected management categories to marine protected areas, second edition* (IUCN, 2018) 8.

[15] CBD, Article 2: '"Protected area" means a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives.'

[16] Day et al (n14) 8, who go on to say 'it should be noted that … this will include sites with other goals as well, at the same level, such as cultural or spiritual, but in the case of conflict nature conservation has to be the priority.' Further IUCN guidance recognises that some sites may have mixed management objectives and a site can be classified as a protected area provided that at least 75 per cent is managed primarily for nature conservation purposes; see Dudley (n13) 35.

[17] See ibid, 58.

[18] Marine (Scotland) Act 2010, s. 67.

necessarily serves conservation purposes. Therefore, despite their name, D&R MPAs and Historic MPAs will not be counted as MPAs for the purpose of this study. At the same time, it does not follow that such sites are irrelevant for the purposes of MPA policy, as discussed in the following section.

Secondly, following on from this initial point, a measure does not have to be formally called an MPA in order to classify as an MPA, provided that it meets the conceptual definition. Indeed, the relevant domestic statutes recognise that several types of nature conservation sites, aside from a NCMPA, designated under different legislation, may contribute to an MPA network[19], notably European marine sites (SACs and SPAs), relevant sites of special scientific interest (SSSIs), and relevant Ramsar sites. Taking all of these different designations into account, there are 233 sites in Scottish waters which are considered to contribute to the MPA network (see Annex) and it is these sites that are the primary focus of this study.[20]

Thirdly, the definition does not require that a MPA is exclusively found in marine space. The IUCN definition is clear that MPAs can include both intertidal or subtidal terrain and the overlaying water column. It follows that a protected area can be exclusively intertidal, with no permanent water coverage, and still count as an MPA. Furthermore, in practice, MPAs may also include adjacent land territory within the scope of their protection.[21] IUCN guidance recognises that MPAs may include a terrestrial element and they can be treated as a single site in certain circumstances, depending on the core objectives of the site.[22] Such an approach is perfectly appropriate if it is necessary for the purposes of ensuring the overall integrity of the ecosystems being protected and it should not affect the classification of a site as an MPA.

### b. Other Effective Area-based Conservation Measures

What is particularly distinctive about protected areas compared to other area-based management tools is their focus on 'specific conservation objectives', which differentiates them from what are often referred to as Other Effective Area-based Conservation Measures (OEACMs). Nevertheless, international policy increasingly recognises that these other area-based management tools may also be relevant to assessing compliance with international biodiversity targets, provided that strict criteria are met.[23] Indeed the CBD establishes an obligation on parties to establish a system of 'protected areas *or* areas where special measures need to be taken to conserve biological diversity'[24] (emphasis added) and the most recent iteration of the global MPA target refers to 'systems of protected areas *and* other effective area-based conservation measures' (emphasis added).[25]

Although OEACMs are distinct from protected areas, they have been recognised as a valuable tool for mainstreaming biodiversity into other sectoral approaches to resource management.[26] In doing so, they may 'deliver biodiversity outcomes of comparable importance to and complementary with those of protected areas.'[27] At the same time, there has been significant debate at the international level about what measures might count towards meeting the protected area target in this context, with a view to preventing sites being relied upon where they offer little benefit to biodiversity. To this end, the CBD Conference of the Parties (COP) has defined 'other effective area-based conservation measure' as 'a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity, with

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[19] The domestic legislation in fact refers to it as a 'network of conservation sites'; Marine (Scotland) Act 2010, s. 79 and Marine and Coastal Access Act 2009, s. 123.

[20] It is perhaps unfortunate that the publicly facing data on different Scottish Government websites provide different numbers of MPAs. The Facts and Figures webpage of the Marine Directorate of the Scottish Government refers to 233 sites: https://marine.gov.scot/data/facts-and-figures-about-scotlands-sea-area- coastline-length-sea-area-sq-kms <accessed 25 August 2023>. In contrast, the main Scottish Government webpage on MPAs provides a different, and apparently out-of-date, number (231) of nature conservation sites as part of the network; https://www.gov.scot/policies/marine-environment/marine-protected-areas/ < accessed 18 August 2023>. It would be beneficial if an easily accessible list of MPAs contributing towards the MPA network was maintained by the Scottish Government in order to facilitate transparency and accountability.

[21] IUCN guidance encourages the integration of wetland systems into protected areas, including in coastal MPAs; see Dudley (n13) 63-64.

[22] Day et al (n14) 28.

[23] For discussion, see D Diz et al, 'Mainstreaming marine biodiversity into the SDGs: The role of other effective area-based conservation measures (SDG 14.5)' (2018) 93 *Marine Policy* 251-261.

[24] CBD, Article 8(a).

[25] Kunming-Montreal Global Biodiversity Framework (December 2022), Target 3.

[26] See CBD COP Decision XXIV/8, Annex III, para. A(b).

[27] Ibid, para. A(d).

associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values.'[28] This definition makes clear that OEACMs can only contribute to MPA networks where they offer long-term benefits for biodiversity. Further guidance adopted by the CBD COP has emphasised that such measures should only be counted where they achieve a 'sustained and effective contribution to in situ conservation biodiversity'[29], which in part means that 'monitoring the effectiveness of [OEACMs] is needed.'[30]

The position of the Scottish Government on the contribution of OEACMs to the Scottish MPA Network is ambiguous. In its 2018 Report to the Scottish Parliament on progress to identify a Scottish Network of MPAs, the Scottish Government identified the following five area-based measures as part of the MPA network in Scotland's seas: [31]

- North-east UK sandeel closure
- North West Rockall (insofar as it does not overlap with the North West Rockall SAC)
- West Rockall Mound
- Blue Ling Management Area (Rosemary Bank)
- Blue Ling Management Area (West of Scotland)

These five area based measures are still listed by the Scottish Government as being part of the Scottish MPA network.[32] Yet, it is not entirely clear on what basis this selection was made and why other area-based management measures were not chosen. For example, there are a number of other long-term fishery closures, adopted for a variety of reasons, but which may nevertheless have positive biodiversity benefits.[33] Another example of sites which may potentially qualify as OEACMs are Historic MPAs, which are designated for the protection of cultural assets, but which may also provide positive biodiversity benefits by preventing activities that may disturb the site.[34]

Another ambiguity arising from the identification of OEACMs by the Scottish Government is whether these sites are counted when calculating the area coverage of the total MPA network. There would appear to be contradictory information in the public realm on this point. The Scottish Government website states that 'the Scottish MPA network includes sites for nature conservation, protection of biodiversity, demonstrating sustainable management, and protecting our heritage [and] in total the network covers approximately 37% of our seas.'[35] In contrast, in response to a recent parliamentary question (S6W-18168 Ariane Burgess), the Cabinet Secretary explained:[36]

> 'The total area of the Marine Protected Area network designated in the Scottish continental shelf area adjacent to Scotland, as designated in the Continental Shelf (Designation of Areas) Order 2013 is (a) 228,118 square kilometres and (b) 37%.
>
> These figures take into account all overlapping designations and capture:
>
> - Special Areas of Conservation
> - Special Protection Areas
> - Nature Conservation Marine Protected Areas
> - Ramsar sites for wetlands of international importance.
> - Sites of Special Scientific Interest.
>
> These figures do not include Historic Marine Protected Areas, Other Area Based Measures, or the Demonstration and Research Marine Protected Area.'

This ambiguity could be resolved by a clearer and coherent policy position on what role OEACMs are playing in relation to the Scottish MPA network and how relevant OEACMs are identified. In this respect, it is significant to note that some states and other relevant actors have developed policies

[28] CBD COP Decision XIV/8 (2018) para. 2.
[29] Ibid, Section B, Criteria C.
[30] Ibid, para. C(f).
[31] Scottish Government, *Scottish MPA Network – Parliamentary Report* (December 2018) 11
[32] See https://www.gov.scot/policies/marine-environment/marine-protected-areas/ <last accessed 18 August 2023>.
[33] See e.g. some of the area-based measures under the Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004.
[34] Marine (Scotland) Act 2010, s. 96.
[35] https://www.gov.scot/policies/marine-environment/marine-protected-areas/ < accessed 7 July 2023>.
[36] See https://www.parliament.scot/chamber-and-committees/questions-and-answers/question?ref=S6W-18168 <accessed 25 August 2023>.

concerning when OEACMs will count towards meeting their international targets. For example, according to the EU Commission[37], OEACMs can be counted towards the EU target if:

- the area is covered by a national or international legislative or administrative act or a contractual arrangement aiming to achieve long-term conservation outcomes;
- conservation objectives and measures are in place; and
- effective management and monitoring of the biodiversity in the area is in place.

Similarly, Canada[38] has adopted a clear definition of OEACMs alongside criteria for their inclusion in the Canadian Protected and Conserved Areas Database, namely:

- the area has defined boundaries–you can point to it on a map;
- governing authorities are able to control activities within the boundaries;
- governing authorities have the obligation to perform activities that lead to conservation in the area and restrict activities that are incompatible with conservation;
- conservation is year round and will be maintained in the long term;
- site goals will lead to conservation and biodiversity;
- conservation objectives are not threatened by other site objectives;
- governing authorities follow the management plan that is creating positive biodiversity outcomes, and no governing authorities threaten onsite conservation.

It would be desirable for the Scottish Government to develop a policy on OEACMs, not only to resolve ambiguity about existing measures, but also because it is likely that further area-based management measures may be adopted in the future, particularly given commitments to the protection of priority marine features outside of MPAs[39] and proposals to extend the sandeel fishery closure to the entirety of Scottish waters.[40] As a result, clarity about if and how these measures and other potential OEACMs will contribute to the Scottish MPA Network will become even more important as time passes.

For the purposes of this report, the focus is on MPAs and therefore OEACMs will not be directly included in the analysis. However, when discussing effectiveness of MPA management, the report will return to the issue of OEACMs, as their existence arguably needs to be taken into account in determining whether current management measures are effective.

Recommendation: The Scottish Government should develop a policy on the contribution of OEACMs to meeting international conservation targets, which aligns with international guidance produced by the CBD COP and takes into account best practice from other jurisdictions.

[37] Commission Staff Working Document, *Criteria and Guidance for Protected Area Designation*, Document SWD(2022) 23 final (28 January 2022) 15.
[38] https://www.canada.ca/en/environment-climate-change/services/nature-legacy/other-effective-area-based-measures.html <accessed 7 July 2023>.
[39] Scottish Government and Scottish Green Party Shared Policy Programme (September 2021) 46.
[40] See Scottish Government, *Consultation on proposals to close fishing for sandeel in all Scottish waters* (July 2023).

# 3. Legal and policy context

This section will set out the overarching legislative and policy context relating to the development of the MPA network in Scotland. It will explain the relevant legal duties relating to the establishment of a MPA network in both national law and international law, as well as relevant policy guidance, particularly the CBD Global Biodiversity Framework adopted in December 2022 and the 2020 EU Biodiversity Strategy, both of which have been highlighted as underpinning policy development in Scotland.

## a. National context

The debate about MPAs began in earnest in the UK during discussions about the introduction of new marine legislation in the early 2000s. This legislation was drafted to include specific duties on the Scottish Ministers to develop a network of MPAs.

Under section 79 of the Marine (Scotland) Act 2010, Scottish Ministers are under a specific duty to designate areas as Nature Conservation Marine Protected Areas (NCMPAs) as part of a broader UK MPA network that contributes to the conservation or improvement of the marine environment in the UK marine area and represents the range of features present in the UK waters.[41] There is no specific timeframe associated with this duty and it would therefore seem to impose an ongoing obligation, with which compliance must be periodically reviewed in light of evolving scientific evidence.
Alongside NCMPAs designated under the 2010 Act, the UK MPA network will also be comprised of offshore MPAs established under the Marine and Coastal Access Act 2009[42], European marine sites, Sites of Special Scientific Interest (SSSIs), and Ramsar sites.[43] The precise characteristics and differences between these different forms of designation will be reviewed in section 4. Progress on the establishment of a MPA network, alongside an assessment of the extent to which the conservation objectives of sites are being met[44], must be reported to the Scottish Parliament every six years.[45] The next report is due in December 2024.

A parallel duty to establish MPAs under the Marine and Coastal Access Act 2009 exists[46], as well as a similar reporting duty.[47]

In complying with its duties under these statutes, Scottish Ministers must also have regard to any retained EU law and any international obligations that relate to the conservation or improvement of the marine environment.[48] This obligation reflects the range of legal and policy drivers behind the legislation and it requires consideration to be given to a number of different sources, discussed in the following sections.

Before moving onto the global and regional context, however, it is worthwhile identifying the broader assemblage of domestic legal and policy commitments to which the development of a MPA network may also contribute. Key examples are:

- The Environment Strategy for Scotland, adopted in February 2020, commits the Scottish Government to an overarching vision of restoring nature and ending Scotland's contribution to climate change by 2045. The achievement of this vision is expressly linked to the delivery of the National Outcomes established under section 1 of the Community Empowerment (Scotland) Act 2015, which are themselves designed to give effect to the UN Sustainable Development Goals (SDG), including SDG 14 on life below water.
- The Marine Strategy Regulations 2010 require the Scottish Government to exercise their relevant functions so as to secure compliance with the EU Marine Strategy Directive and in particular the obligation to achieve good environmental status (GES) of marine waters. The

[41] Marine (Scotland) Act 2010, s. 79(2)-(3).
[42] Section 79 refers to 'areas designated as marine conservation zones under section 116 of the 2009 Act' but section 116(7) of the 2009 Act itself provides that 'an MCZ designated by the Scottish Ministers under this section is to be known as a marine protected area.' For the purposes of this report, such sites will be referred to as offshore MPAs to avoid confusion.
[43] Marine (Scotland) Act 2010, s. 79(4).
[44] Marine (Scotland) Act 2010, s. 70.
[45] Marine (Scotland) Act 2010, s. 103.
[46] Marine and Coastal Access Act 2009, s. 123(1)-(3).
[47] Marine and Coastal Access Act 2009, s. 124.
[48] Marine (Scotland) Act 2010, s. 79(5); Marine and Coastal Access Act 2009, s. 123(5).

UK's programme of measures adopted to give effective to the Directive expressly noted that 'the UK's network of Marine Protected Areas (MPAs) will play a significant role in supporting the achievement of a number of the GES characteristics and targets.'[49]

- The Scottish Government, along with all other public bodies and office-holders, has a duty under section 1 of the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity. The establishment of a network of MPAs has been recognised as a key contribution to this duty.[50] This is reiterated in the draft Scottish Biodiversity Strategy to 2045 which sets a vision of restoring and regenerating biodiversity across land, freshwater and seas by 2045 so that habitats, ecosystems and species are diverse, thriving, resilient and adapting to climate change.[51]
- The establishment and effective management of MPAs is also relevant to the achievement of the Scottish Government's Vision for a Blue Economy which overall calls for 'shared stewardship of our marine environment [which] supports ecosystem health, improved livelihoods, economic prosperity, social inclusion and well-being.'[52]

### b. Global context

The development of a MPA network in Scotland is in part driven by international law and the associated policy framework.

Firstly, insofar as MPAs are part of a broader legal toolkit designed to protect and preserve the marine environment, their development is framed by general obligations found in the 1982 United Nations Convention on the Law of the Sea (UNCLOS). Article 192 of this treaty provides an overarching obligation for states to 'protect and preserve the marine environment', which has been interpreted as a due diligence obligation requiring states to not only take action to protect the ocean from current and future threats, but also to take positive action with a view to 'maintaining and improving its present condition.'[53] This is a so-called due diligence obligation[54], which demands positive action by states, 'using … the best practicable means at their disposal and in accordance with their capabilities'[55], to protect and preserve the marine environment. The Convention does not itself explicitly require the establishment of MPAs, but it does include an obligation to take measures that are 'necessary to protect and preserve rare and fragile ecosystems as well as habitat of depleted, threatened or endangered species and other forms of marine life'[56] and the United Nations General Assembly has, in its annual resolution on oceans and the law of the sea, encouraged states 'to further progress towards the establishment of marine protected areas, including representative networks, and … to further consider options to identify and protect ecologically or biologically significant areas, consistent with international law and on the basis of the best available scientific information.'[57] Furthermore, international courts have emphasised that it is necessary to interpret these obligations in UNCLOS in light of other relevant rules of international law.[58] In this context, there is a strong connection between UNCLOS and the other treaties, discussed below, which do contain specific rules on the establishment of protected areas.

The CBD was adopted in 1992 and entered into force in 1993. It currently has 196 parties[59], including the UK, and it is one of the most widely ratified treaties. The overall objective of the Convention is to promote the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.[60] The significance of the Convention is the way in which it has influenced the narrative on nature conservation, moving away from discrete action focussed on particular species or habitats to a more holistic and cross-cutting

[49] Department for Environment, Food and Rural Affairs, *Marine Strategy Part Three: UK Programme of Measures* (December 2015) para. 61.
[50] Scottish Government, *The Scottish Government Biodiversity Duty Report 2018-2020* (July 2023) 18.
[51] Scottish Government, *Scottish Biodiversity Strategy to 2045: tackling the nature emergency* (December 2022) 32.
[52] Scottish Government, *A Blue Economy Vision for Scotland* (March 2022).
[53] *South China Sea Arbitration* (Philippines v China), Award on the Merits (2016) para. 941.
[54] Ibid, para. 944.
[55] UNCLOS, Article 194(1).
[56] UNCLOS, Article 194(5).
[57] Oceans and the Law of the Sea, UNGA Resolution 77/248 (30 December 2022) para. 284. See also Sustainable Fisheries, UNGA Resolution 77/118 (9 December 2022) paras 225-226.
[58] *South China Sea Arbitration* (Philippines v China), Award on the Merits (2016) para. 942.
[59] https://www.cbd.int/information/parties.shtml <accessed 25 August 2023>.
[60] CBD, Article 1.

approach, taking into account ecosystem resilience and connectivity.[61] In part, it has done this by introducing overarching obligations requiring states to develop national strategies, plans and programmes for the conservation and sustainable use of biological diversity and to take progressive steps to integrate the conservation of biodiversity into other sectoral plans, programmes and policies.[62] Whilst many of the Convention's provisions are general in nature, several core obligations are found in Article 8 on in situ conservation, which opens with the obligation to:

> 'as far as possible and appropriate establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity.'[63]

In this context, the CBD defines 'protected areas' as 'a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives.'[64] This mirrors the IUCN definition, which as noted in section 2 above, emphasises the primacy of conservation objectives. Whilst there is no specific obligation relating to MPAs, there is no doubt that the CBD applies to marine areas within the national jurisdiction of parties, that is to internal waters, the territorial sea, the exclusive economic zone and the continental shelf.[65] Indeed, the CBD COP has emphasised that 'marine and coastal protected areas are one of the essential tools and approaches in the conservation and sustainable use of marine and coastal biodiversity.'[66] Whilst the focus of this report is on MPAs, it is worthwhile reiterating that marine ecosystems are often interconnected with terrestrial ecosystems, which can have important implications for designation or management, as highlighted in section 2 above.

A number of further observations can be made about the obligation relating to protected areas in Article 8(a) of the CBD.

Firstly, protected areas are just one tool to be employed by states in the fulfilment of their obligations under the CBD, a fact underlined by Article 8(c) providing that states must 'regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use' (emphasis added). The CBD COP has further underlined that 'marine and coastal protected areas should be part of a wider marine and coastal management framework.'[67] It follows that protected areas should not be adopted in isolation from more general conservation measures. That being said, it can be argued that the due diligence required from states in regulating activities is greater within protected areas than outside protected areas precisely because protected areas have been recognised for their significant biological or ecological value.

Secondly, it must be observed that the obligation in Article 8(a) of the CBD is an obligation of conduct, meaning that individual parties have a degree of discretion in determining the extent of their protected area networks. This is underlined by the indication that parties must take action 'as far as possible and appropriate.' It does not follow, however, that this discretion is unlimited and it can be argued that the duty to take 'appropriate' steps requires parties to demonstrate due diligence in their performance of the obligation, in line with the general obligation to protect and preserve the marine environment set out in UNCLOS. What is appropriate will depend on the particular context of a state. A country like Scotland, with a large and biologically diverse marine area under its jurisdiction, arguably has to do more in order to establish an appropriate system of MPAs compared to a country with a smaller marine area.

To assist states in performing their obligations under Article 8(a), the CBD COP has adopted a number of associated policy instruments relating to protected areas. Perhaps the most important policy instrument in this regard is the inclusion of a specific target on protected areas in the Global Biodiversity Framework (GBF) adopted by the fifteenth COP in Montreal in November 2022. The GBF functions as the Strategic Plan for the implementation of the CBD for the period 2022-2030 and its overarching aim is to 'catalyze, enable and galvanize urgent and transformative action by governments, subnational and local governments, and with the involvement of all of society to halt and reverse biodiversity loss, to achieve

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61 See generally J Harrison, *Saving our Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (OUP 2017) 45-51.
62 CBD, Article 6.
63 CBD, Article 8(a); see also Article 8(b): 'Each contracting party shall, as far as possible and appropriate, develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity.'
64 CBD, Article 2.
65 CBD, Article 4(a).
66 CBD COP Decision VII/5 (2004) para. 16.
67 Ibid, para. 20.

the outcomes it sets out… and thereby to contribute to the three objectives of the Convention…'[68] Indeed, the GBF is permeated by an emphasis on the urgency of action to halt and reverse biodiversity loss[69]. With this in mind, parties are expected to update their national biodiversity strategies or plans (required under Article 6 of the CBD) to give effect to the GBF[70] and Scotland has committed to doing so.[71]

The key target in the GBF in relation to MPAs is target 3, which calls for parties to:

> Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitable governed systems of protected areas and other effective area-based conservation measures, recognising indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognising and respecting the rights of indigenous peoples and local communities, including over their traditional territories.'

Whilst this target is often referred to as the '30x30 target', it is clear from the text that it calls for much more than the simple designation of 30% of the ocean as MPAs. Indeed, there are multiple components of the target, all of which must be cumulatively satisfied if the target is to be met. Many of these elements of the GBF echo what was found in the previous Aichi Biodiversity target.[72] To the extent that this is true, COP decisions adopted prior to the GBF may continue to be relevant to the implementation of target 3. The key issues relevant to Scotland are discussed below.

Firstly, target 3 calls for protected areas to be designated in 'areas of particular importance for biodiversity and ecosystem functions and services.' This part of the commitment must be read in light of the obligation in Article 8(b) of the CBD which requires states to develop 'guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity', as well as Annex I of the CBD listing factors to be taken into account when implementing the Convention and the criteria on the identification of ecological and biologically significant marine areas (EBSAs) in need of protection, adopted by the CBD COP.[73] The latter instrument lists seven key criteria to inform decision-making, namely: uniqueness or rarity; special importance for the life-history stages of species; importance for threatened, endangered or declining species and/or habitats; vulnerability, fragility, sensitivity, or slow recovery; biological productivity; biological diversity; and naturalness. Whilst these so-called EBSA criteria were developed primarily to aid the identification of ecosystems in need of protection in areas beyond national jurisdiction, the CBD COP has noted that they can be adapted for use in areas within national jurisdiction.[74] The EBSA criteria are supplemented by scientific guidance for designing representative networks of MPAs, which emphasises the need for a MPA network to be both representative of different biogeographical subdivisions of the ocean, as well as ensuring connectivity.[75]

Target 3 of the GBF also calls for effective management of protected areas and the integration of protected areas into broader systems of management. This element of Target 3 must be understood in light of Target 1 which calls for all areas to be under 'participatory, integrated biodiversity inclusive spatial planning and/or effective management processes addressing land and sea use change…' The CBD COP has adopted further guidance on integration of protected areas, in which they inter alia define protected area integration as 'the process of ensuring that the design and management of protected areas, corridors and the surrounding matrix fosters a connected, functional ecological network.'[76] In this connection, the CBD COP has called for parties to review their national landscape and seascape plans, including marine spatial plans, 'in order to improve connectivity and complementarity and reduce fragmentation and impacts.'[77]

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[68] CBD COP Decision XV/4 (2022) Annex, para. 4.

[69] E.g. ibid, Annex, para. 29. See also para 31.

[70] Ibid, para. 5 and para. 34(a). See also para 11: 'Each Party would contribute to attaining the goals and targets of the global biodiversity framework in accordance with national circumstances, priorities and capabilities.'

[71] Scottish Government, Scottish Biodiversity Strategy to 2045: tackling the nature emergency (December 2022) 5: 'This strategy remains a draft to ensure that the final version reflects any agreement made at COP 15.'

[72] Aichi Target 11. See also CBD COP Decision VII/28 (2004) Annex. CBD COP Decision VII/5 (2004) para. 18.

[73] CBD COP Decision IX/20 (2008) para. 14 and Annex I. See also the scientific guidance for designing representative networks of marine protected areas, in Annex II to the same decision.

[74] CBD COP Decision IX/20 (2008) para. 18.

[75] CBD COP Decision IX/20 (2008),para. 14 and Annex II. Of course, the challenges of promoting connectivity in the marine environment should not be forgotten; see Hopkins et al (n9) 49.

[76] CBD COP Decision XIV/8 (2018) Annex I, para. 3.

[77] CBD COP Decision XIV/8 (2018) Annex I, para. II.A(f).

Furthermore, integrated management may call for 'coordinated management of multiple sites of different governance types to achieve conservation objectives at larger landscape and seascape scales.'[78] This is therefore relevant when discussing effective management in section 5 below.

Not only must management be effective, but also equitable, which requires consideration of the governance of MPAs. A lot has been written on this subject[79] and, prior to the GBF, the CBD COP adopted 'voluntary guidance on effective governance models for management of protected areas, including equity, taking into account work being undertaken under Article 8(j) and related provisions.'[80] This latter instrument recognises that there is no single model of governance that can be applied to all MPAs, but rather governance needs to be tailored to the context, whilst also respecting certain principles, such as the promotion of participatory multi-stakeholder processes, transparency, monitoring and review. Indeed, multi-stakeholder participation is a theme throughout many CBD COP decisions, including being a central tenet of the ecosystem approach promoted by the CBD.[81]

Target 3 of the GBF recognises that the management of MPA does not require full cessation of all activities within the MPA, but it underlines that conservation outcomes should be used to determine what level of activity is sustainable. Where activity is permitted, CBD guidelines on biodiversity- inclusive impact assessment suggests that EIA should be mandatory for activities within protected areas.[82] Guidance produced by the CBD COP has also emphasised that in developing systems of protected areas under Article 8 of the Convention, states should aim for an 'appropriate balance' between MPAs where extractive uses are allowed and 'representative marine and coastal protected areas where extractive uses are excluded, and other significant human pressures are removed or minimized, to enable the integrity, structure and functioning of ecosystems to be maintained or recovered.'[83] The CBD COP has emphasised in this context that 'there are some benefits of the framework that can be provided with any degree of certainty only by including highly protected areas, and that to achieve the full benefits a network needs to include representative and distinctive areas and contain a sufficient area of the coastal and marine environment to be effective and ecologically viable.'[84] The use of the term 'highly protected areas' in this context would appear to be a reference to 'protected areas where extractive uses are excluded, and other significant human pressures are removed or minimized.' In other words, the CBD would seem to be encouraging the establishment of MPAs in IUCN categories I or II, where impacts of human activities are strictly limited to ensure protection of conservation values. Of course, it is up to each party to determine the appropriate balance between different types of protected areas forming their network[85] and there is arguably a large amount of leeway for them to do so, although, at a minimum, there should be some areas that are highly protected. States have been encouraged by the CBD COP to take further steps to achieve this end.[86] In furtherance of this goal, Resolution WCC-2016-Res-050 of the International Union for the Conservation of Nature (IUCN) has also encouraged 'IUCN State and Government Agency Members to designate and implement at least 30% of each marine habitat in a network of highly protected MPAs and other effective area-based conservation measures, with the ultimate aim of creating a fully sustainable ocean, at least 30% of which has no extractive activities, subject to the rights of indigenous peoples and local communities…' This target is not formally binding, but it provides an aspirational target to guide state practice.

In terms of the objectives of MPAs, target 3 of the GBF must also be read in light of target 2 which calls for 'at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and management ecosystems are under effective restoration [by 2030] in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.' This target is backed up by a legal obligation in Article 8(f) of the CBD to 'rehabilitate and restore degraded ecosystems and promote the recovery of threatened species…'[87] MPAs will often be good candidates for restoration.[88]

[78] CBD COP Decision XIV/8 (2018) Annex II, para. 7(b).
[79] See e.g. PJS Jones, RH Murray and O Vestergaard, *Enabling Effective and Equitable Marine Protected Areas: Guidance on governance approaches* (UNEP 2019).
[80] CBD COP Decision XIV/8 (2018) Annex II.
[81] CBD COP Decision V/6 (2000) particularly principles 1 and 2.
[82] CBD COP Decision VIII/28 (2006) Appendix I.
[83] CBD COP Decision VII/5 (2004) para. 21 and Annex I, Operational Objective 3.1.
[84] Ibid, para. 24.
[85] Ibid, para. 22.
[86] Ibid, Annex II, para. 1: 'for countries with no marine and coastal protected areas or no highly protected marine and coastal protected areas, the first step should be to develop the first few marine and coastal protected areas and the necessary mechanisms to allow future marine and coastal protected areas and networks to be developed.'
[87] See further J Harrison, 'The Protection of Species, Ecosystems and Biodiversity under UNCLOS in light of the South China Sea Arbitration: An emergent duty of marine ecosystem restoration?', Edinburgh School of Law Research Paper No. 2019/20, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3388657 <accessed 7 July 2023>
[88] See Hopkins et al (n9) 51

Other general targets in the GBF also have resonance for the achievement of target 3. For example, target 21 underlines that decision-making should be based upon the best available data and integrated through participatory practices. Another key target underpinning the whole GBF is target 19 which demands that parties 'substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner … to implement national biodiversity strategies and action plans.' Indeed, sustainable finance has been highlighted as a key area that needs improvement in the CBD work programme on protected areas.[89]

The CBD COP has emphasised the importance of monitoring the achievement of identified goals and objectives, which calls for 'evaluation of effectiveness, and adaptive management over time.'[90] Adaptive management is more generally recognised by the CBD COP as a crucial element of the ecosystem approach which is promulgated under the Convention.[91]

Finally, the CBD COP has emphasised the need for effective enforcement which depends inter alia on:

- Adequate enforcement capacity, including clear responsibilities, inter-agency coordination, trained and equipped personnel and the necessary legal or customary powers;
- Appropriate penalties and associated legal provisions;
- Integration between enforcement, voluntary compliance and management.[92]

A final point that comes out of the CBD COP decisions is the need for transparency in MPAs. In particular, the CBD COP has encouraged reporting on progress and in particular it has encouraged parties to 'share and update relevant information on their protected areas system within the World Database on Protected Areas.'[93] Such transparency is particularly important when it comes to measuring progress towards target 3 of the GBF. As discussed in section 5 below, this is an area where Scotland could improve its performance.

It is clear from the above discussion that the relatively concise obligation relating to protected areas in Article 8(a) of the CBD is underpinned by a rich and complex tapestry of international guidance and best practice relating to the establishment, management and integration of MPA networks, mostly contained in relevant CBD COP decisions. These decisions do not establish binding obligations on parties, but are rather policy instruments. Thus, parties cannot necessarily be held legally responsible for failing to effectively and equitably manage at least 30 per cent of their marine areas through a system of protected areas and other effective area-based conservation measures by 2030. Nevertheless, the COP decisions do provide important context for understanding the scope and substance of the treaty obligation in Article 8(a), which is legally binding. Moreover, COP decisions are adopted by consensus of the CBD parties, meaning they have the almost universal support of the international community and they should therefore be accorded significant weight as political commitments at the global level. CBD COP decisions convey a clear expectation that parties will take this implementation process seriously and they will document their decision-making processes through the development of national biodiversity action plans and strategies, including national targets, supplemented by national reports on progress in implementing their obligations and related targets.[94] It is expected that progress will be subject to political oversight by the CBD COP which has indicated that it will carry out a 'global analysis of information in NBSAPs' and review 'collective progress in the implementation of the [GBF].'[95] The GBF also suggests that individual parties consider 'voluntary peer review.'[96] The precise parameters for such a process have not been articulated as yet, but any such review should be carried out in a transparent manner, ensuring that the results of published so that follow-up action can be monitored.

Beyond the CBD, a number of other international treaties may also be relevant to the development of the MPA network. One example is the 1979 Convention on Migratory Species, which includes an obligation to endeavour to 'conserve and, where feasible and appropriate, restore' habitats of migratory species listed in Appendix I, which includes a number of marine mammals, turtles, fish and seabirds.[97] The UK is a

[89] CBD COP Decision X31 (2010) para. 10(a).
[90] CBD COP Decision VII/5 (2004) Annex II, para. 3.
[91] E.g. CBD COP Decision V/6 (2000) para. 4 and Principle 9; see also CBD COP Decision VII/11 (2004) para. 17. Adaptive management is also recognised as an element of sustainable use under the Convention; see Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (2004) Practical Principle 4.
[92] CBD COP Decision VII/5 (2004) Annex II, para. 8.
[93] CBD COP Decision X/31 (2010) para. 35. See also CBD COP Decision VII/28 (2004) para. 32.
[94] CBD COP Decision XV/6 (2022), Annex, para. 34(a) and (b).
[95] Ibid, Annex, para. 34(c) and (d).
[96] Ibid, Annex, para. 34(e).
[97] Convention on Migratory Species, Article 3(4)(a).

party to the CMS, as well as participating in a number of other instruments designed to give effect to the CMS in relation to particular marine species, such as the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas and the Memorandum of Understanding on the Conservation of Migratory Sharks.

The CMS is another important source of international guidance on MPAs. The CMS COP has encouraged individual parties to take a network approach in protecting habitats in order to ensure ecological connectivity and it particularly emphasises the necessity of cooperating across international borders in order to ensure that migratory species are protected across their range.[98] They also encourage monitoring of networks to allow rapid identification of threats and timely action in response[99] and parties are requested to ensure financial resources are put in place to support and strengthen ecological networks.[100] These recommendations reinforce guidance issued by the CBD COP, as discussed above.

Another relevant global treaty is the 1971 Ramsar Convention on Wetlands of International Importance, although given its particular role in the Scottish MPA Network, this treaty will be further discussed in section 4.

For a jurisdiction like Scotland, claiming global leadership in the field of marine environmental protection, it is clear that account should be taken of international guidance in developing the MPA network and the Scottish Government should clearly explain how it has done so in its relevant policy documentation.[101]

Recommendation: The Scottish Government should acknowledge the importance of taking into account international policy and guidance in developing the Scottish MPA network, as part of the development of its National Biodiversity Strategy, which should commit to furthering the effectiveness, equity and integration of the MPA network in pursuit of GBF Target 3.

Recommendation: The UK, with the support of the Scottish Government, should consider volunteering for a peer review of its MPA network with a view to identifying progress as well as areas for further improvement in order to meet GBF Target 3.

### c. Regional context

Global efforts to establish a network of MPAs have been supplemented by regional mechanisms, which in the North-East Atlantic has been led by the Commission established under the 1992 Convention for the Protection of the Marine Environment in the North-East Atlantic (often referred to as the OSPAR Convention). The overall objective of the OSPAR Convention is to 'protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.'[102] Obligations are placed individually and jointly upon contracting parties, but the OSPAR Commission, composed of representatives of each party, including the UK, is also given a role in coordinating action by individual member states to achieve this end. It does this through the adoption of specific decisions and recommendations, but also an overarching strategy, which will be referenced below where relevant.

The OSPAR Convention includes Annex V on the protection and conservation of ecosystems and biological diversity in the OSPAR maritime area. The provisions of the Annex make direct reference to the CBD and the parties commit to 'take the necessary measures to protect and conserve the ecosystems and the biological diversity of the maritime area, and to restore, where practicable, marine areas which have been adversely affected.'[103] The OSPAR Strategy also makes clear that the parties intend their actions to be a contribution to the GBF.[104]

There is no explicit treaty obligation under the OSPAR Convention to develop a MPA network, but parties have agreed a series of recommendations through which they have established a framework for the

[98] CMS COP Resolution 12.7 (Rev.COP13) (2020) para. 8.
[99] Ibid, para. 16.
[100] Ibid, para. 27.
[101] It is worth noting that section 1 of the Nature Conservation (Scotland) Act 2004 requires 'every public body and office- holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions' and, in complying with this duty, they must 'have regard to' the CBD. This falls short of a strict obligation to comply with the CBD in all circumstances, however.
[102] OSPAR Convention, Article 2(1)(a).
[103] OSPAR Convention, Annex V, Article 2(a).
[104] OSPAR Strategy, OSPAR Agreement 2021-01, 7.

development of such a network. These recommendations make explicit reference to the CBD, as well as other relevant legal instruments. The OSPAR guidance stresses that the network 'should form an ecologically coherent network of well-managed MPAs'[105], including 'sites representative of all biogeographic regions in the OSPAR maritime area'[106], and it highlights the importance of transboundary cooperation for these purposes, particularly for species that are migratory in nature. The guidance sets out seven criteria which should be used to identify appropriate sites for inclusion in the network, namely: (i) threatened or declining species and habitats/biotopes; (ii) important species and habitats/biotopes; (iii) ecological significance; (iv) high natural biodiversity; (v) representativity; (vi) sensitivity; (vii) naturalness. In many ways, this guidance mirrors the EBSA criteria developed under the CBD, discussed above. In addition, the OSPAR Commission has proposed guidance on the design of a network, underlining that sites should be an appropriate size and that resilience should be built into the network by replicating features where possible.[107]

Establishment of an OSPAR MPA network largely depends upon individual parties taking action at the national level. To this end, parties are called upon to notify the OSPAR Commission of MPAs which will contribute to the OSPAR MPA Network[108], with a central database recording key information about those sites, including both information about the MPA, but also management data. By 1 October 2021, the OSPAR MPA Network comprised 583 MPAs, including 8 MPAs collectively designated in areas beyond national jurisdiction. Scotland contributes 124 MPAs to the OSPAR MPA Network, which amounts to a significant proportion of the overall network.[109]

The status of the network is evaluated on a regular basis by the OSPAR Commission against the criteria collectively agreed by the contracting parties. In the last report published in 2021[110], a number of gaps were identified by the Commission, some of which may be relevant for Scotland in determining how to develop its own MPA network. Some species which have been identified as requiring further protection in OSPAR regions II (Greater North Sea) or III (Celtic Seas) include Leatherback turtle, Blue whale, Northern right whale, Sturgeon, Leafscale gulper shark, Portuguese dogfish, Cod, Spurdog, Angel shark, coral gardens, deep-sea sponge aggregations, and Lophelia pertusa reefs.[111] Not all of these species and habitats will necessarily be found in Scottish waters, but, to the extent that they are, there may be a need for further designation of sites in order to strengthen the OSPAR MPA Network.

Parties to the OSPAR Convention have also developed guidance on the management of MPAs. This guidance stresses the importance of management plans as a valuable tool for achieving the goals of the MPA network and it proposes an outline structure for a management plan. Whilst not mandatory, this document clearly sets best practice and it is reinforced by Recommendation 2003/03 which provides that contracting parties should 'develop for each area selected under paragraph 3.1 a management plan, in accordance with the management guidelines, to achieve the aims for which the area has been selected.'[112] Alongside this guidance, the OSPAR Commission has adopted a toolkit to assess the effectiveness of management of OSPAR MPAs in the form of a self-assessment scorecard, developed from a scheme first designed by the World Bank. This process is intended both to provide a means to identify successes and ongoing challenges in order to inform future management, as well as providing a means of external accountability for the management of MPAs.[113]

[105] Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area, OSPAR Agreement 2003-17, para. 6. See also Guidance on developing an ecologically coherent network of OSPAR Marine Protected Areas (2006).
[106] Recommendation 2003/3 on a network of Marine Protected Areas, as amended by OSPAR Recommendation 2010/2, para. 2.1(a).
[107] Guidance on developing an ecologically coherent network of OSPAR Marine Protected Areas (2006). This consideration is integrated into the national legislation; see Marine (Scotland) Act 2010, s. 79(3)(c): 'the designation of sites comprised in the network reflects the fact that conservation of a feature may require the designation of more than one site.'
[108] OSPAR Recommendation 2003/03, para. 3.2. See also para. 5.2 and Appendix 2 with reporting proforma.
[109] See Annex for a list of those Scottish MPAs which contribute to the OSPAR MPA Network.
[110] See OSPAR Commission, Report and Assessment of the Status of the OSPAR network of Marine Protected Areas in 2021, available at https://oap.ospar.org/en/ospar-assessments/committee-assessments/biodiversity-committee/status-ospar-network-marine-protected-areas/assessment-reports-mpa/mpa-2021/ <accessed 21 August 2023>.
[111] Recommendations are still pending for dog whelk (*Nucella lapillus*) and bluefin tuna (*Thunnus thynnus*) as the potential suitability of MPAs as a tool to support their conservation has not been confirmed.
[112] OSPAR Recommendation 2003/03, para. 3.3(a).
[113] Guidance to assess the effectiveness of management of OSPAR MPAs: a self-assessment scorecard (2007) para. 2.

The recently updated OSPAR strategy also includes a number of objectives related to the establishment and management of MPAs, as follows:

> By 2030 OSPAR will further develop its network of marine protected areas (MPAs) and other effective area-based conservation measures (OECMs) to cover at least 30% of the OSPAR maritime area to ensure it is representative, ecologically coherent and effectively managed to achieve its conservation objectives.
>
> By 2022 OSPAR will identify barriers to the effective management of MPAs, and by 2024 take steps to address them appropriately to enable all OSPAR MPAs to achieve their conservation objectives.

The first of these targets broadly mirrors target 3 of the GBF, although it does not contain all the elements found in the latter. The second of these targets focusses on management of existing MPAs and it has particular relevance for the purposes of this study.

Recommendation: The Scottish Government should consider the gaps in the OSPAR Network identified by the OSPAR Commission and consider what steps, if any, could be taken within the marine areas under Scotland's jurisdiction to address these gaps.

Recommendation: The Scottish Government should take concrete steps to ensure that it meets the OSPAR Strategic Target of enabling all OSPAR MPAs to achieve their conservation objectives by 2024 – in doing so, it should commit to carrying out and publishing a self- assessment of existing management with a view to developing and publishing management plans for each OSPAR MPA.

### d. Keeping pace with the EU

The international obligations discussed above also influenced developments in EU law whilst the UK was a Member State and the Marine (Scotland) Act 2010 still requires the Scottish Ministers to have regard to any retained EU law (what will be referred to as 'assimilated law' from the end of 2023[114]) in complying with their obligation to establish a network of conservation sites.[115] Furthermore, as discussed below, the broader policy position of the Scottish Ministers is to 'keep pace' with EU law, which may have implications for the future development of the MPA network in Scotland.

Under the Marine Strategy Framework Directive (MSFD)[116], Member States were under an obligation to adopt a programme of measures designed to achieve or maintain good environmental status of their marine waters and this programme of measures had to include 'spatial protection measures, contributing to coherent and representative networks of marine protected areas, adequately covering the diversity of the constituent ecosystems, such as special areas of conservation pursuant to the Habitats Directive, special protection areas pursuant to the Birds Directive, and marine protected areas as agreed by the Community or Member States concerned in the framework of international or regional agreements to which they are parties.'[117] This was an important obligation as it required action by EU Member States beyond the designation of protected areas for species and habitats listed in the Habitats and Birds Directive, calling also for a broader approach to designating marine protected areas. This obligation was implemented in the UK by the Marine Strategy Regulations 2010, as well as the marine legislation already discussed above.

The deadline for achieving good environmental status under the MSFD was 2020, although this target was missed on a number of fronts. To this end, the EU institutions are considering further action that may be required to achieve the target, including potential revision of the Directive.[118] In particular, the Directive is likely to be aligned with the EU Biodiversity Strategy which was published by the EU Commission in May 2020[119] and includes a section on strengthening protected areas

[114] Retained EU Law (Revocation and Reform) Act 2023, s. 5.
[115] Marine (Scotland) Act 2010, s. 79(5).
[116] Directive 2008/56/EC of 17 June 2008.
[117] Ibid, Article 13(4).
[118] See e.g. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12898-Protecting-the-marine- environment-review-of-EU-rules/public-consultation_en <accessed 25 August 2023>.
[119] Communication from the Commission, EU Biodiversity Strategy for 2030: Bringing nature back into our lives, Document COM/2020/380 final (20 May 2020); see also Council Conclusions (23 October 2020) para. 9: 'WELCOMES the objective of creating a coherent network of well-managed protected areas and to protect a minimum of 30% of the EU's land area and 30% of its sea area, one third of which strictly protected,

within the EU. The new EU Biodiversity Strategy recognises that strictly protected areas are one tool towards achieving good environmental status and the strategy includes a commitment that 'at least 30% of the land and 30% of the sea should be protected in the EU', and 'at least one third of protected areas – representing 10% of EU land and 10% of EU sea – should be strictly protected.' The Commission has proposed that these targets should be achieved in each biogeographical region and sea basin.[120] Whilst the first part of this target reflects the global commitment towards 30% coverage of MPA networks by 2030, the reference to strictly protected areas clearly goes significantly further.[121] Alongside designation of new protected areas, the EU Biodiversity Strategy also calls upon EU Member States to '[e]ffectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.'

The EU Commission has developed guidance on how states should go about identifying additional protected areas to meet this commitment. In relation to marine ecosystems, the guidance says:

> 'Considering that many marine habitats and species, including red-listed ones and prohibited species under Annex I of the Technical Measures Regulation under the common fisheries policy, are not protected under the Habitats and Birds Directives, these could be prioritised for protection under national protection schemes, which will significantly contribute to achieving the legal requirements of the MSFD, of the regional seas conventions and other international agreements to which Member States are parties, such as the Convention on Migratory Species or the Convention on Wetlands of International Importance.'[122]

According to the Strategy, 'there should be specific focus on areas of very high biodiversity value or potential' including 'carbon-rich ecosystems, such as peatlands, grasslands, wetlands, mangroves and seagrass meadows' and it suggests that these areas should be the focus of strict protection. The EU Commission has defined strictly protected areas for the purpose of the EU target as:

> 'Strictly protected areas are fully and legally protected areas designated to conserve and/or restore the integrity of biodiversity-rich natural areas with their underlying ecological structure and supporting natural environmental processes. Natural processes are therefore left essentially undisturbed from human pressures and threats to the area's overall ecological structure and functioning, independently of whether those pressures and threats are located inside or outside the strictly protected area.'[123]

The Commission goes on to say that 'management measures are therefore expected to be restricted to activities absolutely essential for supporting or enhancing natural processes.'[124] This understanding of strict protection would seem to align with the CBD recommendations on introducing 'highly protected' MPAs where no extractive activities are permitted and other human pressures are removed or minimised in order to enable the integrity, structure and functioning of ecosystems to be maintained or recovered. However, the EU Council (composed of representatives of national governments) has highlighted that 'the stricter level of protection may allow for certain human activities, which are in line with the conservation objectives of the protected area.'[125] This interpretation would seem to leave individual EU member states with some room for manoeuvre when deciding what measures must be taken within strictly protected areas.

The EU Biodiversity Strategy also emphasises restoration of marine ecosystems, again with an emphasis on carbon-rich ecosystems as well as important fish spawning and nursery areas. The EU Commission has highlighted that protected areas can be critical to achieving restoration targets and restored areas

representing 10% of EU land and 10% of EU sea; EMPHASISES that this is an objective to be reached by Member States collectively, with all Member States participating in this joint effort as well as taking into account national conditions; STRESSES that this network should be based on the Natura 2000 network and complemented by additional designations by Member States.'

[120] Commission Staff Working Document, Criteria and Guidance for Protected Area Designation, Document SWD(2022) 23 final (28 January 2022) 3.

[121] Indeed, attempts to include a target for strictly protected areas in the GBF were ultimately unsuccessful; for some background, see J Harrison, Strictly Protected Marine Protected Areas: International Policy and National Practice, Saving our Seas through Law Policy Brief No. 5 (2021), available at https://www.law.ed.ac.uk/sites/default/files/2021-04/Marine%20Briefing%205%20%28updated%29%20-%20ACC.pdf <accessed 7 June 2023>.

[122] Commission Staff Working Document (n120) 9.

[123] Ibid, 19.

[124] Ibid, 23.

[125] Council Conclusions (23 October 2020) para. 10.

may contribute to the protected area network if they meet minimum criteria.[126] In this connection, in June 2022, the Commission proposed a Regulation on Nature Restoration, which includes a legally binding target of achieving restoration of at least 30% of the listed habitats, which includes some marine habitats, by 2030. These proposals include measures to ensure that restored areas are maintained following restoration. To achieve these targets, Member States must prepare a national restoration plan which quantifies the area that needs to be restored to meet the targets in the Regulation. The Regulation has not yet been approved by the Parliament or the Council and so the precise content may change.

Given that the UK has left the EU, it will not be bound by further developments under EU law. However, the Scottish Government has committed to 'align[ing] with the EU where appropriate and in a manner that contributes towards maintaining and advancing standards across a range of policy areas.'[127] Indeed, the UK Withdrawal from the EU (Continuity) (Scotland) Act 2021 confers specific powers on the Scottish Ministers to achievement alignment with EU law.[128] These powers cover any area of EU law, provided it falls within devolved competence, but environmental protection is explicitly listed as a purpose of these so-called 'keeping pace' powers. Whilst alignment is the 'default position'[129] and the draft Scottish Biodiversity Strategy suggests that the Scottish Government is committed to 'maintaining *or exceeding* European Union environmental standards' (emphasis added)[130], there is no obligation for the Scottish Ministers to do so and they maintain considerable flexibility when choosing whether or not to align with developments in EU law, taking into account 'the full range of interests, whether economic, social, environmental or other.'[131] The commitment to keep pace is therefore of a political nature, rather than a legal obligation. Nevertheless, it provides a strong argument in favour of action that aligns with developments in EU environmental law. This is a point that will be returned to below.

### e. Conclusions

The overview of international legal and policy documents in this section reveals a rich and broad- ranging framework to guide states in the implementation of international obligations to develop networks of protected areas. There are significant overlaps between instruments adopted at various levels and the following table seeks to consolidate the key points as a set of relatively high-level principles that states should take into account when carrying out their obligations under domestic law.

[126] Commission Staff Working Document (n120) 10.

[127] Scottish Government, *Statement of Policy by the Scottish Ministers in exercise of the power in Section 1 of the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021* (10 May 2022).

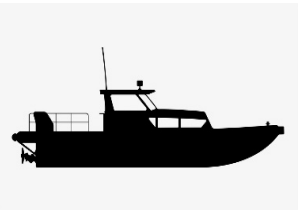
[128] UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021, s. 1.

[129] Scottish Government, *Statement of Policy by the Scottish Ministers in exercise of the power in Section 1 of the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021* (10 May 2022).

[130] Scottish Government, *Scottish Biodiversity Strategy to 2045: Tackling the Nature Emergency in Scotland* (December 2022) 14.

[131] Ibid.

Table: Summary of key principles supported by the international legal and policy framework

| Network Design | Governance and Transparency | Effective Management | Effective Enforcement |
|---|---|---|---|
|  |  |  |  |
| Representativity (CBD; OSPAR) | Stakeholder engagement (CBD) | Management plans (OSPAR) | Adequate enforcement capacity (CBD) |
| Ecological coherence and connectivity (CBD; OSPAR; CMS) | Reporting (CBD; OSPAR) | EIA (CBD) | Appropriate Penalties (CBD) |
| Balance between sustainable use and high levels of protection (CBD; EU) | Sustainable financing (CBD; CMS) | Adaptive Management (CBD; CMS) | Enforcement Strategy (CBD) |
| Integration into wider spatial management and conservation action (CBD) | | Restoration (CBD; OSPAR; EU) | |

It must also be highlighted that the key principles reflected in the legal and policy framework are also supported by the academic literature on MPAs. For example, various studies have underlined the need for participatory governance and the involvement of various stakeholders in the design and implementation of MPA networks.[132] Moreover, key recommendations stemming from the academic literature support the need for MPA management plans[133] and enforcement strategies.[134] We will return to these principles throughout the rest of this study in order to inform the evaluation of the Scottish MPA network in practice.

[132] See e.g. PJS Jones, *Governing Marine Protected Areas: Resilience through diversity* (Routledge 2014).
[133] J Roessger et al, 'Turning the tide on protection illusions: The underprotected MPAs of the OSPAR Regional Sea Convention' (2022) 142 *Marine Policy* 105109, 7: 'MPAs should have their regulations defined and compiled in a single plan and independently from external mechanisms that can be changed without conservation objectives in mind but with direct impacts inside the MPA. Evidence suggests that the existence of complete and clear management plans, including proper and precise regulations, is one of the key features for successful MPAs, besides other elements such as enforcement and monitoring.'
[134] See BD Causey, 'Enforcement in marine protected areas', in S Gubbay (ed), *Marine Protected Areas: Principles and Techniques for Management* (Chapman & Hall 1995) 138: 'some enforcement plan should be considered for newly established MPAs from the outset.'

# 4. Overview of protected areas categories in the Scottish marine protection area

This section will carry out a legal analysis of the relevant statutory and policy context for the designation of the main types of protected area that fall within the definition developed by IUCN, discussed in section 2. For each type of protected area, the analysis will explain how such sites are designated and what legal protection is offered to the site once designated.

## a. Sites of Special Scientific Interest

### i. Designation criteria and process

One of the oldest nature conservation designations in the UK is the Site of Special Scientific Interest (SSSI). The origins of this designation can be found in the National Parks and Access to Countryside Act 1949[135], although the provisions relating to this type of protected area have been overhauled, with a bespoke Scottish scheme now found in the Nature Conservation (Scotland) Act 2004. SSSIs may be designated ('notified') by Scottish Nature Heritage (SNH)[136] in order to protect 'any land … of special interest by reason of any of its natural features' which includes 'any of its flora or fauna or geological or geomorphological features.'[137] Thus, this procedure allows a degree of discretion to identify appropriate sites for protection. For these purposes, land can be understood as 'land covered by water'[138] although the precise scope of the legislation is not entirely clear. In the planning context, it has been held that the phrase 'land covered by water' includes land down to the low water mark[139] and this would seem to be the definition adopted by SNH for the purpose of the SSSI regime.[140] The SSSI regime in England, however, is broader in scope, including both land lying above the mean low water mark and 'any land covered by estuarial waters.'[141] This would appear to allow notification of SSSIs on subtidal land within an estuary, although Ministers retain a power to call in subtidal notifications and to direct the relevant authority as to how to proceed.[142] This understanding of the scope of the powers potentially gives more flexibility to the use of SSSI powers under the English legislation and it would be useful to address the lack of clarity about the application of SSSIs in Scotland through an amendment of the legal framework. The review of nature conservation legislation by the Scottish Law Commission in their eleventh law reform programme may offer an opportunity to do so.[143]

An elaborate procedure applies to the notification of SSSIs, including a requirement to publish a proposal and to consider any representations made by relevant stakeholders.[144] Notification of a SSSI can potentially be challenged by way of judicial review, although the technical nature of the exercise means that courts will often be willing to give deference to the decision-maker on such issues.[145] A register of SSSI notifications is kept by the Keeper of the Registers of Scotland.[146]

Of the 1422 SSSIs in Scotland, 65 have been identified by the Scottish Government as contributing to the MPA network.[147] Given the restrictions on designation discussed above, these sites are

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[135] National Parks and Access to the Countryside Act 1949, s. 23.
[136] SNH has been rebranded as 'NatureScot', but its legal name, established by statute, remains Scottish Natural Heritage; Nature Heritage (Scotland) Act 1991, s. 1.
[137] Nature Conservation (Scotland) Act 2004 (2004 Act), s. 3.
[138] Interpretation and Legislative Reform (Scotland) Act 2010, Sch. 1.
[139] See *Argyll and Bute District Council v Secretary of State for Scotland* 1976 SC 248, at 256: 'The basic distinction between land and sea still exists, and the inclusion of land covered with water in the definition of "land" comprehends land covered by water, sea or fresh….'
[140] https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/national-designations/sites-special-scientific-interest-sssis <accessed 29 September 2023>.
[141] Wildlife and Countryside Act 1981, s. 28(1A) – provision added by the Marine and Coastal Access Act 2009, s. 148 and Schedule 13, para. 2. Estuarial waters for these purposes are defined as 'any waters within the limits of transitional waters, within the meaning of [Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy]' which in turn defines transitional waters in Article 2(6) as 'bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.'
[142] Wildlife and Countryside Act 1981, s. 28CB.
[143] See https://www.scotlawcom.gov.uk/law-reform/eleventh-programme-of-law-reform <accessed 24 July 2023>.
[144] 2004 Act, schedule 1.
[145] See e.g. *R (on the application of Fisher) v English Nature* [2004] EWCA 663; *R (on the application of Boyd) v English Nature* [2003] EWHC 1105 (Admin).
[146] 2004 Act, s. 22.
[147] See Annex 1.

exclusively coastal in character and they are often located in the intertidal zone. This has implications for the types of activities that may require regulation, as discussed below.

Recommendation: The spatial scope of the SSSI regime should be clarified and aligned with the position in England and Wales.

### ii. General protection upon designation

Some legal consequences derive directly from notification of an area as a SSSI. Principally, any person who intentionally or recklessly damages any natural feature specified in an SSSI notification commits an offence[148] and, if found guilty, they will be subject to a maximum fine of £40,000 on summary conviction or a fine on conviction on indictment.[149] It is a defence to show that the act was an incidental result of a lawful operation and the person took appropriate precautions or could not have reasonably foreseen that damage would occur. Upon conviction, a court may also impose a restoration order.[150]

The general obligation above applies to any person, but more specific constraints apply to the landowner or occupier. In particular, any SSSI notification must be accompanied by a site management statement providing 'guidance to owners and occupiers of land within a site of special scientific interest as to how the natural feature specified in the SSSI notification should be conserved or enhanced.'[151] The notification must identify 'acts or omissions which appear to SNH to be likely to damage that natural feature' and an owner/occupier may only carry out such operations with the consent of regulatory authorities. Such consent must be sought from SNH, unless authorisation has been given by another relevant regulatory authority[152] or it is covered by the Nature Conservation (Scotland) Act 2004 (Authorised Operations) Order 2016. SNH may grant consent subject to conditions[153] and decisions by SNH may be appealed to the Land Court.[154] Failure to comply with these provisions is a criminal offence, subject to a maximum fine of £40,000 on summary conviction or a fine on conviction on indictment[155], but SNH may also bring civil proceedings for interdict or another appropriate remedy.[156] Some defences are available, including showing that it was necessary to take the action as part of an emergency operation, but an owner may still be required to take steps to restore, as far as reasonably practicable, the site to its former condition even if this defence applies.[157] The listing of any operations requiring consent must be reviewed at the request of any owner or occupier, but only after a six-year period has expired.[158] Furthermore, SNH may, with the consent of the Scottish Ministers and when the situation is one of urgency, amend the notification to include additional operations or modify the description of operations in order to cover any activity that a person is carrying out or intending to carry out.

The precise restrictions that will apply under this scheme will obviously vary from site to site, but they can cover a wide range of activities. For example, there are 18 operations requiring consent in the Loch Fleet SSSI, which involves major activities such as construction of roads and extraction of minerals, but also more specific activities such as commercial bait digging in intertidal areas.[159]

### iii. Implications for regulatory decision-making

It is not only SNH that is involved in the regulation of SSSIs through the consent scheme described above, but other public bodies may also have regulatory powers which are applicable in SSSIs, for example planning authorities or the Scottish Environment Protection Agency. In this regard, any public body or office-holder must take reasonable steps in the exercise of its functions in order to further the conservation and enhancement of any natural feature protected by a SSSI.[160]

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148 2004 Act, s. 19.
149 2004 Act, s. 19.
150 2004 Act, s. 40.
151 2004 Act, s. 4.
152 2004 Act, s. 17.
153 2004 Act, s. 16.
154 2004 Act, s. 18.
155 2004 Act, s. 19.
156 2004 Act, s. 45.
157 2004 Act, s. 17.
158 2004 Act, s. 6.
159 See https://sitelink.nature.scot/site/984 <accessed 7 July 2023>.
160 2004 Act, s .12.

Furthermore, it must not carry out any operation, or permit any operation to be carried out, which is likely to damage any such natural feature, without the written consent of SNH, unless it has been otherwise authorised to do so or it is an emergency operation.[161] If damage is caused, public bodies are required to take all reasonably practicable steps to restore the natural features in accordance with any advice given by SNH. More generally, where a public authority exercises any function either on or affecting land covered by a SSSI notification, that authority must also consult SNH about the exercise of that function and have regard to any advice provided by SNH.[162] These procedural obligations ensure that significant protection is offered to the protected features of SSSIs from a range of activities which may be authorised through other regulatory regimes.[163]

### iv. Specific Management Powers

A broader range of powers are available to protect SSSIs against specific activities. Firstly, SNH may make bye-laws (subject to the procedure and provisions in ss. 201-203 of the Local Government (Scotland) Act 1973) for the protection of a SSSI.[164] Secondly, SNH may enter into a land management agreement with the owners or occupiers of a site which requires the owner or occupier to carry out certain operations subject to payment by SNH.[165] Where an owner or occupier refuses to enter into a land management agreement, SNH may alternatively propose a land management order which may be adopted by the Scottish Ministers in order to require certain operations to be carried out on the land whilst also providing for the making of payments by SNH to cover the reasonable costs incurred as a result of the order.[166] Appeals may be made to the Land Court against such orders. The Scottish Ministers may also make a Nature Conservation Order (subject to the complex procedure in schedule 2 of the 2004 Act) prohibiting an operation on land falling within or contiguous to an SSSI.[167] Such orders must be reviewed every six years. Any person who contravenes a Nature Conservation Order or who fails to comply with a land management order is guilty of an offence subject to a maximum fine on summary conviction of £40,000 or a fine on conviction on indictment.[168] Moreover, where an offence has been committed, SNH may issue a restoration notice requiring 'the responsible person to carry out such operations as may be specified in the notice, within such periods from the notice taking effect as may be so specified, for the purpose of restoring, so far as is reasonably practicable, the damaged natural feature to its former condition.'[169]

In practice, these powers have been used sparingly. Only 6 out of 65 (9%) SSSIs contributing to the MPA network have some form of specific management measures in place. However, this represents 22% of the total area, which reflects the fact that it is the larger SSSIs that have had management measures adopted. These measures are almost exclusively focused on preventing shellfish extraction. A table of measures is presented below. This list of management measures does not take into account protection that may be offered through other regulatory measures, a point to which we will return in section 5.

Table: Specific conservation measures adopted for SSSIs

| NAME | TYPE | AREA (HA) | MEASURE | DESCRIPTION |
|---|---|---|---|---|
| Cromarty Firth | SSSI | 3148.173 | Nigg and Udale Bays Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means |
| Culbin Sands, Culbin Forest and Findhorn Bay | SSSI | 4927.442 | Culbin Sands and Findhorn Bay Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means and cockle harvesting |
| Dornoch Firth | SSSI | 1994.329 | Loch Fleet and Cuthill Sands Nature Conservation Order 1995 & Morrich More and Dornoch Firth Nature Conservation Order 1995 | Restriction on shellfish (except mussels) extraction by mechanical means |
| Firth of Forth | SSSI | 7441.66 | Firth of Forth Nature Conservation Order 2006 | Restriction on cockle harvesting |
| Loch Fleet | SSSI | 1226.416 | Loch Fleet and Dornoch and Cuthill Sands Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means |
| Morrich More | SSSI | 2932.876 | Morrich More and Dornoch Firth Nature Conservation Order 1995 | Restriction on shellfish (except mussels) extraction by mechanical means |

[161] 2004 Act, s. 13. If SNH has not given consent within 28 days of a request, it is assumed that consent has not been given; ibid, s. 13(8).
[162] 2004 Act, s. 12.
[163] For a fuller explanation of this complex regime, see CT Reid, *Nature Conservation Law*, 3rd edn (Green 2009) at 232.
[164] 2004 Act, s. 20.
[165] Countryside Act 1968, s. 15.
[166] 2004 Act, ss. 29-37.
[167] 2004 Act, ss. 23-25.
[168] 2004 Act, ss. 27 and 36.
[169] 2004 Act, s. 20A.

## b. European Marine Sites: Special Areas of Conservation and Special Protection Areas

### i. Designation criteria and process

Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are types of protected areas introduced by EU law in order to provide protection for particular species and habitats listed in the relevant EU instruments. These provisions apply to a range of species and habitats and they are not exclusively concerned with the protection of the marine environment. Nevertheless, they have been increasingly applied to this context in recent years.

SPAs are designated under the Birds Directive to protect the habitat of those bird species listed in Annex I of the Directive, as well as regularly occurring migratory species.[170] SACs are designated under the Habitats Directive for natural habitat types listed in Annex I and the habitats of species listed in Annex II.[171] It follows that there is a limit on the use of these powers, although a number of marine species and habitats are covered by the Directive. These include several general, but significant marine habitats:

- Sandbanks which are slightly covered by seawater all the time;
- Estuaries;
- Coastal lagoons;
- Mudflats and sandflats not covered by seawater at low tide;
- Large and shallow inlets and bays;
- Reefs;
- Submarine structures made by leaking gases;
- Submerged or partially submerged sea caves.

In addition, the following marine species are listed:

- Common bottlenose dolphin (Tursiops truncates)
- Harbour porpoise (Phocoena phocoena)
- Eurasian otter (Lutra lutra)
- Loggerhead sea turtle (Caretta caretta)[172]
- Harbour seal (Phoca vitulina)
- Grey seal (Halichoerus grypus)
- Sea lamprey (Petromyzon marinus)

Under both Directives, Member States are under an obligation to nominate sites that they consider to contain these listed habitats and species when they meet the criteria set out in the relevant instruments.[173] The process under both instruments is overseen by the European Commission, who is responsible for establishing a list of habitats of Community importance, following which formal designation takes place.[174] As a result of this centralised process, a failure to nominate sufficient or

[170] Birds Directive, Directive 2009/147/EC, Article 4.
[171] Habitats Directive, Directive 92/43/EEC, Articles 3-4.
[172] Such turtles are not routinely found in Scottish waters at present, but the effects of climate change, particularly on warming sea waters, may mean that the range of the species shifts northwards in the future.
[173] As a result of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, the duty to designate sites has been subtly changed so that authorities now must designate a site when it is considered to be a site of 'national importance.'
[174] Following notification by a Member State but prior to adoption by the Commission, sites were referred to as candidate SACs. Under the Directive, sites did not receive protection until they had been added to the list of sites of European importance by the Commission, but it was UK policy to confer protection on sites as soon as they had been nominated to the Commission; see e.g. 1994 Regulations, Regulation 10. Indeed, sites would receive protection even during the consultation process; see e.g. Scotland's National Marine Plan (2015) para. 4.45.

appropriate sites could be subject to legal challenge.[175] What the case law has also highlighted is that designation must be done based upon scientific criteria, meaning that social or economic factors cannot be taken into account at the designation stage.[176]

Whilst the legal basis for these two types of protected area is distinct, together SPAs and SACs contributed to what is known as the Natura 2000 network of protected areas.[177] Furthermore, states must endeavour to take measures outside of the designated sites in order to improve the coherence of the network and to 'encourage the management of features of the landscape which are of major importance for wild flora and fauna.'[178] This fall short of a strict obligation but it underlines the importance of connectivity found in other instruments, such as the CBD and the OSPAR Convention, as discussed above.

The obligations relating to SPAs and SACs are broadly given effect in Scotland through Part 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 (1994 Regulations). In the offshore area beyond the territorial sea, the Conservation of Offshore Marine Habitats and Species Regulations 2017 apply. Even though the UK has left the EU and it is no longer directly bound by the obligations under the relevant Directives, these designations continue to apply as retained EU law, albeit modified to reflect the fact that the EU institutions no longer have a role in implementing the Directives[179] or overseeing compliance.[180] There are currently 56 Special Areas of Conservation and 58 Special Protection Areas which contribute to the MPA Network in Scotland.[181] There are two further sites which receive protection under the 1994 Regulations, as they have been identified as being appropriate for protection, but which would not yet seem to have been formally designated as an SAC. One of these sites (Hatton Bank) is registered on the JNCC website as a candidate site[182], whereas another site (Sound of Barra) is registered as a site of Community importance.[183] For the purpose of this study, they will be treated as SACs, both because candidate sites and sites of Community importance receive the same protection as SACs in practice and because the UK institutions now have powers to designate SACs without the involvement of the European Commission. Moreover, they would appear to be treated in Scottish Government data as part of the MPA Network.[184] However, the Scottish Government should clarify their status, if necessary, using powers under the 1994 Regulations[185] and 2017 Regulations[186] to designate both sites as SACs.

Recommendation: The Scottish Ministers should clarify the status of the Sound of Barra and Hatton Bank, using their powers where necessary to finalise their designation as SACs.

### ii. General protection upon designation

The significance of SPAs and SACs lies in the high level of protection that they receive once they have been proposed for designation.[187] Once a site has been designated as either a SAC or a SPA, there is an obligation to establish conservation priorities and adopt necessary conservation measures,[188] which may include a site-specific management plan and/or other appropriate statutory, administrative or contractual measures to secure the conservation objectives of the site. There is some discretion as to the nature of protection that might be offered.

As a matter of Scots law, certain protections apply automatically once a site is designated. Thus, it is an offence under the 1994 Regulations to intentionally or recklessly damage the features protected

[175] E.g. Case C-669/16, *Commission v United Kingdom* (2018) ECLI:EU:C:2018:844; *The Queen v Secretary of State for Environment Transport and the Regions, ex parte First Corporate Shipping Ltd* [2000] ECR I-09235;
c.f. *WWF v Secretary of State for Scotland* [1999] 1 CMLR 1021.
[176] *R v Secretary of State for the Environment ex parte RSPB* [1997] QB 206. See also Case C-57/89 *Commission v Germany* [1991] ECR I-883; Case C-355/90 *Commission v Spain* [1993] ECR I-4221. Socio- economic considerations may be relevant when adopting management, however. See below.
[177] Habitats Directive, Article 3(1).
[178] Habitats Directive, Article 10.
[179] See generally Scottish Government, *EU Exit: The Habitats Regulations in Scotland* (December 2020) which explain the changes made as a result of Brexit.
[180] See however the powers of Environmental Standards Scotland established under Part 2 of the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021.
[181] See Annex.
[182] See https://sac.jncc.gov.uk/site/UK0030388 <accessed 21 August 2023>.
[183] See https://sac.jncc.gov.uk/site/UK0012705 <accessed 21 August 2023>.
[184] 58 SACs are referred to on the Marine Scotland Information website: Facts and figures about Scotland's sea area (coastline length, sea area in sq kms) | Marine Scotland Information <accessed 21 August 2023>.
[185] See 1994 Regulations, Regulation 7(1).
[186] 2017 Regulations, Regulation 7(1).
[187] See n 173.
[188] Habitats Directive, Article 6(1).

in a European site.[189] It is a defence to show that the act was an incidental result of a lawful operation and the person took appropriate precautions or could not have reasonably foreseen that damage would occur. A person guilty of damaging any protected feature on a European site is liable on summary conviction to a fine not exceeding level 5 on the standard scale (£5000[190]) or on conviction on indictment to a fine. Furthermore, any damage causing significant adverse effects to the favourable conservation status of habitats protected under either the Birds Directive or the Habitats Directive will be covered by the Environmental Liability (Scotland) Regulations 2009, requiring inter alia an operator to identify potential remedial measures and SNH have the power to issue restoration orders.[191] A slightly different set of offences apply to SACs and SPAs established in offshore waters by virtue of the 2017 Regulations, which in part is a reflection of the more limited jurisdiction exercised by a coastal state over foreign actors and vessels beyond the territorial sea.

Nevertheless, there are offences which prohibit damage, destruction or disturbance of European marine sites, subject to an unlimited fine on conviction, whether by summary or solemn proceedings.[192] Furthermore, the 2017 Regulations make clear that '[i]n determining the amount of any fine to be imposed on a person convicted of an offence under this regulation, the court must in particular have regard to any financial benefit which has accrued or appears likely to accrue to that person in consequence of the offence.'[193]

### iii. Implications for regulatory decision-making

Alongside the specific criminal offences relating to protected features in European sites, there is also an obligation for public authorities to take appropriate steps to avoid the deterioration of natural habitats within a European site.[194] This is an ongoing responsibility, which may require review of activities taking place in or near the protected area, regardless of whether they fall within the scope of the procedure requiring an appropriate assessment of projects or plans, discussed below. To this end, SNH is under a statutory duty to monitor the status of European sites[195], thereby highlighting any new threats that may emerge[196] and to advise on 'any operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species, for which the site has been designated'.[197]

Many activities in the marine area require licensing and perhaps the most important innovation in the Habitats Directive (also extended to SPAs designated under the Birds Directive) is the obligation to carry out an 'appropriate assessment' of 'any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects.'[198] The purpose of an appropriate assessment is to clarify the risks to SACs or SPAs that may arise from a proposed plan or project, as well as to identify and evaluate measures to eliminate or reduce those risks. This duty falls directly on the competent authority responsible for authorising activities, rather than the proponent of an activity, who would normally carry out an EIA under applicable regulations.[199] Moreover, the obligation applies not only to activities within a protected area, but also to activities situated outside of the site, where the activity is nevertheless expected to have a significant effect on the site.

There is no specific definition of what constitutes a 'plan' or a project' for the purposes of the Directive and it will have to be determined on an individual basis, although the case law on the subject suggests a broad interpretation.[200] The scope of this duty has also been widely interpreted[201] and it includes both activities carried out by public bodies, as well as activities by private actors for which permission is sought from public authorities. It even includes some fishing activity when specific licences are granted.[202]

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189 1994 Regulations, Regulation 18.
190 See Criminal Procedure (Scotland) Act 1995, s. 225 (last amended by The Mutual Recognition of Criminal Financial Penalties in the European Union (Scotland) Order 2009).
191 1994 Regulations, Regulation 19.
192 2017 Regulations, Regulation 38.
193 2017 Regulations, Regulation 38(16).
194 Habitats Directive, Article 6(2).
195 See discussion of monitoring in section 5 below.
196 1994 Regulations, Regulation 37A.
197 1994 Regulations, Regulation 33.
198 Habitats Directive, article 6(3).
199 E.g. Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017, regulation 6.
200 see e.g. *Waddenzee Case*, Case C-127/02 [2004] ECR I-7405, paras 24-26; *Coöperatie Mobilisation for the Environment UA (Dutch Nitrogen Cases),* Joined Cases C-293/17 and C-294/17, Judgment 7 November 2018) para. 66.
201 See also the DEFRA guidance for public authorities, which expressly says that 'you should give the terms 'plan' and 'project' a very broad meaning to cover a wide range of activities'; see https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site <accessed 25 August 2023>.
202 One of the leading cases on the subject concerned a fishing licence; see *Waddenzee Case*, Case C-127/02 [2004] ECR I-7405.

For example, when it was proposed to authorise electric fishing for razor clams in Scottish waters in accordance with the Razor Clams (Prohibition on Fishing and Landing) (Scotland) Order 2017, it was accepted that an appropriate assessment would be required prior to the authorisation of such fishing in two areas which fell within SACs (Luce Bay and Sound of Barra).[203]

The trigger for an appropriate assessment is that a project or plan is 'likely to have a significant effect' on the management of a protected site, but this criterion has also been interpreted in a broad fashion. There is no formal screening process, as is the case for an environmental impact assessment[204], but rather it is rather treated as an 'informal threshold decision.'[205] This differentiates an appropriate assessment from other forms of environmental assessment which is in part explained by the fact that it is the authority itself, rather than a developer, who carries out the assessment.

Nevertheless, there are aspects of the process which could be strengthened. For example, the transparency of appropriate assessments could be improved, as the same participatory requirements associated with Environmental Impact Assessment and Strategic Environmental Assessment do not attach to an appropriate assessment.[206]

Despite the informality associated with the appropriate assessment, courts have stressed that the process must be carried out with rigour and, in accordance with the precautionary principle, an appropriate assessment should be carried out 'if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site.'[207] It has been emphasised that this is a cumulative test and the obligation to carry out an appropriate assessment 'also applies where it is the combination of that plan or project with other plans or projects which is likely to have a significant effect on the site concerned.'[208] At the same time, the Scottish courts have underlined that the evaluation of whether significant effects can be excluded is 'primarily a matter of fact for the decision-maker'[209] and such decisions are not subject to judicial review unless clear errors of law or fact are involved. In other words, some discretion may lie with the authority in cases of uncertainty.

The appropriate assessment feeds directly into decisions on whether to approve a plan or authorise a project, and if so, whether conditions should be attached to the authorisation. Indeed, the results of the appropriate assessment are critical because the Habitats Directive only permits a plan or project to be authorised if the relevant authority has 'ascertained that it will *not* adversely affect the integrity of the site concerned' (emphasis added).[210] It is worth underlining that the emphasis is on the integrity of the site, rather than on the protected features in isolation, which calls for a broader understanding of how the activity may affect the ecological functioning of the site as well as its ecological connectivity with the wider landscape or seascape.[211] The European Commission has described site integrity as 'the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated.'[212] The precautionary principle comes in again at this stage of the process as the European Court of Justice has stressed that 'the authority must refuse to authorise the plan or project being considered where uncertainty remains as to the absence of adverse effects on the integrity of the site.'[213] There are some exceptions to this rule, but the Habitats Directive stresses that it is only 'for imperative reasons of overriding public interest, including those of a social or economic nature' that a project or plan may be authorised if it will adversely affect the integrity of the site, and even then, only if compensatory measures are adopted.[214] Compensation must be aimed at addressing the negative effects on the species or habitats protected by the site[215] and compensation should ideally be taken before the plan or project goes ahead.[216] This sets a relatively high threshold and EU Commission guidance has

[203] See discussion in T Appleby and J Harrison, 'Taking the Pulse of Environmental and Fisheries Law: The Common Fisheries Policy, the Habitats Directive, and Brexit' (2019) 31 *Journal of Environmental Law* 443, 448- 449.
[204] E.g. Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017, Part 2.
[205] *R (on the application of Champion v North Norfolk District Council and another* [2015] UKSC 52, para. 41.
[206] The Directive simply provides that 'the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, *if appropriate*, after having obtained the opinion of the general public' (emphasis added); Habitats Directive, Article 6(4).
[207] *Waddenzee Case*, Case C-127/02 [2004] ECR I-7405, para. 45.
[208] *Dansk Akvakultur,* Case C-278/21, Judgment 10 November 2022, para. 30.
[209] *RSPB v Scottish Ministers* [2017] CSIH 31, para. 206.
[210] Habitats Directive, Article 6(3).
[211] See e.g. the explanation of the 'integrity test' offered by DEFRA guidance: https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site <accessed 25 August 2023>.
[212] See European Commission, *Managing Natura 2000 Sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC* (November 2018) 50.
[213] *Peter Sweetman and others v An Bord Pleanala*, Case C-258/11, Judgment 11 April 2013, para. 41.
[214] Habitats Directive, Article 6(4).
[215] European Commission, *Managing Natura 2000 Sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC* (November 2018) 66.
[216] Ibid, 64.

emphasised that a public interest can only be overriding if it is a long-term interest meaning that 'short term economic interests or other interests which would only yield short-term benefits for society would not appear to be sufficient.'[217] Discretion is even more limited when priority habitats are involved. It is generally recognised that this exception must be interpreted restrictively.[218] These provisions are given effect by regulation 53 of the 1994 Regulations, which in particular require the Scottish Ministers to secure compensatory measures if a plan or project is agreed to, notwithstanding a negative assessment. This overall procedure serves to give significant protection to European sites. Similar provisions are found in the 2017 Regulations applicable to offshore SACs and SPAs.[219]

Recommendation: The Scottish Government should review the procedural requirements connected with appropriate assessments in order to determine whether it would be appropriate to introduce greater transparency to the process by requiring public participation.

### iv. Specific management powers

Further specific restrictions on activities in European marine sites may also be adopted using a variety of powers. Indeed, the Directive explicitly says that, 'for [SACs], Member States shall establish the necessary conservation measures involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans, and appropriate statutory, administrative or contractual measures which correspond to the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the sites.'[220] This leaves some discretion as to the form of management, but leaves no doubt that 'necessary conservation measures' must be adopted, i.e. there is a legal obligation to take action. Failure to do so may amount to a breach of environmental law.

One tool available under domestic legislation for the protection of a European site designated under the 1994 Regulations is a Nature Conservation Order.[221] This operates in a similar way to the SSSI regime discussed above. Powers to issue land management orders have also been extended to European sites designated under the 1994 Regulations.[222] Breaches of these instruments constitute a criminal offence, punishable by way of a fine of up to £5000 on summary conviction or by a fine on conviction on indictment.[223] Restrictions may also be introduced through byelaws[224] None of these powers exist for offshore European sites, although fisheries management measures may be adopted under the Fisheries Act 2020. These general powers will be discussed in relation to offshore MPAs below. SNH may enter into management agreements with the owner, lessee or occupier of land forming part of a European site, or land adjacent to such a site for the management, conservation, restoration or protection of the site, or any part of it.[225]

Finally, a power is available for relevant authorities to enter into a management scheme for a European marine site.[226] They can do so voluntarily or they may be directed to do so by the Scottish Ministers.[227] There is no specific format that a management scheme must take and they can fulfil a number of functions including explaining and contextualising the conservation objectives for the site, identifying the key threats to the designated features, listing the actions that should be taken, and setting out how progress will be monitored. Moreover, a scheme is often accompanied by an institutional framework in order to oversee its implementation. One of the main advantages of a management scheme is to bring all relevant authorities under a single umbrella in order to address all activities which may impact upon the protected area in

[217] European Commission, Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (January 2007) 8.
[218] L Kraemer, 'The European Commission's Opinions under Article 6(4) of the Habitats Directive' (2009) 21 *Journal of Environmental Law* 59, 62.
[219] 2017 Regulations, Regulations 28-29, 31.
[220] Habitats Directive, Article 6(1).
[221] 1994 Regulations, Regulations 19-20 and 2004 Act, ss. 22-28.
[222] 1994 Regulations, Regulation 19.
[223] See 1994 Regulations, Regulations 20 and 21.
[224] Generally, byelaws can be adopted for European sites by virtue of regulation 28, but this regulation does not apply to European marine sites. Rather, regulation 36 provides an alternative legal basis for the adoption of bye- laws.
[225] 1994 Regulations, Regulation 16(1).
[226] 1994 Regulations, Regulation 34; 2017 Regulations, Regulation 22.
[227] 1994 Regulations, Regulation 35.

a comprehensive and coherent manner. In practice, management schemes have been adopted for a limited number of SACs, namely:

- Berwickshire and North Northumberland Coast
- Firth of Lorn
- Loch Creran
- Moray Firth

Other specific measures have been introduced using a range of the above powers, however. Several coastal sites have been protected through Nature Conservation Orders. In addition, specific management measures for SACs and SPAs have been adopted in some cases using general powers under fisheries legislation, albeit for the express purpose of promoting the conservation objectives of particular MPAs. This is the case for example with The Inshore Fishing (Prohibited Methods of Fishing) (Luce Bay) Order 2015, as well as those European sites covered by The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2015. These instruments often regulate different forms of fishing, although restrictions will differ depending on the type of the gear being used; see discussion in section 5 below. European fisheries legislation also offers protection to several offshore SACs in a similar fashion.

The table below presents information on which SPAs and SACs have been protected in practice using specific management measures or equivalent measures under fisheries legislation.

Table: Specific Management Measures for European Marine Sites

| NAME | TYPE | AREA (HA) | MEASURE | DESCRIPTION |
|---|---|---|---|---|
| Dornoch Firth and Morrich More | SAC | 8712.174 | Morrich More and Dornoch Firth Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means |
| Firth of Lorn | SAC | 20992.5 | Loch Sunart to the Sound of Jura Marine Conservation Order 2016 | Restriction on dredging, bottom trawling, gillnets and longlines |
| Loch Creran | SAC | 1226.416 | Inshore Fishing Order 2015, Art 4 | Restriction on dredging, bottom trawling, pelagic trawling, creels, gillnets and longlines; restriction on fishing for horse mussels |
| Loch Laxford | SAC | 1219.999 | Inshore Fishing Order 2015, Art 5 | Restrictions on dredging and bottom trawling |
| Lochs Duich, Long and Alsh Reefs | SAC | 2374.908 | Inshore Fishing Order 2015, Art 8 | Restrictions on dredging and bottom trawling; restriction on fishing for horse mussels |
| St Kilda | SAC | 25398.16 | Inshore Fishing Order 2015, Art 11 | Restrictions on dredging, bottom trawling and gillnets |
| Treshnish Isles | SAC | 1961.058 | Inshore Fishing Order 2015, Art 12 | Restrictions on dredging, bottom trawling and gillnets |
| Sanday | SAC | 10987.61 | Inshore Fishing Order 2015, Art 10 | Restrictions on dredging, bottom trawling and gillnets |
| Darwin Mounds | SAC | 137835.6 | EU Regulation 2016/2336, Art 8, EU Regulation 2019/1241, Annex II | Restriction on bottom trawls, bottom set gillnets, entangling nets or trammel nets and bottom set longlines |
| East Mingulay | SAC | 11491.51 | Inshore Fishing Order 2015, Art 3 | Restrictions on dredging, bottom trawling, gillnets, longlines, creels, rod and line, and handlines |
| North West Rockall Bank | SAC | 436912.6 | EU Regulation 2019/1241, Annex XII | Restriction on bottom trawling and other bottom set static gear |
| Hatton Bank | SAC | 1569139 | EU Regulation 2019/1241, Annex XII | Restriction on bottom trawling and other bottom set static gear |
| Luce Bay and Sands | SAC | 48763.72 | Inshore Fishing (Luce Bay) Order 2015 | Restriction on dredging and bottom trawling |
| Sunart | SAC | 10242.89 | Inshore Fishing Order 2015, Art 7 | Restrictions on dredging, bottom trawling, gillnets, longlines, and creels; restriction on fishing for horse mussels |

| | | | | |
|---|---|---|---|---|
| Cromarty Firth | SPA | 3249.773 | Nigg and Udale Bays Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means |
| Dornoch Firth and Loch Fleet | SPA | 6517.406 | Morrich More and Dornoch Firth Nature Conservation Order 1995 & Loch Fleet and Dornoch and Cuthill Sands Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means |
| Firth of Forth | SPA | 6323.124 | Firth of Forth Nature Conservation Order 2006 | Restriction on cockle harvesting |
| Moray and Nairn Coast | SPA | 2327.43 | Culbin Sands and Findhorn Bay Nature Conservation Order 1995 | Restriction on shellfish extraction by mechanical means and on cockle harvesting |
| St Kilda | SPA | 28935.24 | Inshore Fishing Order 2015, Art 11 | Restrictions on dredging, bottom trawling and gillnets |

Based upon this table, some general observations about the coverage of management measures for European sites can be made. 14 out of 58 (24%) SACs contributing to the MPA network have some form of management measures in place, whereas only 5 out of 58 (9%) SPAs contributing to the MPA network have some form of management measures in place. These may seem small numbers but it must be borne in mind that some of these sites will benefit from protection offered by OEACMs or other fisheries measures applicable within the MPA boundaries, although not specifically adopted to further the conservation objectives of the site. This will be discussed further below in section 5 on effective management.

## b. Nature Conservation Marine Protected Areas and Offshore Marine Protected Areas

### i. Designation criteria and process

A new form of nature conservation designation was introduced by the Marine and Coastal Access Act 2009 and Marine (Scotland) Act 2010, which allow the designation of MPAs for the express purpose of nature conservation. Under the 2010 Act, these are referred to as Nature Conservation Marine Protected Areas (NCMPAs) in order to distinguish them from two other forms of MPAs established by the legislation, namely Historic MPAs and Demonstration and Research MPAs. Under the 2009 Act, they are simply referred to as Marine Protected Areas (MPAs)[228], although they will be referred to in the following discussion as offshore MPAs in order to avoid confusion with the more generic use of the term MPA throughout the report.[229]

There are several similarities between NCMPAs and offshore MPAs. Both pieces of legislation allow designation for the purpose of conserving marine flora or fauna, conserving marine habitats or types of such habitats, or conserving features of geological or geomorphological interest.[230] These objectives include both conserving species that are rare or threatened, but also conserving the diversity of species and habitat.[231] Another factor to be taken into account in the process of designation under the 2010 Act is 'the extent to which [designating an area] will contribute to the mitigation of climate change.'[232] Scientific guidance has been published to inform the process of identifying appropriate sites for protection.[233] Yet, it is also possible when designating NCMPAs or offshore MPAs to have

[228] The Act generally refers to Marine Conservation Zones or MCZs, but it makes clear in section 116(7) that 'an MCZ designated by the Scottish Ministers under this section is to be known as a marine protected area.'
[229] On some government websites, they are also referred to as Nature Conservation Marine Protected Areas; see e.g. https://jncc.gov.uk/our-work/nature-conservation-mpas/ <accessed 25 September 2023>.
[230] 2010 Act, s. 68 and 2009 Act, s.117.
[231] 2010 Act, s. 68(5)-(6); 2009 Act, s 117(4)-(5).
[232] 2010 Act, s. 68(7). It has been noted that the focus of this provision is on mitigation, rather than adaptation or resilience; see Hopkins et al (n9) 49.
[233] SNH, *Advice to the Scottish Government on the selection of Nature Conservation Marine Protected Areas for the Development of the Scottish MPA network* (2012); SNH, *Further advice to Scottish Government on the selection of Nature Conservation Marine Protected Areas for the Development of the Scottish MPA network* (2014).

regard to 'any economic or social consequences of designation'[234] and Scottish Ministers have produced guidance for undertaking Socio-Economic Impact Assessments of MPAs in inshore waters to address this point.[235] It follows that there is broad discretion as to how to use these powers, although, as noted in section 3 above, Scottish Ministers are under an express duty to designate NCMPAs and offshore MPAs under these statutes in order to establish a network of protected areas (which also includes SPAs, SACs and SSSIs) that 'represent[s] the range of features present in the UK marine area' and 'contributes to the conservation or improvement of the marine environment in the UK marine area.'[236]

An elaborate process applies to the designation of MPAs under both pieces of legislation, which mandates publication and consultation concerning proposals to designate sites.[237] Once it has been decided to designate a NCMPA or offshore MPA, each designation order must identify the relevant protected features as well as the conservation objectives of the site.[238] The conservation objective generally requires either the conservation of the particular protected feature at a favourable condition or its recovery to a favourable condition.[239]

The main difference between the designations under the two Acts is the geographical area in which a designation may be made. NCMPAs may be designated in any sea area within the outer limits of the territorial sea adjacent to Scotland, i.e. within 12 nautical miles from baselines.[240]

It is also possible to include certain coastal areas within the scope of a NCMPA if certain conditions are met.[241] Thus, NCMPAs may not be exclusively marine in character. In contrast, the 2009 Act applies to areas beyond the territorial sea, including both within the EEZ and on the continental shelf of the United Kingdom. Thus offshore MPAs will be exclusively marine in character, although the legislation allows a designation to apply exclusively to the seabed, excluding the water column.[242] An additional requirement under the 2009 Act is that offshore MPAs must be designated with the consent of the UK Government.[243] This reflects the more limited powers that Scottish Ministers possess beyond the territorial sea. As discussed below, differences are also apparent in the scope of management powers available for MPAs under the 2009 and 2010 Acts.

In practice, the Scottish Government has focussed its efforts on designating NCMPAs and offshore MPAs for the protection of a list of 41 so-called MPA Search Features, including 21 habitat types, 5 low or limited mobility species, 10 mobile species, and 5 large-scale features, which were considered to be representative of a broader range of features that would benefit from special protection.[244] To date, 23 NCMPAs have been designated, the most recent of which is the Red Rocks and Longay NCMPA which was designated in February 2023.[245] In addition, 13 offshore MPAs have been designated in Scottish waters under the 2009 Act. Most of these offshore MPAs are located within the limits of the EEZ, although it is worth noting that three offshore MPAs (West of Scotland MPA, Wyville Thomson Ridge MPA, and Darwin Mounds MPA) partially overlap with the special area shared between the UK and Denmark (on behalf of the Faroe Islands). As a result, activities authorised by the Faroe Islands may legitimately take place within these MPAs without the consent of the UK[246], although the parties have

[234] 2010 Act, s. 68(8); 2009 Act, s. 117(7).
[235] Scottish Government, *Marine Protected Areas in inshore waters: guidance for undertaking socio-economic impact assessments* (October 2022).
[236] 2010 Act, s. 79.
[237] 2009 Act, ss. 75-76. There are powers to provisional designate an area as an urgent NCMPA; see s. 77. 2010 Act, ss. 119- 121.
[238] 2010 Act, s. 68(3); 2010 Act, s. 117(2).
[239] See 2010 Act, s. 68(11)(a); 2009 Act, s. 117(6). Favourable condition is generally understood as when the extent of a habitat feature is stable or increasing and the structure and functions of the feature is in a healthy condition and not deteriorating; see e.g. South Arran MPA Order 2014, Article 5(2). A slightly different definition applies to mobile species which focuses on the quality and quantity of habitat as well as the composition of the population; ibid, Article 5(5).
[240] 2010 Act, s. 68.
[241] 2010 Act, s. 69.
[242] 2009 Act, s. 118(6). This may be necessary on the extended continental shelf where the UK only has jurisdiction over the seabed and not the superjacent water column, which is high seas.
[243] 2010 Act, s. 116(6).
[244] MPA Search Features were mostly those priority marine features which it was considered would benefit from spatial protection; see Scottish Government, *Marine Protected Areas in Scotland's Seas: Guidelines on the Selection and Development of the MPA network*.
[245] Red Rocks and Longay Nature Conservation Marine Protected Area Order 2022. This replaces earlier orders which had designated the MPA using emergency powers under section 77 of the 2010 Act.
[246] 2013 Protocol to the Agreement between the UK Government and Denmark. According to Article 1(1): 'The Parties may extend their marine environmental protection legislation (apart from rules related to management of fisheries and of continental shelf resources) to the whole of the Special Area. The Parties shall enforce such legislation in conformity with international law vis-à-vis third State ships. Ships flying the flag of any of the Parties shall exclusively be subject to flag State jurisdiction.'

agreed to cooperate on measures to protect the marine environment.[247] It is also worth noting that two offshore MPAs (Darwin Mounds MPA and Hatton-Rockall Basin MPA) are partially located on the UK outer continental shelf, meaning that the UK has jurisdiction and sovereign rights over the seabed, but the water column is high seas and subject to freedom of navigation. Moreover, Denmark has objected to these MPAs as it also claims jurisdiction and sovereign rights over this area.[248]

It is worth noting that not all of the MPA Search Features that were initially identified as appropriate for protection have had sites designated for them. In particular, European spiny lobster, heart cockle aggregations, burrowing sea anemone aggregations, and white-beaked dolphin lack protection, despite being included in that initial list of MPA Search Features. From this perspective, it is difficult to claim that the network is complete and further work is required in order to identify appropriate sites for these species. In addition, it is recognised that replication of protection within the network is desirable[249] and there is also further work to be done in this respect. The upcoming parliamentary report on progress is establishing a MPA Network in

Scottish waters, due by December 2024, is a good time to focus on these questions and it may permit the relevant Scottish Parliament committees with an opportunity to carry out scrutiny of what actions have been taken and what more needs to be done.

Recommendation: Work should continue on identifying appropriate sites for the establishment of NCMPAs or offshore MPAs in order to protect those MPA search features which are currently excluded from the network or for which there is no replication.

### ii. General protection upon designation

Once designated, it is a criminal offence for a person to intentionally or recklessly carry out a prohibited act in a NCMPA if the act has significantly hindered, or may significantly hinder, the achievement of the stated conservation objectives for the site.[250] Prohibited acts include killing or injuring any animal in the protected area which is a protected feature of the area; picking, collecting, cutting, uprooting or destroying any plant which is a protected feature of the area; taking anything from the protected area which is, or forms part of, a protected feature of that area; and damaging or destroying any habitat or feature which is a protected feature of the protected area. A person who is guilty of an offence under this section is liable on summary conviction, to a fine not exceeding £50,000, or on conviction on indictment, to a fine.[251] A much broader range of defences are available to this offence compared to offences under other designations, however. Thus, it is a defence to show that the act was carried out in the exercise of functions of a public authority, if it was expressly authorised by a public authority or if it was carried out in the interests of the prevention or detection of crime or for securing public health.[252] It is also a defence if the act constituting the offence was carried out in the course of sea fishing and the effect on the protected features could not have been reasonably avoided.[253] This particular defence can be removed by order. Finally, it is a defence to demonstrate that an action was taken for the purpose of saving life or securing the safety of a vessel, aircraft or marine installation.[254]

Similar prohibitions apply to the intentional or reckless damage of the protected features of offshore MPAs[255], with a similar range of defences.[256] This offence is also subject to a £50,000 fine on summary conviction or a fine on conviction on indictment. The legislation expressly provides that 'in determining the amount of any fine to be imposed on a person convicted of an offence under this section, the court must in particular have regard to any financial benefit which has accrued or appears likely to accrue to the person in consequence of the offence.'[257]

[247] 2013 Protocol to the Agreement between the UK Government and Denmark, Article 2.
[248] See https://oap.ospar.org/en/ospar-assessments/committee-assessments/biodiversity-committee/status-ospar-network-marine-protected-areas/assessment-reports-mpa/mpa-2021/#17 <accessed 25 August 2023>.
[249] 2010 Act, s. 79(3)(c); see also discussion of OSPAR guidance in section 3 above.
[250] 2010 Act, s. 95.
[251] Ibid.
[252] 2010 Act, s. 97(1).
[253] 2010 Act, s. 97(2).
[254] 2010 Act, s. 98.
[255] 2009 Act, s. 140.
[256] 2009 Act, s. 141.
[257] 2009 Act, s. 140(5).

### iii. Implications for regulatory decision-making

Where a public authority exercises functions which are capable of affecting any protected feature in a NCMPA or offshore MPA, it must exercise its powers in such a way in which it considers best further the conservation objectives of the site or, where this is not possible, least hinders those objectives.[258] More specifically, where a public authority is charged with authorising an activity which is capable of affecting protected feature or related ecological or geomorphological processes in an NCMPA or offshore MPA, it is prohibited from issuing an authorisation unless it is satisfied that there is no significant risk of the act hindering the conservation objectives of the MPA or, where there is a risk, it is satisfied that there is no alternative means of acting that would pose a lower risk and 'the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment … that will be created by proceeding with it.'[259] It is important to recognise in this context that the conservation objectives may not just require the protection of the designated feature in isolation, but they are often drafted to include related species or habitat. For example, the South Arran Nature Conservation Marine Protected Area Order 2014 makes clear that favourable status of the protected mobile features includes the quality and quantity of its habitat, whereas favourable status of protected habitat includes the diversity and abundance of species forming part of, or inhabiting, the habitat.[260] This formulation would appear to resemble the requirement of site integrity that is explicitly built into the regime for European marine sites, although more clarity on how site integrity should be protected under the 2009 and 2010 legislation would be welcome.

Should it authorise an activity that is likely to undermine the conservation objectives of a MPA, the public authority must ensure that 'the person will undertake, or make arrangements for the undertaking of, measures of equivalent environmental benefit to the damage which the act will or is likely to have in or on the marine protected area concerned.'[261] Importantly, in relation to NCMPAs designated under the 2010 Act, the Scottish Ministers must also be satisfied that the equivalent measures are appropriate. There is a clear resemblance between these provisions and the requirements relating to European sites, albeit with some important differences, discussed below.

Firstly, there is no explicit requirement for an assessment to be carried out by the regulatory authority, but rather the emphasis would seem to be on the person applying for the authorisation to satisfy the authority that there is no risk. In other words, the procedure is closer to that of an EIA, rather than an appropriate assessment under the Habitats Directive. In some cases, a formal EIA may be required, but only when the activity is listed in the relevant regulations, which in most cases will be the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (applying within 12 nautical miles) or the Marine Works (Environmental Impact Assessment) Regulations 2017 (applying beyond 12 nautical miles). The fact that a project is to be carried out in a MPA is a relevant consideration in determining whether an EIA is required for Schedule 2 works under both sets of regulations. Yet, one of the major shortcomings of the EIA regime as it applies to the marine environment is the limited list of marine activities that are covered in the schedules. For example, intensive fish farming is listed in schedule 2, but other forms of aquaculture, such as seaweed cultivation, are not, no matter their scale or potential impact. Where an activity does not fall within the schedules of the relevant EIA regulations, the procedural guarantees offered by the EIA process, including duties to publish information and to consult, may not apply to this process. This is a matter that should be reviewed by the Scottish Government with a view to strengthening the EIA regime at sea and ensuring effective application of the authorisation regime for activities taking place within MPAs. Any such review should take into account the guidance on biodiversity-inclusive environmental impact assessment produced by the CBD COP, discussed in section 3.

Secondly, whilst the requirements in relation to NCMPAs and offshore MPAs would appear to limit the discretion of regulators to authorise activities where there is a significant risk of the act hindering the conservation objectives of the site, the subtly different wording under this legislation compared to the European legislation would seem to allow more flexibility to regulators. The need to demonstrate that 'the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment' could be read as setting a lower threshold than demonstrating 'imperative reasons of overriding public interest' as required by the Habitats Directive. Moreover, when it comes to the provision of alternative measures, the 2010 Act would also appear to set a flexible condition of requiring measures of 'equivalent environmental benefit', without specifying that the measures have to ensure the integrity of the MPA network. Finally, it is not obvious that regulators would be bound to take a precautionary approach when making a determination under the 2009 Act or the 2010 Act, unlike the case for an appropriate assessment under the 1994 Regulations. Indeed, the lack of any case law on these provisions means that there is considerable uncertainty about their interpretation in practice and there would

[258] 2010 Act, s. 82(1)-(2). Equivalent provisions apply to offshore MPAs; see 2009 Act, s. 126.
[259] 2010 Act, s. 83(4)(b)(ii).
[260] See e.g. South Arran MPA Order, Article 5.
[261] 2010 Act, s. 83(4)(b)(iii). See similar language in 2009 Act, s. 126(7).

currently appear to be no general guidance issued on how these obligations are to be applied in practice.[262] This is an area of law where greater legal certainty would be highly desirable, either through general guidance developed by the appropriate authorities or through legal reform. There is even potential scope for harmonising the requirements under the 2009 and 2010 Acts with the protection offered under the 1994 Regulations. After all, the species and habitats protected under this legislation have no less ecological importance than the species and habitats protected under retained EU law.

Recommendation: The EIA regime for marine activities should be reviewed and revised in order to ensure that the EIA process applies to all major activities proposed within NCMPAs and offshore MPAs, thereby requiring publication of appropriate environmental information and opportunities for public participation in the decision-making process.

Recommendation: Guidance on the protection of site integrity under the 2009 and 2010 Acts should be developed in order to clarify the reach of the protection offered by the legislation and to bring the protection in line with the protection offered to European marine sites.

Recommendation: General guidance should be developed on the interpretation of the test to be applied by regulatory bodies under s. 83 of the 2010 Act and s. 126 of the 2009 Act when authorising activities which may have a significant effect on the conservation objectives of NCMPAs or offshore MPAs, with a view to harmonising the legal framework, as far as possible, with the requirements of the Habitats Regulations and ensuring that a precautionary approach is taken.

### iv. Specific management powers

Further powers to regulate activities in MPAs differ, depending on the legislation under which they were designated.

For NCMPAs designated under the 2010 Act, Scottish Ministers may adopt a Marine Conservation Order (MCO) in order to regulate, restrict or prohibit particular activity in line with the conservation objectives of the MPA.[263] MCOs can, in principle, be very broad in nature, regulating any activity that is likely to affect the conservation objectives of a site. However, to date, MCOs have largely been used to regulate fishing in practice. The one exception to this is the Red Rocks and Longay MCO which not only prohibits most fishing in the MPA, it also prohibits anchoring of a vessel, the fixing of moorings or anchors to the seabed, the depositing or removal of anything on the seabed, and the construction, alteration or improvement of any works.[264] It is an offence to contravene a MCO subject to a penalty of a fine not exceeding £50,000 on summary conviction or a fine on conviction on indictment.[265] The following table lists those NCMPAs which have a MCO in place, as well as NCMPAs which have had specific management measures adopted using general fisheries legislation, specifically under The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2015. These instruments often regulate different forms of fishing, although the precise scope and spatial coverage of restrictions will differ depending on the type of the gear being used. This is an issue that will be discussed further in section 5 below.

Table: Specific Management Measures for NCMPAs

| NAME | TYPE | AREA (HA) | MEASURE | DESCRIPTION |
|---|---|---|---|---|
| Loch Carron | NCMPA | 2285.035 | Loch Carron Marine Conservation Order 2019 | Restrictions on dredging and bottom trawling |
| Loch Creran | NCMPA | 1226.602 | Inshore Fishing Order 2015, Art 4 | Restrictions on dredging, trawling, creels, gillnets, and longlines; restriction on fishing for horse mussels |
| Loch Sunart | NCMPA | 4882.206 | Inshore Fishing Order 2015, Art 7 | Restrictions on dredging, bottom trawling, creels, gillnets, and longlines; restriction on fishing for horse mussels |
| Loch Sunart to the Sound of Jura | NCMPA | 74119.88 | Loch Sunart to the Sound of Jura Marine Conservation Order 2016 & Inshore Fishing Order 2015, Art 7 | Restrictions on dredging, bottom trawling, creels, gillnets and longlines; restriction on fishing for horse mussels |

[262] However, a public authority must notify both the Scottish Ministers and SNH before making a determination and they must have regard to any advice or guidance provided by these bodies.
[263] 2010 Act, s. 85.
[264] Red Rocks and Longay Marine Conservation Order 2022, Article 4(2).
[265] 2010 Act, s. 94.

| | | | | |
|---|---|---|---|---|
| Loch Sween | NCMPA | 4066.113 | Inshore Fishing Order 2015, Art 6 | Restrictions on dredging, bottom trawling and fishing by hand |
| Lochs Duich, Long and Alsh | NCMPA | 3696.213 | Inshore Fishing Order 2015, Art 8 | Restrictions on dredging and bottom trawling; restriction on fishing for horse mussels |
| Noss Head | NCMPA | 753.905 | Inshore Fishing Order 2015, Art 9 | Restrictions on dredging and bottom trawling; restriction on fishing for horse mussels |
| Upper Loch Fyne and Loch Goil | NCMPA | 8766.969 | Inshore Fishing Order 2015, Arts 13-14 | Restrictions on dredging, bottom trawling, creels, gillnets and longlines; restriction on fishing for horse mussels |
| Wester Ross | NCMPA | 59935.54 | Wester Ross Marine Conservation Order 2016 | Restrictions on dredging and bottom trawling |
| Wyre and Rousay Sounds | NCMPA | 1620.405 | Inshore Fishing Order 2015, Art 15 | Restrictions on dredging and bottom trawling |
| Red Rocks and Longay | NCMPA | 1184.643 | Red Rocks and Longay Marine Conservation Order 2022 | Restrictions on dredging, bottom trawling, creels, gillnets, longlines, rod and line, and handline |
| South Arran | NCMPA | 27993.64 | South Arran Marine Conservation Order 2015 | Restrictions on dredging, trawling, creels, gillnets, longlines, rod and line, handline, and fishing by hand |

It can be seen from this table that 12 out of 23 (52%) NCMPAs have some form of specific management measures in place. In terms of size of the NCMPAs that have had management measures adopted, this represents however about 11% of the total area of NCMPAs, which means that many of the larger Nature Conservation MPAs do not have management measures in place.

Marine management schemes may also be introduced for NCMPAs[266], provided that relevant authorities consult SNH before doing so.[267] One of the innovations of the 2010 Act is to allow a single scheme to be promulgated for NCMPAs and European Marine sites which either overlap or are adjacent. As is the case for European Marine Schemes, Scottish Ministers may direct relevant authorities to make a scheme.[268] No marine management schemes have been adopted for NCMPAs to date.

A slightly different regulatory framework applies to offshore MPAs established under the 2009 Act. At the time of its adoption, this legislation did not provide for specific management measures to be adopted for offshore MPAs, in large part because fisheries management was an exclusive competence of the EU. The EU had utilised its fisheries management powers to protect a small number of offshore conservation sites[269], but disagreements amongst member states had led to delays in rolling out protection to other sites.[270] Brexit offered an opportunity to address this lacuna and powers to regulate activities within offshore MPAs were introduced by the Fisheries Act 2020, introducing new provisions into the 2009 Act. Thus, under s. 137A of the 2009 Act, Scottish Ministers may make 'orders relating to the exploitation of sea fisheries resources in the Scottish offshore region for the purpose of conserving marine flora or fauna, marine habitats or types of marine habitat, or features of geological or geomorphological interest.' These powers do not just relate to management in MPAs, but are broader in nature. Whilst such orders must normally be subject to consultation, urgent measures can be adopted.[271] Failure to comply with an order made under s. 137A is an offence subject to a maximum fine of £10,000 on summary conviction or a fine on conviction on indictment.[272] However, these measures are limited to regulating fishing, in large part because many other activities in the offshore area are reserved to the UK government.[273] These new powers have not been used yet in Scottish offshore waters. Rather, the only management measures that apply to offshore MPAs stem from EU law, as reflected in the table below.

[266] 2010 Act, s. 99.

[267] 2010 Act, s. 101.

[268] 2010 Act, s. 102.

[269] For the purpose of the table below, the general prohibition on fishing below 800m in Article 8 of EU Regulation 2016/2336 is counted as a conservation measure for offshore MPAs given that its primary purpose is to protect benthic habitat.

[270] See discussion in Appleby and Harrison (n203) 443-464.

[271] 2009 Act, s. 137B(4). Such orders only remain in force for 12 months subject to a further extension of a period not exceeding 12 months.

[272] 2009 Act, s. 139(2A) read in light of s.225(8) of the Criminal Procedure (Scotland) Act 1995.

[273] E.g. Maritime transport, defence, oil and gas.

Table: Specific Management Measures for Offshore MPAs

| NAME | TYPE | AREA (HA) | MEASURE | DESCRIPTION |
|---|---|---|---|---|
| Hatton-Rockall Basin | Offshore MPA | 125754.7 | EU Regulation 2019/1241, Annex XII | Restrictions on bottom trawling and bottom set static gear |

It is clear that significant gaps exist in the management of offshore MPAs, although it is important to note that some sites may benefit from broader fisheries measures existing under retained EU law. For example, there is a general prohibition on fishing below 800 m under EU Regulation 2016/2336, which would protect large areas of seabed within and beyond offshore MPAs. This is discussed further in section 5 below.

## c. Ramsar Sites

### i. Designation criteria and process

Ramsar sites are slightly different to the other types of MPAs considered above in that they are designated under an international treaty, rather than under domestic legislation. Parties to the 1971 International Convention on Wetlands of International Importance are required to designate 'suitable wetlands within its territory for inclusion in the List of Wetlands of International Importance' maintained by the secretariat to the Convention.[274] Whilst the Convention itself does not demand any particular process for designation of Ramsar sites and there is no set procedure in national law, guidance adopted by the Ramsar COP encourages a participatory approach.[275]

Wetlands are defined for the purpose of the Ramsar Convention as 'areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres'[276] although the Convention also recognises that sites may extend to 'riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six meters at low tide lying within the wetlands.'[277] In other words, Ramsar sites may be partially, but not exclusively, marine in nature. Sites should be designated on account of their 'international significance in terms of ecology, botany, zoology, limnology or hydrology.'[278] In practice, the Ramsar COP has developed nine criteria to guide states in identifying suitable sites.[279] Upon designation, parties must submit certain information to the secretariat in the form of a Ramsar information sheet. Parties must designate at least one site when becoming a party but they are encouraged to develop the list and add sites to the List over time.[280] Indeed, the Ramsar COP has encouraged the development of a national network of protected wetlands[281], as well as the integration of Ramsar sites into broader networks of protected areas.[282]

There is no specific process for designating sites in Scotland as Wetlands of International Importance, although once designation has taken place, the Scottish Ministers are required to notify SNH, who in turn must notify a range of actors including land-owners and relevant local authorities and public bodies.[283]

[274] Ramsar Convention, Article 2(1).
[275] Ramsar COP Resolution XI.8 (Rev. COP 14), Annex 2,
[276] Ramsar Convention, Article 1.
[277] Ramsar Convention, Article 2(1).
[278] Ramsar Convention, Article 2(2).
[279] https://www.ramsar.org/sites/default/files/documents/library/ramsarsites_criteria_eng.pdf <accessed 29 September 2023>.
[280] Ramsar Convention, Article 2(5).
[281] Ramsar COP Resolution XI.8 (Rev. COP 14), Annex 2, paras 36-49.
[282] Ramsar COP Resolution IX.22 (2005): Ramsar sites and systems of protected areas.
[283] Nature Conservation (Scotland) Act 2004, s. 38.

There are currently 51 Ramsar sites in Scotland (including one transboundary site)[284], of which 16 are considered by the Scottish Government to contribute to the MPA network.[285] These are exclusively coastal sites, mostly covering intertidal habitat for wildfowl.

### ii. Management of Ramsar Sites

Certain international obligations apply to states following designation of sites as wetlands of international importance. In particular, Article 3 of the Ramsar Convention requires parties to 'formulate and implement their planning so as to promote the conservation of the wetlands included in the List.'[286] Conservation is not defined for the purposes of the Convention, although the Ramsar COP has made clear that 'consideration should be given to the need for management' and contracting parties have been encouraged to 'develop management plans for each wetland designated for the Ramsar list.'[287] This reinforces general guidance concerning MPA management reflected in OSPAR recommendations, discussed above. Furthermore, the Ramsar COP has endorsed guidelines for management planning for Ramsar sites and other wetlands, which inter alia, emphasise the need for a precautionary approach to management, the importance of multi- stakeholder participatory governance, and the requirement of adaptive management.[288] The Convention also suggests that the establishment of 'nature reserves on wetlands' is one way to fulfil this duty.[289] The term 'nature reserve' is not defined, but it implies a high level of protection. Whilst nature reserves are not required on all Ramsar sites, the Convention suggests that some Ramsar sites should incorporate nature reserves and parties must additionally 'provide adequately for their wardening.'[290] This suggests a minimum level of enforcement must be achieved, again echoing international best practice discussed in section 3 above. Furthermore, the Ramsar Convention makes clear that once a site is listed, a party may only delete or restrict the site if it is in 'its urgent national interest' and the party takes compensation measures, including the creation of additional nature reserves of similar habitat, either in the same area or elsewhere.[291] It must be noted that the language is hortatory in nature, using the term 'should' rather than 'shall', and even then, only demanding action 'as far as possible.' Nevertheless, it does establish an expectation that listed sites will be maintained at a good environmental status.

None of these requirements have been explicitly incorporated into national law in Scotland. Rather the approach to protection of Ramsar sites in Scotland has been to designate them as either European sites or SSSIs, thereby extending the legal protection offered to those regimes.[292] Therefore, the potential for management will depend upon what other designations are in place. It has been noted that 'Scotland's approach to the protection of Ramsar sites is different to the rest of the UK, which is to apply European site protections to all Ramsar sites'[293] and Environmental Standards Scotland has expressed the concern that 'under the current two-tier regime, any Ramsar feature(s) afforded SSSI protection could theoretically be permitted for development (effectively deleting Ramsar areas) without first proving an urgent national interest and without creating offset habitats.'[294] The Scottish Government has committed to review the protection offered to Ramsar sites.[295]

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[284] See https://www.gov.scot/policies/biodiversity/ramsar-sites-and-nature-reserves/ <accessed 29 September 2023>.
[285] See Annex.
[286] Ramsar Convention, Article 3(1).
[287] Ramsar COP Resolution 5.7: Management Planning for Ramsar Sites and other wetlands (1993).
[288] Ramsar COP Resolution XII.9: The Ramsar Convention's Programme on communication, capacity building, education, participation and awareness 2016-2024 (2015).
[289] Ramsar Convention, Article 4(1).
[290] Ibid.
[291] Ramsar Convention, Article 4(2). See Ramsar Resolution VII.24: Compensation for lost wetland habitats and other functions (1999); Ramsar COP Resolution XI.9: An Integrated Framework and guidelines for avoiding, mitigating and compensating for wetland losses (2012). Note that there may however be other scenarios in which a site is delisted; see Ramsar COP Resolution IX.6: Guidance for the consideration of the deletion or restriction of the boundaries of a listed Ramsar site (2005).
[292] https://www.gov.scot/publications/implementation-of-scottish-government-policy-on-protecting-ramsar-sites/ <accessed 29 September 2023>. See also National Planning Framework 4, policy 4.
[293] https://www.environmentalstandards.scot/wp-content/uploads/2022/09/Ramsar-case-summary-for-website.pdf <accessed 29 September 2023>.
[294] See Environmental Standards Scotland, Consideration of the Effectiveness of the site protection system in respect of Ramsar sites in Scotland, Case ID: IESS/21/011, available at https://www.environmentalstandards.scot/wp-content/uploads/2022/09/Ramsar-case-summary-for-website.pdf <accessed 7 July 2023>.
[295] https://www.environmentalstandards.scot/wp-content/uploads/2022/09/Ramsar-case-summary-for-website.pdf <accessed 25 August 2023>.

Given their current status in Scots law, a question arises as to whether the inclusion of Ramsar sites separately in the MPA network adds value. Ramsar sites neither increase the spatial footprint of the network, nor do they add any additional protection to the network. Counting Ramsar sites separately therefore provides a somewhat misleading picture about the total number of MPAs in the Network. To this end, it is questionable whether Ramsar sites should continue to count towards the total number of sites making up the MPA network, unless significant reforms are introduced as a result of the Scottish Government review of Ramsar sites which would increase their protection over and above other designations.

Recommendation: The Scottish Government should review the protection offered to Ramsar sites so that they are offered protection that at least accords with their international status under the UK's treaty commitments.

### d. Conclusions

It has been seen from the analysis conducted in this section that, with the exception of Ramsar sites which are rather anomalous and overlap with other MPA designations, the protection that is offered to a site will depend on the legislative scheme under which it is designated. Nevertheless, there are similarities between the protection offered to the different types of MPA.

In particular, general protection is offered to the protected features of all sites, through the establishment of criminal offences relating to the intentional or reckless damage of such features. The precise consequences of an offence do vary, however, as discussed below in section 6.

Alongside the establishment of general offences to discourage action which damages protected features, the legislation also demands that regulators take specific account of the conservation objectives of all sites when exercising their functions, with specific procedural protections in place which are designed to ensure that activities are not authorised if they are likely to have a significant impact on the conservation objectives of a site. The European sites clearly benefit from the greatest protection in this regard and the recommendations in this section have suggested several ways in which other legislative regimes could be amended in order to clarify the degree of protection that is offered.

Finally, a wide range of powers are available to adopt specific management measures to protect features within MPAs. How much protection is offered through this route will depend on how those powers are exercised in practice. As has been explained above, there has been some use of these powers to date, largely to regulate fishing, but not all sites have specific management measures in place.

Table: Percentage of MPAs which have had specific management measures adopted

| NCMPAs | Offshore MPAs | SSSIs | Ramsar sites | SACs | SPAs | Total |
|---|---|---|---|---|---|---|
| 52% | 8% | 29% | N/A | 24% | 9% | 21% |

Caution must be exercised in interpreting these numbers, however. In particular, given that many of the sites within the MPA Network are coastal or intertidal, it may mean that specific fisheries management measures are not needed, as the area within the MPA may not be suitable for fishing in the first place. Furthermore, fishing may be regulated within MPAs for other reasons and so a lack of specific management measures does not mean that fishing is uncontrolled. For example, a number of SPAs on the East Coast of Scotland (e.g. Outer Firth of Forth and St Andrews Bay SPA, Fowlsheugh SPA) may indirectly benefit from the sand eel fishing closure, which is designed to protect the food source of many of the seabirds that are protected by these SPAs and which is classified by the Scottish Government as a OEACM. Similarly, there are several specific fisheries management measures that have been adopted across wide geographical areas and thus apply in multiple MPAs, e.g. the prohibition on setting bottom set gillnet, entangling net and trammel net at any position where the charted depth is greater than 200 metres[296] or the general prohibition on fishing below 800m.[297] This latter measure in particular affords significant protection to many offshore MPAs whose conservation objectives include benthic features

[296] EU Regulation 2019/1241, Article 9(6).
[297] EU Regulation 2016/2336, Article 8.

which may be damaged by bottom fishing, e.g. Faroe-Shetland Sponge Belt Offshore MPA, The Barra Fan and Hebrides Terrace Seamount Offshore MPA and the West of Scotland Offshore MPA. However, the existence of this general fisheries measure does not mean that further specific management to further the MPA conservation objectives may not be required.[298]

Overall, it is clear that there are some significant gaps in fisheries management across the MPA Network. This is recognised by the Scottish Government, which had committed in the shared programme of work agreed with the Scottish Green Party to 'deliver fisheries management measures for existing Marine Protected Areas (MPAs) where these are not already in place by March 2024 at the latest, directly following the conclusion of the required statutory consultation processes.'[299] Consultation on such measures is expected within the next six to twelve months, which means the picture of management is likely to change in the near future.[300] In line with international best practice identified in section 3, any process for the adoption of management measures must be participatory and transparent and the Scottish Government will have to provide leadership in order to bring together the different sides in the debate. Yet, time is also of the essence, particularly if the Scottish Government is to meet the OSPAR target of enabling all OSPAR MPAs to achieve their conservation objectives by 2024. In this context, it is vital that the Scottish Government deliver on this key policy commitment and avoid any further slippage in the timeframe for delivery.

[298] See JNCC, *Fisheries Management Options Paper: West of Scotland MPA* (April 2023).

[299] See also Scottish Government, *Scottish Biodiversity Strategy to 2045: tackling the nature emergency* (December 2022) 8: 'increase the number of sites in Scotland's Marine Protected Area network with specific fisheries management measures…'

[300] The Cabinet Secretary recently announced that 'after the summer recess, we will consult on proposals for fisheries management measures in offshore MPAs beyond 12 nautical miles' although 'the complexity of the inshore area and the number of sites have meant that progress has been slower than was hoped—therefore, consultation on inshore measures will take place in 2024'; see HPMA statement to the Scottish Parliament, 29 June 2023: https://www.parliament.scot/chamber-and-committees/official-report/search-what-was-said-in- parliament/recent- publication?meeting=15402&iob=131410_ <accessed 21 August 2023>

# 5. Evaluating the effectiveness of the current MPA network

The extent of the MPA network in Scotland has evolved over the past decade and it now comprises 233 sites, composed of six different types of conservation designations, namely SSSIs, SPAs, SACs, NCMPAs, offshore MPAs and Ramsar sites. According to the Scottish Government, the current MPA network covers 37% of the Scottish marine area, even taking into account overlaps between existing MPAs.[301] However, as noted in the introduction to this report, an assessment of the effectiveness of MPA network requires us to look beyond the spatial footprint of the network to understand the extent of protection that is offered. Building on the analysis in the previous section, we will now therefore evaluate the extent of protection offered by the current suite of MPAs, with a view to identifying gaps and weaknesses and making recommendations for future action.

Image: The composition of Scotland's MPA Network


This section will carry out a quantitative and qualitative analysis of the current extent of the MPA network in Scotland and the level of protection that is afforded to designated protected area sites. Taking into account the analysis is section 4, as well as additional information concerning specific management measures in place, the analysis will present data on the level of protection afforded across the MPA network, drawing upon the protected area classification schemes developed by IUCN, as well as relevant academic literature. The analysis will also consider available data concerning the condition of MPAs in order to assess the effectiveness of the MPA network and it will evaluate the practice of MPA management against international guidelines and academic literature relating to equitable MPA management.

## a. Categorisation of protected areas against IUCN criteria

One way in which to better understand the protection offered by the MPA network is to carry out an analysis of the categories of MPAs in accordance with criteria developed by IUCN. The IUCN criteria were developed in recognition of the fact, even though all protected areas have a primary emphasis on the conservation of nature, different types of protected areas offer different levels of protection. To this end, IUCN has developed a six-fold classification of protected areas.

[301] See https://marine.gov.scot/data/facts-and-figures-about-scotlands-sea-area-coastline-length-sea-area-sq- kms <accessed 21 August 2023>.

Table: IUCN MPA Management Categories (source: Dudley (ed) (2008))

| Category | Title | Objective |
|---|---|---|
| Ia | Strict nature reserve | Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values |
| Ib | Wilderness area | Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition |
| II | National park | Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities |
| III | Natural monument or feature | Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove |
| IV | Habitat/species management area | Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category |
| V | Protected landscape or seascape | Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values |
| VI | Protected areas with sustainable use of natural resources | Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims |

Whilst there is no inherent hierarchy between the different categories of protected areas[302], the IUCN guidance on classifying MPAs does explain that 'the benefits to people and coastal communities, and the degree of delivery of conservation outcomes generally increase with the level of protection and effective management, and by commensurate reduction in the intensity of use and exploitation.'[303] This conclusion also reflects the best practice promoted by CBD COP decisions, as explained in section 3, where it is suggested that a MPA network should strike an appropriate balance between sites which are highly protected and sites in which sustainable use is encouraged. From this perspective, an analysis of how Scottish MPAs are classified according to the IUCN criteria can contribute to understanding the existing balance in Scotland. Indeed, the CBD has encouraged parties to categorise their protected areas using the IUCN classification system and to report the results to the World Database on Protected Areas maintained by UNEP-WCMC. Unfortunately, this recommendation has not been implemented for all MPAs contributing to the Scottish network.[304] This lacuna should be rectified and the Scottish Government should ensure that complete information is supplied to the World Database on Protected Areas for all sites contributing to the Scottish network.

For the purpose of this analysis, the classification system has been applied to the 233 sites that make up the Scottish MPA network. In doing so, a number of important conditions must be noted. In particular, the categorisation reflects the conservation objectives of the site, rather than name.[305] For example, the reference to a West of Scotland Deep Sea Reserve in governmental documentation concerning the West of Scotland MPA does not necessarily mean that it should be classified as a category Ia MPA, but rather its classification will depend on the conservation objectives of the site. The focus on conservation objectives also means that the classification does not necessarily reflect the actual protection that is afforded to the site in practice, a shortcoming to which we will return below. Secondly, the analysis is carried out on a site-by-site basis, rather than zones within the site. As a result, the categorisation should be based upon the primary management objectives of the site as a whole, which should apply

[302] See T Starnes et al, 'The extent and effectiveness of protected areas in the UK' (2021) 30 *Global Ecology and Conservation* e10745, 2.
[303] J Day et al (n14) 11.
[304] See data in Annex.
[305] Dudley (n13) 13.

to at least 75 per cent of the site.[306] The individual results of the analysis for all 233 sites are included in the Annex to this Report with the following discussion providing an overview of those results and their implications for the Scottish MPA network.

Applying the classification system to the Scottish MPA network reveals that the vast majority of sites (217) fall within a single category, namely category IV: habitat/species management area. This reflects the fact that almost all MPAs are managed for sustainable use, i.e. permitting activities when they are compatible with the conservation or recovery of particular designated features. This conclusion applies to all NCMPAs, all offshore MPAs, all SACs, all SPAs and all Ramsar sites.[307] Most SSSIs also fall within category IV, although it can be argued that some SSSIs should be classified as category III sites given that the protection of major geological features rank highly in their conservation objectives. For the purposes of this analysis, the study has followed the lead of the IUCN UK National Committee, which proposed that those SSSIs forming part of the GB Geological Conservation Review should be classified as category III protected areas.[308] There are 16 sites which fall within this category (see Annex) covering a total of approximately 48337 hectares or about 0.2% of the MPA network.

The stark conclusion of this analysis is that there is an obvious homogeneity between the classification of sites making up the Scottish MPA network. This conclusion contrasts with the recommendations of the CBD COP that an MPA network should contain a balance of sites designated for sustainable use and sites in which all extractive activities are prohibited. There are no MPAs which fall within this latter category. This finding would seem to point towards an imbalance that should be addressed through further development of the MPA network.

This analysis is based upon a classification of those conservation sites that count towards the Scottish MPA network, but it may be worth noting that there are other conservation sites that are not currently counted in the network, but may slightly change the picture of overall classification.

In particular, the Scottish MPA network currently does not include any National Nature Reserves established under the National Parks and Access to Countryside Act 1949. Unlike other nature conservation designations, a nature reserve is 'managed solely for a conservation purpose' or 'also for a recreational purpose if the management of the land for [that] purpose does not compromise its management for the conservation purpose.'[309] Indeed, most national nature reserves are either owned by the state or managed according to an agreement with SNH.[310]

There are currently 43 NNRs covering 154,250 hectares, which includes a number of coastal sites which overlap significantly with conservation sites that are included in the MPA network, namely: Loch Fleet; St Abb's Head; Caerlaverock; St Cyrus; St Kilda; Tentsmuir; Forvie; Hermaness; Noss; Rum; Isle of May; and Taynish. Some of these sites are very small, with many being less than a hectare, but other sites cover larger areas of intertidal habitat which is managed for conservation purposes. For example, Loch Fleet NNR is composed of a mixture of land and estuarial waters and it partially overlaps with the Loch Fleet SSSI, the Dornoch Firth and Loch Fleet Ramsar site, and the Dornoch Firth and Loch Fleet SPA. Similarly, the Caerlaverock NNR is almost entirely composed of intertidal habitat, overlapping with the Solway Firth SAC, the Solway Firth SPA, the Upper Solway Flats and Marshes Ramsar site, and the Upper Solway Flats and Marshes SSSI. It is notable that part of this site is managed on a lease from Crown Estate Scotland, demonstrating an innovative use of legal tools to further nature conservation. It would be interesting to consider whether this tool could have further application in other parts of the network.[311]

The inclusion of some NNRs within the Scottish MPA network could provide variability in the MPA classification as some of these sites have been registered as category II sites on the World Database on Protected Areas, namely Caerlaverock, St Cyrus, St Kilda, Forvie, Rum[312], Isle of May, and Taynish. Recognising these coastal NNRs as part of the MPA network could therefore offer a further contribution to the MPA Network by recognising the specific management objectives pursued on these sites,

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306 Ibid, 2.

307 This aligns with the work on terrestrial areas carried out in Starnes et al (n6).

308 Crofts et al (n5) 19-20. Note that in many cases, this classification does not coincide with the classification in the WDPA, where all sites that have been reported have been classified as category IV protected areas.

309 1949 Act, s. 15.

310 See 1949 Act, s. 16.

311 See also the possibility for the delegation of management powers under the Scottish Crown Estate Act 2019.

312 See also Crofts et al (n5) 19, which treats the Isle of Rum as a category II site because it is owned by SNH and it is managed for geodiversity and biodiversity conservation. Whilst this categorisation can attach to the status of Rum as a National Nature Reserve, it is not as straightforward to apply this category to the other designations connected with Rum (SSSI, SAC, and SPA) given that the conservation objectives of those designations permit sustainable use of the site for purposes which are compatible with the objectives.

without significantly extending the spatial footprint of the network, as the NNRs largely overlap with other designations. It would also give effect to the Scottish Biodiversity Strategy, which aims inter alia to 'realise the potential of National Nature Reserves as key assets for building landscape-scale approaches and increasing nature connectedness.'[313]

Another way of consolidating the MPA network would be to explicitly recognise the contribution that may be made by NGO-owned or managed sites. A key finding of the IUCN UK Committee's Report on *Putting Nature on the Map* was that 'so many sites owned (or leased) and managed by conservation NGOs meet the IUCN protected area definition and can therefore be added to the [World Database on Protected Areas].'[314] There are potentially a number of coastal sites which fall within this category, some of which may also overlap with an existing designation, but whose recognition as contributing to the Scottish MPA network could offer additional protection, particularly where those sites are actively managed for nature conservation purposes. The recognition of such sites as a formal part of the MPA network would also be an opportunity for some Scottish Environment LINK members to exercise a direct stake in the network. Whilst the size of such sites is likely to be small in the overall scheme of the network, it would nevertheless demonstrate a commitment on the part of the Scottish Government to collaborative management of the network and an express recognition of the stewardship exercised by these organisations over Scotland's natural environment on behalf of the Scottish people.

Both NNRs and privately managed protected areas are clustered around the coast[315], which means that different strategies are required to diversify the management of the network in marine areas. The establishment of a suite of Highly Protected Marine Areas (HPMAs) would have addressed this lack of balance. Depending upon how they were precisely defined, HPMAs would have likely qualified as category Ia protected areas, i.e. strict nature reserves.[316] It was noted in section 3 of this report that international best practice recognises the benefits of including highly protected areas within a MPA network. Yet, at the time of writing, it seems unlikely that any further action will be taken to strengthen the MPA network through the introduction of HPMAs. Following a consultation exercise carried out in early 2023, the Cabinet Secretary made a ministerial statement on 29 June 2023 in which she announced that the policy of establishing HPMAs in at least 10% of Scotland's waters by 2026 is no longer going to be taken forward.[317] At the time, it was said that the Scottish Government is thereby looking to 'develop a new pathway and a timetable for [the] work'[318], but the even more recent government response to the consultation casts doubt on whether HPMAs will be pursued due to the opposition expressed during the consultation exercise.[319] In particular, the Scottish Government's consultation response made clear that it 'no longer intends to process the establishment of new legal powers for introducing HPMAs in Scottish inshore waters through a Bill in the Scottish Parliament this parliamentary term.'[320]

It remains unclear what this policy announcement means in the longer term and particularly whether the Scottish Government intends to keep pace with EU law and policy in this area. As noted in section 3 above, the EU has committed to achieving strict marine protection in at least 10 per cent of its seas by 2030. Reference to this target was made in the parliamentary statement on HPMAs in June 2023 and the more recent Scottish Government consultation response says that it will 'recognise the EU Biodiversity Strategy for 2030 targets.'[321] It is not clear whether 'recognising' the targets is the same as realising the targets, but if the Scottish Government is serious about its ambitions to ultimately rejoin the EU[322], alignment with these targets must be a political priority. The development of HPMAs would also demonstrate a commitment to implementing international best practice, as recommended in CBD COP guidance and IUCN recommendations. In other words, HMPAs should not be completely abandoned as a policy tool to pursue enhanced marine protection in the long term.

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[313] Scottish Government, *Scottish Biodiversity Strategy to 2045: tackling the nature emergency* (December 2022) 41.
[314] Crofts et al (n5) 17.
[315] See section 4.
[316] Category Ia sites are 'strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.'
[317] See Highly Protected Marine Areas Ministerial Statement, Meeting of the Parliament, 29 June 2023, available at https://www.parliament.scot/chamber-and-committees/official-report/search-what-was-said-in-parliament/recent-publication?meeting=15402&iob=131410 <accessed 21 August 2023>.
[318] Ibid.
[319] *Scottish Highly Protected Marine Areas (HMPA) Consultation: Scottish Government Response to the Consultation* (November 2023) 16: 'the concern over potential disproportionate socio-economic impacts and the lack of sufficient time to assess and address these in consultation with marine users and island and coastal communities, was a key factor in the decision by the Scottish Government, that the policy as proposed would not be continued.'
[320] Ibid 4.
[321] Ibid 4.
[322] See Scottish Government, *An independent Scotland in the EU* (November 2023).

There may be other routes through which enhanced protection could be delivered, however, without the development of a new category of HPMAs. In particular, existing MPA management measures could be strengthened in order to deliver enhanced protection. The EU target itself suggests that 'at least one third of protected areas – representing 10% of EU land and 10% of EU sea – should be strictly protected', meaning that it does not necessarily demand the expansion of the spatial footprint of the MPA network through the designation of new sites, but it could be achieved through stricter management of existing protected areas. To be clear, this does not mean converting existing MPAs into HPMAs by stealth, but rather considering the establishment of limited zones within MPAs in which enhanced protection is offered. An existing example is the designation of the Lamlash Bay 'no-take zone', which was originally designated in order to protect biodiversity generally before being integrated into the broader South Arran NCMPA. Of course, the Lamlash no-take zone only controls fishing, but not other activities and it therefore only offers limited protection. MPA management should rather focus on all activities that may harm relevant marine features.

It is also worth acknowledging that HPMAs do have some support from the UK Government, albeit through a pilot scheme and the UK Government has already demonstrated its agreement in principle to the designation of HPMAs in offshore waters.[323] It has also indicated that it intends to 'identify further suitable sites for consultation and potential designation.'[324] This means that there may be possibilities for collaboration between the Scottish Government and UK Government in relation to offshore waters; it is possible that one of the next pilot sites could be in Scottish offshore waters, should the Scottish Government choose to work with the UK Government to this end.

What is clearly recognised by the Scottish Government is that any future action in this area needs to be done in a collaborative manner. The case needs to be made that it is in the general interests of society to ensure that enhanced protection is offered to some marine ecosystems in order to provide a refuge for marine species and habitats that are under a range of anthropogenic pressures. This should not be a debate about fishing exclusively, but rather the cumulative impacts of activities on the marine environment. Indeed, fishing has so far been the main target of management (see following section) and other pressures should also be considered for proactive management action. Genuine and effective engagement with affected stakeholders on this issue will inevitably take time and effort. Yet, it is incumbent on the Scottish Government to attempt to find common ground and this will require proactive and innovative mechanisms to bring all of the relevant stakeholders around the table to seek consensus as far as possible. Whatever mechanism is chosen, it must allow all opinions to be fed into the process, but it should not give a veto to vested interest groups. It will ultimately be up to the Scottish Government to decide how to balance competing interests in order to meet its overarching international and domestic commitments to develop a network of effectively managed protected areas and to achieve good environmental status for Scottish waters, whilst also taking into account socio-economic considerations.

Recommendation: The Scottish Government should ensure that it has submitted comprehensive and accurate information to the WDPA for all MPAs contributing to its MPA network.

Recommendation: The Scottish Government should consider the integration of some National Nature Reserves, as well as privately owned and managed nature reserves, into the Scottish MPA network.

Recommendation: The Scottish Government should clarify its policy on keeping pace with the proposals outlined in the EU Biodiversity Strategy, including the commitment to strict protection of at least 10% of Scottish marine waters by 2030 and any future targets adopted in the EU Nature Restoration Regulation.

Recommendation: The Scottish Government should continue the dialogue with relevant stakeholders on achieving enhanced protection of the MPA network and increasing the area within the network subject to strict protection.

[323] See The North East of Farnes Deep Highly Protected Marine Area (Marine Conservation Zone) Designation Order 2023.
[324] Highly Protected Marine Areas – Department for Environment, Food and Rural Affairs written statement, 5 July 2023.

## b. Analysis of existing management measures

The analysis of IUCN categories provides one perspective on the overall composition of the MPA network, but, given its focus on conservation objectives, it tells us little about what management is in place in practice. In the IUCN's own words, 'the category is not a reflection of management effectiveness.'[325] At the same time, IUCN Guidelines make clear that '[p]rotected areas must prevent, or eliminate where necessary, any exploitation or management practice that will be harmful to the objectives of designation'[326] and IUCN encourages '[a] diversity of management approaches …, as it reflects the many ways in which communities around the world have expressed the universal value of the protected area concept'[327] From this perspective, it is worthwhile exploring in more detail the extent of management within MPAs and how far they go in regulating or prohibiting activities.

It has already been seen in section 4 how different legal tools are available to manage activities taking place within MPAs. Most activities are regulated on a case-by-case basis using existing regulatory powers, with relevant public authorities required to take into account the MPA conservation objectives when making decisions thereunder. As such, the level of protection will often depend upon whether an activity is permitted in a particular case and, if so, what conditions are attached to any permission to proceed. In other cases, specific management measures may be adopted using powers under the relevant legislation in order to restrict an activity within the MPA. To date, this latter approach has largely been applied to fishing. It is the use of these specific management measures that will be the focus of the analysis here.

Where specific management measures have been applied to fishing in particular MPAs, it is important to acknowledge that fishing is not restricted throughout each of these MPAs. Rather, specific management measures tend to restrict particular forms of fishing in particular parts of the MPA. In other words, fishing is managed on a zonal basis in most MPAs, with restrictions differing depending on the nature of the gear used. Therefore, in order to fully understand the degree of protection offered to an MPA, it is necessary to drill down into the detail of the management measures and calculate[328] the extent of management that is in place for individual gear types. The following table provides an overview of the spatial footprint of fisheries management in relation to different gear types in those NCMPAs, SACs and SPAs in the inshore area where specific management measures have been adopted in the form of Marine Conservation Orders or Inshore Fishing Orders.

What this analysis highlights is that even though all of these MPAs fall within the same IUCN category, the nature and spatial extent of management varies enormously across the different sites. Indeed, the degree of restriction varies significantly between different gear types. On the one hand, dredging and demersal trawling are regulated in all of these MPAs, with a number of MPAs imposing complete prohibitions on these two gear types. On the other hand, pots and creels, gillnets, and longlines tend to be regulated in specific areas within specific MPAs. By way of contrast, pelagic trawling, rod and line and fishing by hand are restricted in very few cases.

Caution must be exercised in interpreting these figures. It must be remembered that the specific management measures that have been adopted do not necessarily exhaust the fisheries management that applies within MPAs. Often, there are a wide range of other fisheries management measures that apply in MPAs, but which serve different purposes other than the furtherance of MPA conservation objectives. Many examples exist under the Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004, which imposes a number of smaller area-based fisheries restrictions adopted for a variety of reasons, some of which are applicable in MPAs. A good example is the closure of Broad Bay, located in the North East Lewis NCMPA, to mobile and active gear in accordance with Schedule 1 of the 2004 Order. This measure was introduced in order to protect juvenile plaice stocks, which are not a protected feature in the MPA. It is therefore difficult to classify this as a management measure for the MPA, although it might count as a OEACM, if it meets the criteria discussed in section 2 above.

[325] IUCN Guidelines for applying the IUCN protected area management categories to marine protected areas, second edition (IUCN 2018) 17.
[326] Ibid.
[327] Ibid. See also PJS Jones et al, *Enabling Effective and Equitable Marine Protected Areas: guidance on combining governance approaches* (UNEP 2019).
[328] The percentages in the following table were calculated using shapefiles and other data publicly available on various government websites; see bibliography.

## Table: A spatial analysis of specific management measures across key inshore MPAs

| NAME | TYPE | Restriction ( % of total pr otected area (which may include terrestrial area)) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Dredging | Demersal and beam trawl | Pelagic trawl | Pots and creels | Gillnets | Longlines | Rod and line & handline | Fishing by hand | Number of gears regulated |
| East Mingulay | SAC | Total (100%) | Total (100%) | None (0%) | Partial (50%) | Partial (50%) | Partial (50%) | Partial (50%) | None (0%) | 6 |
| Firth of Lorn | SAC | Partial (98%) | Partial (98%) | None (0%) | None (0%) | Partial (98%) | Partial (98%) | None (0%) | None (0%) | 4 |
| Loch Carron | NC MPA | Total (100%) | Total (100%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Loch Creran | NC MPA | Total (100%) | Total (100%) | Total (100%) | Partial (63%) | Total (100%) | Total (100%) | None (0%) | None (0%) | 6 |
| Loch Creran | SAC | Total (100%) | Total (100%) | Total (100%) | Partial (63%) | Total (100%) | Total (100%) | None (0%) | None (0%) | 6 |
| Loch Laxford | SAC | Partial (86%) | Partial (86%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Loch Sunart | NC MPA | Total (100%) | Total (100%) | None (0%) | Partial (2%) | Total (100%) | Total (100%) | None (0%) | None (0%) | 5 |
| Loch Sunart to the Sound of Jura | NC MPA | Partial (69%)[329] | Total (100%)[330] | None (0%) | Partial (<1%) | Total (100%) | Total (100%) | None (0%) | None (0%) | 5 |
| Loch Sween | NC MPA | Partial (59%)[331] | Partial (59%)[332] | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | Partial (59%) | 3 |
| Lochs Duich, Long and Alsh | NC MPA | (Total) 100% | Total (100%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Lochs Duich, Long and Alsh Reefs | SAC | Total (100%) | Total (100%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Luce Bay and Sands | SAC | Partial (68%) | Partial (98%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Noss Head | NC MPA | Total (100%) | Total (100%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Red Rocks and Longay | NC MPA | Total (100%) | Total (100%) | None (0%) | Total (100%) | Total (100%) | Total (100%) | Total (100%) | None (0%) | 6 |
| Sanday | SAC | Total (100%) | Total (100%) | None (0%) | None (0%) | Total (100%)[333] | None (0%) | None (0%) | None (0%) | 3 |
| South Arran | NC MPA | Total (100%) | Partial (63%)[334] | Partial (1%) | Partial (3%) | Partial (3%) | Partial (3%) | Partial (1%) | Partial (1%) | 8 |
| St Kilda | SAC | Total (100%) | Total (100%) | None (0%) | None (0%) | Total (100%) | None (0%) | None (0%) | None (0%) | 3 |
| St Kilda[335] | SPA | Partial (85%) | Partial (85%) | None (0%) | None (0%) | Partial (85%) | None (0%) | None (0%) | None (0%) | 3 |
| Sunart | SAC | Partial (47%) | Partial (47%) | None (0%) | Partial (1%) | Partial (47%) | Partial (47%) | None (0%) | None (0%) | 5 |
| Treshnish Isles | SAC | Partial (95%) | Partial (95%) | None (0%) | None (0%) | Partial (95%) | None (0%) | None (0%) | None (0%) | 3 |
| Upper Loch Fyne and Loch Goil | NC MPA | Total (100%) | Partial (41%)[336] | None (0%) | Partial (8%) | Partial (8%) | Partial (8%) | None (0%) | None (0%) | 5 |
| Wester Ross | NC MPA | Total (100%) | Partial (66%)[337] | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Wyre and Rousay Sounds | NC MPA | Total (100%) | Total (100%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | None (0%) | 2 |
| Number of sites with some restrictions in place (Number of sites with a total restriction on relevant gear) | | 23 (15) | 23 (13) | 3 (2) | 9 (1) | 14 (7) | 10 (5) | 3 (1) | 3 (0) | |

[329] Mechanical dredging is permitted in parts of the protected area during certain periods. Suction dredging is prohibited throughout most of the protected area.
[330] The complete prohibition only applies to beam trawling and demersal seine netting. Demersal trawling is permitted in some parts of the protected area provided that tickler chains are not used and within certain periods.
[331] Fishing for sea fish with a mechanical dredge in the Loch Sween Excepted Area is only allowed by a vessel of no more than 75 gross tonnes and only between 0700 hours and 2100 hours on Monday to Friday of each week. Fishing with a suction dredge is generally prohibited in Loch Sween under the Inshore Fishing (Scotland) Order 2004.
[332] Fishing for sea fish with a demersal trawl in the Loch Sween Excepted Area is only allowed by a vessel of no more than 75 gross tonnes.
[333] To protect common seals.
[334] Only demersal trawling – beam trawling is prohibited throughout the MPA.
[335] Whilst the original proposals for management measures at St Kilda only focussed on the SAC, the Scottish Government agreed to introduced an immediate ban on the use of set nets to protect the seabird colonies protected by the SPA following comments in the consultation.
[336] The extent of the restriction on demersal trawling depends on the tonnage of the vessel.
[337] Demersal trawling by a vessel with an engine power not exceeding 500 kilowatts is permitted in parts of the protected area.

The above analysis of the spatial extent of MPA management could also feed into an alternative framework for classifying MPAs which focuses on the level of protection that is afforded to an MPA in practice, rather than its conservation objectives. A leading example of such a framework is the MPA Guide[338], which suggests classifying MPAs according to the level of protection that is in place in relation to seven types of activity, of which fishing is one.[339] The purpose of this framework is to '[draw] attention to quality, not just quantity of MPAs'[340] and ultimately to prevent MPAs from counting towards global targets when 'no real protection is in place in the water.'[341] Four categories of protection exist within this framework, namely: fully protected, highly protected, lightly protected and minimally protected. In the case of fishing, classification as a fully or highly protected MPA is only permitted when either all commercial fishing or all commercial involving high impact gears are prohibited. High impact gears for these purposes includes dredges, longlines, demersal trawl, and pelagic trawl. It follows that most Scottish MPAs could not be classified as fully or highly protected, given that at least one of these gears is allowed. The one exception is Loch Creran where all high impact gears are fully restricted yet, even in this case, the MPA Guide dictates that fishing by vessels of more than 12 m is incompatible with nature conservation, meaning that a site would not even be classified.[342] This builds upon IUCN guidance which specifies that 'industrial fishing' is incompatible with the establishment of an MPA.[343] As Scottish legislation tends not to restrict the size of vessels fishing within MPAs, it would lead to a finding that all Scottish MPAs were 'incompatible with nature conservation.'

To some eyes, this might seem a rather arbitrary conclusion and classification of MPAs on this basis should be treated with caution. Indeed, by exclusively focussing on management measures, there is a risk that we lose sight of the fact that conservation objectives drive management in many legal systems, including in Scotland. Thus, whilst a classification according to the MPA Guide might highlight the limits of management in the water, it does not necessarily tell us whether management is effective or direct us as to how much management should be put in place for each individual site. Perhaps a more pertinent measure of whether management is sufficient is whether MPA management objectives are being met, as discussed in the following section.

## c. Analysis of monitoring programme and condition of protected areas

One clear measure of whether MPAs are effectively managed is whether they are meeting their conservation objectives. This requires monitoring of the features protected by the MPA, which is carried out by a range of agencies, including SNH and the Marine Directorate of the Scottish Government, although monitoring also involves 'collaboration with other stakeholders and citizen science.'[344] One example is the European-funded project 'Engaging the Fishing Industry in Marine Environmental Survey and Monitoring' which involved the collection of data from drop-down video surveys, juvenile fish surveys and investigations into the movements of flapper skate.[345] Indeed, the marine legislation requires periodic reporting on the achievement of the conservation objectives of most MPAs.

[338] K Grorud-Colvert et al, 'The MPA Guide: A framework to achieve global goals for the ocean' (2021) 373 *Science* 1215.
[339] It covers mining, dredging and dumping, anchoring, infrastructure, aquaculture, fishing, and non-extractive activities.
[340] Ibid, 1.
[341] Ibid, 2.
[342] MPA Guide Expanded Guidance: Level of Protection (Version 2: June 2022) 22.
[343] See WCC-2016-Rec-102-EN, para. 3: 'CALLS ON governments to prohibit environmentally damaging industrial activities and infrastructure development in all IUCN categories of protected area.' See also WCC- 2020-Res-055-EN: Guidance to identify industrial fishing incompatible with protected areas, which offers a broad definition of industrial fishing, namely '(>12 m long x 6 m wide) motorised vessels, with a capacity of >50 kg catch/voyage, requiring substantial sums for their construction, maintenance and operation and mostly sold commercially, and that all fishing using trawling gears that are dragged or towed across the seafloor or through the water column, and fishing using purse seines and large longlines, is defined as industrial fishing.' It should be noted that the relevant IUCN resolution was only adopted with significant negative votes and abstentions from amongst the state delegations.
[344] Scottish Government, Scottish MPA Network – Parliamentary Report December 2018) 25.
[345] See https://data.marine.gov.scot/dataset/engaging-fishing-industry-marine-environmental-survey-and- monitoring <accessed 4 September 2023>.

Depending on its location, either SNH (coastal or inshore) or JNCC (offshore) produces detailed information on the conservation status of most protected features, which allows some analysis of how well MPAs are faring. Each feature is allocated a single descriptor from the following categories:[346]

1. Favourable maintained – An interest feature should be recorded as maintained when its conservation objectives were being met at the previous assessment, and are still being met.
2. Favourable recovered – A feature of interest can be recorded as having recovered if it has regained favourable condition, having been recorded as unfavourable at the previous assessment.
3. Favourable declining – The attribute targets set for the natural feature have been met, but evidence suggests that its condition will worsen unless remedial action is taken.
4. Unfavourable recovering – A feature of interest can be recorded as recovering after damage if it has begun to show, or is continuing to show, a trend towards favourable condition.
5. Unfavourable no change – An interest feature may be retained in a more-or-less steady state by repeated or continuing damage – it is unfavourable but neither declining or recovering. In rare cases, an interest feature may be unable to regain its original condition following a damaging activity, but a new stable state might be achieved.
6. Unfavourable declining – Decline is another possible consequence of a damaging activity. In this case, recovery is possible and may occur either spontaneously or if suitable management input is made.
7. Partially destroyed – It is possible to destroy sections or areas of certain features or to destroy parts of sites with no hope of reinstatement because part of the feature itself, or the habitat or processes essential to support it, has been removed or irretrievably altered. In these cases, the remainder of the feature is given an assessed condition.

Overall, it must be borne in mind that MPAs are likely to have multiple protected features which must all be favourable if we are to consider the MPA is in good condition. Data on the percentage of protected features in favourable condition for each MPA in Scottish MPA Network is included in the Annex of this report. This data has been extracted from the relevant information about the condition of protected features available on the Sitelink website managed by SNH, which incorporates data from both SNH and JNCC.[347] For the purpose of this analysis, only Favourable Maintained and Favourable Recovered are considered positive outcomes as they are the only outcomes which do not demand additional management measures, assuming that the condition assessment is up-to- date, a point returned to below.

Where there is no published data relating to a particular feature or where it is reported that the feature has not been assessed, it is assumed that it is not in good condition, although it must be acknowledged that this may not actually be the case. This is particularly limiting for NCMPAs and offshore MPAs, where no reported data was available for any of these features on the Sitelink website. The following table presents a summary of the results.

Table: Percentage of protected features in favourable maintained/recovered condition according to SNH/JNCC data

| | NCMPA | Offshore MPA | SAC | SPA | SSSI | Ramsar | Total |
|---|---|---|---|---|---|---|---|
| 0% | 23 | 13 | 18 | 10 | 4 | 0 | 68 |
| 1-20% | 0 | 0 | 0 | 6 | 2 | 2 | 10 |
| 21-30% | 0 | 0 | 1 | 2 | 2 | 2 | 7 |
| 31-40% | 0 | 0 | 6 | 11 | 2 | 1 | 20 |
| 41-50% | 0 | 0 | 8 | 11 | 6 | 4 | 29 |
| 51-60% | 0 | 0 | 2 | 2 | 8 | 0 | 12 |
| 61-70% | 0 | 0 | 1 | 2 | 3 | 4 | 10 |
| 71-80% | 0 | 0 | 2 | 8 | 11 | 0 | 21 |
| 81-99% | 0 | 0 | 1 | 3 | 5 | 1 | 10 |
| 100% | 0 | 0 | 19 | 3 | 22 | 2 | 46 |
| Total | 23 | 13 | 58 | 58 | 65 | 16 | 233 |

From this data, and bearing in mind the caveats noted above, it can be seen that a large number of sites are not meeting their conservation objectives. This conclusion would seem to suggest that

[346] NatureScot website: https://www.nature.scot/professional-advice/protected-areas-and-species/protected- areas/site-condition-monitoring/assessment-condition <accessed 25 August 2023>.
[347] https://sitelink.nature.scot/home <accessed 29 August 2023>.

current management actions are not sufficient. In many cases, this may not be surprising, given the gaps in management measures identified previously in the report. In this context, the individual results in the Annex highlight which MPAs might demand management to be put in place or improved as a matter of urgency, based upon their poor condition. In particular, where a significant proportion of features are not in favourable condition, this may point to the fact that current management measures are not sufficiently stringent or significant pressures are not being adequately managed through other decision-making processes. In line with the concept of adaptive management, highlighted in section 3 as a key principle of international best practice, regular reviews of conservation objectives should be carried out, with appropriate adjustments of management where it is deemed necessary.

Whilst this analysis provides a snapshot of the status of protected features across much of the MPA network, it is also important to note that much of the data that is relied upon in this analysis is old, which may undermine the rigour of the results. In many cases, data was last collected more than a decade ago. This is not just a challenge for the Scottish MPA network but for protected areas across the UK.[348] The potential unreliability of data underlines the need for a dedicated MPA monitoring strategy which can ensure that credible data is collected and published on a periodic basis. The last strategy was produced in 2017 and it would appear to have expired. A refreshed MPA monitoring strategy that takes into account the growth of the Network is therefore needed. The release of the statutory MPA Network Report in 2024 would be an appropriate opportunity to refresh the monitoring strategy, taking into account the growth of the MPA network in recent years.

Another opportunity to drive the achievement of MPA conservation objectives would be the inclusion of statutory targets in the proposed Natural Environment Bill.[349] This is a step that has already been taken by England under the Environment Act 2021, which has specified a target of 70% of the total number of all protected features within relevant MPAs will be in favourable condition by 31st December 2042.[350] It is accordingly a duty of the Secretary of State to ensure that the target is met[351] and the legislation specifies both reporting obligations and what steps must be taken if targets are not set.[352] The Environment Improvement Plan published in early 2023 also includes an interim target to achieve 48% of protected features in favourable condition by 31st January 2028[353] and the Environment Act requires an annual implementation report which describes what progress has been made towards any targets.[354] The development of this legislative scheme perhaps provides lessons for Scotland. There may be some elements of the UK legislation that could be replicated in a Scottish scheme, for example the annual reporting. However, in other respects, there are aspects of the UK legislation that could be improved on. In particular, the Scottish Parliament could consider a more structured set of targets (for example every five years) which would give a greater sense of progression. Careful consideration would also have to be given to the overall target. Whilst 100% must be desirable, it is questionable whether it is feasible and therefore a conversation needs to be started about what level of ambition Scotland should set for its MPA Network. Scottish Environment LINK Members have an opportunity to lead that discussion leading up to the introduction of a new legislation incorporating environmental targets, of which a protected area target would be just one, into Scots law. Indeed, it would even be possible to introduce related MPA targets, for example giving statutory footing to a commitment to keep pace with EU law and designate at least 10% of Scotland's seas a strictly/highly protected by 2030 in line with the EU Biodiversity Strategy, discussed above.

The nature restoration strategy and legislation being developed by the EU is also relevant to considering how to ensure that Scotland's MPAs are in good condition. Under Scotland's commitment to keep pace with EU law, it should also introduce legal commitments to taking restoration action across terrestrial and marine environments. Restoration involves active measures to support nature, rather than just removing pressures, and therefore legislation alone will not suffice. Financial provision will have to be set aside in order to achieve restoration targets. SNH already supports restoration efforts through its Nature Restoration Fund, launched in 2021 and marine projects are eligible for funding. Indeed, a number of

[348] See e.g. recent analysis of English SSSIs carried out by Wild Justice: Wild Justice, *A sight for sore SSSIs* (July 2023) which reported that the condition of most SSSIs in England has not been assessed for more than 10 years.
[349] Scottish Government, *The Environment Strategy for Scotland: Progress Report to Parliament* (March 2022) 16: 'we are developing statutory targets for nature recovery, which will be implemented through a Natural Environment Bill, to be laid before Parliament in 2024.'
[350] The Environmental Targets (Marine Protected Areas) Regulations 2023.
[351] Environment Act 2021, s. 5(a).
[352] Environment Act 2021, s. 6.
[353] UK Government, *Environment Improvement Plan 2023: First Revision of the 25 Year Environment Plan* (January 2023) 31.
[354] Environment Act 2021, s. 9.

successful projects in the first round had a marine focus.[355] This is positive, although it is also important to ensure a reporting framework to demonstrate what practical restoration has been achieved through this funding. Furthermore, funds must be strategically employed in order to support restoration of areas that will be subsequently protected from further harm. From this perspective, restoration work within MPAs or the use of other measures, such as Demonstration and Research MPAs[356], to support restoration work should be given priority.

Recommendation: The Scottish Government should develop and publish a revised MPA monitoring strategy which sets out priorities for a six-year programme of work leading up to the MPA network report in 2030.

Recommendation: The Scottish Government should review its existing management measures in light of the available information on the status of protected features with a view to developing management plans for those MPAs which might require additional action to make progress in achieving favourable conditions for their protected features.

Recommendation: The Scottish Government should introduce statutory targets relating to the achievement of favourable status of protected features in the MPA network as part of an ambitious and complete suite of targets driving a requirement for nature restoration across land and sea, inside *and* outside of protected areas.

### d. Promoting coordinated management of the MPA network

On any account, it is clear that coordinated management action is needed if the conservation objectives of MPAs across the network are to be achieved. It is important to understand that this is not just a matter of further fisheries management measures, which often tends to be the focus of MPA discussions, but rather an assessment of all key pressures, including both marine activities, as well as land-based sources of pressure, such as agricultural run-off or sewage outflows, all of which can affect the marine environment. Many of these activities are managed through regulatory decision-making on a case-by-case basis and a number of different public authorities or agencies may be involved in these processes.

To promote a coordinated and coherent approach to the management of a site, a clear management plan, developed with the engagement of key stakeholders, including all relevant statutory agencies, is an important tool to pursue this end. A management plan is a tool that has been highlighted as a form of best practice in the international policy discussed earlier in section 3 above. In particular, the OSPAR guidelines specifically call for management plans to be developed for those sites that contribute to the OSPAR network. Yet, as has been noted in one study evaluating the effectiveness of the OSPAR protected area network, 'a large majority of MPAs (as those in the UK) do not display a management plan but rather overlapping regulatory documents managed by independent national agencies.'[357]

Management plans can be used as a means of identifying key pressures on protected features and prioritising and coordinating responses. Restoration may also need to be part of the plan in the context of some of the sites, particularly if Scotland it going to mirror the efforts of the EU in this respect. The development of a management plan is also an opportunity to draw in appropriate stakeholders, including some Scottish Environment LINK members, and strengthening support for the MPA Network.

Whilst a management plan may be an informal document, such an initiative can also be supported by the adoption of a formal statutory management scheme, where necessary. Yet, apart from the limited examples relating to SACs, noted in section 4 above, there is little experience of developing management schemes for Scottish MPAs. Yet, the Scottish Government has recognised that 'Marine

[355] E.g. https://www.nature.scot/doc/nature-restoration-fund-nrf-2021-successful-projects <accessed 29 September 2023>.
[356] See Marine (Scotland) Act 2010, s. 71. Demonstration and Research MPAs can be designated to demonstrate 'sustainable methods of marine management or exploitation.' There is only one such MPA at present, but the scheme would appear to be flexible and it can be argued that a project to demonstrate the potential for restoration of a particular marine habitat falls within its scope. Once designated, a Demonstration and Research MPA can also be accompanied by a Marine Conservation Order (see s. 85), which can be used to prohibit certain activities which might interfere with the objectives of the project, i.e. restoration.
[357] Roessger at al (n133) 7.

Management Schemes could be considered helpful where the MPA has many features which have complex and varied management requirements, and is used for many different activities or regulated by various organisations.'[358] The development of management plans may take considerable resources and so priorities may have to be identified. In this connection, it is worth reiterating the potential under the 2010 Act to adopt a single management scheme for multiple overlapping MPAs, which can further help to coordinate and integrate relevant management action. The MarPAMM project, which ran between 2019 and early 2023 was designed to progress the development of regional MPA management plans, with trials in two regions of Scotland (Argyll and Outer Hebrides) as well as Northern Ireland and Ireland.[359] The project emphasised not only the importance of coordinating management between adjacent MPAs, but also integrating MPA management into wider management structures, such as marine spatial planning. Ultimately, the project would not seem to have produced management plans for the two Scottish regions, although the work that was done provides a platform for future collaboration, as well as identifying some best practice on the topic.[360] In particular, outputs for both regions highlight the potential for the governance structures established under the project to be maintained in order to carry out further work towards a regional MPA management plan.

Other mechanisms and frameworks could also potentially be used to further the integration of the MPA network at the regional level. One potential tool is provided by National Parks established under the National Parks (Scotland) Act 2000. National Parks are themselves a form of protected area[361], as their primary aim is to promote the conservation and enhancement of natural and cultural heritage, alongside other aims such as the sustainable use of the natural resources of the area, understanding and enjoyment of the area by the public, and sustainable economic and social development.[362] The size of National Parks, however, means that they can also be used as a mechanism to coordinate action across other protected areas falling within their boundaries. Whilst the two current National Parks in Scotland are exclusively terrestrial, the Scottish Government has committed to establishing a new National Park by 2026[363] and there has been keen interest in the establishment of a coastal and marine national park.[364] Furthermore, it has been suggested that, in the future, National Parks should be encouraged to give a stronger priority to nature recovery and National Park authorities could be given additional powers to establish '"priority nature zones" to enable landscape-scale restoration and to allow Parks to formally contribute to 30x30 and nature network targets (with equivalent approaches for marine elements).'[365] From this perspective, the National Park Management Plan, required for each National Park[366], could provide a tool for coordinating management of various MPAs found within a marine and coastal National Park, should one be designated. There is clearly an opportunity for Scottish Environment LINK members to play an active role in the evolving policy process concerning the selection and establishment of a new National Park, in order to ensure that any new National Park with a marine element support the coherent management of existing MPAs.

Another mechanism to mention in this context is the marine planning regime. As noted in section 3 above, another key principle highlighted in GBF Target 3 and related instruments adopted by the CBD COP is the integration of MPAs into broader spatial management frameworks. Such integration can be another means of promoting coherent management of MPAs, both by ensuring that these other frameworks effectively support MPA conservation objectives, as well as ensuring connectivity between MPAs where appropriate. From this perspective, it is important to consider how MPAs are integrated into the marine planning system established under Part 3 of the Marine and Coastal Access Act 2009 and Part 3 of the Marine (Scotland) Act 2010, which foresees the adoption of a two- tiered planning regime composed of a National Marine Plan applicable to all Scottish waters[367] and a series of regional marine plans across eleven inshore marine regions: Argyll, Clyde, Forth and Tay, Moray Firth, North Coast, North East,

[358] Marine Scotland, Draft MPA Management Handbook, para. 8.6.2.
[359] See https://www.mpa-management.eu/ <accessed 21 August 2023>.
[360] See Marine Protected Area Management Planning Best Practice Workshop Report, available at https://www.mpa-management.eu/wp-content/uploads/2019/07/WORKSHOP-2019-REPORT-FINAL-DRAFT-for- web-upload-1.pdf <accessed 21 August 2023>.
[361] In terms of the IUCN criteria, discussed above, UK national parks are not national parks in the sense of category II protected areas, but rather category V protected areas: protected landscape/seascape; see Putting Nature on the Map, 10.
[362] National Parks (Scotland)Act 2000, s. 1.
[363] Scottish Government, Scottish Biodiversity Strategy to 2045 (December 2022) 8.
[364] See e.g. SNH, National Parks Advice to Ministers (February 2023): 'we would encourage consideration of a coastal and marine National Park as an exemplar for this nationally important ecosystem and iconic Scottish landscape.'
[365] Ibid.
[366] National Park (Scotland) Act 2000, s. 11.
[367] See Scottish Government, Scotland's National Marine Plan (2015) para. 1.1.

Outer Hebrides, Orkney Islands, Shetland Isles, Solway, West Highlands.[368] The 2010 Act is explicit that both the National Marine Plan, at least insofar as it applies to inshore waters, and any regional marine plans must inter alia 'state the Scottish Ministers' policies on the contribution of [MPAs] to the protection and enhancement of the area to which the plan applies.'[369] Consideration of MPAs should therefore be central to the marine planning process and CBD guidance on integration, discussed in section 3, can be used to further this agenda.

At present, the National Marine Plan simply states that 'development and use of the marine environment must … comply with legal requirements for protected areas and protected species'[370] with further encouragement that 'management plans and guidance on protected areas should be followed to contribute to the achievement of site objectives.'[371] In addition, it is specified that regional marine plans should '[develop] policies that contribute to the achievement of Conservation Objectives within the MPA network.'[372] In practice, no regional marine plans have emerged to date, with work on plans only started in three regions: Shetland, Clyde and Orkney.[373] The Scottish Government has recently indicated that no further regional marine planning processes will be initiated (with the possible exception of the Outer Hebrides) until the second National Marine Plan is adopted[374], expected to be in Spring/Summer 2025.[375] Indeed, the elaboration of a new National Marine Plan provides an opportunity to strengthen the spatial planning framework to support the delivery of MPA conservation objectives, although it is likely that further specific spatial policies will have to be adopted at the regional level in order to take into account regional characteristics.

Scottish Ministers have suggested that the new National Marine Plan will provide additional 'direction on the appropriate use of spatial prescription within [Regional Marine Plans]'[376] and they have also recognised that regional marine planning organisations may need more practical guidance to assist in the development of Regional Marine Plans.[377] A new Regional Marine Planning Forum will be established to this end, which provides opportunities for Scottish Environment LINK members to engage with the marine planning process in order to ensure that future iterations of marine planning in Scotland deliver on the promise of (inter alia) supporting the MPA network.

Recommendation: The Scottish Government must progress its plans to adopt management measures for those inshore and offshore sites where management is not yet in place, without further delay.

Recommendation: The Scottish Government should consider piloting multi-site management schemes using the powers available under the 2010 Act, building upon experience and best practice garnered from other successful marine management schemes in the UK, as well as lessons from the MARPAMM project.

Recommendation: The development of a new National Marine Plan should be used an opportunity to provide more specific guidance on the spatial policies that might be needed at the regional level to support the MPA network.

[368] See Scottish Marine Regions Order 2015.
[369] Marine (Scotland) Act 2010, s. 5(3).
[370] Scottish Government, Scotland's National Marine Plan (2015) Policy 9(a).
[371] Ibid, para. 4.50.
[372] Ibid, para. 4.60.
[373] Draft plans for the Shetland and Clyde regions have been submitted to the Scottish Ministers for consideration. At the next stage, the Scottish Ministers must publish a consultation draft and then take into account any representations before adopting and publishing the final version; see Marine (Scotland) Act 2010, Schedule 1, paras 9-14.
[374] See Scottish Government Response to the Environment, Climate Change and Land Reform Committed Report on Development and Implementation of Regional Marine Plans in Scotland (August 2023).
[375] Scottish Government, *Scotland's National Marine Plan 2: Stakeholder Engagement Strategy and Statement on Public Participation* (October 2022) 18.
[376] Scottish Government Response to the Environment, Climate Change and Land Reform Committed Report on Development and Implementation of Regional Marine Plans in Scotland (August 2023).
[377] Ibid.

# 6. Enforcement

It can be seen from the analysis carried out in previous sections of this report that a range of different legal management tools are used to promote the conservation of protected areas. In order to be effective, it is not only necessary to put measures in place, however, but also to ensure that any measures are actually followed in practice. Effective enforcement was identified as an essential condition of good MPA governance in section 3 above. There are various aspects of enforcement that will be explored in this section, from the challenges of identifying the commission of offences in the first place to the imposition of penalties once an offence has been found to have been committed.

## a. Investigation and identification of offences

One of the first challenges for enforcement is to identify that an offence has been committed, in order to carry out further investigations and to determine what action should be taken. If criminal proceedings are to be brought, it is necessary to collect evidence that proves beyond reasonable doubt that an offence has been committed. In the context of MPA offences, it is necessary to prove the identity of alleged offender and that the precise prohibited activity took place within the boundaries of the MPA. Depending on the circumstances, this can be particularly challenging where some fishing methods, but not others, are prohibited within a MPA, as is often the case. Any doubt about the location or nature of the activity can therefore be critical to the launch of a successful prosecution.

The sheer size of the Scottish marine area also makes the detection of potential offences a major undertaking. The scale of the challenge is further increased given the relatively few enforcement assets available to the Marine Directorate of the Scottish Government, which is responsible for policing Scotland's seas. The Marine Directorate operates three marine protection vessels (MPV Minna, MPV Jura and MPV Hirta, all of which have their own small boats for carrying out boardings) and two light aircraft (Watchdog Alpha and Watchdog Bravo). In addition, it has recently supplemented it's at-sea capacity with the purchase of two additional rigid inflatable boats (RIBs) which allow some more flexibility for inshore patrols. Nevertheless, the assets available to patrol such a wide expanse of waters are limited, particularly when one compares the position in England, with a smaller marine area, but with many more enforcement assets at their disposal: most of the ten Inshore Fishery and Conservation Associations have their own patrol vessels, with additional enforcement capacity lying with the Marine Management Organisation.[378]

Alongside physical inspection of vessels at sea, the Marine Directorate of the Scottish Government also operates other enforcement tools. The Scottish Government hosts the UK Fishing Monitoring Centre, which provides a single point of contact for supervising Vessel Monitoring Systems (VMS) and other electronic reporting systems for all fishing vessel activity in UK waters. VMS and increasingly Remote Electronic Monitoring (REM) offer opportunities to oversee activity at sea without a physical presence. VMS is already required on all fishing vessels of 12 metres or more[379] and certain scallop vessels are required to carry REM technology, including gear sensors and digital camera systems.[380]

Last year, the Scottish Government consulted on the further roll-out of REM across the Scottish fleet, starting with the scallop dredging fleet and the pelagic fleet.[381] Indeed, the delivery plan for the Fisheries Management Strategy 2022-2030 indicated that 'legislation on mandatory REM for the pelagic and scallop sectors will be introduced to the Scottish Parliament in early 2023 (subject to available Parliamentary time)'[382] but this has not occurred at the time of writing (August 2023). At the same time, the Scottish Government is also consulting on the use of electronic tracking and REM for the inshore fleet, although the consultation suggests that REM will not be applied to all vessels but rather it will

[378] The Marine Management Organisation has recently taken over long-term charters for two patrol vessels; see https://www.sentinel-marine.com/news/twin-christenings-for-sentinel-marine-vessels-at-the-port-of-portsmouth <accessed 29 September 2023>.
[379] See Council Regulation (EC) No 1224/2009 establishing a Union Control System for Ensuring Compliance with the Rules of the Common Fisheries Policy, Article 9(2).
[380] The Regulation of Scallop Fishing (Scotland) Order 2017, Article 6.
[381] Scottish Government, Ensuring Long Term Sustainability: Remote Electronic Monitoring (REM) Consultation (March 2022).
[382] Scottish Government, Fisheries Management Strategy 2020 to 2030: delivery plan (September 2022) at 12.

be employed in a targeted manner depending on fishing location, target species and gear in use.[383]

REM serves a number of purposes, including improved gathering of data for management purposes[384], but it may offer new opportunities for enforcement, particularly in MPAs. Nevertheless, it is not a panacea and some challenges still arise. If REM is widely deployed across the fishing fleet, the volume of data that will need to be monitored may place additional pressure on enforcement agencies. Moreover, the corroboration rule in Scots law[385] means that reliance on VMS or REM data alone[386] is not going to be sufficient for a criminal prosecution, unless legislation giving effect to REM waives this requirement and allows conviction on evidence from a single source.[387] Furthermore, we should not forget the other activities taking place in MPAs, beyond fisheries, which may also require the attention of enforcement officials.

As technology develops, new opportunities for enforcement will likely arise. In 2017, the House of Commons Environmental Audit Committee encouraged the UK Government to 'consider investing in aerial and seaborne drones'[388] as an additional enforcement tool.[389] In the future, artificial intelligence may also be a useful tool to manage large amounts of data coming from REM.

Recommendation: The Marine Directorate of the Scottish Government should carry out a strategic review of its enforcement assets with a view to determining what further equipment or resources may be required in order to ensure an effective deterrence to illegal activity in MPAs.

Recommendation: When introducing requirements for REM, the Scottish Government should include appropriate arrangements to maximise the potential for this technology to be used for enforcement purposes, bearing in mind the challenges of meeting the corroboration rule in Scots criminal law.

### b. Penalties and other compliance measures

Most of the legal management tools discussed in the previous sections of this report are ultimately backed up by criminal sanctions in the form of fines imposed in court proceedings. The availability of criminal penalties sends an important signal of the seriousness attached to actions which harm the environment generally and protected areas in particular. Most criminal prosecutions relating to environmental matters in Scotland are brought by way of summary indictment in the Sheriff courts and so it is this process which will be the focus of the following analysis.

We have already seen in the analysis of management above that the legislation concerning protected areas establishes a number of offences seeking to discourage actions that may damage the protected features of a MPA. There is a remarkable similarity in the actual nature of the offences relating to each type of MPA, but the penalties available under each statute differ significantly.[390]

[383] Scottish Government, Improving Inshore Fisheries Data: Consultation on requiring electronic tracking and monitoring technology on under 12 metre commercial fishing vessels (August 2023) para. 16.
[384] See ibid, para.
[385] As a matter of Scots law of evidence, the core elements of a criminal offence must be proven by two pieces of evidence from independent sources.
[386] Where a vessel carries both VMS and REM, these may be counted as independent sources of evidence and they may therefore corroborate each other.
[387] There are precedents in other fields of environmental law, e.g. Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003, s. 13(5).
[388] House of Commons Environmental Audit Committee, Marine Protected Areas Revisited (21 March 2017) para. 23.
[389] English fisheries regulators are already using drones and the Welsh Government are seeking to procure drones to assist with fisheries enforcement; see e.g. Fisheries Drones for Welsh Waters, *Fishing News*, 27 July 2023.
[390] It is worth noting that the requirement to lash and stow prohibited gear within certain MPAs is also a condition of Scottish fishing vessel licences and so an offence could alternatively be prosecuted as a breach of a licence condition.

Table: Maximum penalties on summary conviction for main offences under the relevant legislation

| | Damage to features | Activity without consent | Breach of order |
|---|---|---|---|
| SSSI (2004 Act) | £40,000 | £40,000 | £40,000 |
| European site (inshore) (1994 Regulations) | £5,000 | N/A | £5,000 |
| European site (offshore) (2017 Regulations) | Unlimited | N/A | N/A |
| NCMPA (2010 Act) | £50,000 | N/A | £50,000 |
| Offshore MPA (2009 Act) | £50,000 | N/A | £10,000 |
| Inshore Fishing (Scotland) Act 1984 | N/A | N/A | £5,000 |

This variability in applicable penalties has been noted in the Poustie Review on Wildlife Crime, where it was observed that 'protected sites tend to attract higher potential fines albeit these again are not consistent.'[391] This variability was partially dismissed however because it was argued that 'in practice is it likely that a European site will also be a SSSI so the higher penalty would be available for damaging the SSSI.'[392] This conclusion ignores two important points. Firstly, the offence of damaging a site often applies to specific protected features, which may not be identical under each designation. Secondly, in the marine space, as seen above, there is generally less overlap between European sites and SSSIs, given the spatial limitations on SSSIs described in section 4 above. As a result, the variability is more stark in this context. The Poustie Review recommended that Ministers increase 'maximum penalties available on summary conviction at least for the more serious offences … to at least a £40,000 fine and up to 12 months imprisonment.'[393] Some changes were introduced in the Animal and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020, but this legislation does not align penalties for offences relating to protected areas[394], even though this fell within the recommendations of the Poustie Review and the relevant parliamentary committee recommended enhanced action for damage to resting places and breeding sites, i.e. habitat.[395] Arguably, there is still a case to be made that penalties relating to protected areas should be reviewed and aligned.

Alongside a review of maximum penalties, work relating to sentencing guidelines for environmental offences should be expedited to ensure that penalties are applied in such a way so as to create a deterrent for action. This argument applies not only to the general offences relating to protected areas, but also offences relating to non-compliance with specific management measures. Recent examples of prosecutions reveal that Sheriffs often hand out small fines for fisheries offences, particularly when compared to practice in neighbouring jurisdictions.[396] Taking the three most recent examples from the Scottish Government website reveals that fines for an offence of deploying fishing gear in a protected/closed area are between £3211 and £2000.[397] This compares to much higher fines in English courts which are often at least double. For example, the Master of a fishing vessel who admitted fishing for scallops in a closed area was fined £5000 by Plymouth Magistrates in June 2023, as well as a further fine of £1591 for the value of the offending catch and a surcharge of £190. This was on top of the vessel owner being fined a total of £6452 for the same offence.[398] What is even more striking about the recent examples of penalties in the Scottish courts is that the fines have in all cases been lower than the minimum fixed penalty notice that would be issued for access

[391] Wildlife Crime Penalties Review Group Report (November 2015) para. 29.
[392] Ibid.
[393] Ibid, Recommendation 1.
[394] See Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020. Some offences under the 1994 Regulations were addressed under this legislation, but not the offences relating to European sites. This leads to an anomaly where some offences under the 1994 Regulations are subject to a penalty of up to £40,000 when others (notably those relating to damage to protected areas) are subject to a much lower penalty of £5,000.
[395] Environment, Climate Change and Land Reform Committee, Stage 1 report on the Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Bill, 1st Report, 2020 (Session 5) 10.
[396] For a more complete analysis, see J Harrison, *Enforcement of Fisheries Law in Scotland: an analysis of current law and practice with recommendations for reform* (May 2021) available at https://sift.scot/wp- content/uploads/2021/09/Fisheries-Enforcement-in-Scotland-Harrison-200521-1.pdf <accessed 25 August 2023>.
[397] https://www.gov.scot/publications/marine-and-fisheries-compliance-enforcement-activity/ <accessed 25 August 2023>
[398] See https://www.gov.uk/government/news/court-action-for-illegal-scallop-fishing <accessed 25 August 2023>

offences in accordance with guidance issued by the Scottish Ministers (£4000).[399] This underlines the incoherence of the current system.

The adoption of sentencing guidelines under section 3 of the Criminal Justice and Licensing (Scotland) Act 2010 is one way in which to encourage an appropriate use of available sanctions, as well as consistency between different sheriff courts that will hear cases.[400] Environmental Sentencing Guidelines have already been developed in England and Wales and they highlight the need to take into account not only the degree of culpability of the offender (e.g. was the action deliberate or reckless?) but also the extent and nature of harm caused to the environment.[401] In the context of protected areas, it is arguable that the importance of the site (is it an international or domestic designation?) and the vulnerability of the features on the site (are they favourable or unfavourable?) should be taken into account in determining the level of fine that should apply. The Scottish Sentencing Council already has environmental and wildlife crime guidelines under development, but, after several years, they are still only at stage 1 of a six stage process with little evident progress.[402]

As already noted, not all offences are necessarily prosecuted and so enforcement should not focus exclusively on criminal fines. Indeed, guidance from the Crown Office and Procurator Fiscal Service (COPFS), responsible for bringing all criminal prosecutions in Scotland, highlights that enforcement agencies should pursue direct action wherever possible and 'reporting cases to the Procurator Fiscal will be seen as a last resort.'[403] It follows that attention must also be paid to alternative remedies in order to ensure that they also provide adequate incentives to comply with protected area legislation.

There may be some minor infractions of MPA requirements where a warning letter is appropriate, but in most cases, the main alternative tool for responding to MPA breaches will be the imposition of a fixed penalty notice (FPNs) under the Aquaculture and Fisheries (Scotland) Act 2007 Act (as amended). FPNs are civil sanctions which are issued directly by enforcement agencies and, if paid, do not establish a criminal record for the recipient of the fine. FPNs are issued based upon a scale established under secondary legislation.[404] In terms of sea fisheries offences, access offences (e.g. fishing in a MPA) are treated as the most serious, but for a first time offender, they would only accrue a penalty at level 4 on the scale, i.e. a £4000 penalty.[405] This can be increased to reflect financial gain, i.e. the value of fish caught whilst fishing unlawfully, although proving where particular fish were caught can be incredibly difficult.[406] Furthermore, where a person has committed 'the same category of offence for a second time within two years', the penalty would be doubled. However, the maximum penalty is fixed in the legislation at £10,000.[407] The legislation was last amended in 2013 and it can be asked whether the maximum penalties should be revisited, at least in order to reflect inflation.

Recommendation: Further action should be taken to align penalties for offences relating to protected areas in order to ensure parity of treatment for similar offences.

Recommendation: Sentencing guidelines for environmental offences should be progressed in order to ensure that appropriate penalties are handed down for offences relating to protected areas.

Recommendation: The maximum penalty and accompanying scale of fixed penalty notices should be revised with a view to ensuring that this tool provides a sufficient deterrent against offences.

[399] Scottish Government, Fixed Penalty Notices – Guidance for Industry (August 2015). See below for further discussion of fixed penalty notices.
[400] See e.g. Wildlife Crime Penalties Review Group Report (November 2015) 4: 'We considered that the introduction of Guidelines on wildlife crime sentencing could enhance the consistency and transparency of sentencing in wildlife cases.'
[401] Sentencing Council, Environmental Offences: Definitive Guidelines (2014), available at https://www.sentencingcouncil.org.uk/wp-content/uploads/Environmental-offences-definitive-guideline-Web.pdf <accessed 25 August 2023>
[402] https://www.scottishsentencingcouncil.org.uk/sentencing-guidelines/guidelines-in-development/ <accessed 9 October 2023>.
[403] Crown Office, Reports to the Procurator Fiscal: A guide for specialist reporting agencies (2006) para. 1.4.
[404] Aquaculture and Fisheries (Scotland) Act 2007 (Fixed Penalty Notices) Order 2015.
[405] Scottish Government, Fixed Penalty Notices – Guidance for Industry (August 2015).
[406] To this end, it has been suggested elsewhere that legislation should include a rebuttable presumption that fish found on board a vessel which has contravened restrictions on fishing in a closed area are treated as if they were caught within that closed area; see J Harrison, *Enforcement of Fisheries Law in Scotland: an analysis of current law and practice with recommendations for reform* (May 2021) 21.
[407] The Aquaculture and Fisheries (Scotland) Act 2007 (Fixed Penalty Notices) Order 2015.

# 7. Conclusions and recommendations

In the almost fifteen years since the first legislation calling for the development of a MPA network in the UK, significant progress has been made in designating MPAs in Scottish waters. There are now 233 sites making up the Scottish component of the UK MPA network, covering approximately 37% of Scottish waters. These sites make a significant contribution not only to the ecological coherence of the overall UK MPA Network, but also to the wider OSPAR MPA Network in the North-East Atlantic. One shortcoming relates to the accessibility of information about these sites. One of the challenges in the compilation of this report has been piecing together the assorted information on MPAs and addressing gaps and inconsistencies in public information on this topic. In this respect, the Scottish Government could do better in its provision of information on MPAs and a first step in this direction would be ensuring that all records in the World Databased on Protected Areas were complete and up-to-date.

Whilst progress on the designation of MPAs is to be welcomed, it is important not to be complacent. As highlighted in sections 3 and 4 of this report, some gaps in the substantive protection in the network remain, with some species lacking protection or replication of protection is missing. Furthermore, in order to achieve international biodiversity targets, not only is it necessary to designate MPAs, but designated sites must also be effectively and equitably managed. It is this aspect of the MPA network that has been the main focus of this report, which in section 5 highlights both gaps in management of existing MPAs, but also the lack of balance in management approaches. Achieving a better balance between MPAs which are strictly/highly protected and MPAs which allow sustainable use, in line with international guidance and EU targets, should be one of the main priorities for the development of the MPA network in the coming years. The development of HPMAs would have been one means of achieving this end, although it is not the only one and further suggestions are made in the main body of the report, including the strengthening of existing management measures and the inclusion of NNRs and private nature reserves in the MPA network. That is not to say that all MPAs must be strictly protected. Aligning with the EU target of at least 30% of MPAs being strictly protected means that the majority of MPAs will still be open to activities which are compatible with the conservation objectives of those sites. Where sustainable use of MPAs does continue to be permitted, the report highlights areas where the legal and policy framework can be strengthened in order to ensure more clarity about the level of protection that must be afforded to these sites and the conditions under which activities may be permitted. Furthermore, there are a number of opportunities to reinforce the MPA network through the use of other legal and policy mechanisms, including the marine planning regime.

The recommendations of this report are sensitive to the fact that increasing protection for the features within Scotland's MPA network will have consequences for those economic sectors which currently rely upon utilisation of marine space for their incomes and livelihoods. Any discussion about the future of the MPA network therefore needs to include all relevant stakeholders and socio- economic considerations must be taken into account in deciding where and how protection should be increased. Furthermore, when it comes to fishing, it is important to take into account potential displacement of fishing effort to other areas. There is no doubt that the conversation may often be challenging and difficult decisions will need to be made. Yet, we must also remember that it is imperative that current trends in biodiversity loss, seen across the world, but also apparent in Scotland, must be reversed. This calls for transformative change in the way that we interact with nature.[408] At the same time, there must be a just transition, where impacts on individuals and communities are accounted for when developing policy.[409]

There is no predetermined final destination for the development of the MPA network and therefore assertions of its near completion should be avoided.[410] The principle of adaptive management, promoted through international guidance, demands constant vigilance to identify emerging trends or threats to the objectives pursued by the network. In this respect, monitoring of the MPA network needs to be strengthened in order to ensure that the effectiveness of management can be reviewed and adjusted if necessary. Sustainable financing must be put in place for this purpose, along with the pursuit of innovative partnerships with stakeholders who are able and willing to contribute to the monitoring of MPAs.

[408] See *Global Biodiversity Outlook 5 – Summary for Policy Makers* (2020) 16.
[409] See e.g. Worldwide Fund for Nature, *Just Transitions towards a Nature-Positive Economy* (March 2021).
[410] See e.g. *The Scottish Government Biodiversity Duty Report 2018-2020* (July 2023) 18: 'During the reporting period a key achievement is the near completion of a coherent marine protected area (MPA) network.'

Investment is also needed in enforcement capacity in order to ensure that management measures are actually complied with in practice. In addition, section 6 of the report highlights several areas in which the enforcement framework is not fit for purpose and fails to provide an adequate disincentive for activities which may cause damage to protected areas. In this respect, legal and policy reform is also necessary in order to ensure that adequate penalties are applied when breaches of MPA restrictions are identified. Non-compliance must be met with a robust and proportionate response to send the signal that our MPAs are there to protect the most valuable of our natural assets.

Underpinning the MPA network with statutory targets will provide an important means for ensuring that the Scottish Government can be held to account for achieving favourable status for the features that are protected by the MPA network. In this respect, it is also important to underline that MPAs are only one part of the overall marine biodiversity strategy and progress on MPAs should not come at the cost of losing sight of other important marine conservation objectives. What is ultimately needed is a comprehensive and coherent marine conservation strategy, with clear targets and means to hold decision-makers to account for meeting their commitments.

## Recommendations

1. The Scottish Government should develop a policy on the contribution of OEACMs to meeting international conservation targets, which aligns with international guidance produced by the CBD COP and takes into account best practice from other jurisdictions.

2. The Scottish Government should acknowledge the importance of taking into account international policy and guidance in developing the Scottish MPA network, as part of the development of its National Biodiversity Strategy, which should commit to furthering the effectiveness, equity and integration of the MPA network in pursuit of GBF Target 3.

3. The UK, with the support of the Scottish Government, should consider volunteering for a peer review of its MPA network with a view to identifying progress as well as areas for further improvement in order to meet GBF Target 3.

4. The Scottish Government should consider the gaps in the OSPAR Network identified by the OSPAR Commission and consider what steps could be taken within the marine areas under Scotland's jurisdiction to address these gaps.

5. The Scottish Government should take concrete steps to ensure that it meets the OSPAR Strategic Target of enabling all OSPAR MPAs to achieve their conservation objectives by 2024 – in doing so, it should commit to carrying out and publishing a self-assessment of existing management with a view to developing and publishing management plans for each OSPAR MPA.

6. The spatial scope of the SSSI regime should be clarified and aligned with the position in England and Wales.

7. The Scottish Ministers should clarify the status of the Sound of Barra and the Hatton Bank, using their powers where necessary to finalise their designation as SACs.

8. The Scottish Government should review the procedural requirements connected with appropriate assessments in order to determine whether it would be appropriate to introduce greater transparency to the process by requiring public participation.

9. Work should continue on identifying appropriate sites for the establishment of NCMPAs or offshore MPAs in order to protect those MPA search features which are currently excluded from the network or for which there is no replication.

10. The EIA regime for marine activities should be reviewed and revised in order to ensure that the EIA process applies to all major activities proposed within NCMPAs and offshore MPAs, thereby requiring publication of appropriate environmental information and opportunities for public participation in the decision-making process.

11. Guidance on the protection of site integrity under the 2009 and 2010 Acts should be developed in order to clarify the reach of the protection offered by the legislation and to bring the protection in line with the protection offered to European marine sites.

12. General guidance should be developed on the interpretation of the test to be applied by regulatory bodies under s. 83 of the 2010 Act and s. 126 of the 2009 Act when authorising activities which may have a significant effect on the conservation objectives of NCMPAs or offshore MPAs, with a view to harmonising the legal framework, as far as possible, with the requirements of the Habitats Regulations and ensuring that a precautionary approach is taken.

13. The Scottish Government should review the protection offered to Ramsar sites so that they are offered protection that at least accords with their international status under the UK's treaty commitments.

14. The Scottish Government should ensure that it has submitted comprehensive and accurate information to the WDPA for all MPAs contributing to its MPA network.

15. The Scottish Government should consider the integration of some National Nature Reserves, as well as privately owned and managed nature reserves, into the Scottish MPA network.

16. The Scottish Government should clarify its policy on keeping pace with the proposals outlined in the EU Biodiversity Strategy, including the commitment to strict protection of at least 10% of Scottish marine waters by 2030 and any future targets adopted in the EU Nature Restoration Regulation.

17. The Scottish Government should continue the dialogue with relevant stakeholders on achieving enhanced protection of the MPA network and increasing the area within the network subject to strict protection.

18. The Scottish Government must progress its plans to adopt management measures for those inshore and offshore sites where management is not yet in place, without further delay.

19. The Scottish Government should develop and publish a revised MPA monitoring strategy which sets out priorities for a six-year programme of work leading up to the MPA network report in 2030.

20. The Scottish Government should review its existing management measures in light of the available information on the status of protected features with a view to developing management plans for those MPAs which might require additional action to make progress in achieving favourable conditions for their protected features.

21. The Scottish Government should introduce statutory targets relating to the achievement of favourable status of protected features in the MPA network as part of an ambitious and complete suite of targets driving a requirement for nature restoration across land and sea, inside and outside of protected areas.

22. The Scottish Government should consider piloting multi-site management schemes using the powers available under the 2010 Act, building upon experience and best practice garnered from other successful marine management schemes in the UK, as well as lessons from the MARPAMM project.

23. The development of a new National Marine Plan should be used an opportunity to provide more specific guidance on the spatial policies that might be needed at the regional level to support the MPA network.

24. The Marine Directorate of the Scottish Government should carry out a strategic review of its enforcement assets with a view to determining what further equipment or resources may be required in order to ensure an effective deterrence to illegal activity in MPAs.

25. When introducing requirements for REM, the Scottish Government should include appropriate arrangements to maximise the potential for this technology to be used for enforcement purposes, bearing in mind the challenges of meeting the corroboration rule in Scots criminal law.

26. Further action should be taken to align penalties for offences relating to protected areas in order to ensure parity of treatment for similar offences.

27. Sentencing guidelines for environmental offences should be progressed in order to ensure that appropriate penalties are handed down for offences relating to protected areas.

28. The maximum penalty and accompanying scale of fixed penalty notices should be revised with a view to ensuring that this tool provides a sufficient deterrent against offences.

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## Government data files

In the analysis in section 5, the report principally draws upon the following shapefiles:

- JNCC, *Special Area of Conservation (SACs) with marine components* (2020)
- JNCC, *Special Protection Areas (SPAs) with marine components* (2022)
- JNCC, *UK Offshore MPAs* (2023)
- Scottish Government (Marine Directorate), *Marine conservation orders (MCOs) and fisheries management measures (MPAs and SACs)* – with effect February 2022 (2023)
- SNH, *Ramsar sites – all sites including terrestrial* (2012) SNH, *Sites of Special Scientific Interest (SSSIs) (2013)*
- SNH, *Nature Conservation Marine Protected Areas contributing to the MPA network (2023)*

## Annex – List of MPAs and Key Attributes

| NAME | TYPE | AREA (HA) | OSPAR NETWORK (Y/N) | IUCN CATEGORY REPORTED TO WDPA[411] | IUCN CATEGORY | % FEATURES ASSESSED AS FAVOURABLE MAINTAINED / RECOVERED[412] |
|---|---|---|---|---|---|---|
| AILSA CRAIG | SPA | 2759.53 | Y | Not Reported | IV | 50% |
| ANTON DOHRN SEAMOUNT | SAC | 142861 | N | Not Reported | IV | 0%* |
| ARDVAR AND LOCH A' MHUILINN WOODLANDS | SAC | 808.1 | Y | N/A | IV | 33.3% |
| ASCRIB, ISAY AND DUNVEGAN | SAC | 2577.99 | N | Not Reported | IV | 0% |
| BALLOCHMARTIN BAY | SSSI | 18.9 | N | IV | IV | 0%* |
| BALRANALD BOG AND LOCH NAM FEITHEAN | SSSI | 820.86 | N | IV | III | 87.5% |
| BEAULY FIRTH | SSSI | 1243.36 | N | IV | IV | 60% |
| BERWICKSHIRE AND NORTH NORTHUMBERLAND COAST | SAC | 65226.1 | Y | Not Reported | IV | 33.3%* |
| BERWICKSHIRE COAST (INTERTIDAL) | SSSI | 204.92 | N | IV | IV | 16.6%* |
| BLUEMULL AND COLGRAVE SOUNDS | SPA | 3823.27 | Y | N/A | IV | 0%* |
| BOGSIDE FLATS | SSSI | 254.72 | N | IV | IV | 100% |
| BRAEMAR POCKMARKS | SAC | 1143 | Y | Not Reported | IV | 0%* |
| BRIDGEND FLATS | SSSI | 331.16 | N | IV | IV | 100% |
| BUCHAN NESS TO COLLIESTON COAST | SPA | 5400.76 | Y | Not Reported | IV | 33.3% |
| CALF OF EDAY | SPA | 2671.77 | Y | Not Reported | IV | 33.3% |
| CANNA AND SANDAY | SPA | 6567.58 | Y | Not Reported | IV | 33.3% |
| CAPE WRATH | SPA | 6734.48 | Y | Not Reported | IV | 50% |
| CENTRAL FLADEN | Offshore MPA | 92500 | Y | Not Reported | IV | 0%* |
| CLYDE SEA SILL | NCMPA | 71200 | Y | Not Reported | IV | 0%* |

411 'Not Reported' indicates where the MPA has been listed in the WDPA but it does not record an IUCN category. 'N/A' indicates where the MPA is not included in the WDPA at all.
412 Features with no published data or where the condition of a feature has not been assessed are treated as not being at favourable status. Where these features have been included in the calculation, the percentage is marked with an asterisk (*) to indicate that the calculation is based on this presumption, but may not be accurate.

| | | | | | | |
|---|---|---|---|---|---|---|
| COLL AND TIREE | SPA | 79475.1 | Y | N/A | IV | 100% |
| COPINSAY | SPA | 3607.7 | N | Not Reported | IV | 20% |
| CREE ESTUARY | SSSI | 3441.88 | N | IV | III | 80% |
| CROMARTY FIRTH | Ramsar | 3287.05 | N | Not Reported | IV | 100% |
| CROMARTY FIRTH | SPA | 3247.96 | N | Not Reported | IV | 80% |
| CROMARTY FIRTH | SSSI | 3614.15 | Y | IV | IV | 75% |
| CULBIN SANDS, CULBIN FOREST AND FINDHORN BAY | SSSI | 5016 | N | IV | IV | 50% |
| DARWIN MOUNDS | SAC | 137726 | Y | Not Reported | IV | 0%* |
| DORNOCH FIRTH | SSSI | 1993.11 | N | IV | IV | 71.4% |
| DORNOCH FIRTH AND LOCH FLEET | Ramsar | 6513.27 | N | Not Reported | IV | 63.2%* |
| DORNOCH FIRTH AND LOCH FLEET | SPA | 6513.27 | Y | Not Reported | IV | 90.9% |
| DORNOCH FIRTH AND MORRICH MORE | SAC | 8701.22 | Y | Not Reported | IV | 53.3%* |
| DURNESS | SAC | 1213.8 | Y | N/A | IV | 45.5% |
| EAST CAITHNESS CLIFFS | NCMPA | 11400 | Y | Not Reported | IV | 0%* |
| EAST CAITHNESS CLIFFS | SPA | 11696.4 | Y | Not Reported | IV | 60% |
| EAST MAINLAND COAST, SHETLAND | SPA | 23333.2 | Y | N/A | IV | 66.7%* |
| EAST MINGULAY | SAC | 11510.9 | Y | Not Reported | IV | 0%* |
| EAST OF GANNET AND MONTROSE FIELDS | Offshore MPA | 183900 | Y | Not Reported | IV | 0%* |
| EAST ROCKALL BANK | SAC | 369489 | Y | Not Reported | IV | 0%* |
| EAST SANDAY COAST | Ramsar | 1508.2 | N | Not Reported | IV | 66.7% |
| EAST SANDAY COAST | SPA | 1508.2 | Y | Not Reported | IV | 100% |
| EAST SANDAY COAST | SSSI | 1607.56 | N | IV | IV | 90% |
| EDEN ESTUARY | SSSI | 1097.88 | N | IV | IV | 64.7% |
| EILEANAN AGUS SGEIRAN LIOS MOR | SAC | 1139.49 | Y | Not Reported | IV | 100% |
| EYNHALLOW | SSSI | 97.22 | N | IV | IV | 0% |
| FAIR ISLE | SPA | 6825.1 | Y | Not Reported | IV | 33.3% |
| FARAY AND HOLM OF FARAY | SAC | 781.33 | Y | Not Reported | IV | 100% |
| FARAY AND HOLM OF FARAY | SSSI | 116.62 | N | IV | IV | 100% |
| FAROE-SHETLAND SPONGE BELT | Offshore MPA | 527800 | Y | Not Reported | IV | 0%* |

| | | | | | | |
|---|---|---|---|---|---|---|
| FETLAR | SPA | 16964.7 | Y | Not Reported | IV | 50% |
| FETLAR TO HAROLDSWICK | NCMPA | 21600 | Y | Not Reported | IV | 0%* |
| FIRTH OF FORTH | Ramsar | 6317.93 | Y | Not Reported | IV | 50% |
| FIRTH OF FORTH | SPA | 6317.93 | N | Not Reported | IV | 50% |
| FIRTH OF FORTH | SSSI | 7423.19 | N | IV | IV | 84.6%* |
| FIRTH OF FORTH BANKS COMPLEX | Offshore MPA | 213000 | Y | Not Reported | IV | 0%* |
| FIRTH OF LORN | SAC | 20999.4 | Y | Not Reported | IV | 100% |
| FIRTH OF TAY AND EDEN ESTUARY | Ramsar | 6947.62 | Y | Not Reported | IV | 14.28%* |
| FIRTH OF TAY AND EDEN ESTUARY | SAC | 15441.6 | Y | Not Reported | IV | 50%* |
| FIRTH OF TAY AND EDEN ESTUARY | SPA | 6947.62 | N | Not Reported | IV | 42.85% |
| FLANNAN ISLES | SPA | 5832.82 | Y | Not Reported | IV | 42.85% |
| FORTH ISLANDS | SPA | 9797.01 | Y | Not Reported | IV | 35.2% |
| FOULA | SPA | 7985.49 | Y | Not Reported | IV | 16.7% |
| FOWLSHEUGH | SPA | 1303.23 | Y | Not Reported | IV | 83.3% |
| GEIKIE SLIDE AND HEBRIDEAN SLOPE | Offshore MPA | 221500 | Y | Not Reported | IV | 0%* |
| GLEN BEASDALE | SAC | 546.37 | Y | N/A | IV | 33.3% |
| GRUINART FLATS | SSSI | 3261.32 | N | IV | III | 69.2% |
| GRUINART FLATS, ISLAY | Ramsar | 3262.13 | Y | Not Reported | IV | 66.7% |
| GRUINART FLATS, ISLAY | SPA | 3262.13 | N | Not Reported | IV | 75% |
| HANDA | SPA | 3205.61 | Y | Not Reported | IV | 16.7% |
| HASCOSAY | SAC | 164.67 | Y | N/A | IV | 50% |
| HATTON BANK | SAC[416] | 1569433 | Y | Not Reported | IV | 0%* |
| HATTON-ROCKALL BASIN | Offshore MPA | 125600 | Y | IV | IV | 0%* |
| HERMANESS, SAXA VORD AND VALLA FIELD | SPA | 6832.36 | Y | Not Reported | IV | 33.3% |
| HOWMORE ESTUARY, LOCHS ROAG AND FADA | SSSI | 418.09 | N | IV | IV | 100% |
| HOY | SPA | 18123.9 | Y | Not Reported | IV | 20% |

[416] Currently Hatton Bank is listed by the JNCC as a candidate SAC.

| | | | | | | |
|---|---|---|---|---|---|---|
| INNER CLYDE | Ramsar | 1825.29 | N | Not Reported | IV | 100% |
| INNER CLYDE | SPA | 1813.72 | N | Not Reported | IV | 100% |
| INNER CLYDE | SSSI | 1824.92 | Y | IV | IV | 75% |
| INNER HEBRIDES AND THE MINCHES | SAC | 1381391 | Y | Not Reported | IV | 100% |
| INNER MORAY FIRTH | Ramsar | 2290.25 | Y | Not Reported | IV | 66.7% |
| INNER MORAY FIRTH | SPA | 2290.25 | N | Not Reported | IV | 73.3% |
| INNER TAY ESTUARY | SSSI | 4115.38 | N | IV | IV | 80% |
| INVERPOLLY | SAC | 11881.9 | Y | N/A | IV | 42.9% |
| ISLE OF MAY | SAC | 356.64 | Y | Not Reported | IV | 100% |
| ISLE OF MAY | SSSI | 70.1 | N | IV | IV | 40% |
| KAMES BAY | SSSI | 4.6 | N | IV | IV | 0%* |
| KENTRA BAY AND MOSS | SSSI | 992.85 | N | IV | IV | 50% |
| KINLOCH AND KYLEAKIN HILLS | SAC | 5275.63 | N | N/A | IV | 42.85% |
| KINLOCH AND KYLEAKIN HILLS (MONADH CHAOL ACAINN IS CHEANN LOCH) | SSSI | 5266.95 | Y | IV | IV | 44.4% |
| LOCH AN DUIN | Ramsar | 2619.37 | N | Not Reported | IV | 50% |
| LOCH AN DUIN | SSSI | 2621.19 | N | IV | III | 100% |
| LOCH BEE | SSSI | 1105.66 | N | IV | III | 100% |
| LOCH CARRON | NCMPA | 2284.47 | Y | IV | IV | 0%* |
| LOCH CRERAN | NCMPA | 1200 | Y | IV | IV | 0%* |
| LOCH CRERAN | SAC | 1226.48 | Y | Not Reported | IV | 0% |
| LOCH FLEET | SSSI | 1231.77 | N | IV | IV | 50% |
| LOCH LAXFORD | SAC | 1214.54 | Y | Not Reported | IV | 50% |
| LOCH MOIDART | SSSI | 797.17 | N | IV | III | 80% |
| LOCH MOIDART AND LOCH SHIEL WOODS | SAC | 1753.04 | Y | Not Reported | IV | 40% |
| LOCH NAM MADADH | SAC | 2320.9 | Y | Not Reported | IV | 100% |
| LOCH NAM MADADH | SSSI | 300.85 | N | IV | IV | 100% |
| LOCH OBISARY | SSSI | 347.6 | N | IV | IV | 100% |
| LOCH OF STENNESS | SAC | 792.59 | Y | Not Reported | IV | 100% |
| LOCH ROAG LAGOONS | SAC | 43.14 | Y | Not Reported | IV | 100% |

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|---|---|---|---|---|---|---|
| LOCH SIADAR | SSSI | 8.51 | N | IV | IV | 100% |
| LOCH SUNART | NCMPA | 4900 | Y | IV | IV | 0% |
| LOCH SUNART TO THE SOUND OF JURA | NCMPA | 74100 | N | IV | IV | 0% |
| LOCH SWEEN | NCMPA | 4100 | N | IV | IV | 0% |
| LOCHS AT CLACHAN | SSSI | 103.68 | N | IV | IV | 100% |
| LOCHS DUICH, LONG AND ALSH | NCMPA | 3700 | N | IV | IV | 0%* |
| LOCHS DUICH, LONG AND ALSH REEFS | SAC | 2373.01 | N | Not Reported | IV | 0% |
| LOCHS OF HARRAY AND STENNESS | SSSI | 1787.41 | N | IV | IV | 50% |
| LONGMAN AND CASTLE STUART BAYS | SSSI | 421.5 | N | IV | IV | 75% |
| LUCE BAY AND SANDS | SAC | 48753 | Y | Not Reported | IV | 0%* |
| LUSKENTYRE BANKS AND SALTINGS | SSSI | 1080.98 | N | IV | III | 77.8% |
| MARWICK HEAD | SPA | 475.54 | Y | Not Reported | IV | 0% |
| MINGULAY AND BERNERAY | SPA | 7801.71 | N | Not Reported | IV | 71.4% |
| MOINE MHOR | SAC | 1149.02 | N | Not Reported | IV | 80% |
| MONACH ISLANDS | SAC | 3646.56 | Y | Not Reported | IV | 100% |
| MONACH ISLES | NCMPA | 6200 | Y | Not Reported | IV | 0%* |
| MONIFIETH BAY | SSSI | 199.23 | N | IV | IV | 100% |
| MONTROSE BASIN | Ramsar | 981.14 | N | Not Reported | IV | 30.8%* |
| MONTROSE BASIN | SPA | 981.19 | N | Not Reported | IV | 50%* |
| MONTROSE BASIN | SSSI | 953.42 | Y | IV | III | 76.9% |
| MORAY AND NAIRN COAST | Ramsar | 2325.67 | N | Not Reported | IV | 44.4% |
| MORAY AND NAIRN COAST | SPA | 2325.67 | N | Not Reported | IV | 40% |
| MORAY FIRTH | SAC | 151274 | Y | Not Reported | IV | 100% |
| MORAY FIRTH | SPA | 176218 | Y | N/A | IV | 54.5% |
| MORRICH MORE | SSSI | 2930.72 | N | IV | III | 55.6% |
| MOUND ALDERWOODS | SSSI | 297.33 | N | IV | IV | 66.7% |
| MOUSA | SAC | 529.74 | Y | Not Reported | IV | 66.7% |
| MOUSA | SSSI | 197.97 | N | IV | IV | 25% |
| MOUSA TO BODDAM | NCMPA | 1300 | Y | Not Reported | IV | 0%* |
| MUCKLE AND LITTLE GREEN HOLM | SSSI | 52.26 | N | IV | IV | 100% |

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|---|---|---|---|---|---|---|
| MULL OAKWOODS | SAC | 1405.46 | N | N/A | IV | 50% |
| MUNLOCHY BAY | SSSI | 302.01 | N | IV | III | 100% |
| NORTH CAITHNESS CLIFFS | SPA | 14628.8 | Y | Not Reported | IV | 71.4% |
| NORTH COLONSAY AND WESTERN CLIFFS | SPA | 3297.3 | N | Not Reported | IV | 40% |
| NORTH FETLAR | SSSI | 1637.04 | N | IV | IV | 44.4% |
| NORTH ORKNEY | SPA | 21173.2 | N | N/A | IV | 0%* |
| NORTH RONA | SAC | 628.53 | N | Not Reported | IV | 75%* |
| NORTH RONA AND SULA SGEIR | SPA | 6850.58 | N | Not Reported | IV | 30% |
| NORTH RONA AND SULA SGEIR | SSSI | 138.79 | N | IV | IV | 36.4% |
| NORTH UIST MACHAIR AND ISLANDS | Ramsar | 4702.77 | N | Not Reported | IV | 25%* |
| NORTH UIST MACHAIR AND ISLANDS | SPA | 4873.53 | N | Not Reported | IV | 77.8% |
| NORTH WEST ROCKALL BANK | SAC | 436526 | N | Not Reported | IV | 0%* |
| NORTH-EAST FAROE-SHETLAND CHANNEL | Offshore MPA | 2368200 | Y | Not Reported | IV | 0%* |
| NORTH-EAST LEWIS | NCMPA | 90700 | N | N/A | IV | 0%* |
| NORTHTON BAY | SSSI | 451.73 | N | IV | III | 57.1% |
| NORTH-WEST ORKNEY | Offshore MPA | 436500 | Y | IV | IV | 0%* |
| NORWEGIAN BOUNDARY SEDIMENT PLAIN | Offshore MPA | 16400 | Y | Not Reported | IV | 0%* |
| NOSS | SPA | 3338.38 | Y | Not Reported | IV | 42.9% |
| NOSS HEAD | NCMPA | 800 | N | IV | IV | 0%* |
| OBAIN LOCH EUPHOIRT | SAC | 348.28 | Y | Not Reported | IV | 100% |
| OBAIN LOCH EUPHOIRT | SSSI | 65 | N | IV | IV | 100% |
| ORONSAY AND SOUTH COLONSAY | SSSI | 2178.36 | N | IV | IV | 100% |
| OUTER FIRTH OF FORTH AND ST ANDREWS BAY COMPLEX | SPA | 272068 | Y | N/A | IV | 95.8%* |
| PAPA STOUR | SAC | 2072.9 | Y | Not Reported | IV | 100% |
| PAPA STOUR | SPA | 569.6 | Y | N/A | IV | 50% |
| PAPA STOUR | SSSI | 629.48 | N | IV | III | 57.1% |
| PAPA WESTRAY | NCMPA | 3300 | Y | Not Reported | IV | 0%* |
| POBIE BANK REEF | SAC | 96575 | Y | Not Reported | IV | 0%* |

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|---|---|---|---|---|---|---|
| POOL OF VIRKIE | SSSI | 22.96 | N | IV | IV | 100% |
| RED ROCKS AND LONGAY | NCMPA | 1184.36 | N | N/A | IV | 0%* |
| ROSEHEARTY TO FRASERBURGH COAST | SSSI | 135.8 | N | IV | III | 20% |
| ROUSAY | SPA | 5480.84 | Y | Not Reported | IV | 16.7% |
| RUM | SAC | 10839.7 | Y | N/A | IV | 52.9% |
| RUM | SPA | 46724.2 | N | Not Reported | IV | 66.7% |
| SANDAY | SAC | 10977 | Y | Not Reported | IV | 75% |
| SANDNESS COAST | SSSI | 11.1 | N | IV | IV | 100% |
| SCANNER POCKMARK | SAC | 674 | Y | Not Reported | IV | 0%* |
| SCAPA FLOW | SPA | 31819.9 | Y | N/A | IV | 0%* |
| SEA OF THE HEBRIDES | NCMPA | 1003900 | Y | N/A | IV | 0%* |
| SEAS OFF FOULA | SPA | 341215 | Y | N/A | IV | 0%* |
| SEAS OFF ST KILDA | SPA | 399547 | Y | N/A | IV | 0%* |
| SHIANT EAST BANK | NC MPA | 25200 | Y | N/A | IV | 0%* |
| SHIANT ISLES | SPA | 6935.65 | N | Not Reported | IV | 37.5% |
| SMALL ISLES | NC MPA | 80300 | Y | Not Reported | IV | 0%* |
| SMALL SEAL ISLANDS | SSSI | 161.75 | N | IV | IV | 100% |
| SOLAN BANK REEF | SAC | 85593 | Y | Not Reported | IV | 0%* |
| SOLWAY FIRTH | SAC | 43676.2 | Y | Not Reported | IV | 30%* |
| SOLWAY FIRTH | SPA | 135749 | Y | N/A | IV | 0%* |
| SOUND OF ARISAIG (LOCH AILORT TO LOCH CEANN TRAIGH) | SAC | 4544.27 | Y | Not Reported | IV | 100% |
| SOUND OF BARRA | SAC[417] | 12507.4 | Y | Not Reported | IV | 0%* |
| SOUND OF GIGHA | SPA | 36326.8 | Y | N/A | IV | 0%* |
| SOUTH ARRAN | NCMPA | 28000 | Y | IV | IV | 0%* |
| SOUTH UIST MACHAIR | SAC | 3437.71 | Y | Not Reported | IV | 83.3% |
| SOUTH UIST MACHAIR AND LOCHS | Ramsar | 5027.31 | N | Not Reported | IV | 44.4% |
| SOUTH UIST MACHAIR AND LOCHS | SPA | 5027.31 | N | Not Reported | IV | 50% |
| SOUTHANNAN SANDS | SSSI | 255.68 | N | IV | IV | 100% |

[417] The Sound of Barra is currently listed by the JNCC as a Site of Community Importance.

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|---|---|---|---|---|---|---|
| SOUTH-EAST ISLAY SKERRIES | SAC | 1500.41 | N | Not Reported | IV | 100% |
| SOUTHERN TRENCH | NC MPA | 239800 | N | N/A | IV | 0%* |
| ST ABB'S HEAD TO FAST CASTLE | SPA | 1736.75 | Y | Not Reported | IV | 33.3% |
| ST KILDA | SAC | 25467.6 | Y | Not Reported | IV | 100% |
| ST KILDA | SPA | 29014.6 | N | Not Reported | IV | 63.6% |
| STANTON BANKS | SAC | 81727 | Y | Not Reported | IV | 0%* |
| SULE SKERRY AND SULE STACK | SPA | 3909.45 | Y | Not Reported | IV | 42.9% |
| SULLOM VOE | SAC | 2691.43 | Y | Not Reported | IV | 100% |
| SUMBURGH HEAD | SPA | 2478.91 | Y | Not Reported | IV | 20% |
| SUNART | SAC | 10230.2 | N | Not Reported | IV | 33.3% |
| SUNART | SSSI | 5540.16 | Y | IV | IV | 75% |
| TAYNISH AND KNAPDALE WOODS | SAC | 1017.96 | Y | N/A | IV | 50% |
| TAYNISH WOODS | SSSI | 392.41 | N | IV | IV | 84.6% |
| TAYPORT - TENTSMUIR COAST | SSSI | 1261.29 | N | IV | IV | 53.9% |
| TAYVALLICH JUNIPER AND COAST | SAC | 1213.16 | Y | N/A | IV | 100% |
| THE BARRA FAN AND HEBRIDES TERRACE SEAMOUNT | Offshore MPA | 437300 | Y | Not Reported | IV | 0%* |
| THE VADILLS | SAC | 62.42 | Y | Not Reported | IV | 100% |
| THE VADILLS | SSSI | 19.69 | N | IV | IV | 100% |
| TIREE WETLANDS AND COAST | Ramsar | 1939.76 | N | Not Reported | IV | 81.8% |
| TIREE WETLANDS AND COAST | SPA | 1939.76 | N | N/A | IV | 71.4% |
| TIREE WETLANDS AND COAST | SSSI | 1772.51 | N | IV | IV | 85.7% |
| TOB VALASAY | SSSI | 39.46 | N | IV | IV | 100% |
| TONG SALTINGS | SSSI | 441.24 | N | IV | IV | 100% |
| TRESHNISH ISLES | SAC | 1962.66 | Y | Not Reported | IV | 100% |
| TRESHNISH ISLES | SSSI | 240.67 | N | IV | IV | 80% |
| TROUP, PENNAN AND LION'S HEADS | SPA | 3365.2 | Y | Not Reported | IV | 0% |
| TURBOT BANK | Offshore MPA | 25100 | Y | Not Reported | IV | 0%* |
| ULVA, DANNA AND THE MCCORMAIG ISLES | SSSI | 736.78 | N | IV | IV | 53.3%* |
| UPPER LOCH FYNE AND LOCH GOIL | NCMPA | 8800 | Y | IV | IV | 0%* |

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|---|---|---|---|---|---|---|
| UPPER SOLWAY FLATS ANMARSHES | Ramsar | 310267 | N | Not Reported | IV | 17.9%* |
| UPPER SOLWAY FLATS AND MARSHES | SSSI | 24892 | N | IV | III | 57.7%* |
| WEST COAST OF THE OUTER HEBRIDES | SPA | 132170 | Y | N/A | IV | 0%* |
| WEST OF SCOTLAND | Offshore MPA | 107718000 | Y | Not Reported | IV | 0%* |
| WEST SHETLAND SHELF | Offshore MPA | 408300 | Y | Not Reported | IV | 0%* |
| WEST WESTRAY | SPA | 3780.16 | Y | Not Reported | IV | 28.6% |
| WESTER ROSS | NCMPA | 59900 | N | IV | IV | 0%* |
| WHITENESS HEAD | SSSI | 401.5 | N | IV | III | 42.9%* |
| WHITING NESS - ETHIE HAVEN | SSSI | 136.17 | N | IV | III | 54.6% |
| WYRE AND ROUSAY SOUNDS | NCMPA | 1600 | Y | IV | IV | 0%* |
| WYVILLE THOMSON RIDGE | SAC | 173995 | Y | Not Reported | IV | 0%* |
| YELL SOUND COAST | SAC | 1544.44 | N | Not Reported | IV | 0%* |
| YELL SOUND COAST | SSSI | 868.79 | Y | IV | IV | 0%* |
| YTHAN ESTUARY AND MEIKLE LOCH | Ramsar | 313.67 | N | Not Reported | IV | 37.5%* |
| YTHAN ESTUARY, SANDS OF FORVIE AND MEIKLE LOCH | SPA | 7062 | Y | N/A | IV | 75% |

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