

# EVALUATING SAFEGUARDS FOR WHALES, DOLPHINS AND PORPOISES IN THE UK'S MARINE PROTECTED AREAS



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WHALE AND  
DOLPHIN  
CONSERVATION



## EXECUTIVE SUMMARY

Marine protected areas (MPAs) are ocean sites designated to protect habitats, species and processes that are essential for healthy and abundant marine ecosystems. Designation of an MPA can support long-term nature conservation by effectively managing use of a site. There are several different types of MPA which include sanctuaries, marine parks, marine reserves and Special Areas of Conservation (SACs). The UK has set international and domestic targets to protect 30% of the sea by 2030, and to have 70% of MPAs in 'favourable condition' by the end of 2042, with the remaining 30% in 'recovering condition'.

Cetaceans (whales, dolphins and porpoises) play a vital role in ocean nutrient cycling, carbon sequestration and supporting marine ecosystem functioning. In the UK, 11 MPAs have been designated with cetaceans as the primary qualifying feature (for harbour porpoise, bottlenose dolphin, Risso's dolphin and minke whale). These MPAs aim to protect habitats that are critical for cetaceans' survival and to restore their populations; however, MPAs will only achieve their conservation aims if they are managed effectively.

WDC undertook research to assess the effectiveness of the management of the 11 UK MPAs designated for cetaceans using the Marine Mammals Management Toolkit developed by Ocean Governance [1]. This evaluation examined MPA management across various activities (e.g. fishing, anthropogenic noise, public outreach, research, and monitoring). This process allowed for scoring the 'management effectiveness' of these MPAs. The analysis also provides a baseline from which effectiveness of MPA management can be tracked and informs progress towards achieving favourable conservation status at these sites.

**The research concludes that the UK's cetacean MPA network is not being effectively managed, impacting its ability to meet crucial population and ecosystem recovery targets for designated species.**

**WDC recommends urgent action across the following priority areas to improve the efficacy of these MPAs to deliver benefits for whales, dolphins and porpoises:**

- 1. Management plans for MPAs must be put in place as soon as possible and updated regularly:** WDC's research identified a lack of adequate management and monitoring plans with 90% of assessed MPAs either lacking a management plan or the plan is an outdated one, despite the requirement for these to be updated every five years. This is severely impacting their effectiveness.
- 2. Measures must be implemented to reduce anthropogenic noise pollution at its source and mandate effective mitigation of its impacts:** Rapid expansion in human activities and development in the marine environment has resulted in increasing anthropogenic noise levels, which must be addressed to avoid degradation of MPAs and harm to protected and sensitive species.
- 3. Permitted fishing practices within MPAs must be amended, including extending the ban on bottom-trawling and implementing a ban on gillnets within all cetacean MPAs:** Fishing practices which are known to be damaging and harmful, such as bottom trawls, dredging and gillnets, are still permitted within many MPAs with minimal restrictions. These pose significant bycatch risks, deplete prey and damage critical seabed habitats.

## INTRODUCTION

People rely on the ocean for food, recreation, transportation, marine-dependant industries and climate regulation. Healthy ocean ecosystems provide a host of human, economic and biodiversity benefits. Despite this, anthropogenic pressures on the ocean are rapidly increasing, including marine pollution, vessel traffic and offshore developments.

Marine protected areas (MPAs) are designated with the aim to conserve marine habitats, protect vulnerable species, and restore the health and resilience of marine ecosystems. This formal recognition of biologically significant areas allows for damaging activities, such as fishing and mining, to be regulated or restricted. The International Union for Conservation of Nature (IUCN) defines an effective MPA as one that achieves its aims, including conservation and management objectives, and where management systems are appropriate [1].

Global recognition of the importance of MPAs in supporting ocean recovery and resilience is growing. In 2020, over 100 countries, including the UK, signed up to a global target to protect 30% of the land and ocean for nature by 2030 (commonly called '30x30')<sup>1</sup>. This target can only be delivered by expanding and enhancing formal protected areas, allowing nature to recover and combatting the biodiversity and climate crises jointly.

### UK domestic ambition

The UK has committed to build an ecologically coherent network of domestic MPAs, first through the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) in 2003<sup>2</sup>, and later through the 2008 EU adoption of the Marine Strategy Framework Directive (MSFD)<sup>3</sup>. Further commitments under the 25 Year Environment Plan<sup>4</sup> and UK Marine Strategy strengthen national ambition to increase and better manage protected areas, which is essential to achieve Good Environmental Status (GES) in UK waters<sup>5</sup>.

In 2023, the UK government set a legally binding target for at least 70% of protected features in English MPAs to be in a 'favourable condition' by the end of 2042, with the remaining 30% in 'recovering condition'<sup>6</sup>. The government's response [2] to the Environment, Food and Rural Affairs (EFRA) Committee inquiry into *Protecting Marine Mammals in the UK and Abroad* [3] also committed to, where necessary, implement management measures by the end of 2024, including for highly mobile species such as cetaceans.

### Importance of the UK MPA network

A well-managed and ecologically coherent network of MPAs can support marine biodiversity and climate change mitigation and adaptation, alongside providing wider ecosystem services. Effective implementation of MPAs is essential to support domestic policy ambition on nature recovery and deliver on global 30x30 targets. However, the UK is falling behind on current commitments. OSPAR's 2021 assessment of the North-East Atlantic MPA network highlighted the UK's limited progress towards delivering an ecologically coherent MPA network [4]. Their 2023 report noted some progress towards area-based protection, but highlighted that gaps in coverage still exist [5]. In 2023, an assessment by Wildlife and Countryside Link reported that only 8% of UK waters are effectively protected for nature [6].

1 This was agreed at the Convention on Biological Diversity (CBD) COP15 within the Kunming-Montreal Global Biodiversity Framework <https://www.cbd.int/gbf>

2 JNCC OSPAR Convention work <https://jncc.gov.uk/our-work/ospar-convention/>

3 Marine Strategy Framework Directive <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32008L0056>

4 25 Year Environment Plan <https://www.gov.uk/government/publications/25-year-environment-plan/25-year-environment-plan-our-targets-at-a-glance>

5 UK Marine Strategy <https://moat.cefas.co.uk/introduction-to-uk-marine-strategy/>

6 UK Government The Environmental Targets (Marine Protected Areas) Regulations. Available online: <https://www.legislation.gov.uk/uksi/2023/94/contents/made>

## Cetacean MPAs in the UK

All cetaceans are protected under UK law through the Conservation of Habitats and Species Regulations<sup>7</sup> and the Conservation of Offshore Marine Habitats and Species Regulations<sup>8</sup>. This legislation makes it an offence to capture, kill, injure or disturb cetaceans throughout their natural range.

In addition, 11 MPAs in the UK have been designated with cetaceans (harbour porpoise, bottlenose dolphin, Risso's dolphin and minke whale) as a primary qualifying feature (Figure 1). These designations recognise the sites' importance for the survival and recovery of these whale, dolphin and porpoise populations, including for feeding, breeding and raising young. In an additional three MPAs, cetaceans are a qualifying feature, meaning they have been identified as populations of national importance, so receive some additional level of protection.

Designation types for cetacean MPAs include Special Area of Conservation (SAC); Highly Protected Marine Area (HPMA); Marine Conservation Zone (MCZ, England, Wales and Northern Ireland); and Nature Conservation Marine Protected Areas (NCMPA, Scotland). The different designation types potentially offer a framework for effective protection, but due to lack of implementation their aims are likely not being achieved.

Of these different types of MPAs, only HPMA protect the whole ecosystem within the site boundary, including the seabed, water column, sea surface and all marine species, and have the potential to provide the most significant biodiversity benefits [7]<sup>9</sup>.

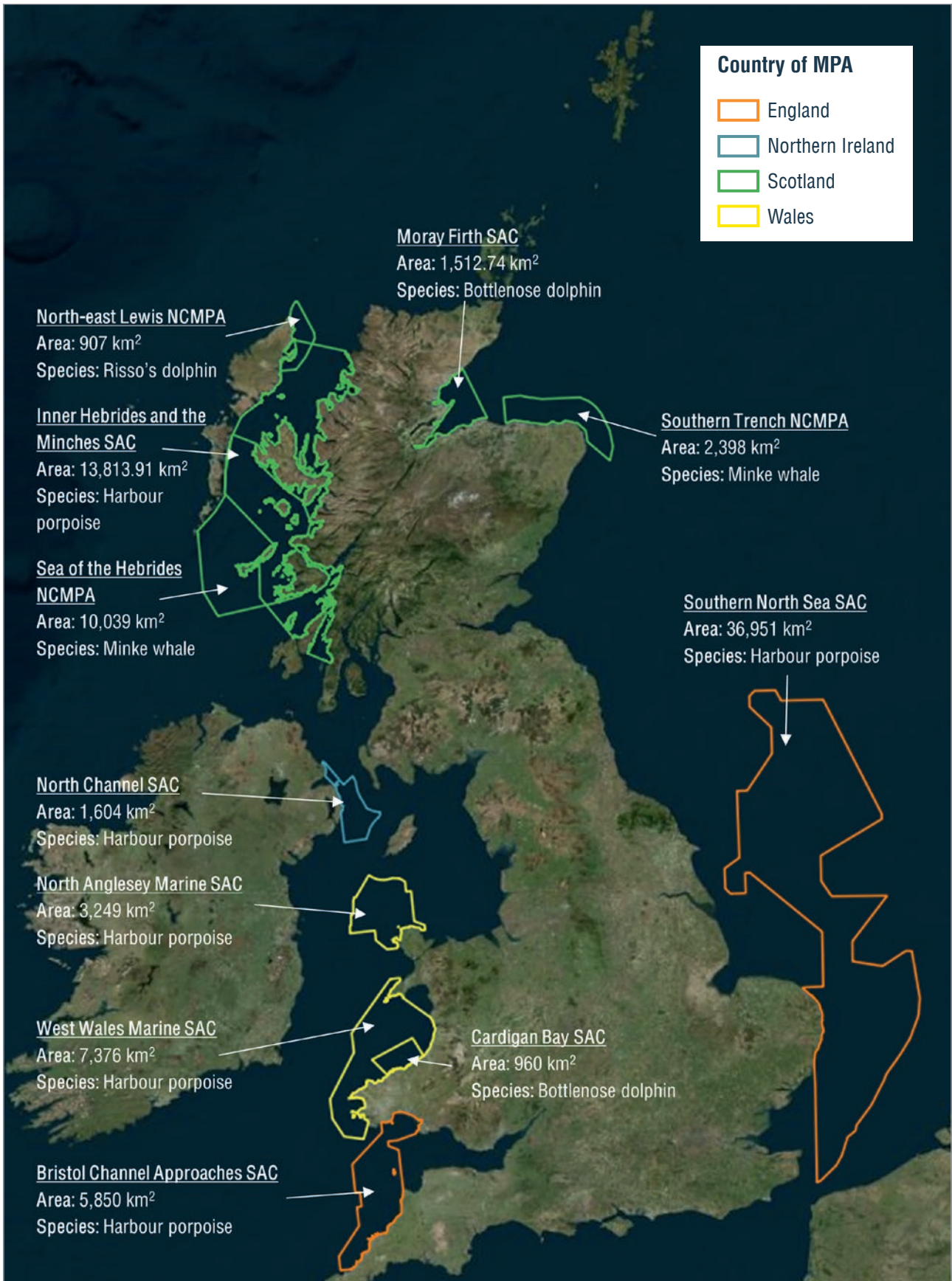
**This paper analyses how effectively cetacean MPAs are being managed to assess their impact and provides recommendations to better protect whales, dolphins and porpoises in the UK.**



7 UK Government. The Conservation of Habitats and Species Regulations. <https://www.legislation.gov.uk/ukxi/2017/1012/contents/made>

8 UK Government. The Conservation of Offshore Marine Habitats and Species Regulations. <https://www.legislation.gov.uk/ukxi/2017/1013/contents/made>

9 The first three pilot HPMA were designated in English waters in June 2023 - JNCC English Highly Protected Marine Areas <https://jncc.gov.uk/our-work/english-highly-protected-marine-areas/>. Whilst their effectiveness for nature recovery has not yet been established, initial results have demonstrated positive results for species, habitat and ecosystem recovery [8].



**Figure 1:** The 11 MPA sites in the UK where cetaceans are a primary qualifying feature<sup>10</sup>.

<sup>10</sup> JNCC MPA Mapper. <https://jncc.gov.uk/mpa-mapper/>

## METHODOLOGY

**WDC's research analysed the effectiveness of management across the 11 UK MPAs where cetaceans are a primary qualifying feature.**

The following sites were assessed:

- Bristol Channel Approaches SAC
- Cardigan Bay SAC
- Inner Hebrides and the Minches SAC
- Moray Firth SAC
- North Anglesey Marine SAC
- North Channel SAC
- North-east Lewis NCMPA
- Sea of the Hebrides NCMPA
- Southern North Sea SAC
- Southern Trench NCMPA
- West Wales Marine SAC

The following types of protected areas were not assessed for this research:

- **HPMAs** – these are designated for whole ecosystems.
- **Sites of Special Scientific Interest (SSSIs)** – these are designated for a range of species or habitats within a site.
- **The three MPAs where cetaceans are a qualifying feature**, but not the primary feature.

The effectiveness of MPA management was analysed using the Marine Mammals Management Toolkit<sup>11</sup> which was developed under the framework of the Ocean Governance Project<sup>12</sup>. The toolkit is based on IUCN guidelines for applying protected area management categories [9], and is the only framework developed specifically to assess marine mammal MPAs<sup>13</sup>.

The toolkit does not rank management scores (e.g. as 'good', 'fair' or 'poor'); this would be misleading because each MPA is unique in its aims and requires different management. Instead, the assessment provides numerical scores across key management criteria (e.g. outreach and engagement). This highlights strengths and weaknesses in the management approach of each MPA and identifies threats that may need further attention to effectively protect the site.

### Data availability

Data used in this study was compiled from publicly available information on UK Statutory Nature Conservation Bodies' (SNCBs) websites<sup>14</sup>, which in some cases was limited. **It is important to note that data availability varied significantly, with some SNCBs providing minimal information on MPA management and status, and others providing extensive information which supported a more detailed review.**

11 Ocean Governance A New Tool for Managers and Policy Makers to Consider Marine Mammals, and Their Effective Management, in MPAs. <https://marine-mammals.info/the-marine-mammal-twinning/>

12 Ocean Governance <https://oceangovernance4mpas.eu/>

13 Marine Mammals Management Toolkit <https://marine-mammals.info/>

14 JNCC, NatureScot, NRW, Seafish Kingfisher information service

In the UK, the Scottish Government (via NatureScot) provided the least information online about existing activities and management advice. The Welsh Government (via Natural Resources Wales) provided the most comprehensive information on existing activities and management advice.

Analysis of where most harm is occurring is significantly biased against SNCBs that make available the most comprehensive information (for example, Cardigan Bay), which provided information on almost twice the number of activities compared to other sites.

## MPA assessment

This research defined MPA effectiveness as the degree to which the protected area is effectively managed to achieve its goals and objectives [1] across a range of categories, including:

- **Outreach and engagement** – The extent of education and awareness-raising programmes delivered to stakeholders (such as fishers, local communities and tourism operators) on the benefits of MPAs. The sharing of information allows each group's substantial local knowledge to support effective planning and management.
- **Research and monitoring** – The quality and availability of baseline data on how marine mammals use the site, and the number and type of threats from anthropogenic activities. Factors considered included the methodology and frequency of ecological monitoring, and data sharing across stakeholder groups.
- **Addressing the activities and threats** – The presence and robustness of management and mitigation measures to address harmful activities. Examples include whale and dolphin watching guidelines, noise management regulations (including noise limits and mitigation measures for offshore industries), fisheries restrictions, vessel activity and stranding response programmes.
- **Management framework** – This includes the level of coordination between agencies that manage activities in the MPA (for example, whether there are zoning plans for different activities or plans for coordinated responses to major incidents such as oil spills or strandings), the robustness of governance of activities including monitoring of impacts, and regular reporting and review of management plans and objectives.

The results across each of these categories were used to understand the overall performance of each MPA, identify management strengths and weaknesses, and make recommendations to improve management effectiveness.



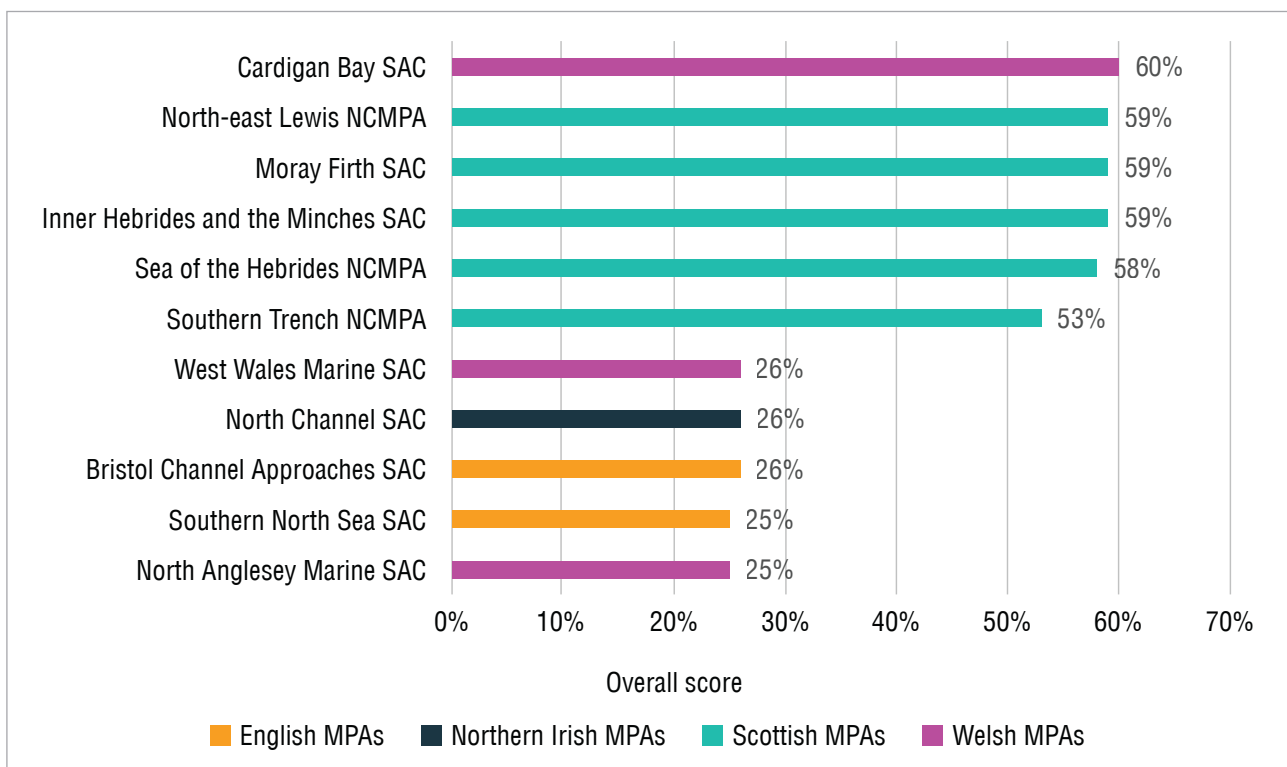
## RESULTS AND ANALYSIS

There are currently 337 MPAs in UK waters, totalling ~339,000 km<sup>2</sup>. Of these, **11 sites (covering ~85,000 km<sup>2</sup>) are designated with cetaceans as a primary qualifying feature. In terms of the size of the area protected, this comprises 25% of the MPA network, and 11% of UK waters.**

### Overall management effectiveness

**The MPA which scored the highest for management effectiveness was Cardigan Bay SAC**, in West Wales (see Annex A). This MPA is designated for bottlenose dolphins and scored 60% overall (Figure 2). The site has a detailed management plan with comprehensive management advice, although the plan is currently out of date, having been written in 2018. The plan includes commercial and recreational fishing regulations, and a voluntary code of conduct for the whale and dolphin watching industry. There is a comprehensive outreach and education programme delivered through an appointed site officer. There is also a robust monitoring programme, including photo identification of the bottlenose dolphin population. The bottlenose dolphin population here has declined over recent years and, although the reason is unclear, the sharpest decline in numbers was reported after the MPA was opened to scallop dredging. High levels of recreational boat traffic have also been shown to adversely impact the social structure of dolphins in Cardigan Bay<sup>15</sup>.

**North Anglesey Marine SAC (in Wales) and Southern North Sea SAC (in England) both ranked the lowest for management effectiveness.** These SACs are designated for harbour porpoise and both scored only 25% overall. This is due to their lack of a management plan, monitoring of the harbour porpoise population and noise regulations. These SACs, along with the other three harbour porpoise SACs designated in 2019, are the lowest scoring overall.



**Figure 2.** The management effectiveness score for each UK cetacean MPA.

<sup>15</sup> Sea Watch Foundation Cardigan Bay Monitoring Project <https://www.seawatchfoundation.org.uk/cardigan-bay-monitoring-project/>



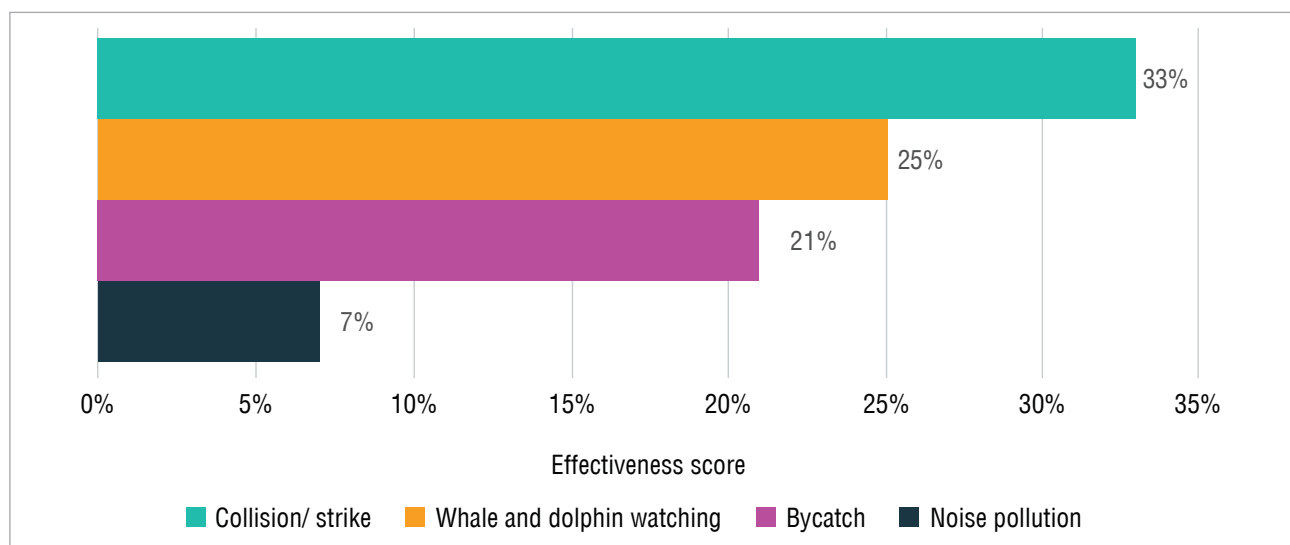
It is of concern that **none of the six harbour porpoise SACs have management plans or management measures.** Currently, the only guidance provided for these areas is within the 'Conservation Objectives and Advice on Operations' document for each site, which only covers the conservation objectives and a list of activities that could negatively impact the harbour porpoise population of the site. They do not include advice on management or permissance of activities, research and monitoring. This can lead to unmanaged activities occurring in these SACs, potentially harming both the MPA as a whole and the harbour porpoise populations they are designed to protect.

## Harmful activities

The analysis revealed some overarching trends relating to management of harmful activities:

- **SACs are the lowest scoring for management effectiveness.** This is mainly due to a lack of implementation. Yet, SACs should provide the best protection for cetaceans as they mandate development of conservation objectives and advice regarding potentially harmful activities [11,12].
- **Legal loopholes mean harmful activities are often not minimised or managed.** Current legislation only prevents some harmful activities (e.g. fishing, disturbance), whilst other damaging activities have minimal restrictions and permission to undertake them may be granted on a case-by-case basis. Additionally, activities assessed to cause harm to the protected feature and which undermine conservation objectives may still be permitted to take place under Imperative Reasons of Overriding Public Interest (IROPI)[13]. For example, offshore windfarm consenting may be granted at the expense of conservation objectives in order to meet government ambition on renewable energy.
- **MPAs with lower effectiveness scores often did not have management plans or measures, and only provided guidance on activities.** This meant key threats such as noise pollution, bycatch and disturbance (e.g. from whale and dolphin watching) were often ineffectively managed through restrictions or mitigation measures (Figure 3).

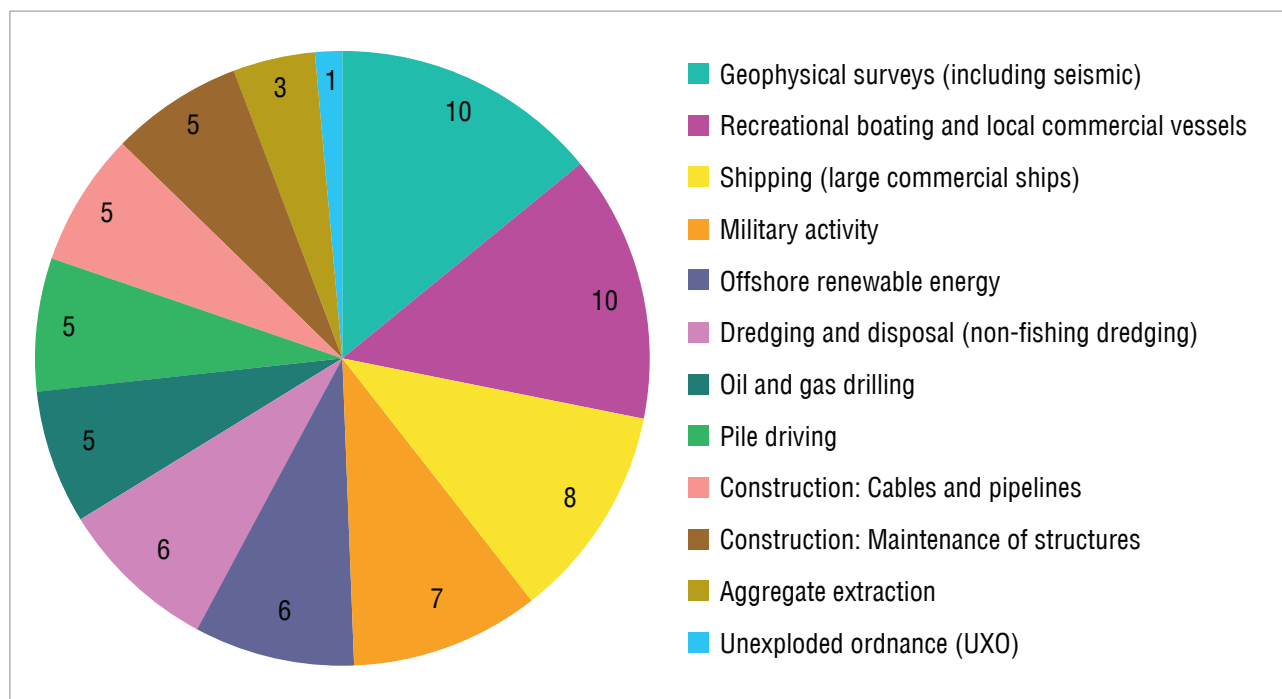
This lack of robust oversight has allowed multiple large-scale, harmful offshore activities to proceed in protected areas despite their negative impact on protected features and species. This includes the rapid expansion of offshore windfarms, with minimal requirement or guidance for industry on appropriate mitigation and monitoring of impacts [14]. The Southern North Sea SAC has particularly suffered harm due to lack of management and its deemed suitability for the siting of offshore windfarms, which contributed to its low management effectiveness score (see Annex B).



**Figure 3.** Average management effectiveness score (for management measures in place), across all UK cetacean MPAs, for the most significant threats.

## Noise pollution

**Anthropogenic noise is the most poorly managed threat across all sites**, based on the data available for this assessment. In every MPA assessed, this emerged as the most poorly managed threat and scored an average of 7% for management effectiveness. **Geophysical surveys (including seismic) were the most significant source of intense, impulsive noise pollution, and occurred in 91% of MPAs examined. Recreational and commercial vessels and large commercial shipping also produced significant continuous, chronic noise pollution in 91% of these MPAs** (Figure 4).



**Figure 4.** Primary sources of noise pollution in UK cetacean MPAs and the number of sites where each activity occurs.

Individual and cumulative loud underwater noise sources can have significant negative impacts on cetaceans. This may include auditory damage, displacement, and disruption to feeding, communication and navigation over large distances [15–19]. With levels of development and activity increasing offshore, particularly from the rapidly expanding offshore wind industry, there are likely to be significant, cumulative negative impacts on cetacean populations in MPAs over large areas and multiple years [18,20,21].

Several key factors make underwater noise an issue that requires urgent attention:

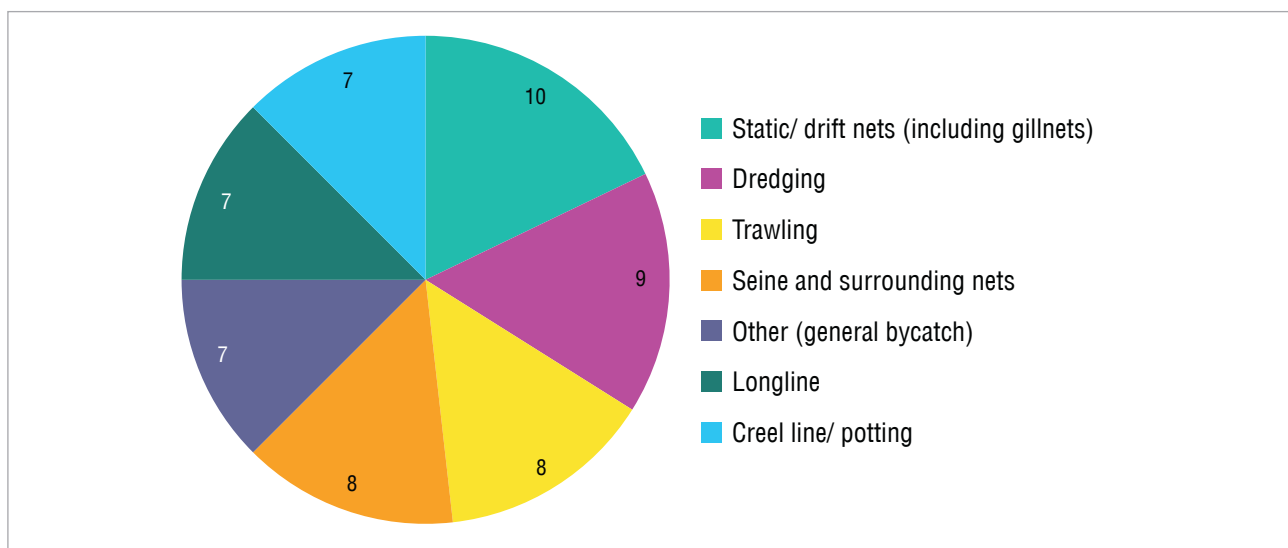
- **The UK lacks regulations on underwater noise**, with no limits or spatio-temporal restrictions during key timeframes or at important locations for marine mammals. Currently, existing guidance to reduce risk is voluntary [14], not legally binding, and includes a range of mitigation measures which are not scientifically proven to reduce risk to cetaceans<sup>16</sup>.
- **There are minimal requirements to monitor the impacts of noise or adapt activities if issues are identified.** At most, there is a requirement to monitor cetacean activity during seismic surveys, or through the first few pile driving activities conducted during construction of an offshore windfarm. This has led to a lack of data on responses and effects – and a potential underrepresentation – of the threats and impacts.

<sup>16</sup> JNCC Marine mammals and noise mitigation <https://jncc.gov.uk/our-work/marine-mammals-and-noise-mitigation/>

■ **Offshore windfarm developments are progressing at pace around the UK**, without regulation on underwater noise limits. Where these occur within MPAs, associated activities such as pile driving threatens MPAs' conservation status. For example, within the Southern North Sea SAC there has been significant offshore windfarm expansion, and current guidance provides minimal requirements to protect the harbour porpoise population. This means that the development of offshore energy has been prioritised above ensuring the effectiveness of the protected site, despite the availability of effective noise mitigation measures.

## Bycatch

**Bycatch is the second most poorly managed threat for cetaceans across all sites**, based on the data available for this assessment. This was the second most poorly managed threat for nine of the 11 MPAs and scored an average of 21% for management effectiveness.



**Figure 5.** The main types of fishing activity in UK cetacean MPAs which potentially pose a bycatch risk, and the number of sites where each activity occurs.

**In 91% of cetacean MPAs, fishing methods that are known to be harmful to whales and dolphins can be permitted, such as drift nets, gillnets, seine nets and trawling**, although not all types of fishing are allowed in every MPA.

It should be noted that bycatch is the most significant threat to cetaceans globally, and is a major issue in UK fisheries, with more than 1,000 dolphins, porpoises and whales killed each year [22]. Gillnets, trawlers and creel fisheries using pots and traps have the highest bycatch rates, with harbour porpoise, common dolphin, minke whale and humpback whale most impacted [22,23]. Bycatch can also cause chronic and acute injuries, with severe welfare implications for individual whales and dolphins. This has population-level and conservation impacts for vulnerable species [23–25].

Some cetacean MPAs have fishing restrictions in place, including seasonal closures for certain gear types, restrictions on particular types of gear, closure of specific areas to certain types of fisheries, or a requirement for the use of pingers on gear (devices that produce a sound, intended to deter marine mammals). However, how these restrictions are applied varies between sites and fisheries. In addition, these measures cannot guarantee adequate protection for cetaceans from significant bycatch risk.

**Implementing comprehensive bans that prohibit harmful fishing activities from MPAs, including bottom trawling and gillnets, would provide more effective protections for whales and dolphins.**

## Whale and Dolphin watching

**Commercial whale and dolphin watching is the third most poorly managed threat across all cetacean MPA sites**, based on the data available for this assessment. This was particularly problematic for two of the 11 MPAs and scored 25% for management effectiveness.

Well managed, responsible whale and dolphin watching can support coastal economies, research on the local cetacean population, and educate the public on cetaceans and the threats they face. However, without regulation, the rapid expansion of whale and dolphin watching tour operators can cause disturbance. Issues can include: a large number of vessels in the water; vessels approaching too closely, remaining too long or chasing wildlife; and on occasion, collision with cetaceans [26]. Disturbance can drive whales and dolphins away from an area and can impact their feeding and breeding behaviour with long term consequences [27]. Collisions can cause injuries and even death [27].

Whale and dolphin watching is not a licensed activity in the UK, and there is currently no specific legislation in relation to wildlife watching. Instead, voluntary guidelines and codes of conduct exist, such as the Scottish Marine Wildlife Watching Code<sup>17</sup> and the Cardigan Bay Marine Code of Conduct<sup>18</sup>. These codes provide advice on operations, including how to behave around wildlife and safe distances to approach. However, there are no restrictions on the number of boats or a requirement to have trained naturalist guides on each trip. Scuba diving boat trips, snorkelling or swimming activities in cetacean MPAs are also unrestricted.

These voluntary guidelines cannot guarantee there will be minimal disturbance from whale and dolphin watching and no harassment of cetaceans. **Implementing mandatory guidelines that are equivalent to these codes of conduct would be substantially more effective in protecting whales and dolphins.**

## Vessel collisions and strikes

**Vessel collisions are the fourth most poorly managed threat to cetaceans across all sites**, based on the data available for this assessment. This covers all types of shipping, from local recreational boats to commercial shipping and scored an average of 33% for management effectiveness.

Collisions with vessels often result in physical injury or death for whales and dolphins [28,29]. Blunt force or sharp injuries can also be lethal several hours, days, or weeks after the incident causing prolonged suffering, with significant welfare implications [30,31]. Such incidents undermine cetacean conservation efforts and threaten the overall effectiveness of the MPA in safeguarding their populations.

Many collisions between large vessels and cetaceans go unnoticed: there is no requirement to report strikes of whales and dolphins occurring at sea and their carcasses may not wash up on land. This makes it hard to understand the scale of problem and challenging to effectively mitigate through methods such as re-routing.

MPA management plans do not include mitigation measures for commercial shipping to reduce the risk of vessel collisions with whales and dolphins, despite several MPAs having ports and harbours inside or near the site. Speed limits for recreational boating are voluntary and are included in the different wildlife codes of conduct. Speed restrictions for other vessel types, and a requirement to avoid key areas for populations are also lacking. If an area is identified as a high risk area for collisions, speed restrictions and the introduction of propeller guards would help reduce the risk of collision and injury [32].

17 Scottish Marine Wildlife Watching Code <https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/scottish-marine-wildlife-watching-code>

18 Cardigan Bay Marine Code of Conduct <https://www.cardiganbaywatersports.org.uk/marine-code-of-conduct/>

## RECOMMENDATIONS TO IMPROVE MANAGEMENT EFFECTIVENESS OF UK CETACEAN MPAs

### UK Government should:

#### Urgently scale up ambition on creating effective MPAs in UK waters, through:

- **Designation of additional HPAs and MPAs for cetaceans.** It is essential to create further protections in order to meet national 30x30 commitments and deliver an ecologically coherent network of MPAs in the UK. This should include a combination of new designations, extending the boundary of existing sites, and adding new species as a qualifying feature to existing sites. Government should also expand and accelerate the designation of HPAs, as these provide the strongest protections for whole ecosystems within the site [33].
- **Implementing effective marine spatial planning that prioritises biodiversity objectives.** It is essential that a regional approach considers the impact of proposed anthropogenic activities on MPAs and aims to minimise impacts both individually and cumulatively. For example, marine management plans for the Eastern inshore and offshore waters being drafted by the Marine Management Organisation (MMO) must consider and address the impact of offshore windfarm expansion in the Southern North Sea SAC on conservation objectives. In Scotland, the review of National Marine Plan must introduce the much-delayed fisheries management measures in Scottish MPAs.
- **Urgent delivery of an Enhanced Marine Protection (EMP) plan for Scottish waters.** The Scottish Government are developing an EMP plan, which aims to manage Scottish waters, so all users benefit alongside prioritising nature restoration and protection. Progress has been made, but this work needs to continue at pace to ensure biodiversity commitments are met.

#### Improve governance to ensure that domestic MPAs meet their objectives, through:

- **Urgently publishing management plans for all MPAs.** The UK government has committed to, where necessary, implement management measures by the end of 2024, including for highly mobile species such as cetaceans [3]. However, 90% of cetacean MPAs either lack a management plan, or the existing one is out-of-date. These must be written or updated to monitor and regulate harmful activities, to avoid further degradation of cetacean MPAs.
- **Delivering up-to-date assessments of species' conservation status.** All MPAs require baseline assessments of the conservation status of whale and dolphin populations within the site to understand if their objectives are being met, as well as to monitor the impact of anthropogenic activities on cetaceans and what further management is required. This information is currently unknown in six of the 11 MPAs designated for cetaceans and is outdated (over three years old) in the remaining five sites. These assessments must be urgently completed and repeated on a regular basis to examine the MPA's effectiveness.

- **Implementing regular monitoring and reporting for anthropogenic activities.** Any anthropogenic activities permitted in these MPAs should have a statutory requirement to monitor the impact on cetaceans. This data must be shared publicly following a standardised approach, in a timely manner and be used to inform adaptive management. This is essential to address existing data gaps, prioritise management efforts, and regulate further activities. Mandating this could also increase compliance and support enforcement (e.g. delivering penalties for offences)[34].
- **Update and strengthen environmental assessment regimes.** This includes Environmental Impact Assessments (EIA), Strategic Environmental Assessment (SEA) and Habitat Regulation Assessments (HRA). The current EIA procedure for marine activities urgently needs updating, as it does not effectively protect the environment from damaging activities, primarily due to how the legislation is implemented [35]. A recent Office for Environmental Protection (OEP) review found the following barriers to effective implementation which must be resolved to improve environmental outcomes: data accessibility, post-decision monitoring, evaluation and reporting, and access to the necessary expertise (e.g. within planning teams)[35].

### Address key threats to cetaceans within protected areas:

**Ensure management plans adequately reduce and mitigate harm to whales and dolphins from damaging activities, through:**

- **Application of the precautionary principle<sup>19</sup>.** All potentially damaging activities should be automatically prohibited in cetacean MPAs (e.g. bottom trawling, gillnets, offshore energy construction, oil and gas exploration and production). Activities should only be permitted on a case-by-case basis after detailed assessment proves they will not result in damage to protected species, or if proven mitigation measures will be adequately implemented.
- **Urgent action to address bycatch and noise, which are the most significant threats, through implementing:**
  - **Noise limits and proven mitigation measures.** These should be implemented for activities producing loud, harmful noise pollution including offshore construction (especially offshore wind) and seismic surveys within or adjacent to MPAs. WDC strongly recommends that an approach similar to that taken in Germany is adopted<sup>20</sup>. This imposes a statutory requirement to reduce noise to certain levels, and a legal requirement to use noise abatement and mitigation measures to reduce noise levels to within these limits.
  - **A ban on oil and gas exploration and production within MPAs (including new exploration licenses and production approvals).** These activities produce significant noise pollution, alongside undermining the UK's climate ambition, and should not be permitted.

<sup>19</sup> European Parliament - [https://www.europarl.europa.eu/thinktank/en/document/EPRS\\_IDA\(2015\)573876](https://www.europarl.europa.eu/thinktank/en/document/EPRS_IDA(2015)573876)

<sup>20</sup> The German Sound Protection concept requires constant sound exposure levels (SEL) to be less than 160 dB re 1 µPa at 750m (single peaks up to 190 dB re 1 µPa at 750m) from the noise source within the German EEZ. No piling is allowed within harbour porpoise SACs and an adverse effect on a site is to be presumed if at 10% or more of the area of the site is located within the disturbance radius.

- **A ban on bottom trawling and gillnets in all MPAs.** Fishing activities, particularly bottom trawling, have been under recent review. In March 2024, it was announced that bottom towed fishing gear was banned in MPAs containing valuable reef and rocky habitats<sup>21</sup>. WDC recommend that this ban is extended to all UK MPAs to reduce the risk of bycatch and seabed damage in these critical sites.
- **Fisheries closures at key periods or locations.** For example, during cetacean feeding times, breeding seasons or in key areas. The benefits of no-take-zones for marine ecosystems have been well-documented [36,37].
- **A requirement to use negatively buoyant (sinking) ground lines in creel fishery.** This should be rolled out across all cetacean MPAs, starting in Scotland, as recommended by the 2024 meeting of the International Whaling Commission (IWC) Scientific Committee (SC) [38].
- **Remote Electronic Monitoring (REM) should become mandatory on all fishing vessels.** Including those operating in MPAs to assist efforts to better quantify fishing effort and bycatch of cetaceans.

<sup>21</sup> Bottom towed fishing gear prohibited over reef habitats in 13 marine protected areas <https://www.gov.uk/government/news/bottom-towed-fishing-gear-prohibited-over-reef-habitats-in-13-marine-protected-areas>

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## ANNEX A

### Case study: Cardigan Bay Special Area of Conservation

The Cardigan Bay/ Bae Ceredigion Special Area of Conservation (SAC) was designated in 2004. The local population of bottlenose dolphins (*Tursiops truncatus*) are the primary qualifying feature for designation of the site. This comprises the largest semi-resident population in the UK<sup>1</sup>, with roughly 125 individuals.

A total of 960 km<sup>2</sup> of inshore waters in Cardigan Bay, West Wales are designated based on the significance of these waters for bottlenose dolphin feeding and reproduction. In the summer months, calves and juveniles are often observed with individual adults or groups.

**Site objectives** – The main conservation objectives for the site are as follows<sup>2</sup>:

- **Long-term population viability:** The population of bottlenose dolphins is maintaining itself on a long-term basis as a viable component of its natural habitat.
- **Preservation of natural range:** The natural range of the species population within the site is not being reduced or likely to be reduced for the foreseeable future.
- **Supporting population increase:** The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is increasing.

**Management effectiveness** – in WDC's assessment of the 11 MPAs where cetaceans are a primary qualifying feature, Cardigan Bay SAC scored the highest of the sites analysed for **management effectiveness, scoring 60%** according to Marine Mammals Management Toolkit. This score was achieved due to:

- **Outreach and engagement** – scoring 92% for management effectiveness. Successful elements included:
  - The Cardigan Bay Marine Wildlife Centre overlooking the SAC – The visitor centre details the importance of the SAC, educating the public and school groups about the bottlenose dolphin population. The centre aims to educate the public on how to behave responsibly around these animals, take personal action to reduce harm to marine wildlife, and encourages the public to protect them<sup>3</sup>.
  - An awareness outreach programme to fishers and tourism operators – By engaging with local fishing and tourism operators about the benefits of the MPA to the area, these groups in turn collaborate to support best practices in the management of the SAC.
  - Education as part of whale watching tours (for some operators) – This informs the public about the bottlenose dolphin population of the SAC and the threats they face. Some operators provide longer trips offering the opportunity for members of the public to participate in the research into the population<sup>4</sup>.

1 JNCC website. Cardigan Bay <https://sac.jncc.gov.uk/site/UK0012712>

2 NRW Cardigan Bay SAC. <https://naturalresources.wales/media/687993/eng-cardigan-bay-reg-37-report-2018.pdf>

3 Cardigan Bay Marine Protected Area Visitor's Centre <https://cardiganbaysac.org.uk/cardigan-bay-marine-protected-area-visitors-centre/>

4 Cardigan Bay Marine Wildlife Centre. Research. <https://www.welshwildlife.org/cbmwc-research>

■ **Management of activities on the site** – scoring 76% for management effectiveness. Successful elements included:

- A dedicated Cardigan Bay SAC officer – Along with this, a number of organisations through the Relevant Authorities Group (RAG)<sup>5</sup> have legal responsibilities to manage the site.
- A management plan is in place for the SAC – Whilst the management plan requires reviewing (it was last updated in 2008), the details of the management approach required for different activities are still followed to ensure the favourable conservation status of the bottlenose dolphin population.
- A voluntary code of conduct has been established for the whale watching operators that operate in the SAC.
- Some fishing restrictions are in place, e.g. net types and seasonal restrictions within the SAC to protect a number of species including bottlenose dolphin.

■ **The research and monitoring programme** – scoring 71% for management effectiveness. Successful elements included:

- A dedicated research and monitoring programme – This is run by Sea Watch Foundation and has studied the bottlenose dolphin population in Cardigan Bay<sup>6</sup> since 2000. The research studies the use of the area by the bottlenose dolphin population and the impacts of anthropogenic activities.

Whilst this was the highest scoring MPA for management effectiveness, there are still some significant failings, particularly in the management of key threats such as noise. There is minimal regulation to reduce noise levels from activities (including offshore construction and seismic surveys), or to monitor and report impacts. There are some measures to reduce bycatch, including seasonal restrictions and gear restrictions in some parts of the MPA, but these require reviewing to ensure they are effective.

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<sup>5</sup> Cardigan Bay Special Area of Conservation (SAC) <https://cardiganbaysac.org.uk/what-is-the-sac/>

<sup>6</sup> Sea Watch Foundation. Cardigan Bay Monitoring Project. <https://www.seawatchfoundation.org.uk/cardigan-bay-monitoring-project/>

## ANNEX B

### Case study: Southern North Sea Special Area of Conservation

The Southern North Sea Special Area of Conservation (SAC) was designated in 2019. Harbour porpoise are the primary qualifying feature for which the site was designated. The MPA includes key winter and summer habitat for this species<sup>1</sup>, some of which overlap, creating an area where harbour porpoises occur year-round<sup>2</sup>. The Southern North Sea is the largest UK MPA where cetaceans are the primary qualifying feature, at 36,951 km<sup>2</sup>.

**Site objectives** – The main conservation objectives for the site are as follows<sup>1</sup>:

- **Population viability:** Harbour porpoises are a viable component of the site.
- **Disturbance reduction:** There is no significant disturbance of the species.
- **Maintaining condition:** The condition of supporting habitats and processes, and the availability of prey is maintained.

**Management effectiveness** – in WDC's assessment of the 11 MPAs where cetaceans are a primary qualifying feature, Southern North Sea SAC scored the lowest of the sites analysed for **management effectiveness, scoring 25%** according to Marine Mammals Management Toolkit. The low score was due to:

- **Lack of a management plan** – A management plan would support reduction of harms caused by anthropogenic activity within the MPA.
- **Rapid expansion of offshore windfarms in the region** – Construction of offshore windfarms produces loud noise pollution over large areas for extended periods of time. This has resulted in areas with lower densities of porpoises in the SAC<sup>3</sup>. JNCC has recognised that *“the scale of offshore wind installation planned over the next decades in some of these areas raises the potential for unprecedented disturbance, on top of a continuing background of noise from oil and gas and other sources”*<sup>3</sup>.
- **Lack of noise regulations for offshore construction** – Advice on noise management (mitigation measures) within the MPA currently relies on ‘overarching guidance’ which is not robust or legally binding. Statutory bodies encourage mitigation measures to reduce noise levels which have not been proved effective, such as ‘soft-starts’ and acoustic deterrent devices (ADDs). Robust noise regulations would provide improved protection.
- **Minimal fishing regulations** – There are some restrictions on fishing activities within the MPA, but many of these are not specifically aimed at protecting the local harbour porpoise population and instead focus on other sensitive species. Harbour porpoises benefit from restrictions placed on habitats that overlap some areas of the Southern North Sea MPA, e.g. the restrictions on bottom towed fishing gear to protect the Dogger Bank sandbanks<sup>4</sup>. This restriction has additional benefits including reducing the risk of harbour

1 JNCC Southern North Sea SAC. <https://jncc.gov.uk/our-work/southern-north-sea-mpa/>

2 JNCC. Southern North Sea Conservation Advice. <https://data.jncc.gov.uk/data/206f2222-5c2b-4312-99ba-d59dfd1dec1d/SouthernNorthSea-conservation-advice.pdf>

3 JNCC. Guidance on noise management in harbour porpoise SACs 2020. <https://hub.jncc.gov.uk/assets/2e60a9a0-4366-4971-9327-2bc409e09784#JNCC-Report-654-FINAL-WEB.pdf#JNCC-Report-654-FINAL-WEB.pdf>

4 UK Government. The Dogger Bank Special Area of Conservation (Specified Area) Bottom Towed Fishing Gear Byelaw 2022 <https://www.gov.uk/government/publications/the-dogger-bank-special-area-of-conservation-specified-area-bottom-towed-fishing-gear-byelaw-2022>

porpoise bycatch in that area of the SAC and protecting sandeels, which are a primary food source for harbour porpoise.

- **Lack of a research and monitoring programme** – There is no dedicated research and monitoring programme for the harbour porpoise population at the site. Information on this population is collected from the UK-wide SCANS surveys, which are undertaken in the summer every six years. These surveys are too infrequent to understand the impact of human activities and management measures on the local population, and the population's conservation status.

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Funded by Orca. We would like to thank Orca for funding the production of this report, and for championing the implementation of robust management plans and best practice guidelines in UK marine protected areas.

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