

Position statement

NRW's position on the use of Marine Mammal Management Units for screening and assessment in Habitats Regulations Assessments for Special Areas of Conservation with marine mammal features

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What is this document about?

This document sets out Natural Resources Wales's (NRW) position on the use of Marine Mammal Management Units (MMMUs) and other approaches for screening and assessment in Habitats Regulations Assessments (HRA) for Special Areas of Conservation (SACs) with marine mammal features. Screening is defined here as the first stage of HRA where plans or projects are checked to see if they would be likely to have or there is a possibility of a significant effect on a European site and follows Regulation 63(1), 63(2) and 67 (Tyldesley and Chapman, 2013).

It primarily describes the use of MMMUs as the relevant spatial scale for screening and inclusion of plans and projects in an in-combination assessment. The use of MMMUs is applied to most impact pathways, except for impact pathways where there is strong evidence that an alternative approach is appropriate (e.g., screening distances and disturbance from underwater noise). The use of an iterative/sequential Appropriate Assessment (AA) is advised to accompany the use of MMMUs at the screening stage. This is where an AA is first carried out on the closest site to the impact source / development and if an Adverse Effect on Site Integrity (AEOSI) cannot be ruled out, the next closest site is assessed and so on.

The Position Statement provides a steer on how NRW will consider information to inform HRA advice and present their advice to the Competent Authority.

Who is this document for?

The Position Statement is aimed at:

- Those within NRW who may be advising on Habitats Regulations Assessment (HRA) of SACs with marine mammal features
- NRW Marine Licensing Team, who may wish to understand how this advice should be applied

- Other Competent Authorities (CA) / regulators / UK Statutory Nature Conservation Bodies who may wish to understand our approach and consider its use in conducting HRA on sites with marine mammal features
- Developers and their consultants who wish to understand this approach and submit applications with enough information to allow the CA to assess sites with marine mammal features in the same way

Development of this position

This Position was developed following discussion of a range of potential approaches to screening in HRA, with associated advisory and regulatory risks and benefits, at NRW's Strategic Marine Mammal Issues Group (SMMIG) (including MMMU subgroup), Offshore Renewable Energy Programme (OREP) and Marine Planning and Policy Delivery Group (MPPDG) meetings. External meetings and workshops were also organised to peer review the use of MMMUs in HRA. The approach was approved and adopted in October 2020 by the Marine Programme Board (MPB) within NRW.

This Position does not represent a legal opinion and should not be interpreted as such. Project developers and owners should be advised to seek their own independent legal advice on any matters arising in connection with this Position Statement in respect of a specific activity or development project.

This Position does not prejudice any advice that NRW might provide in our capacity as a statutory advisory or regulatory decision maker.

NRW will update this Position Statement as and when relevant new evidence becomes available.

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Version History

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1.0	10-20	Document published
1.1	05-22	Accessibility update. Following a review, there is no recent published evidence that would warrant a substantive update of this document

Review Date: November 2022

To report issues or problems with this guidance [contact Guidance Development](#)

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1. Introduction

What are MMMUs?

Marine mammal management units (MMMUs) are considered to be relevant spatial scales for marine mammal species that represent our best understanding of the structure of biological populations and any ecological differentiation within such populations, and the spatial differences in human activities and management relevant for that population. The boundaries of MMMUs do not just represent population differentiation but also political boundaries (e.g., country/county) or boundaries relevant to the management of human activities (e.g., ICES divisions used for the collection of fisheries data and management of fisheries).

Since 2012, the Inter-Agency Marine Mammal Working Group (IAMMWG), comprising representatives of the UK's Statutory Nature Conservation Bodies (SNCBs) - Natural England (NE), Scottish Natural Heritage (SNH), Natural Resources Wales (NRW), Department of Agriculture, Environment and Rural Affairs (DAERA) and Joint Nature Conservation Committee (JNCC) – have developed and proposed MMMUs for the seven most common cetacean species around the UK. These were approved by the SNCBs' Chief Scientist Group and published in 2015 (IAMMWG, 2015) and have been adopted by SNCBs as the relevant spatial scales for conservation advice on key cetacean species in UK waters (Figure 1).

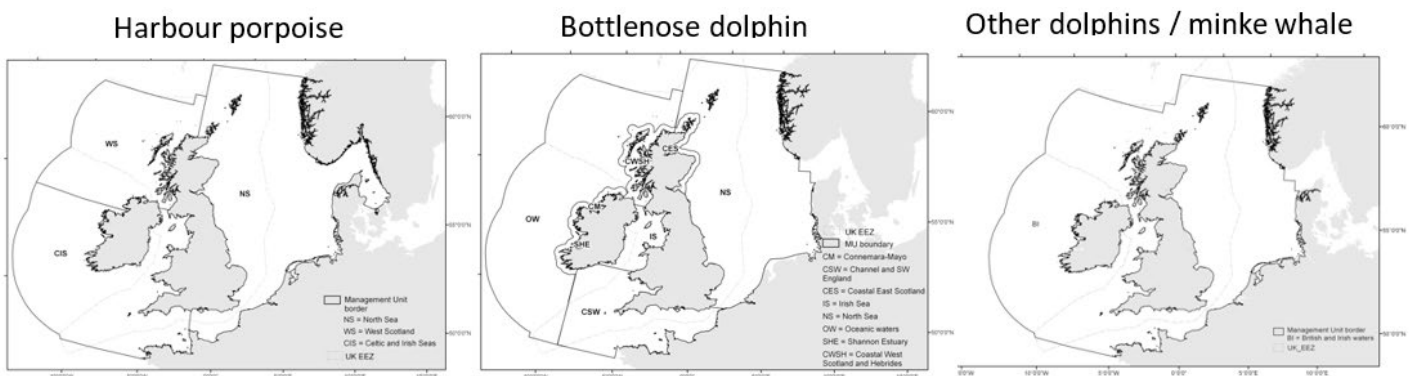


Figure 1. Interagency marine mammal working group (IAMMWG) marine mammal management units (MMMUs) for cetaceans (IAMMWG, 2015)

Seal MMMUs were also developed by the IAMMWG at the same time but due to differences in how seals were managed in some parts of the UK (e.g., licensing in Scotland), seal MMMUs were not officially published, and further work is required to develop these (Figure 2). Notably, the extent of those MMMUs stopped at the UK boundary, unlike cetacean MMMUs which cover other Member State waters. This artificial UK boundary in the IAMMWG seal management units does not reflect known seal population movement and distribution or management boundaries e.g., ICES Areas.

Although draft IAMMWG grey seal management units have been used in previous applications and NRW advice, we do not currently advocate their use. Until these are better defined by the IAMMWG, NRW suggest the use of the OSPAR Region III: Celtic Seas area as the appropriate interim management unit (Figure 2). Based on the best

available evidence, this area reflects the most appropriate spatial scale of grey seal movements in the region, and currently the most plausible option among various management unit possibilities. This area has been used in our advice on recent significant marine project applications.

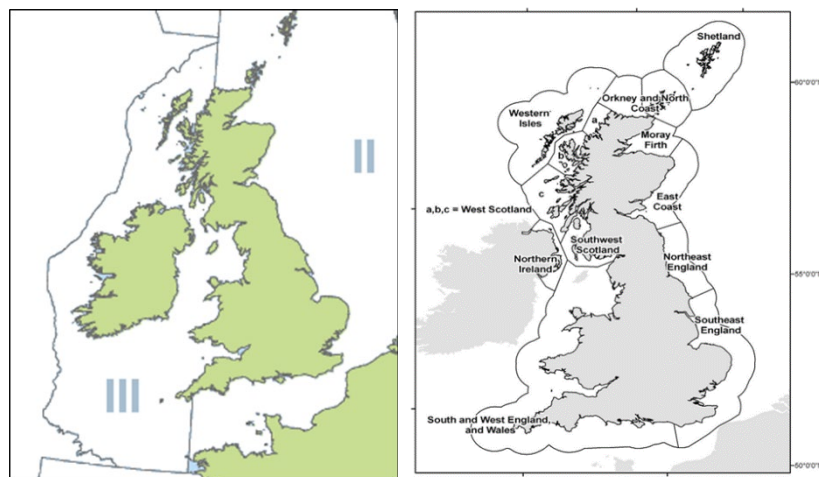


Figure 2. Example grey seal management units: OSPAR Region III: Celtic Seas (left); Draft IAMMWG management unit (right)

What are MMMUs used for?

MMMUs are used to inform conservation advice in several ways, including but not limited to, the relevant spatial scale for assessment of environmental impacts in marine casework (e.g., through HRA, EIA), and the appropriate scale for the selection of Marine Protected Areas e.g., harbour porpoise SACs. Cetacean MMMUs also have population abundance estimates associated with them which underpin conservation advice (IAMMWG, 2021).

Not all UK SNCBs, however, use MMMUs as the spatial scale for considering impacts in HRA and may use different approaches in their advice. Evidence supporting a particular approach may differ between species and between sites and is unlikely to be equivalent for all sites and locations around the UK. As such, different approaches have developed that are suitable for the region at hand and need not be the same for each region. For example, based on the evidence in Wales, an approach that is appropriate in Wales with multiple marine mammal SACs in proximity of each other might not be appropriate for the North Sea where, in the case of harbour porpoise, there is a single SAC in a relatively large area.

While it is usually clear and obvious when an appropriate assessment (AA) is required for impacts from projects that occur inside or overlap with SAC boundaries, how we should assess impacts outside of site boundaries is less obvious. From critically reviewing caselaw on the application of Article 6 (HRA) outside site boundaries ('offsite impacts'), Article 6 can indeed apply beyond the boundary of the site where there is pathway to impact on the conservation objectives of the site (DTA Ecology and BSG Ecology, 2020). The extent of functional linkage to sea areas outside the site, however, is important here, and depends on the strength of evidence, which varies for species and location. As a point of principle, an impact occurring outside the site needs to adversely affect the achievement of the conservation objectives of the site concerned for it to be considered to affect site integrity.

Informed by these outcomes, this Position Statement represents NRW's advisory position on the use of MMMUs and other approaches relevant to marine mammals in casework advice for HRA, especially in relation to impacts that occur outside of site boundaries. It is advised that this approach is followed by staff in NRW advisory and permitting and this advice is given externally to developers and stakeholders.

2. NRW's position on using MMMUs in HRA

Due to the mobile nature of all Annex II marine mammal features, it is accepted that they do not stay within site boundaries. It is reasonable, therefore, to assume that should an activity occur outside a site, marine mammal features of the sites (several of them rather than just the occasional individual) could travel to and thus be impacted by that activity, wherever it may be in the management unit.

We generally consider that there is the potential for the MMMU to be 'functionally linked' to SACs given, in most cases, the evidence demonstrating the degree of connectiveness and the fact that SACs are dependent on the wider population within the MMMU and represent special areas of sea within it (see Appendix 2; see Chapman and Tyldesley (2016) for information on the concept of functional linkage). The Moorburg case (c-142/16) and the Holohan case (C-461/17) confirm the need to adequately consider offsite impacts, where there is a potential and credible effect on the conservation objectives of a site. When considering likely significant effects on site features from offsite impacts, we must consider the specifics of whether the marine mammal site feature can reach the impact and in doing so whether it would be adversely affected in relation to the conservation objectives of the site and not just whether the impact occurs inside or overlaps with the site. For example, where there is evidence of functional linkage between the area of disturbance and the site, there is a potential for disturbance to affect site integrity when it occurs outside the site and the impact footprint does not overlap with its boundary. However, the degree to which the disturbance affects the conservation objectives, depends on the wording of the objective, the species, the weight of evidence supporting the connection of the site feature to the area of functionally linked sea and the magnitude of the effect. For impact pathways that potentially result in injury or death, the impact to the population is more direct and permanent than that of disturbance, and more likely to credibly affect the conservation objectives of the site and its integrity.

In accordance with NRW's internal guidance on HRA, NRW's consideration of marine mammals in project HRAs is carried out in two stages of the process (the derogations are not covered in this document): Stage 1 – test of Likely Significant Effect; Stage 2 – Appropriate Assessment.

Stage 1 - Test of Likely Significant Effect

At this stage, the Competent Authority consider whether a project either alone or in combination with other plans and projects is 'likely to have a significant effect' (LSE) on a European site by undermining its conservation objective(s). An LSE is a 'possible' significant effect whose occurrence cannot be excluded on the basis of objective information. There should be an impact pathway and credible evidence of the absence of a possible yet real risk for LSE to be excluded. If the competent authority does not believe the risk to be credible, it can be ruled out at TLSE stage.

This stage – sometimes called screening – is intended to be a preliminary examination rather than a detailed investigation: if detail is required to come to a view, then it is probable that an Appropriate Assessment (AA) is needed. If it is unknown or there is doubt as to an absence of LSE, then an AA should be carried out.

Potential impact pathways are considered, including those occurring outside of site boundaries, with a brief examination of whether there are any reasonably foreseeable effects to marine mammal features of a site (in relation to the conservation objectives) based on credible evidence of a real risk, or a hypothetical risk where guidelines exist.

When considering which sites to screen into the assessment (for each impact pathway and species feature), the relevant MMMU is used as the spatial scale for screening (Figures 3-5). If credible impact pathways are identified, or there is reasonable doubt as to absence of an effect from the relevant impact to a marine mammal Annex II feature, in view of the conservation objectives, then all sites with that feature within the relevant MMMU for that species should be screened in for AA.

For most impact pathways, particularly those associated with potential removals or injury, using the MMMU as the spatial scale for assessment (screening) is therefore most appropriate. For some pathways, e.g., underwater noise disturbance, a different approach may also be relevant, e.g., using screening distances. However, using alternative approaches to screening depends on the weight of the evidence supporting that approach and should be considered on a case-by-case basis in consultation with NRW.

NRW advise the use of MMMUs for screening in HRA but may consider other approaches where adequately justified.

Stage 2 - Appropriate Assessment

An AA is made to establish whether there is any adverse effect on site integrity (AEOSI) in view of the site's conservation objectives.

When projects, impacts and mobile site features occur outside of site boundaries, but within the relevant MMMU, we follow different general principles for assessing each species feature for the AA. There may be exceptions to these principles where expert judgement will be required on a case-by-case basis. In this Position Statement we cover species that are features of Welsh SACs – bottlenose dolphin, harbour porpoise and grey seal:

- **Bottlenose dolphin**

The high level of connectivity between Pen Llŷn a'r Sarnau and Cardigan Bay SACs, and the strong evidence that there is a single population of bottlenose dolphins using both sites means that it is likely that an impact that causes AEOSI to one site would cause the same to the other. Conversely, ruling out an AEOSI on one site is likely to also mean no AEOSI on the other but this would need to be assessed independently.

For bottlenose dolphin: An Appropriate Assessment should be carried out on both bottlenose dolphin SACs: Pen Llŷn a'r Sarnau and Cardigan Bay.

- **Harbour porpoise**

SAC documentation specifies that the population of porpoise associated with the sites is that of the MMMU population: there is no specific number of porpoises associated with the site. The site Conservation Objectives for all harbour porpoise SACs in the MMMU are the same (see Appendix 1) and the sites are of equal importance to the species but vary by season.

For harbour porpoise: An Appropriate Assessment should be carried out on the closest site to the proposed plan or project location first. If AEOSI cannot be ruled out, a sequential/iterative assessment should be carried out considering the next closest site.

If AEOSI cannot be ruled out on the closest site first, then the next closest site is assessed and so on. Where AEOSI is ruled out on the closest site, it follows that AEOSI would also be ruled out at more distant sites. The differing seasonal nature of the sites, however, should be borne in mind during the assessment.

- **Grey seal**

Grey seal is a relatively complex feature to assess due to the seasonal changes to the population; the seals present at a site at one time of year (pupping) may be different to the seals present at another time (moulting/post-breeding). Yet there is a high degree of connectivity throughout the region (i.e., interim management unit). Some life cycle stages may also be more sensitive to certain impacts at certain times e.g., pupping and moulting. The conservation objectives of grey seal features largely relate to pupping but not exclusively; grey seal presence and distribution during non-breeding periods is also an important consideration in the AA.

Some locations in the region/management unit are also important non-breeding haul-outs (e.g., moulting, resting). Several haul-outs occur outside of SACs but seals that use these may be 'SAC animals' or associated with SACs. Additionally, there are differences in the 'importance' of certain pupping locations within the region. Pembrokeshire Marine SAC is the key SAC which supports most grey seal pupping within the Celtic and Irish Seas part of the OSPAR Region III area (interim management unit). As such, this site may need to be routinely assessed if grey seal is taken forward to assessment but will depend on the specifics of the case. Similarly, there are regionally important pupping sites that are not within an SAC, e.g., around Anglesey, but are connected to other SACs in the region. It is advised that the connectivity of these sites outside SACs and their association with SACs is considered when making an AA, and expert judgement will likely be required on assessments of grey seal SAC features on a case-by-case basis.

In general terms, we suspect that animals from further away from the source of an impact are less likely to travel to that location and therefore be affected than those in closer proximity.

For grey seal: An Appropriate Assessment should be carried out on the closest site to the proposed plan or project location first. If AEOSI cannot be ruled out, a sequential/iterative assessment should be carried out considering the next closest site.

Pembrokeshire Marine SAC is also likely to require assessment depending on the specifics of the case.

If the AA is unable to rule out an AEOSI for the closest site, the next closest site should then be considered, and so on. Where an AEOSI is ruled out at the closest site, it is unlikely that AEOSI would occur on sites further away, although Pembrokeshire Marine SAC is likely to require assessment depending on the specifics of the case.

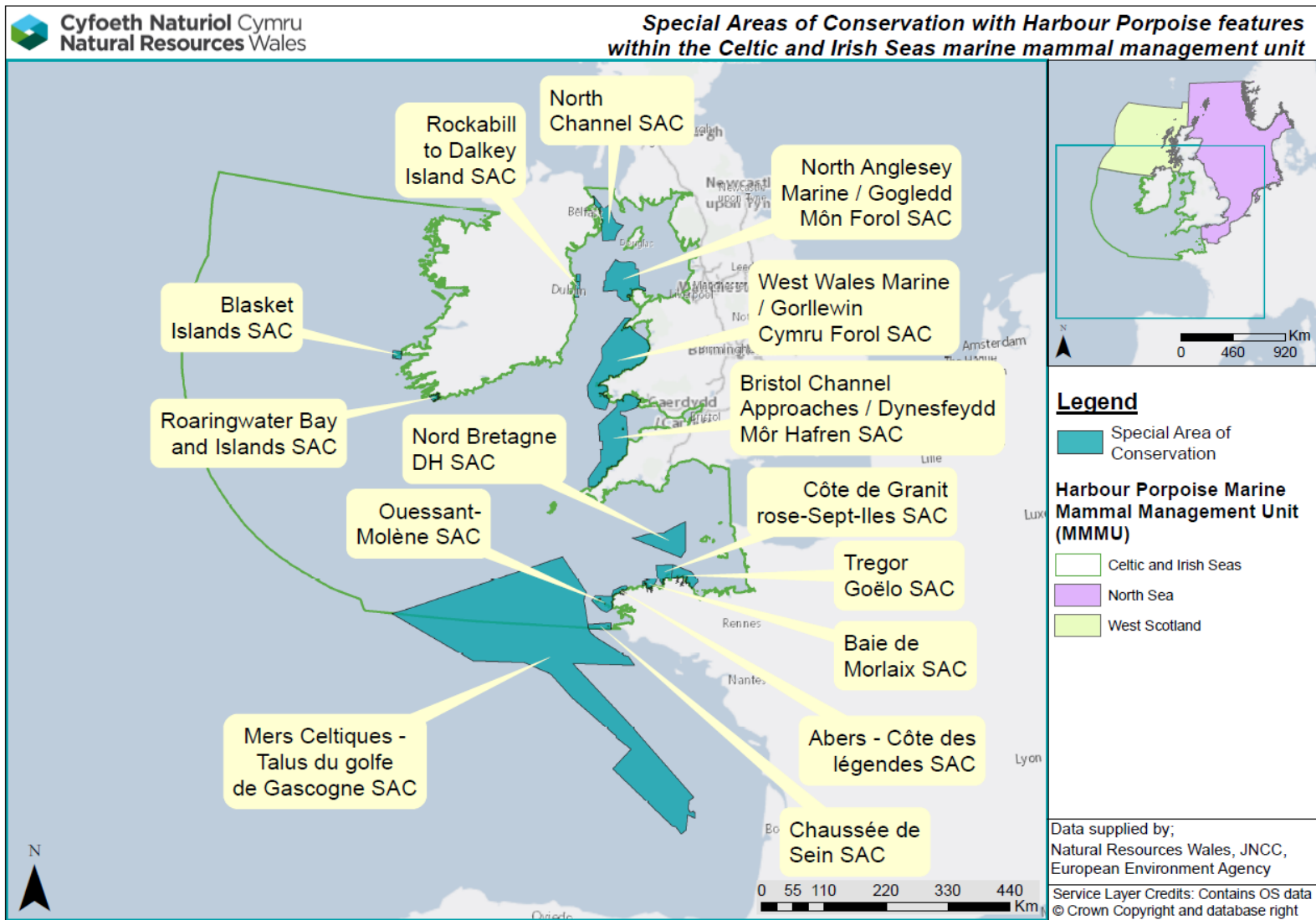


Figure 3. The Celtic and Irish Seas harbour porpoise MMMU and SACs within it.

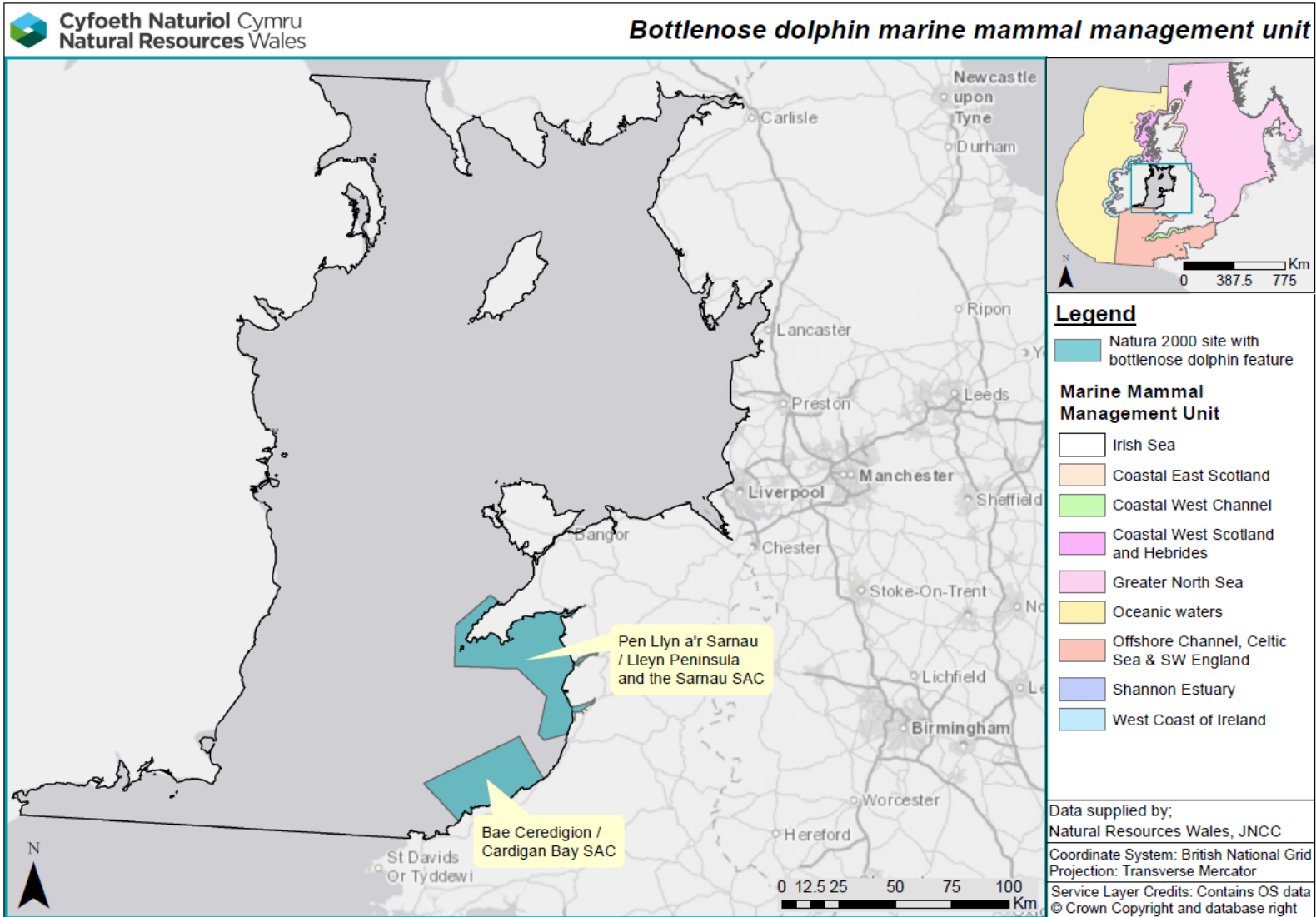


Figure 4. The Irish Sea bottlenose dolphin MMMU and SACs within it.

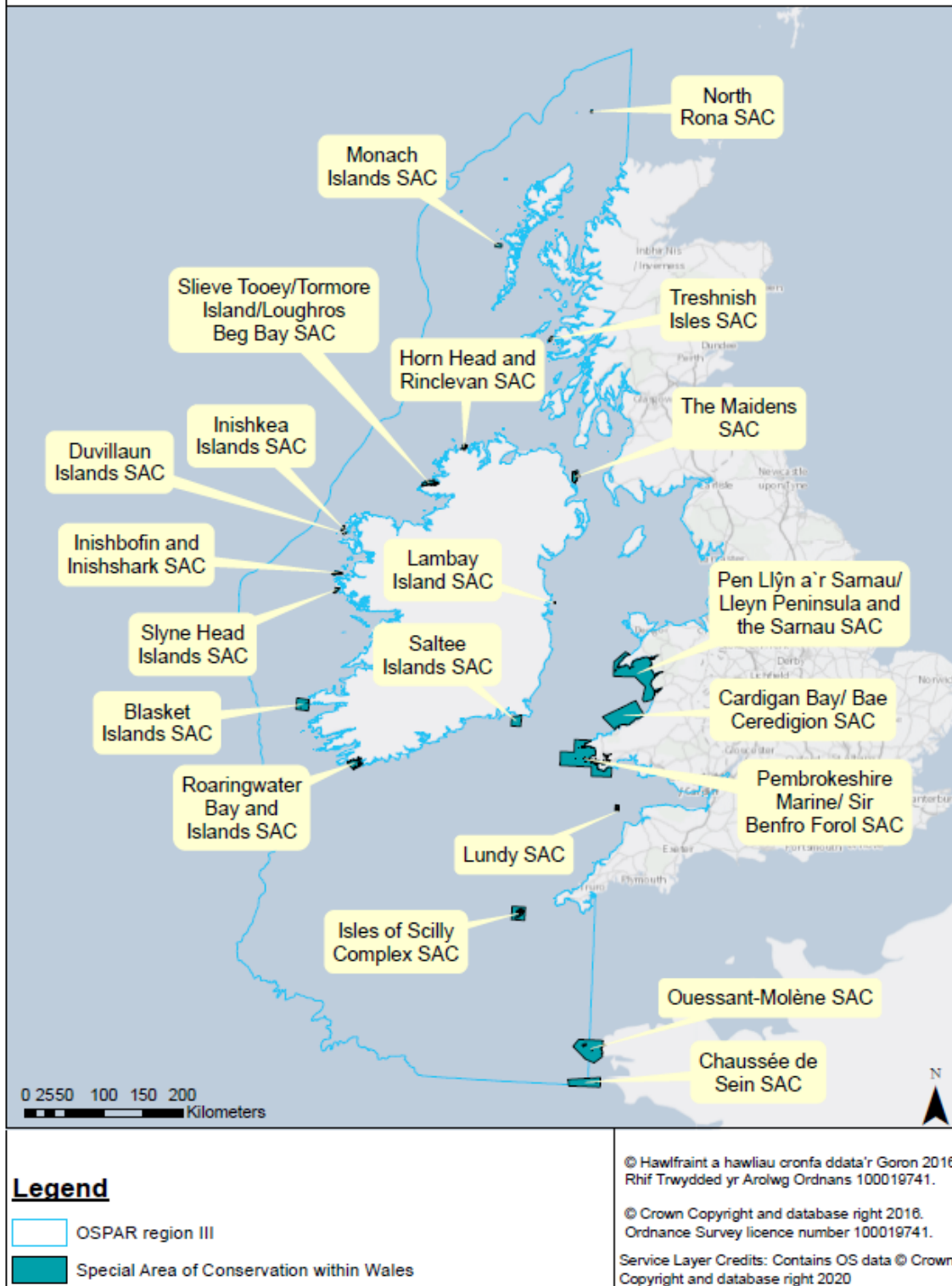


Figure 5. The OSPAR Region III interim MMMU for grey seal and SACs within it.

Appendices

Appendix 1: Conservation objectives

Harbour Porpoise

Harbour porpoise is a feature of three SACs in Welsh waters, North Anglesey Marine (NAM), West Wales Marine (WWM), and Bristol Channel Approaches (BCA). All sites are single feature sites (harbour porpoise only) and have common conservation objectives: see examples of the SAC 'Conservation Objectives and Advice on Operations' package at [Natural Resources Wales / Find protected areas of land and sea](#).

The sites were identified as having persistently higher densities of harbour porpoises (Heinänen and Skov 2015) compared to other areas of the MU. This is likely linked to the habitats within the site providing good feeding opportunities. Therefore, operations within or affecting the site should be managed to ensure that the animals' potential usage of the site is maintained.

Harbour porpoise is a viable component of the site

This SAC has been selected primarily based on the long-term, relatively higher densities of porpoise in contrast to other areas of the MU. The implication is that the SAC provides relatively good foraging habitat and may also be used for breeding and calving. However, because the number of harbour porpoise using the site naturally varies (e.g., between seasons), there is no exact number of animals within the site.

The intent of this objective is to minimise the risk of injury and killing or other factors that could restrict the survivability and reproductive potential of harbour porpoise using the site. Specifically, this objective is primarily concerned with operations that would result in unacceptable levels of those impacts on harbour porpoises using the site. Unacceptable levels can be defined as those having an impact on the FCS of the populations of the species in their natural range. The reference population for assessments against this objective is the MU population in which the SAC is situated (IAMMWG 2015).

The harbour porpoise is also a European Protected Species (EPS) listed on Annex IV of the Habitats Directive and as such is protected under the Habitats Directive Article 12 and transposing regulations from deliberate killing (or injury), capture and disturbance throughout its range. In addition, Article 12 (4) of the Habitats Directive is concerned with incidental capture and killing. It states that Member States 'shall establish a system to monitor the incidental capture and killing of the species listed on Annex IV (all cetaceans). In the light of the information gathered, Member States shall take further research or conservation measures as required to ensure that incidental capture and killing does not have a significant negative impact on the species concerned'. Site based measures should therefore be aligned with the existing strict protection measures in place throughout UK waters.

There is no significant disturbance of the species

Disturbance of harbour porpoise typically, but not exclusively, originates from operations that cause underwater noise including, as examples, seismic surveys, pile driving and sonar. Responses to noise can be physiological and/or behavioural. JNCC has produced guidelines to minimise the risk of physical injury to cetaceans from various sources of loud, underwater noise¹. However, disturbance is primarily a behavioural response to noise and may, for example, lead to harbour porpoises being displaced from the affected area.

This SAC was identified as having persistently higher densities of harbour porpoises (Heinänen and Skov, 2015) compared to other areas of the MU. This is likely linked to the habitats within the site providing good feeding opportunities. Therefore, operations within or affecting the site should be managed to ensure that the animals' potential usage of the site is maintained. Disturbance is considered significant if it leads to the exclusion of harbour porpoise from a significant portion of the site. Specifically, draft SNCB advice / guidance for assessing the significance of noise disturbance to a site suggests:

Noise disturbance within an SAC from a plan/project individually or in combination is significant if it excludes harbour porpoises from more than:

1. 20% of the relevant area² of the site in any given day³, and
2. an average of 10% of the relevant area of the site over a season^{4, 5}

The condition of supporting habitats and processes, and the availability of prey is maintained

Supporting habitats, in this context, means the characteristics of the seabed and water column. Processes encompass the movements and physical properties of the habitat. The maintenance of supporting habitats and processes contributes to ensuring that prey is maintained within the site and is available to harbour porpoises using the site. Some evidence shows that the harbour porpoise has a high metabolic rate compared to terrestrial mammals of similar size (Rojano-Doñate *et al.* 2018) and high feeding rates (Wisniewska *et al.* 2016). The harbour porpoise is therefore thought to be a species that is highly dependent on a year-round proximity to food sources and its distribution and condition may strongly reflect the availability and energy density of its prey (Brodie 1995 in Santos & Pierce, 2003). The densities of porpoise using a site are likely linked to the availability (and density) of prey within the site. Harbour porpoise eat a variety of prey including gobies, sandeel, whiting, herring and sprat. However, the diet of porpoises when within the sites is not well known but is likely comparable to that in the wider seas.

¹ [Marine mammals and noise mitigation | JNCC - Adviser to Government on Nature Conservation](#)

² The relevant area is defined as that part of the SAC that was designated on the basis of higher persistent densities for that season (summer defined as April to September inclusive, winter as October to March inclusive).

³ Applicable only in Habitats Regulations Assessments (HRA) due to impracticality of daily noise limit management of activities, but retrospective compliance analysis advised

⁴ Summer defined as April to September inclusive, winter as October to March inclusive

⁵ For example, a daily footprint of 19% for 95 days would result in an average of $19 \times 95 / 183$ days (summer) = 9.86%

There are several operations (Table 2 [in the site's 'Conservation Objectives and Advice on Operations' package]) which potentially affect the achievement of this Conservation Objective. Whilst some plans/projects are unlikely to have a significant effect alone, an effect might become significant when considered in combination with other plans/projects and against the background of existing activities/pressures on the site. Further work is needed to assess historic, existing and planned levels of plans/projects in the sites and to better understand their impacts on the habitats and prey within the sites.

Bottlenose and grey seals

Bottlenose dolphin are a feature of Cardigan Bay (CB) and Pen Llyn a'r Sarnau (PLAS) SACs. Grey seal is a feature of PLAS and Pembrokeshire Marine (PM) SAC. These species and sites have common conservation objectives: see examples of the SAC 'Regulation 37 Advice' packages at [Natural Resources Wales / Find protected areas of land and sea](#)

Populations

The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements include:

- population size
- structure, production
- condition of the species within the site.

As part of this objective, it should be noted that for **bottlenose dolphin** and **grey seal**:

- Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression

For **grey seal** populations should not be reduced as a consequence of human activity.

Range

The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future.

As part of this objective, it should be noted that for **bottlenose dolphin** and **grey seal**:

- Their range within the SAC and adjacent inter-connected areas is not constrained or hindered
- There are appropriate and sufficient food resources within the SAC and beyond
- The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing

Supporting habitats and species

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 stable or increasing. Important considerations include:

- distribution
- extent
- structure
- function and quality of habitat
- prey availability and quality.

As part of this objective, it should be noted that:

- The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term.
- The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term.
- Contamination of potential prey species should be below concentrations potentially harmful to their physiological health.
- Disturbance by human activity is below levels that suppress reproductive success, physiological health, or long-term behaviour

Restoration and recovery

As part of this objective, it should be noted that for the **bottlenose dolphin**, populations should be increasing.

Appendix 2: Evidence base underpinning MMMUs

The evidence varies for each of the Annex II marine mammal species. Species that are features of SACs around Wales are described below (common seal is not a feature of an SAC around Wales).

Harbour porpoise

Satellite telemetry in Denmark and Greenland indicates that some animals range widely while others show a degree of site fidelity (Nielsen *et al.* 2018). However, there are no studies of harbour porpoise movements in UK - there has been no tagging of wild cetaceans in UK waters, and individual identification e.g., through photo ID, is not thought to be effective due to the general lack of identifying features and the small, elusive nature of the species. However, harbour porpoise is thought to be a wide-ranging species (Read & Westgate 1997; Sveegaard *et al.* 2011), and within the eastern North Atlantic they have generally been considered to behave as a 'continuous' biological population that extends from the French coasts of the Bay of Biscay northwards to the arctic waters of Norway and Iceland (Tolley & Rosel 2006; Fontaine *et al.* 2007). For conservation and management purposes, it is useful to divide this population into smaller units where distinct habitat or human pressures – such as bycatch – exist. As such, three porpoise MUs – Celtic and Irish Seas, North Sea, Western Scotland - have been agreed around the UK (IAMMWG 2015; 2021), and given the evidence underpinning the creation of MUs, we consider the population associated with each MU to form a single inter-connected unit that represents an appropriate scale for wider management of the population.

Fontaine *et al.* (2017), however, recently found some genetic and morphological differentiation in porpoise populations in the NE Atlantic. Around western parts of the British Isles and Bay of Biscay there is a mixing zone between Iberian and North Atlantic 'types' which has led the North Atlantic Marine Mammal Commission (NAMMCO) to propose separate stock identities for West Scotland/Ireland, Celtic Seas and Irish Seas (NAMMCO 2019; NAMMCO/IMR 2019). These stock assessment units differ from management units used by the IAMMWG (SNCBs) and the MSFD/ICES Assessment Units. Further work by the SNCBs is underway to examine these findings.

Bottlenose dolphin

There is strong evidence through photo-ID that coastal bottlenose dolphins in the Irish Sea do not tend to move into Celtic Seas or beyond and are relatively constrained to the Irish Sea Management Unit (Feingold & Evans 2014; Lohrengel *et al.* 2018; Pesante *et al.* 2008b). The largest population of coastal bottlenose dolphins in the UK is found in Cardigan Bay. The population ranges beyond the boundaries of Cardigan Bay (CB) and Pen Llŷn a'r Sarnau (PLAS) SACs (of which it is a feature of both) and has been observed throughout the wider management unit but not beyond (Pesante *et al.* 2008a,b). Photo-ID evidence shows that most individual dolphins move between the two SACs, strongly supporting the idea that the populations of the two SACs are highly connected, and that there is likely a single generic population across the management unit (although a few individuals appear to be faithful to one particular site).

Cardigan Bay SAC is the principal SAC for bottlenose dolphin and was designated primarily (Grade A) for this species, whereas bottlenose dolphins are a secondary (Grade

C) feature of PLAS SAC. However, there is no legislative reason why one site would be more important than the other, and given the strong evidence outlined above, we consider the entire Irish sea MU to be a single inter-connected unit. We therefore consider the population associated with PLAS SAC and CB SAC to be the same and that this is broadly equivalent to the population of the wider MU for purpose of assessment of site integrity.

Grey seal

There is strong evidence (through photo-ID and tagging studies) that grey seals range among the three Welsh SACs and beyond throughout the regional seas (OSPAR Region III area: western coast of Great Britain and neighbouring areas) (Baines *et al.* 1995; Carter and Russell 2018; Cronin *et al.* 2016; Jessopp *et al.* 2013; Jones *et al.* 2013; Keily *et al.* 2000; Langley *et al.* 2018, 2020; Pomeroy *et al.* 2014; Russell *et al.* 2017; Thompson 2011; Vincent *et al.* 2005, 2017). The evidence shows that individual grey seals move between the sites, supporting the notion that the SACs are connected, and that there is likely a single generic population using the region. There is strong evidence that Pembrokeshire Marine SAC is the most important site in the region due to the highest numbers of pups being born there annually (Baines *et al.* 1995; Keily *et al.* 2000; McMath & Stringell 2006; Strong *et al.* 2006).

Grey seals show strong site fidelity during the pupping season (Langley *et al.* 2018, 2020; Pomeroy *et al.* 2000), when they give birth and nurse pups on land. The population can therefore be considered a closed population during pupping time and the notion of a SAC population makes some sense during this time. Outside of this season, seals still rely on land for moulting and resting but are less site faithful, with animals dispersed over a wider area (SCOS 2017). Thus, we see a difference in the grey seal population distribution at different times of the year, and animals may be more sensitive to disturbance during pupping and moulting times. Nevertheless, the conservation objectives of Welsh SACs relate to the species in general rather than any specific life stage. It therefore makes sense to consider the population level effects at a wider scale and consider site specific evidence where available. We only have recent (within last 5 years) estimates of SAC level pup production for PLAS SAC. We have older data on pup production in Pembrokeshire Marine SAC and limited relevant data for CB SAC. We assert, however, that effects on the wider population should be considered when conducting HRA given the interconnectivity of the population in the region.

References

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