

MONA OFFSHORE WIND PROJECT

Appendix to ExQ1 Q1.10.6 Part B, Conservation objectives for SPAs screened in for Likely Significant Effects

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Image of an offshore wind farm

MONA OFFSHORE WIND PROJECT

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Glossary

Term	Meaning
Applicant	Mona Offshore Wind Limited.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Mona Offshore Wind Project	The Mona Offshore Wind Project is comprised of both the generation assets, offshore and onshore transmission assets, and associated activities.
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects.

Acronyms

Acronym	Description
HRA	Habitats Regulations Assessment
LSE	Likely Significant Effect
SAC	Special Area of Conservation
SPA	Special Protection Area

1 Appendix to ExQ1 Q1.10.6 Part B, Conservation objectives for SPAs screened in for Likely Significant Effects

1.1 Introduction

1.1.1.1 This document has been prepared in response to Question 1.10.6 of the Examining Authority's first round of Written Questions addressed to the Applicant. The question is as follows:

Conservation Objectives

The ExA will be considering the potential for adverse effects on European sites in light of their conservation objectives. Can the Applicant provide conservation objectives for all European sites for which a Likely Significant Effect has been identified.

1.2 Response

1.2.1.1 This document includes the conservation objectives for the following Special Protection Areas (SPAs) for which a Likely Significant Effect (LSE) was identified in the Habitats Regulations Assessment (HRA) Stage 1 Screening Report (REP2-012):

- Liverpool Bay/Bae Lerpwl SPA (Appendix A)
- Ribble and Alt Estuaries SPA (and Ramsar site) (Appendix B)
- Irish Sea Front SPA (Appendix C)
- Morecambe Bay and Duddon Estuary SPA (Appendix D)
- Bowland Fells SPA (Appendix E)
- Glannau Aberdaron ac Ynys Enlli/Aberdaron Coast and Bardsey Island SPA (Appendix F)
- Lambay Island SPA (Appendix G)
- Howth Head Coast SPA (Appendix H)
- Ireland's Eye SPA (Appendix I)
- Copeland Islands SPA (Appendix J)
- Wicklow Head SPA (Appendix K)
- Ailsa Craig SPA (Appendix L)
- Rathlin Island SPA (Appendix M)
- Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA (Appendix N)
- Grassholm SPA (Appendix O)
- Saltee Islands SPA (Appendix P)
- North Colonsay and Western Cliffs SPA (Appendix Q)
- Rum SPA (Appendix R)
- Shiant Isles SPA (Appendix S)
- Skelligs SPA (Appendix T)

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- Handa SPA (Appendix U)
- St Kilda SPA (Appendix V)
- Cape Wrath SPA (Appendix W)
- Flannan Isles SPA (Appendix X)
- Flamborough and Filey Coast SPA (Appendix Y)
- Fowlsheugh SPA (Appendix Z)
- Mingulay and Berneray SPA (Appendix AA)
- Canna and Sanday SPA (Appendix BB)
- Isles of Scilly SPA (Appendix CC)
- Buchan Ness to Collieston SPA (Appendix DD)
- Troup, Pennan and Lion's Heads SPA (Appendix EE)
- East Caithness Cliffs SPA (Appendix FF)
- North Caithness Cliffs SPA (Appendix GG)
- Sule Skerry and Sule Stack SPA (Appendix HH)
- North Rona and Sula Sgeir SPA (Appendix II)
- West Westray SPA (Appendix JJ)

1.2.1.2 With regards to the Ribble and Alt Estuaries Ramsar site, no separate conservation objectives are provided. On Natural England's Designated Sites View, under the conservation advice for the Ribble and Alt Estuaries Ramsar (Natural England, no date), it states that as the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations)¹ relating to Habitats Regulations Assessments extend to Ramsar sites, Natural England considers the Conservation Advice packages for the overlapping European Marine Site designations to be, in most cases, sufficient to support the management of the Ramsar interests. If there are Ramsar qualifying features not covered by overlapping European Marine Sites, Natural England will consider the best approach on addressing these (e.g. to produce advice on a feature basis) if there is an operational risk. Therefore, the conservation objectives provided in Appendix B for the Ribble and Alt Estuaries SPA apply equally to the Ribble and Alt Estuaries Ramsar site.

1.2.1.3 The conservation objectives for the Special Areas of Conservation (SACs) for which an LSE was identified in the HRA Stage 1 Screening Report (REP2-012) are provided separately in S_D3_25.5 Appendix to ExQ1 Q1.10.6 Part A, Conservation objectives for SACs screened in for Likely Significant Effects at Deadline 3.

1.3 References

Natural England (no date) Natural England Conservation Advice for Marine Protected Areas Ribble and Alt Estuaries Ramsar. Available at: <https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK11057&SiteName=ribble%20and&SiteNameDisplay=Ribble%20and%20Alt%20>

¹ Which derive from the European Commission's Habitats Directive (92/43/EEC) and the Wild Birds Directive (Directive 79/409/ECC).

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Estuaries%20Ramsar&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=&HasCA=0. Accessed September 2024.

Appendix A Liverpool Bay/Bae Lerpwl SPA



Liverpool Bay / Bae Lerpwl Special Protection Area

Conservation Advice Package



Version 1 (December 2022)

Report details

Natural England Joint Publication JP046

Authors

Natural England (NE), Natural Resources Wales (NRW) and the Joint Nature Conservation Committee (JNCC)

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Executive summary

Liverpool Bay / Bae Lerpwl Special Protection Area (SPA) was originally classified in 2010 for common scoter (*Melanitta nigra*), red-throated diver (*Gavia stellata*) and waterbird assemblage. In 2017, the SPA was reclassified by the UK and Welsh Governments. At this time, three more bird features were added. These are non-breeding little gull (*Hydrocoloeus minutus*), breeding little tern (*Sternula albifrons*) and breeding common tern (*Sterna hirundo*). As part of the reclassification in 2017, the boundary of the SPA was extended to the north and west to support the addition of little gull.

The Liverpool Bay / Bae Lerpwl SPA lies in both English and Welsh territorial waters and in offshore UK waters and forms part of the National Sites Network.

This advice for the Liverpool Bay / Bae Lerpwl SPA was jointly prepared by Natural England and Natural Resources Wales (NRW) and given in fulfilment of their duty under Regulation 37 of the Conservation of Habitats and Species Regulations 2017 and the Joint Nature Conservation Committee (JNCC) given in fulfilment of their duty under Regulation 21 of the Conservation of Offshore Marine Habitats and Species Regulations 2017.

Section 3 provides the background and detail of the conservation objectives for each of the features.

General site and feature information for Liverpool Bay / Bae Lerpwl SPA can be found in section 4.

The advice on operations, in relation to the site, can be found in section 5, along with information relating to each feature's seasonality.

Crynodeb Gweithredol

Dosbarthwyd Ardal Gwarchodaeth Arbennig (AGA) Bae Lerpwl / Liverpool Bay yn wreiddiol yn 2010 oherwydd ei môr-hwyaden ddu (*Melanitta nigra*), ei throchydd gyddfgoch (*Gavia stellata*) a'i chasgliad o adar dŵr. Yn 2017, cafodd yr AGA ei hailddosbarthu gan Lywodraethau Cymru a'r DU. Yr adeg honno, ychwanegwyd tair nodwedd adar arall, sef yr wylan fechan (*Hydrocoloeus minutus*) nad yw'n bridio, y fôr-wennol fechan (*Sternula albifrons*) a'r fôr-wennol gyffredin (*Sterna hirundo*) sy'n bridio. Fel rhan o'r ailddosbarthiad yn 2017, cafodd terfyn yr AGA ei ymestyn i'r gogledd a'r gorllewin i gynnal ychwanegu'r wylan fechan.

Mae AGA Bae Lerpwl / Liverpool Bay wedi ei lleoli yn nyfroedd tiriogaethol Cymru a Lloegr ac yn nyfroedd môr mawr y DU ac mae'n ffurfio rhan o'r Rhwydwaith Safleoedd Cenedlaethol.

Cafodd y cyngor hwn ar gyfer AGA Bae Lerpwl / Liverpool Bay ei baratoi ar y cyd gan Natural England a Cyfoeth Naturiol Cymru (CNC) a'i gyflwyno wrth iddynt gyflawni eu dyletswydd dan Reoliad 37, Rheoliadau Cadwraeth Cynefinoedd a Rhywogaethau 2017 a'r Cyd-bwyllgor Cadwraeth Natur (JNCC) wrth gyflawni eu dyletswydd dan Reoliad 21, Rheoliadau Cadwraeth Cynefinoedd a Rhywogaethau Morol Alltraeth 2017.

Mae Adran 3 yn rhoi cefndir a manylion amcanion cadwraeth pob un o'r nodweddion.

Gellir dod o hyd i wybodaeth gyffredinol am safle a nodweddion AGA Bae Lerpwl / Liverpool Bay yn adran 4.

Gellir dod o hyd i gyngor ar weithrediadau, mewn perthynas â'r safle, yn adran 5, yn ogystal â gwybodaeth gysylltiedig â thymoroldeb pob nodwedd.

For further information

Natural England

Website: [Liverpool Bay/Bae Lerpwl SPA - UK9020294A \(naturalengland.org.uk\)](https://www.naturalengland.org.uk)

Email: Cheshire2.Lancashire@defra.gov.uk
enquiries@naturalengland.org.uk

Tel: 0300 060 3900

Natural Resources Wales

Website: [Natural Resources Wales Conservation Advice](https://www.naturalresourceswales.gov.uk)

Email: enquiries@naturalresourceswales.gov.uk

Address:

Natural Resources Wales
Maes y Ffynnon, Penrhosgarnedd
Bangor, Gwynedd. LL57 2DW

Tel: 0300 065 3000

Joint Nature Conservation Committee

Website: [Liverpool Bay SPA | JNCC - Adviser to Government on Nature Conservation](https://www.jncc.gov.uk)

Email: communications@jncc.gov.uk

Liverpool Bay / Bae Lerpwl Special Protection Area

Advice under Regulation 37 of the Conservation of Habitats and Species Regulations 2017 & Regulation 21 of the Conservation of Offshore Marine Habitats and Species Regulations 2017

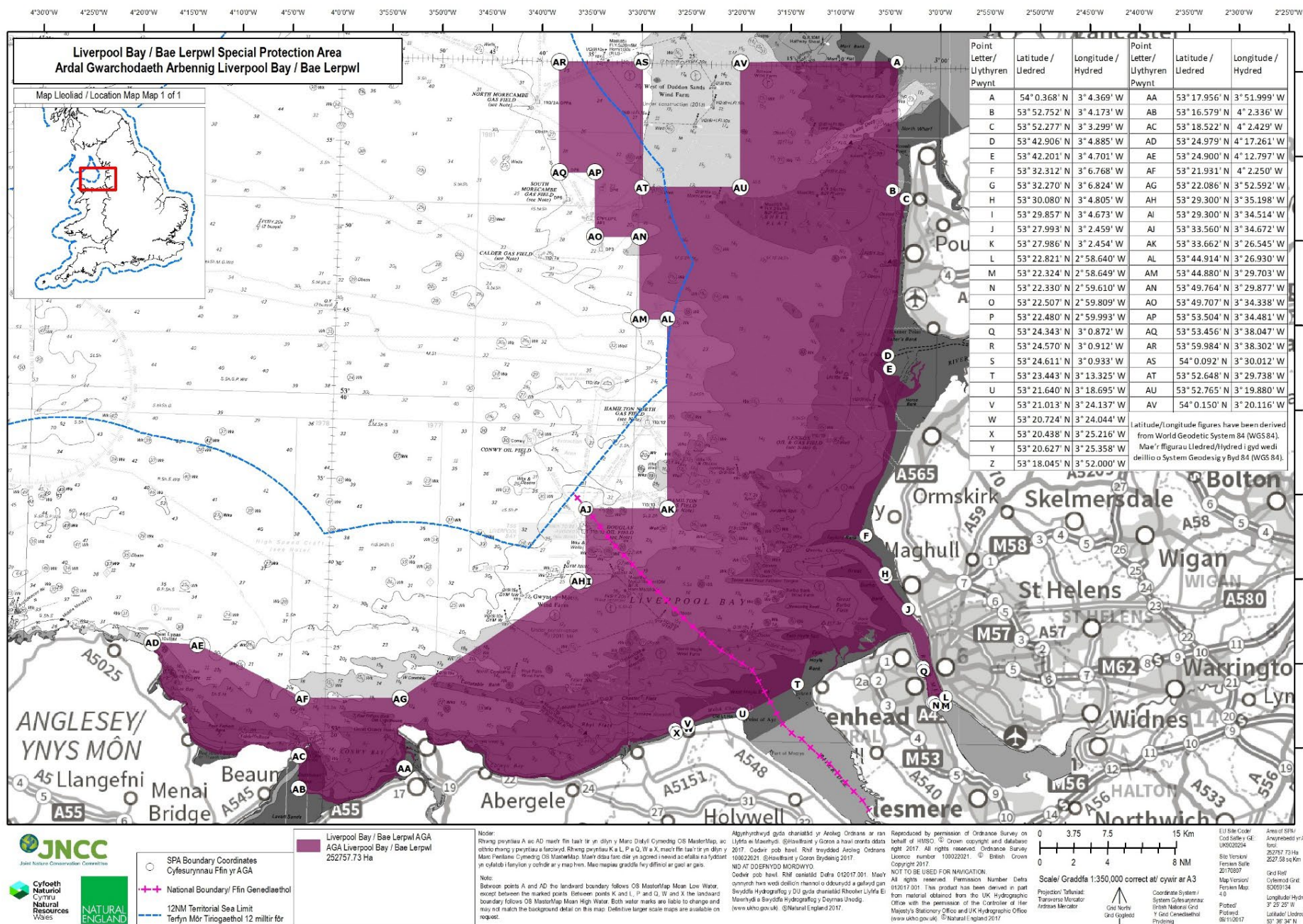
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Figure 1: Map showing the site boundary of Liverpool Bay / Bae Lerpwl SPA



1. Introduction

Liverpool Bay / Bae Lerpwl Special Protection Area (SPA) was originally classified in 2010 for common scoter (*Melanitta nigra*), red-throated diver (*Gavia stellata*) and waterbird assemblage. In 2017, the SPA was reclassified by the UK and Welsh Assembly Governments. At this time, three more bird features were added. These are non-breeding little gull (*Hydrocoloeus minutus*), breeding little tern (*Sternula albifrons*) and breeding common tern (*Sterna hirundo*). As part of the reclassification in 2017, the boundary of the SPA was extended to the north and west to support the addition of little gull.

The Liverpool Bay / Bae Lerpwl SPA lies in both English and Welsh territorial waters and in offshore UK waters and forms part of the National Sites Network.

The SPA is subject to protection under the Conservation of Habitats and Species Regulations 2017¹ (referred to in this document as the 'Habitats Regulations') and the Conservation of Offshore Marine Habitats and Species Regulations 2017² (referred to in this document as the 'Offshore Habitats Regulations'). When the 'relevant Habitats Regulations' are referred to in this document it means that either the Conservation of Habitats and Species Regulations 2017 or the Conservation of Offshore Marine Habitats and Species Regulations 2017, or both, should be referred to depending on what is appropriate.

Amongst other things, both relevant Habitats Regulations place an obligation on relevant³ and competent authorities (outlined in section 2.2) to put in place measures to protect the sites from damage or deterioration.

This advice for the Liverpool Bay / Bae Lerpwl SPA is jointly prepared by Natural England and Natural Resources Wales (NRW) and given in fulfilment of their duty under Regulation 37⁴ of the Habitats Regulations and the Joint Nature Conservation Committee (JNCC) given in fulfilment of their duty under Regulation 21⁵ of the Offshore Habitats Regulations.

This advice is based on the best available evidence and information at the time of writing in accordance with our evidence standards⁶. It will be kept under review by Natural England, Natural Resources Wales and the JNCC and updated with significant and appropriate new evidence and information.

The features of Liverpool Bay / Bae Lerpwl SPA are:

- Non-breeding red-throated diver (*Gavia stellata*);
- Non-breeding common scoter (*Melanitta nigra*);
- Non-breeding little gull (*Hydrocoloeus minutus*);
- Breeding common tern (*Sterna hirundo*);
- Breeding little tern (*Sternula albifrons*); and
- Non-breeding waterbird assemblage.

Liverpool Bay / Bae Lerpwl SPA qualifies under Article 4 of the Birds Directive (2009/147/EC) for the following reasons:

- Species listed in Annex I of the Birds Directive: the site regularly supports more than

¹ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

² [The Conservation of Offshore Marine Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

³ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

⁴ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

⁵ [The Conservation of Offshore Marine Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

⁶ [Research at Natural England - Natural England - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

1% of the Great Britain populations of two breeding species and one non-breeding species (Table 1). Therefore, the site qualifies for SPA classification in accordance with the UK SPA selection guidelines (stage 1.1: JNCC 1999).

- Regularly occurring migrants not listed in Annex I of the Birds Directive: the site regularly supports more than 1% of the biogeographical populations of one non-breeding species (Table 1). Therefore, the site qualifies for SPA classification in accordance with the UK SPA selection guidelines (stage 1.2: JNCC 1999).
- Assemblages: the site regularly supports an assemblage of more than 20,000 individual waterbirds. Therefore, the site qualifies for SPA classification in accordance with the UK SPA selection guidelines (stage 1.3: JNCC 1999).
- Species for which stage 1 guidelines cannot be applied: the site regularly supports one non-breeding species which is on Annex I of the Birds Directive but which cannot be selected at stage 1.1 because there is no national population estimate for comparison (Table 1). The site is identified as supporting the second largest aggregation of little gulls in the UK, and therefore qualifies for SPA classification in accordance with the UK SPA selection guidelines (stage 1.4: JNCC 1999).

2. Roles and responsibilities

2.1 Natural England's, Natural Resources Wales's and the JNCC's role

The Habitats Regulations give Natural England and Natural Resources Wales, and the Offshore Habitats Regulations give the JNCC, a statutory responsibility to advise relevant authorities as to (a) the conservation objectives for Liverpool Bay / Bae Lerpwl SPA within their respective jurisdictions and, (b) any operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species for which Liverpool Bay / Bae Lerpwl SPA has been classified.

Natural England, Natural Resources Wales and the JNCC will provide additional advice for the site to relevant authorities and competent authorities to allow them to fulfil their duties under their relevant Habitats Regulations, such as a competent authority assessing the implications of any plans or projects on the SPA. Each plan or project will be judged on its own merits, and this will determine the nature of any additional advice required.

2.2 The role of competent and relevant authorities

The term “competent authority” includes all public bodies and statutory undertakers. In relation to the marine area, all competent authorities⁷ are required to exercise their functions which are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of the Birds Directive. This includes competent authorities undertaking a Habitat Regulations Assessment, for which guidance is available⁸.

Competent authorities have specific duties and powers under the relevant Habitats

⁷ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

⁸ [Habitats regulations assessments: protecting a European site - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

Regulations⁹. Before a competent authority decides to undertake or give any consent or permission or other authorisation for a plan or project which is: (i) likely to have a significant effect on a European Marine Site or a European offshore marine site (either alone or in combination with other plans or projects); and (ii) is not directly connected with or necessary to the management of that site, then the competent authority must carry out an appropriate assessment of the implication of the plan or project for that site in view of that site's conservation objectives. Competent authorities also have duties to review decisions that have already been made¹⁰.

The competent authority carries out the appropriate assessment and makes a decision rather than the proponent of the plan or project or the Statutory Nature Conservation Body (SNCB i.e., Natural England, Natural Resources Wales or the JNCC). However, the competent authority must consult the SNCB under Regulation 63(3) and must have regard to any representations made by the SNCB when reaching its decision. Regulation 63(2) makes it clear that the applicant must supply the necessary information for the competent authority to make the assessment. The competent authority can require the proponent to provide sufficient information to inform the assessment. When carrying out the assessment, the competent authority **must** consult Natural England and/or Natural Resources Wales and the JNCC as appropriate, in accordance with the relevant Habitats Regulations.

The relevant authorities under Regulation 38¹¹ of the Habitats Regulations, and a competent authority under Regulation 22¹² of the Offshore Habitat Regulations, may draw up a management scheme for the site. If such a scheme were to be established, its purpose would be to provide a vehicle through which the relevant authority, or competent authority for offshore sites, must exercise their functions so as to secure compliance with the Directive (as defined above). Any management on this site should be guided by the advice in this package.

Relevant authorities must, within their areas of jurisdiction, have regard to both direct and indirect effects on interest features of the site. This may include consideration of issues outside the boundary of the site.

Nothing within a Regulation 37/21 package will require relevant authorities to undertake any actions or ameliorate changes in the condition of interest features if it is shown that the changes result wholly from natural causes.

Having issued Regulation 37/21 advice for this site Natural England, Natural Resources Wales and the JNCC will continue to review any new evidence or information about this site and will provide further guidance as appropriate. This does not, however, preclude relevant authorities from taking any appropriate action to prevent deterioration to the interest features and indeed such actions should be undertaken when required.

2.3 The role of conservation objectives

The conservation objectives should ensure that the obligations of the relevant Habitats Regulations are met by ensuring the integrity of the site is maintained, or where necessary restored, and that its qualifying features makes an appropriate contribution to favourable conservation status (FCS) at the national level. This includes the site's contribution to the

⁹ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](#) and [The Conservation of Offshore Marine Habitats and Species Regulations 2017 \(legislation.gov.uk\)](#)

¹⁰ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](#) and [The Conservation of Offshore Marine Habitats and Species Regulations 2017 \(legislation.gov.uk\)](#)

¹¹ [The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](#)

¹² [The Conservation of Offshore Marine Habitats and Species Regulations 2017 \(legislation.gov.uk\)](#)

coherence of the National Site Network.

They are the starting point from which management of the site and monitoring programmes may be developed, as they provide the basis for determining what will maintain or restore features to favourable condition. They inform the consideration of whether plans or projects are likely to have a significant effect on a site; the scope and conclusions of appropriate assessments; and the determination of whether plans or projects will adversely affect the integrity of the site.

2.4 The role of advice on operations

The advice on operations set out in Section 5 of this document provides the basis for discussion about the nature of the operations that could take place within, or close to, the site, and which have the potential to have an impact on its interest features.

Specific advice should be sought from Natural England, Natural Resources Wales or the JNCC to help identify the extent to which existing measures of control, management and forms of use are, or can be made, consistent with the conservation objectives. This should focus the attention of relevant authorities and surveillance programmes on areas that may need management measures.

2.5 When to use this advice

The aim of this advice is to enable all relevant authorities to direct and prioritise their work on the management of activities that pose the greatest potential threat to the favourable condition of interest features at Liverpool Bay / Bae Lerpwl SPA. The advice given here is without prejudice to any advice provided in relation to the consideration of plans or projects within the meaning of Part 6 of the Habitat Regulations or Regulation 28 of the Offshore Habitats Regulations.

This information should be used with case-specific advice issued by Natural England, Natural Resources Wales and the JNCC when developing, proposing or assessing an activity, plan or project that may affect the site.

Any proposals or operations which may affect the site, or its features should be designed so they do not hinder the achievement of the conservation objectives as this would amount to an adverse effect on the integrity of the site.

3. Conservation objectives

The conservation objectives present attributes for each of the classified species within the site. These attributes are ecological characteristics, and ecological requirements, of the classified species within a site. Taken together, the attributes of all the features describe the site's ecological integrity. The sites conservation objectives will be met when all attributes meet their targets.

The integrity of a site is defined as the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated. Feature attributes allow a feature's condition to be measured which in turn can be used to see if site integrity is being maintained. Unfavourable condition, or failure of an attribute, means that site integrity is not being maintained.

The conservation objectives outline attributes for:

- Species abundance;
- Species distribution;
- Disturbance caused by human activity
- Supporting habitat (food availability)
- Supporting habitat (extent, distribution and availability)
- Connectivity with supporting habitats (little gull, common tern and little tern only)
- Assemblage of species: diversity (waterbird assemblage only)

The attributes relating to supporting habitats and processes should allow birds to distribute themselves optimally within (and sometimes outside) the SPA boundary. This is perhaps particularly relevant for food availability; extent and distribution of supporting habitat; quality of supporting habitat; predation; and disturbance caused by human activity.

Conservation objective attributes have a target which is either quantified or qualified depending on the available evidence. The target identifies, as far as possible, the desired state to be achieved for the attribute. In many cases, the attribute targets show if the current objective is to either 'maintain' or 'restore' the attribute. **The targets given for each attribute do not represent thresholds to assess the significance of any given impact in Habitats Regulation Assessments.** This will need to be assessed on a case-by-case basis using the most current information available.

Some, but not all, of these conservation objective attributes can also be used for regular monitoring of the condition of the classified features. The attributes selected for monitoring the features, and the standards used to assess their condition, are listed in separate monitoring documents, which are available from Natural England, Natural Resources Wales and the JNCC. As condition assessment information becomes available this conservation advice package will be reviewed accordingly.

3.2 Liverpool Bay / Bae Lerpwl SPA conservation objectives

The conservation objectives for Liverpool Bay / Bae Lerpwl SPA are set out in the sections below. As noted in section 1 above, Natural England, Natural Resources Wales and the JNCC may, in future, refine these as understanding of the features improves and further information, such as survey work, becomes available.

The conservation objectives should ensure that the obligations of the relevant Habitats Regulations are met by ensuring the integrity of the site is maintained, or where necessary restored, and that its qualifying features, when in favourable condition, makes an appropriate contribution to favourable conservation status (FCS) for those species at the national level. This includes the site's contribution to the coherence of the National Site Network.

The conservation objectives are the starting point from which management of the site and monitoring programmes may be developed as they provide the basis for determining what will maintain or restore features to favourable condition. They inform the consideration of whether plans or projects are likely to have a significant effect on a site; the scope and conclusions of appropriate assessments; and the determination of whether plans or projects will adversely affect the integrity of the site.

The map at the beginning of this document shows the Liverpool Bay/Bae Lerpwl SPA site boundary. It should be noted that activities outside the site may also affect the features of the site. Reference should also be made to the relevant Habitats Regulations.

Each feature's conservation objective section provides:

1. A clear statement of the conservation objective for the feature
2. A table summarising the attributes, and the targets for those attributes
3. A description of the favourable condition for that feature and
4. A summary of evidence that underpins the selection of the feature, its attributes and targets.

3.3 The conservation objectives for Liverpool Bay / Bae Lerpwl SPA Interest feature 1: Internationally important non-breeding population of red-throated diver (*Gavia stellata*)

Subject to natural change¹³, maintain¹⁴ or restore¹⁵ the red-throated diver population, distribution and its supporting habitats in favourable condition.

Table 1: Conservation objectives (attributes and targets) for the Liverpool Bay / Bae Lerpwl SPA interest feature red-throated diver.

Feature	Attribute	Target
Red-throated diver	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 1800 individuals (mean peak, 2015, 2018, 2019 & 2020).
	Non-breeding population: distribution	Restore ¹⁶ the distribution of the feature; preventing further deterioration, and where possible, reduce any existing anthropogenic influences impacting feature distribution.
	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.
	Supporting habitat: Food availability and quality of prey	Maintain the distribution, abundance and availability of key food and prey items (e.g. fish) to maintain the population.
	Supporting habitat: extent, distribution and quality of supporting habitat for the non-breeding season	Restore the extent, distribution and availability of suitable habitat which supports the feature; preventing further deterioration, and where possible, reduce any existing anthropogenic influences impacting the extent and quality (including water quality).

¹³ "Natural change" means changes in the species or habitat which are not a result of human influences. Human influence on the red-throated diver population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions which is entirely a result of natural process will not constitute unfavourable condition but may trigger a review of the definition of favourable condition.

¹⁴ "Maintain" is used here because existing evidence suggests the feature to be in favourable condition for each attribute with a maintain target, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the red-throated diver population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the red-throated diver population will be deemed to be in unfavourable condition.

¹⁵ "Restore" means to prevent further deterioration without inhibiting potential for future restoration.

¹⁶ "Restore" is used here because existing evidence shows the feature to have been displaced from previously used areas of the site. Therefore, we have set the target to prevent further displacement, while recognising current impacts to the feature, and where possible existing influences should be addressed.

3.3.1 Favourable condition for red-throated diver

The interest feature red-throated diver will be considered to be in favourable condition only when each of the following three conditions are met:

- (i) The red-throated diver population shows only non-significant fluctuation around the mean population at the time of classification of the SPA, with due consideration to the potential for natural change.
- (ii) Red-throated diver distribution and ability to use the site does not significantly change (subject to natural fluctuations and variation).
- (iii) The extent and distribution of the supporting habitat available to the red throated diver population within the site, including its structure, function and supporting processes, is maintained.

Digital aerial surveys of the original SPA boundary¹⁷ took place over several successive winters (2015, 2018, 2019 & 2020) and this data was used as the basis for deriving the SPA population. There is therefore a reasonable estimate of the magnitude of inter-annual natural variation in population size within the boundary of the SPA. This knowledge of natural fluctuation will be used to inform future assessments of favourable condition.

Changes in extent will need to take account of the dynamic nature of the supporting habitats. However, a trend of reduction in extent may indicate long-term changes in the physical conditions influencing the feature, whether it be natural processes or anthropogenically driven.

3.3.2 Explanatory information for the red-throated diver conservation objectives

3.3.2.1 Key supporting habitats, distribution, and disturbance of red-throated diver

Wintering red-throated divers occur throughout Liverpool Bay / Bae Lerpwl SPA with highest recorded densities off the Ribble Estuary, North Wales and the North Wirral Foreshore (Webb and others, 2006). Red-throated divers use the SPA in wintering numbers of European importance which was 922 individuals at the time of classification in 2010 (5.4% of the GB population, 2001/02 – 2006/07). The most recent four-year peak mean population estimate for red-throated diver in Liverpool Bay / Bae Lerpwl SPA is 1800 individuals based on recent digital aerial surveys (HiDef, in prep.).

Supporting habitats may have a functional role (as nursery, spawning or feeding grounds or in providing shelter) in supporting their prey species. Loss or damage to supporting habitats may cause a loss of foraging sites and therefore lead to a reduction in food resources. When Liverpool Bay/Bae Lerpwl SPA was first classified in 2010, red-throated divers had an estimated area of 170,293 ha. This baseline area included windfarms that were present at the time of classification. Post construction monitoring between 2017 and 2020 has indicated that there are detectable displacement effects from the Burbo Bank extension windfarm in Liverpool Bay/Bae Lerpwl SPA (HiDef, 2020). As a result of wind farm development, red-

¹⁷ A 4-year mean peak of the population size was estimated for red-throated diver using the original SPA boundary rather than the most recent boundary. Due to the difference in area being small and containing a low red-throated diver density, no appreciable difference is expected.

throated divers in Liverpool Bay SPA have experienced a reduction in available supporting habitat. Although the physical supporting habitat may still be present, disturbance and displacement from wind farms has meant that some areas are no longer accessible for red-throated divers.

Red-throated diver are wholly marine in the non-breeding season and can be found rafting and fishing in the shallow coastal waters throughout Liverpool Bay (Natural England and JNCC, 2010; Natural England and JNCC, 2013; Dierschke and others, 2017). In the UK, wintering red-throated divers show a preference for shallow inshore waters up to depths of 20m but may also use waters up to approximately 30m deep. Red-throated diver are highly mobile around the UK, and within the SPA over the winter, and may move between sandy bays, sandbanks and the mouths of estuaries, where water of different salinity mixes (Natural England and JNCC, 2013; McGovern, Goddard and Rehfish, 2016; Dierschke and others, 2017; Skov and others, 1995; Stone and others, 1995).

Red-throated diver will primarily use the water column for foraging, but they may also use benthic habitats (e.g., Duckworth and others, 2021). Supporting habitats may have a functional role (as nursery, spawning or feeding grounds or in providing shelter) in supporting their prey species.

Red-throated diver are highly sensitive to vessel movements and have been shown to have a strong stress response to disturbance (Dierschke and others, 2017). In a review of the sensitivity of 26 species of “seabird” to the development of offshore wind- farms, Garthe and Huppopp (2004) found that red-throated divers had the second highest species sensitivity index score. Recent evidence shows that displacement from large infrastructure such as offshore windfarms can extend to 10km and beyond based on monitoring in the Outer Thames Estuary (APEM, 2021). A report on Burbo Bank wind farm extension shows that red-throated divers may have been displaced from up to 12km from the array when post-construction and pre-construction data was compared (HiDef, 2020). The displacement distance from this study was similar to those distances found by Mendel and others, (2019; 20km) and Petersen, Nielsen and Mackenzie (2014; 13km).

Similar results have been reported from the German Bight. Using digital aerial surveys and satellite telemetry, Heinänen and others, (2020) found that divers were strongly displaced from wind farms in suitable habitat, and a significant effect could be detected up to 10-15 km away. Approaching ships and smaller vessels have been shown to cause displacement, even when several kilometres away (Dierschke and others, 2017; Schwemmer and others, 2011, Fliessbach and others, 2019). Here, ships regularly cross the Liverpool Bay / Bae Lerpwl SPA to enter or leave the port of Liverpool, one of the busiest ports in the UK, or service the wind farms and other marine industries in the area. Burt and others, (2022) processed shipping and other anthropogenic activity data and combined it with aerial survey data to model the distribution of wintering red-throated diver in Liverpool Bay / Bae Lerpwl SPA. Amongst other findings, the model results suggest that a displacement buffer of 2km for shipping may be appropriate, with predicted numbers increasing as the distance increased from 0 to 2km.

Commercial and recreational fishing causes disturbance to red-throated diver as the birds usually avoid boats which can result in displacement and the forced use of sub-optimal foraging habitats (Natural England and JNCC, 2010). Disturbance can cause birds to reduce or cease feeding in a given area or to fly away from an area (i.e., be displaced). Either response could decrease their energy intake rate at their present (disturbed) feeding site or alternative feeding site, which may be less favoured. The latter response would also increase energy expenditure during flight and perhaps during subsequent foraging in less favourable habitat (or favourable habitat with greater intra-specific competition). Both

disturbance and displacement can affect the energy budgets and possibly survival of birds (Dierschke and others, 2017). Disturbance and displacement to red-throated diver needs to be managed and limited as far as possible to avoid significantly impacting this species.

At the time Liverpool Bay was originally classified, red-throated divers were already exposed to some level of boat activity (including commercial freight and passenger services, recreational boating, dredging activity, and fishing vessels) and existing wind farms. Disturbance from dredging and shipping activities is expected to be confined to existing shipping channels which are already known to be avoided by divers.

The red-throated diver is a long-lived species with low breeding productivity and populations are vulnerable to increased adult mortality. As shown by studies on fishing practices in the Baltic Sea, entanglement in various types of static fishing gear, netting and marine litter is one of the most frequently identified causes of death for red-throated diver (Okill, 2002, Erdmann and others, 2005, Weston and Caldow 2010). The extent of this impact in Liverpool Bay is not known. Fishing activity within Liverpool Bay includes trawling, dredging, long-lining, potting and angling. Removal of fish species and larger molluscs can have significant impacts on the structure and functioning of benthic communities over and above the physical effects of fishing methods on the seabed, particularly as some fish species fill upper roles in the trophic web.

Red-throated divers are thought to be vulnerable to pollution at any time of the year (Webb and others, 2016). Red-throated divers moult their flight feathers during September and October when they may become flightless for a short period and are thought to be particularly vulnerable to oil pollution and disturbance at this time.

Further detail on local environmental conditions and supporting habitats may be found in section 4.

3.3.2.2 Key food

Red-throated diver are opportunistic feeders, diving below the surface to catch small fish at shallow depths (McGovern, Goddard and Rehfish, 2016; Guse, Garthe and Schirmeister 2009) and forage on the seabed in some environments (Duckworth and others, 2021). Evidence also suggests that red-throated divers prey on several different fish species including members of the gadoid family, various flatfish, herring, gobies, sand eels and sprat (Guse, Garthe and Schirmeister, 2009; Natural England and JNCC, 2013). However, there is currently a lack of evidence for the diet of red-throated diver in Liverpool Bay.

The sandbanks of Liverpool Bay are important foraging grounds, as they provide suitable hunting depths and support many of the prey species and their nursery grounds (Natural England and JNCC, 2013).

As an active fish-feeder (Guse, Garthe and Schirmeister, 2009 and references therein), the distribution and concentrations of red-throated divers will at least partly be determined by the presence, abundance, and availability of their prey species.

Certain types of fishing have the potential to directly remove divers' prey species. Thus, the mechanisms for these pressures to impact on red-throated divers may be a direct or indirect reduction in food availability for the overwintering population.

For many of the red-throated diver's prey species, Liverpool Bay provides important nursery and spawning areas (Campanella and van der Kooij, 2021). Impacts on the prey species from dredging and dumping activities could be detrimental although this requires more

research to determine the scale of impact. As a pursuit predator of fish, red-throated divers are particularly sensitive to elevated levels of turbidity which may reduce their foraging success. Marine industries, such as dredging and aggregates extraction, may cause increased turbidity. This could reduce prey availability for this species if prey are displaced from an area. It is also important to consider the variability in natural background turbidity levels of the site which may affect the contribution of marine industry activity to the turbidity of the water at a specific location (van Kruchten and van der Hammen, 2011).

Commercial extraction of the red-throated diver's main fish prey, as either target and/or by-catch species, could impact the birds, but the extent of this in Liverpool Bay/Bae Lerpwl SPA is not well understood.

3.4 The conservation objectives for Liverpool Bay / Bae Lerpwl SPA Interest feature 2: Internationally important non-breeding population of common scoter (*Melanitta nigra*)

Subject to natural change¹⁸, maintain¹⁹ or restore²⁰ the common scoter population, distribution and its supporting habitats in favourable condition.

Table 2: Conservation objectives (attributes and targets) for the Liverpool Bay / Bae Lerpwl SPA interest feature common scoter.

Feature	Attribute	Target
Common scoter	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 141,801 individuals (mean peak 2015, 2018, 2019 & 2020).
	Non-breeding population: distribution	Maintain the distribution of the feature; the extent should not be reduced by anthropogenic factors.
	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.
	Supporting habitat: Food availability	Maintain the distribution, abundance and availability of key food and prey items (e.g. molluscs and bivalves) to maintain the population.
	Supporting habitat: extent, distribution, and quality of supporting habitat for the non-breeding season	Maintain the extent, distribution and availability of suitable habitat which supports the feature; the quality and extent should not deteriorate by anthropogenic factors (including water quality).

¹⁸ "Natural change" means changes in the species or habitat which are not a result of human influences. Human influence on the common scoter population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions which is entirely a result of natural process will not constitute unfavourable condition but may trigger a review of the definition of favourable condition.

¹⁹ "Maintain" is used here because existing evidence suggests the feature to be in favourable condition for each attribute with a maintain target, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the common scoter population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the common scoter population will be deemed to be in unfavourable condition.

²⁰ "Restore" means to prevent further deterioration without inhibiting potential for future restoration.

3.4.1 Favourable condition for common scoter

Common scoter will be considered to be in favourable condition only when each of the following three conditions is met:

- (i) The common scoter population shows only non-significant fluctuation around the mean population at the time of classification of the SPA, with due consideration to the potential for natural change.
- (ii) Common scoter distribution and ability to use the site does not significantly change (subject to natural fluctuations and variation).
- (iii) The extent and distribution of the supporting habitat available to the common scoter population within the site, including its structure, function and supporting processes, is maintained.

Digital aerial surveys of the original SPA boundary took place over several successive winters (2015, 2018, 2019 & 2020) and this data was used as the basis for deriving the SPA population. There is therefore a reasonable estimate of the magnitude of inter-annual natural variation in population size within the boundary of the SPA. This knowledge of natural fluctuation will be used to inform future assessments of favourable condition.

Changes in extent will need to take account of the dynamic nature of the supporting habitats, but a trend of reduction in extent may indicate long-term changes in the physical conditions influencing the feature, whether it be natural processes or anthropogenically driven.

3.4.2 Explanatory information for the common scoter conservation objectives

3.4.2.1 Key supporting habitats, distribution, and disturbance of common scoter

Common scoters have a clustered distribution within Liverpool Bay with the highest concentrations recorded from three broad areas (Webb and others, 2006): Red Wharf Bay/ Traeth Coch (Anglesey) and Conwy Bay/Bae Colwyn; Great Orme Head/Pen y Gogarth to the North Wirral Foreshore; Formby Point to Shell Flat (off Blackpool). At the time of first classification in 2010, common scoters used the SPA in winter in numbers of European importance (54,675 individuals, 3.4% of the *nigra* subspecies, 2001/02 – 2006/07). The most recent four-year peak mean population estimate of common scoter in the Liverpool Bay / Bae Lerpwl SPA is 141,801 individuals based on recent digital aerial surveys (HiDef, in prep.).

Over-wintering common scoters in Liverpool Bay tend to aggregate on a water depth range of 2-20m and a mean depth of 10-12m (Kaiser and others, 2006). The most important areas of Liverpool Bay for the common scoter are Shell Flat to Formby (off Blackpool), Colwyn Bay/Bae Colwyn and Conwy Bay/Bae Conwy (CCW, 2006).

Common scoters are present in Liverpool Bay from July to May, with the most significant numbers present during August to March. The observed distribution of common scoters is strongly associated with the distribution of its benthic prey species (Kaiser and others, 2006).

Common scoter will primarily use the subtidal and intertidal sandy sediments for foraging. The relatively high abundance of common scoter within Liverpool Bay/Bae Lerpwl SPA may

be attributed to the presence of suitable supporting habitat (HiDef, in prep.; Kaiser, 2002; Natural England, 2010). Supporting habitats may have a functional role in supporting their prey species. Further detail on local environmental conditions and supporting habitats may be found in section 4.

Common scoter is an extremely shy species. In a review of the sensitivity of 26 species of “seabird” to the development of offshore wind-farms, common scoter had the highest vulnerability score in relation to disturbance by ship and helicopter traffic (Garthe and Huppopp, 2004). Kaiser and others (2006) noted that large flocks of the birds were observed being put to flight at a distance of 2km from a 35m vessel, though smaller flocks were less sensitive and put to flight at a distance of 1km (Kaiser and others, 2006). Burt and others (2022) processed shipping and other anthropogenic activity data and combined it with aerial survey data to model the distribution of wintering common scoter in Liverpool Bay / Bae Lerpwl SPA (Burt and others 2022). Amongst other findings, the model results show that the greater the size of the ship the more negative the impact on the estimated number of birds in the vicinity, with larger vessels being expected to have an even greater disturbance distance (Kaiser and others, 2006).

Common scoter may be equally sensitive to other sources of non-physical disturbance, especially those creating noise and/or movement. Disturbance can cause birds to reduce or cease feeding in a given area or to fly away from a given area i.e., be displaced. Kaiser and others (2006) have shown that common scoters were observed in lowest numbers or were absent from areas of Liverpool Bay in which anthropogenic disturbance (shipping activity) was relatively intense, even when these areas held a high prey biomass.

Although evidence shows that common scoters are sensitive to disturbance, especially from ships, it is not clear the extent common scoter are experiencing this pressure within the site. Most shipping activity, including recreational boating, commercial freight and passenger services, marine aggregates and fishing, is confined to existing shipping channels in and out of the Mersey, whilst the main common scoter aggregations are located at Shell Flat near Blackpool, or near the North Wales coastline. Kaiser and others (2006) showed that while common scoters were observed in lowest numbers or were absent from areas of Liverpool Bay in which anthropogenic disturbance (shipping activity) was relatively intense, such areas could hold a high prey biomass. Disturbance to common scoter needs to be monitored and managed to limit disturbance as far as possible to avoid impacting this species.

Studies at Danish wind-farms (Petersen and others, 2006) have provided some evidence of displacement of common scoter from wind-farms and areas around them, although the evidence is less clear than in the case of red-throated divers. At least at one site apparent displacement may be related to temporal variation in the distribution of profitable patches of food resources rather than an effect of the wind-farm (Petersen and others, 2006). Studies in Denmark have suggested evidence of a degree of habituation by common scoters to offshore wind-farms (Petersen and Fox, 2007). Impacts to common scoter may result from collision with wind turbines if they fly at a height above 20m. It has been observed, however, that common scoters generally fly below the height at which they would be at risk of colliding with rotating turbine blades (Garthe and Huppopp 2004). In addition, exposure to collision risks may be lowered by apparent displacement of common scoter from wind-farm footprints due to non-physical disturbance (Petersen and others, 2006), although such an effect may only be short-lived (Petersen and Fox 2007). Any habituation of common scoter to offshore wind-farms (Petersen and Fox 2007) or further expansion of such developments may alter the likelihood of collision risks.

Common scoter are frequently listed amongst those species of seabird and waterfowl that are found entangled in various types of static fishing gear and netting in NW European waters (Erdmann and others, 2005). However, as this type of fishing does not currently

occur in Liverpool Bay, there is no direct site-specific evidence for this being a source of mortality for common scoter in Liverpool Bay. Common scoter populations are sensitive to increased adult mortality as it is a long-lived species with relatively low annual adult mortality (Krementz, Barker and Nichols, 1997; Fox, Petersen and Frederiksen, 2003) and low breeding productivity.

3.4.2.2 Key food

Common scoters feed by diving, usually synchronously in flocks, and feed on cockles, clams, other bivalves, and a variety of other molluscs, crustaceans, and worms. Kaiser and others (2002) conducted a review of the literature concerning the diet of common scoter. This revealed that in each of eight quantitative studies, the percentage value for the occurrence of molluscs in their diet exceeded 90%, and that for bivalves exceeded 88%. The distribution of common scoter in Liverpool Bay / Bae Lerpwl SPA is strongly associated with the distribution of its benthic prey species. As benthic feeders, common scoters are closely associated with the availability and condition of their shallow seabed habitat. The subtidal sandbanks of Shell Flat (also protected within Shell Flat and Lune Deep SAC) support many bivalves that in turn support the common scoter population of Liverpool Bay / Bae Lerpwl SPA. Benthic sampling undertaken to date has found three main bivalve species within the site as a whole; *Abra alba*, *Pharus legumen* and *Donax vittatus* (Kaiser and others, 2006). They are, however, opportunistic in their diet and will often exploit whatever mollusc happens to be the most locally abundant, suitable prey resource.

Fishing activity within Liverpool Bay includes trawling, dredging, long-lining, potting and angling. Removal of fish species and larger molluscs can have significant impacts on the structure and functioning of benthic communities over and above the physical effects of fishing methods on the seabed, particularly as some fish species fill upper roles in the trophic web. In addition, certain types of fishing have the potential to directly remove common scoter's prey species. Thus, the mechanisms for these pressures to impact on common scoters may be a direct or indirect reduction in food availability for the overwintering population. Common scoters are highly sensitive to selective extraction of their prey species, as although they are known to take a broad range of shellfish species, their diet is composed predominantly of sedentary benthic bivalves (Kaiser, 2002). The exposure to selective extraction of prey species by fishing (the amount of their prey species taken by fishing vessels as target or by-catch) is not clearly understood.

Dredging for bivalves has been shown to have significant negative effects on their benthic habitat and could directly affect both the food source and feeding grounds used by common scoters. Extensive harvesting of benthic bivalves has been implicated in mass mortalities of other benthic bivalve feeding ducks notably common eider in the Dutch Wadden Sea (Piersma and Camphuysen 2001).

3.5 The conservation objectives for Liverpool Bay / Bae Lerpwl SPA Interest feature 3: Internationally important non-breeding population of little gull (*Hydrocoloeus minutus*)

Subject to natural change²¹, maintain²² or restore²³ the little gull population, distribution and its supporting habitats in favourable condition.

Table 3: Conservation objectives (attributes and targets) for the Liverpool Bay / Bae Lerpwl SPA interest feature little gull.

Feature	Attribute	Target
Little gull	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 319 individuals (mean peak 2004/5 - 2010/11).
	Non-breeding population: distribution	Maintain the distribution of the feature; the extent should not be reduced by anthropogenic factors.
	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.
	Supporting habitat: Food availability	Maintain the distribution, abundance and availability of key food and prey items (e.g., fish) to maintain the population.
	Connectivity with supporting habitats	Maintain safe passage of birds moving between roosting and feeding areas.
	Supporting habitat: extent, distribution and quality of supporting habitat for the non-breeding season	Maintain the extent, distribution and availability of suitable habitat which supports the feature; the quality and extent should not deteriorate by anthropogenic factors (including water quality).

²¹ "Natural change" means changes in the species or habitat which are not a result of human influences. Human influence on the little gull population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions which is entirely a result of natural process will not constitute unfavourable condition but may trigger a review of the definition of favourable condition.

²² "Maintain" is used here because existing evidence suggests the feature to be in favourable condition for each attribute with a maintain target, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the little gull population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the little gull population will be deemed to be in unfavourable condition.

²³ "Restore" means to prevent further deterioration without inhibiting potential for future restoration.

3.5.1 Favourable condition for little gull

Little gull will be considered to be in favourable condition only when each of the following three conditions is met:

- (i) The little gull population shows only non-significant fluctuation around the mean population at the time of classification of the SPA, with due consideration to the potential for natural change.
- (ii) Little gull distribution and ability to use the site does not significantly change (subject to natural fluctuations and variation).
- (iii) The extent and distribution of the supporting habitat available to the little gull population within the site, including its structure, function and supporting processes, is maintained.

Survey data from multiple winter seasons was used as the basis for deriving the SPA population. There is therefore a reasonable estimate of the magnitude of inter-annual natural variation in population size within the boundary of the SPA. This knowledge of natural fluctuation will be used to inform future assessments of favourable condition.

Changes in extent will need to take account of the dynamic nature of the supporting habitats, but a trend of reduction in extent may indicate long-term changes in the physical conditions influencing the feature, whether it be natural processes or anthropogenically driven.

3.5.2 Explanatory information for the little gull conservation objectives

3.5.2.1 Key supporting habitats, distribution, and disturbance of little gull

From the available data for Liverpool Bay / Bae Lerpwl SPA, Lawson and others (2016) demonstrated a mean peak of 319 individuals (2004/05 – 2010/11), in clearly defined hotspots. Surveys from 2006/07 and 2007/08 did not inform the estimate of little gull abundance because of incomplete spatial coverage, or because of unreliable population estimates. The mean of peak thus uses data from 2004/05, 2005/06 and 2010/11. Although there is no national estimate of little gull abundance, the value of 319 comfortably exceeds the 'minimum 50' guideline nominally used to assess SPA qualification (Stroud and others, 2001). Furthermore, JNCC's national programme of data analysis has established that Liverpool Bay / Bae Lerpwl SPA holds more little gulls than anywhere else in the UK, except for the Greater Wash SPA.

Little gull roost at sea within Liverpool Bay / Bae Lerpwl SPA and are known to travel to Seaforth Nature Reserve within the adjacent Mersey Narrows and North Wirral Foreshore SPA, where they feed and possibly shelter during periods of harsh weather (Allcock, O'Brien and Parsons, 2013). Allcock, O'Brien and Parsons (2013) found that the highest densities of little gull were consistently located offshore of Blackpool and the Ribble Estuary, close to the 12 nautical mile line.

The impact of marine industries upon little gull connectivity should be monitored, and connectivity between roosting and feeding sites maintained as safe and successful movement between these areas is critical to adult fitness and survival. This target will apply within the site boundary and where birds regularly move to and from off-site habitat where this is relevant. The target has been set to better understand the impact of anthropogenic

activities on little gull. Inappropriate management and direct or indirect impacts which may affect the extent and distribution of habitats may adversely affect the population and alter the distribution of birds. This may also apply to supporting habitat that lies outside of the Liverpool Bay / Bae Lerpwl SPA boundary.

3.5.2.2 Key food

We currently have a very limited understanding of the diet of little gulls. Samples collected in the vicinity of feeding little gulls included but was not limited to insects, crustaceans, comb jellies and molluscs, which suggest these might form at least part of their diet (Schwemmer and Garthe, 2006).

Lawson and others (2016) describe in detail the assessment of important areas for little gulls within Liverpool Bay. Supporting habitats may have a functional role (as nursery, spawning or feeding grounds or in providing shelter) in supporting their prey species. Physical loss or damage to supporting habitats may cause a loss of foraging sites and therefore lead to a reduction in food resources.

Physical loss by removal or by smothering of any of the habitats on which little gull depend may result in the loss of foraging sites and therefore the reduction of the food resource for the overwintering population. This would consequently be detrimental to the favourable condition of the interest feature. At the time of the original designation, there was a low level of ships anchoring and marine aggregate extraction. Further detail on local environmental conditions and supporting habitats may be found in section 4.

Fishing activity within Liverpool Bay includes trawling, dredging, long-lining, potting and angling. Removal of fish species and larger molluscs can have significant impacts on the structure and functioning of benthic communities over and above the physical effects of fishing methods on the seabed, particularly as some fish species fill upper roles in the trophic web. Thus, the mechanisms for these pressures to impact on little gulls may be a direct or indirect reduction in food availability for the overwintering population.

3.6 The conservation objectives for Liverpool Bay / Bae Lerpwl SPA Interest feature 4: Internationally important breeding population of common tern (*Sterna hirundo*)

Subject to natural change²⁴, maintain²⁵ or restore²⁶ the common tern population, distribution and its supporting habitats in favourable condition.

Table 4: Conservation objectives (attributes and targets) for the Liverpool Bay / Bae Lerpwl SPA interest feature common tern.

Feature	Attribute	Target
Common tern	Breeding population: abundance	Maintain the size of the breeding population at a level which is at or above 180 pairs (2011 – 2015).
	Breeding population: distribution	Maintain the distribution of the feature; the extent should not be reduced by anthropogenic factors.
	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.
	Supporting habitat: Food availability	Maintain the distribution, abundance and availability of key food and prey items (e.g., fish) to maintain the population.
	Connectivity with supporting habitats	Maintain safe passage of birds moving between nesting and feeding areas.
	Supporting habitat: extent, distribution and quality of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable habitat which supports the feature; the quality and extent should not deteriorate by anthropogenic factors (including water quality).

²⁴ “Natural change” means changes in the species or habitat which are not a result of human influences. Human influence on the common tern population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions which is entirely a result of natural process will not constitute unfavourable condition but may trigger a review of the definition of favourable condition.

²⁵ “Maintain” is used here because existing evidence suggests the feature to be in favourable condition for each attribute with a maintain target, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the common tern population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the common tern population will be deemed to be in unfavourable condition.

²⁶ “Restore” means to prevent further deterioration without inhibiting potential for future restoration.

3.6.1 Favourable condition for the common tern

Common tern will be considered to be in favourable condition only when each of the following three conditions is met:

- (i) The common tern population shows only non-significant fluctuation around the mean population at the time of classification of the SPA, with due consideration to the potential for natural change.
- (ii) Common tern distribution and ability to use the site does not significantly change (subject to natural fluctuations and variation).
- (iii) The extent and distribution of the supporting habitat available to the common tern population within the site, including its structure, function and supporting processes, is maintained.

Aerial surveys were not used to set the target population for this species. The target population is based on the same population estimate from counts at the colony that were used to set the conservation objective for this feature in the Mersey Narrows, or North Wirral Foreshore depending on where they come from. There is therefore a reasonable estimate of the magnitude of inter-annual natural variation in population size within the boundary of the SPA. This knowledge of natural fluctuation will be used to inform future assessments of favourable condition.

Changes in extent will need to take account of the dynamic nature of the supporting habitats, but a trend of reduction in extent may indicate long-term changes in the physical conditions influencing the feature, whether it be natural processes or anthropogenically driven.

3.6.2 Explanatory information for the common tern conservation objectives

3.6.2.1 Key supporting habitats, distribution, and disturbance of common tern

Within Liverpool Bay / Bae Lerpwl SPA, common terns use intertidal habitats when inundated, as well as the deeper water column for foraging. Key foraging areas within the SPA include shallow subtidal waters, generally within 18km of breeding colonies, and especially in areas of high velocity water flow (Woodward and others, 2019; Eglington and Perrow, 2014; Thaxter and others, 2012). Woodward and others (2019) found that for foraging common terns, the mean distance was 6.4(\pm 4.5) km, the mean maximum was 18.09(\pm 8.9) km, and the maximum recorded distance was 30km. The coastal waters of the SPA are also used for a wide range of maintenance activities such as bathing and preening. Common tern foraging in the site are also known to use supporting habitat within the Mersey Narrows and North Wirral Foreshore SPA and the Ribble and Alt Estuaries SPA (Natural England, Natural Resources Wales and JNCC, Departmental Brief 2016).

Supporting habitats may have a functional role (as nursery, spawning or feeding grounds or in providing shelter) in supporting their prey species. Physical loss or damage to supporting habitats could cause a loss of foraging sites and therefore lead to a reduction in food resources. Further detail on local environmental conditions and supporting habitats may be found in section 4.

Important foraging areas for common terns around the Seaforth colony were identified from models of common tern foraging behaviour (Wilson and others, 2014) and confirmed by verification surveys carried out in the Mersey (Perrow, Harwood and Caldow, 2015). Within Mersey Narrows and North Wirral Foreshore SPA there has been recent establishment of a

small breeding colony at Birkenhead (Monteith, 2018) and in the past common tern have also nested at Langton Dock (Banks, 2018 personal communications). These populations may be reliant on Liverpool Bay SPA for foraging. For common tern nesting within Mersey Narrows and North Wirral Foreshore SPA at Seaforth, the predicted marine foraging area extends northwards approximately to Formby, west along most of the Wirral foreshore, and into the mouth of the Mersey Estuary approximately to Rock Ferry (Natural England, Natural Resources Wales and JNCC, Departmental Brief 2016) although greater foraging distances cannot be ruled out. The Seaforth colony will also travel to foraging waters within the Ribble and Alt Estuaries.

There may be a 'functional linkage' (meaning a shared use of bird supporting habitats in different locations) across the suite of SPAs adjacent to Liverpool Bay (and elsewhere along the Irish Sea coast). This includes Ribble and Alt Estuaries SPA, Mersey Narrows and North Wirral Foreshore SPA, The Dee Estuary SPA and Anglesey Terns/Morwenoliaid SPA. As a result, the population of common terns should be regarded as dynamic and may utilise other (protected and non-protected) sites within the Liverpool Bay area. Where common terns are using habitat outside of designated sites this should be regarded as functionally linked supporting habitat for SPA birds and therefore should be considered within any Habitats Regulations Assessment. When last assessed in 2018, numbers within the meta-population appear to be stable (JNCC SMP, 2018).

The impact of marine industries upon common tern connectivity should be monitored, and connectivity between feeding and nesting sites maintained.

3.6.2.2 Key Food

Small fish and invertebrates constitute the majority of the diet for common tern, with sprat (*Sprattus sprattus*), herring (*Clupea harengus*) and sand eels (*Ammodytes* spp.) being particularly important. However, common terns have a broad range of potential prey species and foraging methods, demonstrating a strong foraging plasticity and adaptability (Eglington and Perrow, 2014). They may also feed on crustaceans and terrestrial insects.

Fishing activity within Liverpool Bay includes trawling, dredging, long-lining, potting and angling. Removal of fish species and larger molluscs may have significant impacts on the structure and functioning of benthic communities over and above the physical effects of fishing methods on the seabed, particularly as some fish species fill upper roles in the trophic web. In addition, certain types of fishing have the potential to directly remove common tern prey species. Thus, the mechanisms for these pressures to impact on common tern may be a direct or indirect reduction in food availability for the breeding population.

Physical loss by removal or by smothering of any of the habitats on which common tern depend may result in the loss of foraging sites and therefore the reduction of the food resource for the breeding population. This would consequently be detrimental to the favourable condition of the interest feature. At the time of the original classification, there was a low level of ships anchoring and marine aggregate extraction.

Common tern prey species, such as herring, are particularly sensitive to noise disturbance and excess siltation when spawning can smother eggs. Long term monitoring is required to fully assess any impacts on prey availability due to disturbance and offshore development. There is evidence to suggest that tern foraging success may be higher in areas of greater turbidity (Eglington and Perrow 2014). However, excessive turbidity, such as arising from marine dredging or aggregates extraction, construction, and some types of fishing activity, may also displace prey species and reduce prey availability. Turbidity within key foraging areas should be maintained at natural levels.

3.7 The conservation objectives for Liverpool Bay / Bae Lerpwl SPA Interest feature 5: Internationally important breeding population of little tern (*Sternula albifrons*)

Subject to natural change²⁷, maintain²⁸ or restore²⁹ the little tern population, distribution and its supporting habitats in favourable condition.

Table 5: Conservation objectives (attributes and targets) for the Liverpool Bay / Bae Lerpwl SPA interest feature little tern.

Feature	Attribute	Target
Little tern	Breeding population: abundance	Maintain the size of the breeding population, at a level which is at or above 69 pairs (1995-1999).
	Breeding population: distribution	Maintain the distribution of the feature; the extent should not be reduced by anthropogenic factors.
	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.
	Supporting habitat: Food availability	Maintain the distribution, abundance and availability of key food and prey items (e.g., fish) to maintain the population.
	Connectivity with supporting habitats	Maintain safe passage of birds moving between nesting and feeding areas.
	Supporting habitat: extent, distribution and quality of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable habitat which supports the feature; the quality and extent should not deteriorate by anthropogenic factors (including water quality).

²⁷ "Natural change" means changes in the species or habitat which are not a result of human influences. Human influence on the little tern population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions which is entirely a result of natural process will not constitute unfavourable condition but may trigger a review of the definition of favourable condition.

²⁸ "Maintain" is used here because existing evidence suggests the feature to be in favourable condition for each attribute with a maintain target, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the little tern population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the little tern population will be deemed to be in unfavourable condition.

²⁹ "Restore" means to prevent further deterioration without inhibiting potential for future restoration.

3.7.1 Favourable condition for little tern

Little tern will be considered to be in favourable condition only when each of the following three conditions is met:

- (i) The little tern population shows only non-significant fluctuation around the mean population at the time of classification of the SPA, with due consideration to the potential for natural change.
- (ii) Little tern distribution and ability to use the site does not significantly change (subject to natural fluctuations and variation).
- (iii) The extent and distribution of the supporting habitat available to the little tern population within the site, including its structure, function and supporting processes, is maintained.

Aerial surveys were not used to set the target population for this species. Rather, this is based on the same population estimate from counts at the colony at Gronant that were used to set the conservation objective for this feature in the Dee SPA. There is therefore a reasonable estimate of the magnitude of inter-annual natural variation in population size within the boundary of the SPA. This knowledge of natural fluctuation will be used to inform future assessments of favourable condition.

Changes in extent will need to take account of the dynamic nature of the supporting habitats, but a trend of reduction in extent may indicate long-term changes in the physical conditions influencing the feature, whether it be natural processes or anthropogenically driven.

3.7.2 Explanatory information for the little tern conservation objectives

3.7.2.1 Key supporting habitats, distribution, and disturbance of little tern

The little tern is the smallest of five species of tern breeding around the British coast. It usually nests on beaches and lagoon islands of shingle, sand, or shells sometimes only metres from the high tide mark. This makes them susceptible to predation, human disturbance, and tidal inundation.

The little tern's nesting strategy makes them vulnerable because they breed in small, single species colonies that are abandoned when predation becomes too great; food becomes scarce; or more recently, when human disturbance becomes too great. The nest is an unlined scrape in which 1-3 camouflaged eggs are laid. Incubation is around 18-22 days, and the chicks fledge in 19-20 days. Little terns feed on small fish and crustaceans caught inshore, and occasionally from coastal freshwater bodies.

The nature, scale, timing, and duration of some human activities can result in bird disturbance (defined as any human-induced activity sufficient to disrupt normal behaviours and / or distribution of birds in the absence of the activity) at a level that may substantially affect their behaviour, and consequently affect the long-term viability of the population. Such disturbing effects can, for example, result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within and outside the designated site boundary where appropriate). This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their

distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, presence of people, animals and structures.

Little tern foraging ranges are highly limited, and key areas are generally within 5km of breeding colonies (Woodward and others, 2019). Woodward and others (2019) found that, for foraging, the mean range is 3.5km, mean of recorded maxima is 5km and the maximum recorded is 5km. Research carried out by the JNCC and the Statutory Nature Conservation Bodies (SNCBs) on the little tern colony at Gronant, found the mean of the maximum seaward foraging extents to be 1.87km (Parsons and others, 2015). Eglinton (2013), in a literature review of foraging ecology of terns, concluded that most studies, including those citing anecdotal information, reported a foraging radius less than 4km from the colony. As a result, the little tern relies on abundant food supplies of fish in waters close to the colony. The breeding colony of little tern that forage in Liverpool Bay are located at Gronant, which is located within the Dee Estuary SPA. Significant variation in foraging range occurs between colonies and between years (Eglinton, 2013). Within colonies, ranges have been found to be significantly greater during incubation (April-May ~1.6 – 2 km) than during chick rearing (June-July ~1 - 1.2 km) when foraging ranges would have been constrained by chick feeding duties (Paiva and others 2008). Diet may also change according to chick age, with smaller individuals of the same prey species being brought to younger chicks (Davies, 1981; Bogliani and others 1994; Phalan, 2000; Paiva and others 2006).

The coastal waters of the SPA are also used for a wide range of maintenance activities such as bathing and preening. Little tern foraging within the site are also known to use supporting habitat within The Dee Estuary SPA (Natural England, Natural Resources Wales and JNCC, Departmental Brief 2016). Important foraging areas for little tern nesting at Gronant were identified from shore and boat-based surveys (2009, 2010, 2011) in Liverpool Bay / Bae Lerpwl SPA (Parsons and others, 2015). Maintaining the connectivity between the nesting site and foraging areas is therefore crucial.

Population decline has been attributed to reductions in breeding success rather than to emigration or changes in adult survival (Pickerell, 2004). Human disturbance, primarily as an unintentional result of recreational activity, is thought to have been a major cause of reduced breeding success in the past. Now most colonies have a warden and are cordoned off, greatly reducing such disturbance. A more significant threat is predation from foxes, kestrels, carrion crows and magpies, which are widely reported to cause colony failure or at least severe reduction to breeding success. Although fox control in particular has been effective, control of aerial predators remains a challenge (Pickerell, 2004). Natural erosion and encroachment of vegetation have in many places reduced the area of suitable nesting habitat. Because little terns habitually nest very close to the high-water mark, tidal inundation during storm surges is a frequent cause of nest loss; given predictions of future sea level rise and increase in storminess, these threats would be expected to become increasingly prevalent (Pickerell, 2004).

Physical loss by removal or by smothering of any of the habitats on which little tern depend may result in the loss of foraging sites and therefore the reduction of the food resource for the breeding population. This would consequently be detrimental to the favourable condition of the interest feature. At the time of the original classification, there was a low level of ships anchoring and marine aggregate extraction.

Further detail on local environmental conditions and supporting habitats may be found in section 4.

3.7.2.2 Key Food

Little terns are plunge divers, foraging for small fish within the shallow subtidal waters of the site and may fish over sandbanks out to sea if conditions/prey availability dictate (Allcorn and others, 2003). There is evidence to suggest that shallow waters with strong currents may increase prey availability for this species. An EU LIFE study has mapped availability of prey species for terns around the British Isles (Green, 2017). Key little tern prey items include sand eels (*Ammodytes* spp.), sprat (*Sprattus sprattus*), young herring (*Clupea harengus*) and invertebrates (Taylor and Roe, 2004; Bertolero and others, 2005, Paiva and others, 2008). The impact of changes in food availability geographically and seasonally is not yet understood. It may be a limiting factor determining where and when colonies are established and abandoned.

The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population and alter the distribution of birds. Main food sources can be found within coastal and offshore waters (Cramp, Bourne and Saunders, 1974; del Hoyo, Elliot and Sargatal, 1996; Perrow and others, 2006).

Supporting habitats may have a functional role (as nursery, spawning or feeding grounds or in providing shelter) in supporting little tern prey species. Physical loss or damage to supporting habitats may cause a loss of foraging sites and therefore lead to a reduction in food resources. Tern prey species, such as herring, are particularly sensitive to noise disturbance which can result from offshore developments. Fishing activity may have an impact on the availability of key prey species. Long term monitoring is required to fully assess any impacts on prey availability for this species.

Fishing activity within Liverpool Bay includes trawling, dredging, long-lining, potting and angling. Removal of fish species and larger molluscs may have significant impacts on the structure and functioning of benthic communities over and above the physical effects of fishing methods on the seabed, particularly as some fish species fill upper roles in the trophic web. In addition, certain types of fishing have the potential to directly remove little tern prey species. Thus, the mechanisms for these pressures to impact on little tern may be a direct or indirect reduction in food availability for the breeding population.

3.8 The conservation objectives for Liverpool Bay / Bae Lerpwl SPA Interest feature 6: non-breeding assemblage of over 20,000 waterbirds

Subject to natural change³⁰, maintain³¹ or restore³² the waterbird assemblage population, distribution and its supporting habitats in favourable condition.

Table 6: Conservation objectives (attributes and targets) for the Liverpool Bay / Bae Lerpwl SPA interest feature waterbird assemblage.

Feature	Attribute	Target
Waterbird assemblage	Assemblage of species: abundance	Maintain the size of the non-breeding population of component species at a level which is at or above 157,952 individuals (mean peak 2015, 2018, 2019 & 2020).
	Assemblage of species: diversity	Maintain the species diversity of the bird assemblage which should include common scoter, red-throated diver, little gull, red-breasted merganser and great cormorant.
	Assemblage of species: distribution	Maintain the distribution of the feature; the extent should not be reduced by anthropogenic factors.
	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.
	Supporting habitat: extent, distribution, and quality of supporting habitat for the non-breeding season	Maintain the extent, distribution and availability of suitable habitat which supports the feature; the quality and extent should not deteriorate by anthropogenic factors (including water quality).

³⁰ “Natural change” means changes in the species or habitat which are not a result of human influences. Human influence on the waterbird assemblage population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions which is entirely a result of natural processes will not constitute unfavourable condition but may trigger a review of the definition of favourable condition.

³¹ “Maintain” is used here because existing evidence suggests the feature to be in favourable condition for each attribute with a maintain target, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the waterbird assemblage population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the waterbird assemblage population will be deemed to be in unfavourable condition.

³² “Restore” means to prevent further deterioration without inhibiting potential for future restoration.

3.8.1 Favourable condition for waterbird assemblage

The waterbird assemblage will be considered to be in favourable condition only when each of the following three conditions is met:

- (i) The waterbird assemblage population shows only non-significant fluctuation around the mean population at the time of classification of the SPA, with due consideration to the potential for natural change.
- (ii) The waterbird assemblage population and ability to use the site does not significantly change (subject to natural fluctuations and variation).
- (iii) The extent and distribution of the supporting habitat available to the waterbird assemblage population within the site, including its structure, function and supporting processes, is maintained.

Digital aerial surveys of the original SPA boundary³³ took place over several successive winters (2015, 2018, 2019 & 2020) and this data was used as the basis for deriving the SPA population. There is therefore a reasonable estimate of the magnitude of inter-annual natural variation in population size within the boundary of the SPA. This knowledge of natural fluctuation will be used to inform future assessments of favourable condition.

Changes in extent will need to take account of the dynamic nature of the supporting habitats, but a trend of reduction in extent may indicate long-term changes in the physical conditions influencing the feature, whether it be natural processes or anthropogenically driven

3.8.2 Explanatory information for the waterbird assemblage conservation objectives

The waterbird assemblage refers to the non-breeding population of component species and reflects the diversity of species the SPA supports. Assemblage diversity is a product of species richness (the number of different species present), abundance (population size of each assemblage component species) and relative 'importance' (an assessment of the conservation status of each assemblage component).

Each component makes a different contribution to the diversity of the assemblage, and changes to some components may be considered to affect diversity more than others. Negative changes to small numbers of relatively important assemblage components may have a similar overall effect to negative changes in larger numbers of less important components. Abundance targets are set only for qualifying features (including the assemblage as a whole) and not individually for other component species within the assemblage. The species composition, including the main components of an assemblage, may change over time in response to natural processes. However, to meet this target, the total number of species contributing to the assemblage diversity should not decline significantly (Eaton, Brown and Noble, 2009).

Named components of the assemblage (i.e., species exceeding 1% of the GB total or 2,000 individuals) include all the non-breeding qualifying features:

- Common scoter

³³ A 4-year mean peak of the population size was estimated for the waterbird assemblage using the original SPA boundary rather than the most recent boundary. Due to the difference in area being small and containing a low waterbird assemblage density, no appreciable difference is expected.

- Red-throated diver, and
- Little gulls

As well as the non-breeding populations of:

- red-breasted merganser, and
- great cormorant

Other species contributing to the assemblage are recorded in the following report: JNCC Report 576 (Lawson and others, 2016). The mean peak value of 157,952 includes all marine waterbird species (HiDef, in prep.). HiDef (in prep.) found that birds were generally distributed throughout the SPA, with higher densities being found closer to the coast, especially in the north and southwest.

At classification, red-breasted merganser had a five-year peak mean of 131 individuals (2004/05 – 2010/11; Lawson and others, 2016) representing 1.56% of the GB population of 8,400 individuals in the non-breeding season (Musgrove and others, 2013). Great cormorant had a five-year peak mean of 732 (2004/05 – 2010/11; Lawson and others, 2016) representing 2.09% of the GB population of 35,000 in the non-breeding season (Musgrove and others, 2013).

The 'main component' assemblage species were defined as i) those present in nationally important numbers ($\geq 1\%$ GB population); ii) migratory species present in internationally important numbers ($\geq 1\%$ biogeographic population); iii) those species comprising $\geq 2,000$ individuals ($\geq 10\%$ of the minimum qualifying threshold for an internationally important assemblage); and iv) 'named components' otherwise listed on the SPA citation.

In addition to the main components, other components should be considered as these contribute collectively to the assemblage diversity, in particular proportionally abundant populations of species of conservation importance. Examples are those red-listed as Birds of Conservation Concern and / or those listed on Sections 41/42 of the NERC Act 2006 (UK Government, 2006).

3.8.3 Key supporting habitats and distribution

Great cormorants are generally found in coastal areas where some colonies may remain in the same area year-on-year (Newson and others, 2013). However, sudden changes in location have been recorded which has led to uncertainty in assessing population trends (Mitchell and others, 2004). Furthermore, great cormorant distribution has moved further offshore due to the increase in roosting opportunities afforded by structures.

In the UK, wintering red-breasted merganser tend to be concentrated around estuarine environments (HiDef, in prep.; Kirby, Evans and Fox, 1993; Musgrove and others, 2013). They dive and swim to forage on fish and aquatic invertebrates in the water column (The Wildlife Trusts, 2022). Feeding, roosting, loafing and moulting occur within the site boundary (at sea), but some activities may also occur outside of the site boundary (within adjacent coastal habitats).

Supporting habitats may have a functional role (as nursery, spawning or feeding grounds or in providing shelter) in supporting their prey species. Physical loss or damage to supporting habitats may cause a loss of foraging sites and therefore lead to a reduction in food resources. Further detail on local environmental conditions and supporting habitats may be found in section 4.

3.9 Background to favourable condition

The favourable condition text sets out the principal sources of information that Natural England, Natural Resources Wales and the JNCC will use to assess the condition of the interest features as part of an ongoing monitoring requirement and reporting under Regulation 9 of the Habitats Regulations and Regulation 6 of the Offshore Habitats Regulations. A description of favourable condition can be found in each of the respective feature's conservation objectives in section 3.

On many terrestrial European sites, we know sufficient information about the required condition of qualifying habitats to be able to define favourable condition with confidence. In contrast, understanding the functioning of large, varied, dynamic marine and estuarine sites, which experience a variety of pressures resulting from historic and current activities, is much more difficult. Consequently, it is much harder to define favourable condition so precisely in such sites. In general, the conservation objectives provided are based on a working assumption that the current condition of the features is favourable for most attributes.

Where there are more than one year's observations on the condition of marine features, all available information will need to be analysed to determine, where possible, any natural environmental trends at the site. This will provide the basis for judgements of favourable condition to be determined in the context of natural change. Where it becomes clear that certain attributes may indicate a cause for concern, and if further investigation indicates this is justified, restorative management actions will need to be taken. The aim of such action would be to return the interest feature to favourable condition from any unfavourable state. Future editions of the advice within this document will revise the current assumptions about feature condition in light of ongoing and future monitoring. This will be linked with any developments in our understanding of the structure and functioning of features and the pressures they are exposed to.

This advice also provides the basis for discussions with relevant authorities, and as such the attributes and associated measures and targets may be modified over time. The aim is to have a single agreed set of attributes that will be used as a basis for monitoring in order to report on the condition of features. Condition monitoring of the attributes may be of fairly coarse methodology, underpinned by more rigorous methods on specific areas within the site. Common Standards Monitoring (JNCC 2004) requires mandatory monitoring of some attributes of a designated feature, while other attributes are considered discretionary (or site-specific) and are incorporated to highlight local distinctiveness. Monitoring of both bird populations and the extent of habitats are fundamental to assessing the condition of bird features (JNCC 2004) and are therefore identified as "mandatory attributes" in the text outlining favourable condition for each feature. It is not possible to make a robust assessment of the condition of a feature without assessing the mandatory attributes. In general, for bird features, all mandatory attributes must meet their targets for the feature to be in favourable condition. Priority will be given to measuring attributes that are at risk from anthropogenic pressure and for which changes in management may be necessary. This information may be generated by Natural England/Natural Resources Wales/JNCC or collected by other organisations through agreements.

The condition monitoring programme will be developed through discussion with the relevant / competent authorities and other interested parties. Natural England, Natural Resources Wales and the JNCC will be responsible for collating the information required to assess condition and will form a judgement on the condition of each feature within the site.

Targeted monitoring of the attributes identified in the text outlining favourable condition will

be an important, but not the only, basis for assessing the condition of the features. Additional sources of information may also be selected to inform our view about the integrity and condition of the site. For example, a part of risk-based monitoring activity data (as collected by the relevant/competent authorities and their statutory advisers) could give an indication as to the levels of pressure that may impact on the site features. Any other relevant data, such as data on site integrity, results from compliance monitoring, (for example assessing the conduct of activities in relation to regulations and licence conditions), together with data obtained to inform appropriate assessments, licence applications etc. will also have an important role in informing assessments of feature condition.

Information about the size of the bird populations on the site will also need to be interpreted in the context of any wider changes in the populations of these species at a national or biogeographic region level.

4. General site and feature information

4.1 Local environmental conditions and supporting habitats

Liverpool Bay is located in the south-eastern region of the northern part of the Irish Sea, bordering northwest England and north Wales, and running as a broad arc from Morecambe Bay to the east coast of Anglesey.

The Liverpool Bay / Bae Lerpwl SPA lies in both English and Welsh territorial waters and in offshore UK waters. The border between English and Welsh territorial waters running north-westwards from the Dee Estuary. The SPA comprises one area of 252,757.73 ha. The seaward boundary of the SPA is mostly within the 20-25m depth contour but off the coast of north Wales and in the top north west corner it extends marginally beyond the 25m depth contour.

4.1.1 Bathymetry and sediments

The seabed of Liverpool Bay consists of a wide range of mobile sediments. Sand is the predominant substrate with a concentrated area of gravelly sand off the Mersey Estuary. Sandbanks off the English coast include East Hoyle Bank (largely within the Mersey Narrows and North Wirral Foreshore SPA), and parts of Great Burbo Bank (off the mouth of the Mersey). West Hoyle Bank (at the mouth of the Dee Estuary), Dutchman Bank and Chester and Rhyl Flats/Gwastadeddau'r Rhyl, are amongst the sand banks off the Welsh coast.

4.1.2 Tidal currents

The tidal currents throughout the bay are generally weak and do not exceed 2m/sec. This combined with a relatively extended tidal range of 6 to 8m along the Lancashire coastline facilitates the deposition of sediments, encouraging mud and sand belts to accumulate.

4.1.3 Water temperature and salinity

Water temperature ranges between a low of 5-6°C in February and a high of 14-16°C in August. The salinity level varies from 35 parts per thousand in the western seaward areas and decreases eastwards to 33 – 31 parts per thousand with the increased freshwater river input.

4.1.4 Fish species

The bay holds various fish of commercial importance. Pelagic species such as herring (*Clupea harengus*) and sprat (*Sprattus sprattus*) have nursery grounds in the bay. Demersal species such as plaice (*Pleuronectes platessa*) and sole (*Solea solea*) use the bay for spawning and as a nursery area. Herring and sprat are amongst the most frequently recorded prey species of red-throated divers (Cramp & Simmons, 1977), although this species is considered to be an opportunistic feeder, taking a rather broad range of fish species (Guse, Garther & Schirmeister, 2009 and references therein).

4.1.5 Shellfish species

A study in Liverpool Bay investigated how bivalve distributions may influence common scoter distributions (Kaiser and others, 2002; Kaiser and others, 2006). Benthic sampling undertaken to date has found three main bivalve species within the sampling areas. These were the white furrow shell (*Abra alba*), bean razor clam (*Pharus legumen*) and banded wedge shell (*Donax vittatus*). Species such as rayed trough shell (*Mactra stultorum*) and bean-like tellin (*Fabulina fabula*) were much more patchily distributed. It is clear that each species occurs in distinct patches of variable abundance, but as one species declines it is replaced by another species. Work in Carmarthen Bay/Bae Caerfyrddin (Woolmer 2003) indicates that common scoters are quite broad in their selection of prey species and will forage on species that are at sufficient density and at a suitable depth. This was also supported in the Liverpool Bay study (Kaiser and others, 2006).

4.1.6 Physical and chemical properties

Non-toxic contamination through nutrient loading, organic loading and changes to the thermal regime could impact on prey species and distribution.

Dissolved oxygen (DO) levels affect the condition and health of supporting habitats. Excessive nutrients and/or high turbidity can lead to a drop in DO, especially in warmer months. Low DO can have sub-lethal and lethal impacts on fish and infauna and epifauna communities (Best, Wither & Coates, 2007), and hence can adversely affect the availability and suitability of feeding habitats. However, there is a significant amount of natural variation that should be considered.

High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced DO availability. This can impact sensitive fish, epifauna and infauna communities (Devlin, Painting & Best, 2007; Best, 2014), and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats.

Water turbidity is a result of material suspended in the water, including sediment, plankton, pollution or other matter from land sources. Turbidity levels can rise and fall rapidly as a result of biological (e.g. plankton blooms), physical (e.g. storm events) or human (e.g. development) factors. Prolonged changes in turbidity may influence the amount of light reaching supporting habitats, affecting the primary production and nutrient levels of the habitat's associated communities. Changes in turbidity may also have a range of biological effects on different species within the habitat, e.g. affecting their abilities to feed or breathe. A prolonged increase in turbidity is indicative of an increase in suspended particulates. This has a number of implications for the aquatic / marine environment, such as affecting fish health, clogging the filtering organs of suspension feeding animals and affecting sedimentation rates. This in turn can adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The level of turbidity should be maintained at natural levels. Aggregate extraction, dredging and other marine industries should consider impacts upon the natural sedimentary and hydrodynamic regime, along with the potential disturbance pressures from the associated vessel traffic. At the time of classification, these activities were geographically dispersed and cumulatively represented only a small area of the SPA habitat.

4.2 Red-throated diver - *Gavia stellata*

Red-throated divers in Liverpool Bay are listed in Annex 1 of the Birds Directive and are

assessed against stage 1(1) of the SPA selection guidelines (Stroud and others, 2001) using the relevant national population estimate. The wintering population of red-throated divers in Great Britain is estimated to be 17,116 individuals (O'Brien and others, 2008), representing between 10-19% (depending on the areas included) of the NW Europe non-breeding population. This population estimate was derived primarily from visual aerial surveys and supplemented by The Wetland Bird Survey (WeBS) counts and county bird records. The implementation of digital aerial surveys (DAS) has led to the detection of much larger numbers of red-throated divers wintering in British coastal waters (Irwin and others, 2019). The Great Britain population estimate is, therefore, considered to be an underestimate. The use of data obtained by DAS methods to derive population estimates of some of the features in this conservation advice package is likely to have contributed to increased abundance estimates.

In the UK, red-throated divers are associated with inshore waters, often occurring within sandy bays, firths and sea lochs, although open coastline is also frequently used (Skov and others, 1995; Stone and others, 1995). Lack (1986) found the distribution to be fairly even along the east coast, with perhaps slightly fewer in the south compared to the north. The species is less abundant around western coasts and has a patchy distribution, though it is still common, especially off western Scotland (Moser and others, 1986; Stone and others, 1995). Concentrations have been recorded in Cardigan Bay/Bae Ceredigion, the Moray Firth, the Clyde and Forth Estuaries, the Aberdeenshire coast, the Suffolk/Essex coast, as well as close to Tiree (Moser and others, 1986; Barrett & Barrett 1985; Pollitt and others, 2000; Thorpe 2002). O'Brien and others, (2008) note that distribution was uneven at the national scale and by far the greatest numbers were found off southeast and east Britain. Aerial and boat transect surveys in 2002/3 identified a significant concentration in the Outer Thames Estuary (Percival and others, 2004), and recent surveys have estimated the current SPA population at 18,079 overwintering individuals (Irwin and others, 2019). Shore-based observations from the North Norfolk Coast identified winter (December-January) peaks during 1992- 1995 of up to 820 individuals (Taylor and others, 1999). Subsequently, a mean peak population estimate of 1,787 red-throated divers was identified in the Greater Wash (Lawson and others, 2016). The Greater Wash area supports 10% of the GB wintering population of red-throated diver and is the second most important site in the UK for this species after the Outer Thames Estuary (Lawson and others, 2016).

4.3 Common scoter - *Melanitta nigra*

Common scoter is not listed in Annex I of the Birds Directive and is assessed against stage 1(2) of the SPA selection guidelines (Stroud and others, 2001) using the relevant biogeographical population estimate. Common scoter is a regularly occurring migratory species and winters in the Baltic and eastern Atlantic south to Mauritania (Wetlands International, 2006). The wintering population of common scoter within this area is considered to be approximately 1.6 million individuals (of which it was previously estimated that 50,000 individuals wintered around the coast of Britain) (Kershaw & Cranswick 2003). As described above for red-throated diver, the Great Britain population size (derived largely from shore-based surveys) is clearly an underestimate given the large numbers recorded in Liverpool Bay.

Non-breeding common scoters can be found around most of the coast of the UK, with concentrations around the Moray Firth, Firth of Forth, north-east England, East Anglia, Carmarthen Bay/Bae Caerfyrddin, Cardigan Bay/Bae Ceredigion, north Wales, and north-west England (Lack, 1986; Kirby, Evans & Fox, 1993). The preferred non-breeding habitat comprises shallow offshore areas with a sandy seabed (Lack, 1986).

4.4 Little gull – *Hydrocoloeus minutus*

Little gull in Liverpool Bay are listed in Annex 1 of the Birds Directive and are assessed against stage 1(4) of the SPA selection guidelines. The site is identified as supporting the second largest aggregation of little gulls in the UK, and therefore qualifies for SPA classification in accordance with the UK SPA selection guidelines (stage 1.4: JNCC, 1999).

The site provides protection for between 2.93% and 7.09% of the estimated European non-breeding population (though see earlier caveats). It also represents the only SPA for the species on the west of Britain, and as the UK itself forms the likely north-west edge of the species non-breeding range provides an important link in the species' range requirements.

The breeding population of little gulls in Europe is estimated to be between 22,700 and 45,200 pairs (BirdLife International 2015), with the majority (49%) in Russia. Declines in the core breeding range have led to a European Red List assessment of Near Threatened, although there is a suggestion that long-term expansion in the western breeding range (Sweden, Finland) has led to more non-breeding birds appearing around the UK (Balmer and others, 2013). BirdLife International (2015) estimate the non-breeding European population to be 4,500 – 10,900 individuals, although this is somewhat incomplete as data are absent for some countries within the non-breeding range, and do not always reflect estimates of birds at sea.

Little gulls mainly spend the non-breeding season in the Mediterranean or North Africa, but some are considered to remain in the Irish Sea (Wernham and others, 2002). This is supported by Lawson and others (2016) which estimated between 172 and 374 birds on three of the five surveys in the 'core' winter months (arbitrarily defined as December – January). From April, little gulls begin the return passage migration to their breeding grounds and numbers peak at roost sites (Seaforth) within the Mersey Narrows and North Wirral Foreshore SPA (Wernham and others, 2002; Brown & Grice 2005).

4.5 Common tern – *Sterna hirundo*

Common tern in Liverpool Bay are listed in Annex 1 of the Birds Directive and are assessed against stage 1(1) of the SPA selection guidelines (Stroud and others, 2001) using the relevant national population estimate. Common terns breed within the Mersey Narrows and North Wirral Foreshore SPA. The five-year mean used to classify this site, derived from Seabird Monitoring Programme (SMP) data, is 180 pairs (2011 – 2015). This represented 1.80% of the GB total of 10,000 pairs. The SPA thus offers protection of foraging areas to a significant proportion of common terns breeding in Great Britain.

At the time of classification, the breeding population of common terns in Great Britain was estimated to be 10,000 pairs (Musgrove and others, 2013), representing at least 15% of the Southern & Western European breeding population (67,000 pairs derived by division by 3 of the upper estimation of 200,000 individuals and rounded to the nearest 1,000: AEW 2012). A significant proportion of the British population breeds in Scotland. Coastal colonies in England are concentrated in the north-east, East Anglia, a few localities along the south coast, and in the north-west (Mitchell and others, 2004). Common terns breed not only around coasts but, unlike the other tern species that breed in the UK, also breed frequently beside inland freshwater bodies.

Common terns breeding at The Dee Estuary SPA, adjacent to the SPA, are not predicted to forage within Liverpool Bay, as their nesting location is within the estuary and not on the open coast (Wilson and others, 2014). These breeding terns do not contribute to the

Liverpool Bay / Bae Lerpwl SPA total. Similarly, common terns roosting at the Mersey Narrows and North Wirral Foreshore SPA in the non-breeding season (i.e. on migratory passage) do not contribute to the Liverpool Bay / Bae Lerpwl SPA total.

4.6 Little tern – *Sternula albifrons*

Little tern in Liverpool Bay are listed in Annex 1 of the Birds Directive and are assessed against stage 1(1) of the SPA selection guidelines (Stroud and others, 2001) using the relevant national population estimate. At the time of classification, the breeding population of little terns in Great Britain was estimated to be 1,900 pairs (Musgrove and others, 2013), representing about 10.3% of the Eastern Atlantic breeding population (18,500 pairs derived by division by 3 of the upper estimate of 55,500 individuals: AEWA 2012). Breeding occurs in scattered colonies along much of the east and west coasts of Britain, from the north of Scotland to the south coast of England (Mitchell and others, 2004). The greater part of the population occurs in south and east England from Dorset to Norfolk (Mitchell and others, 2004). All British little terns nest on the coast, utilising sand and shingle beaches and spits, as well as tiny islets of sand or rock close inshore (Mitchell and others, 2004).

Little terns breed at Gronant Beach/Traeth Gronant, within The Dee Estuary SPA. The five-year mean citation population, derived from SMP data, is 69 pairs (1995-1999). More recent SMP data indicates an increase in that population, to 130 pairs (2010 – 2014). This represented 6.84% of the GB population of 1,900 pairs. The SPA thus offers protection of foraging areas to a significant proportion of little terns breeding in Great Britain, and all of the foraging range for little terns breeding at Gronant Beach/Traeth Gronant.

4.7 Waterbird assemblage

Under Stage 1.3 of the UK SPA selection guidelines (JNCC 1999), sites may be selected as SPAs on the basis of supporting regular aggregations of 20,000 waterbirds or more. The original citation for Liverpool Bay / Bae Lerpwl SPA included a waterbird assemblage comprising red-throated divers and common scoters.

The assemblage qualifies under Stage 1.3 using the most up to date data. In the period 2004/05 – 2010/11 a five year peak mean of 69,687 individual waterbirds was estimated (Lawson and others, 2016). The most recent four-year peak mean population estimate for the waterbird assemblage in Liverpool Bay / Bae Lerpwl SPA is 157,952 individuals based on recent digital aerial surveys (HiDef, in prep.). The use of data obtained by digital aerial survey methods to derive population estimates of some of the features in this conservation advice package is likely to have contributed to increased abundance estimates.

Named components of the assemblage (i.e. species exceeding 1% of the GB total or 2,000 individuals) include all the non-breeding qualifying features common scoters, red-throated divers and little gulls. As well as the non-breeding populations of red-breasted merganser and great cormorant.

Other species recorded (Lawson and others, 2016; HiDef, in prep.) and contributing to the assemblage total in numbers less than 1% of their respective GB populations or less than 2,000 individuals include: black-headed gull (*Chroicocephalus ridibundus*), common gull (*Larus canus*), common eider (*Somateria mollissima*), fulmar (*Fulmarus glacialis*), great black-backed gull (*Larus marinus*), great crested grebe (*Podiceps cristatus*), guillemot (*Uria aalge*), gannet (*Morus bassanus*), herring gull (*Larus argentatus*), kittiwake (*Rissa tridactyla*), lesser black-backed gull (*Larus fuscus*), great northern diver (*Gavia immer*), puffin (*Fratercula arctica*), razorbill (*Alca torda*), shag (*Gulosus aristotelis*) and velvet scoter

(*Melanitta fusca*).

5. Advice on operations

5.1 Background

Natural England and Natural Resources Wales have a duty under Regulation 37(3)(b) of the Habitats Regulations to advise other relevant authorities as to 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. Similarly, JNCC have a duty under Regulation 21 (b) of the Offshore Habitats Regulations to advise such competent authorities as it considers appropriate of any operations which in its opinion may adversely affect the integrity of the site.

5.2 Purpose of advice

The aim of this advice is to enable all relevant authorities to direct and prioritise their work on the management of activities that pose the greatest potential threat to the favourable condition of interest features at Liverpool Bay / Bae Lerpwl SPA. The advice given here is without prejudice to any advice provided in relation to the consideration of plans or projects within the meaning of Part 6 of the Habitat Regulations or Regulation 28 of the Offshore Habitats Regulations.

5.3 Mobile species

Some mobile species features e.g. birds are able to move outside the site boundary where there may be direct impacts to those features, for example, collision risk. In most cases it will be possible to use the advice on operations to assess impacts to features that move outside the site. Finally, activities operating at distance from the site may cause pressures that travel into the site which may affect features in this site.

5.4 Specific advice on operations for Liverpool Bay / Bae Lerpwl SPA

The following table is intended to identify where operations or activities may have the potential to have adverse effects on the designated features of this site, or their supporting habitats, resulting in a deterioration in the conservation objectives. The list of activities identified in Table 7 is not exhaustive, as new activities, or new technologies associated with existing activities, may arise at any time. It may also include activities that are currently not known to occur within the site. The inclusion of activities does not imply an actual significant impact, as this will depend on the specific details of a proposed plan or project (e.g., specific location, activity duration, season, scale, etc.). Activities included may require further permissions from other authorities or parties. Specific advice should still be sought from the relevant SNCB (Natural England, Natural Resources Wales or JNCC) or other authorities as appropriate, and a full Habitats Regulations Assessment (HRA) carried out where required. An initial assessment of whether a proposed plan, project, or ongoing activity may have an impact on a designated feature of the site can be seen by viewing [Natural England's Advice on Operations for Liverpool Bay/ Bae Lerpwl SPA](#). The information contained within the Advice on Operations online database is the

advice of Natural England only. The supporting habitats have not been agreed by all SNCBs and this Advice on Operations does not necessarily reflect the advice of all authors.

Table 7. Activities that have the potential to cause disturbance or deterioration to designated features and supporting habitats

Aggregate Extraction	
Aggregate dredging	Beach sand extraction
Cables	
Cables: Horizontal Directional Drilling (HDD) Power cable: decommissioning Power cable: laying, burial and protection Power cable: operation and maintenance	Telecommunication cable: Decommissioning Telecommunication cable: Laying, burial and protection Telecommunication cable: Operation and Maintenance
Coastal Development and Flood and Erosion Risk Management Schemes	
Construction and operation of offshore coastal defence structures (e.g., wave screens/breakwaters) Construction of coastal flood and erosion risk management schemes (e.g., seawalls, groynes, bunds) Intertidal recharge Managed realignment	Piling Reclaim and land take (e.g., the footprint of coastal defences) Maintenance of hard coastal defences Maintenance of soft coastal defences Operation of coastal flood and erosion risk management schemes
Coastal Infrastructure	
Outfalls/ Intake pipes (maintenance/construction/usage)	Slipway (maintenance/construction)
Commercial Shipping	
Commercial hovercraft Navigation markers/lights Vessel anchorages	Vessel discharges/emissions Vessel moorings Vessel movements
Ports and Harbours	
Anchorage/moorings (construction phase) Berths/moorings/anchorages (operation) Capital dredging Capital dredging disposal Cargo operations and landward transportation Clearance slipways, similar structures and water ways Construction of port and harbour structures Habitat creation	Land reclaim Maintenance dredging Maintenance dredging disposal Maintenance of port and harbour structures Operation of port and harbours Piling Shoreside industry and operations Vessel maintenance
Electricity from Renewable Energy Sources	
Offshore wind: during construction (if relevant see Cables also) Offshore wind: operation and maintenance (if relevant see Cables also) Offshore wind: decommissioning (if relevant see Cables also) Tidal lagoon/impoundment: during	Tidal lagoon/impoundment: decommissioning Tidal stream: during construction Tidal stream: operation and maintenance Tidal stream: decommissioning Wave: during construction Wave: operation and maintenance

construction Tidal lagoon/impoundment: operation and maintenance	Wave: decommissioning
Oil, gas and carbon capture storage	
Oil and gas exploration and installation Oil and gas production	Oil and gas decommissioning Pipelines
Fishing	
Anchored nets/lines Demersal seines Demersal trawl Diving (including recreational) Dredges (e.g., scallops, oysters, mussels including seed) Electrofishing	Hydraulic dredges Pelagic fishing (or fishing activities that do not interact with seabed, including rod and line) Seaweed harvesting Shore-based activities (e.g., bait digging, shellfish collection, recreational angling) Traps
Aquaculture	
Finfish aquaculture Seaweed aquaculture: suspended rope/net culture Shellfish aquaculture: bottom culture	Shellfish aquaculture: suspended rope/net culture Shellfish aquaculture: trestle culture
Recreation	
Firework and laser displays Hovercraft Leisure (e.g., swimming, rock pooling, horse-riding) Light aircraft and drones (e.g., microlites, gliders, parasail, hot-air balloons) Non-motorised land craft (e.g., sand yachting, kite buggying) Non-motorised watercraft (e.g., kayaks, windsurfing, dinghies, paddleboards)	Powerboating or sailing with an engine: launching and recovery, participation Powerboating or sailing with an engine: mooring and/or anchoring Sailing without an engine: launching and recovery, participation Sailing without an engine: mooring and/or anchoring

5.5 Seasonality

The advice on seasonality provides evidence-based and site-specific information on when a mobile feature is expected to be either present or undertaking a key life stage within Liverpool Bay / Bae Lerpwl SPA. The advice on seasonality is presented in Table 8.

In Table 8, the months highlighted in grey indicate the months in which significant numbers of each designated species are most likely to be present at the site during a typical calendar year. The months which are highlighted with grey horizontal lines indicate the transitional months where there is potential for significant numbers of the designated species to be present at the site, although these are the months when numbers start to change due to migration. The transitional months for little gull have been highlighted as a precautionary approach based on national indices. The seasonal definitions have been informed by scrutiny of the data presented by Frost and others (2021), HiDef (2020), Lawson and others (2016), Webb and others (2006) and local SPA intelligence for little terns based on personal communication data from the wardens at Gronant dunes.

Applicants considering plans or projects scheduled in the periods highlighted with grey boxes and grey horizontal lines would benefit from early consultation with Natural England, Natural Resources Wales, and the JNCC given the greater scope for there to be likely significant effects that require consideration. The months which are not highlighted in grey or grey horizontal lines are not ones in which the features are necessarily absent, rather that features may be present in less significant numbers in typical years, but there may still be a significant effect. Please note that this period can vary between years and that in any one year considerable numbers of a species may be present throughout the year or outside of the months indicated in the table. Any assessment of potential impacts on the features must be based on up-to-date count data and take account of population trends evident from these data and any other available information. Additional surveys may be required.

Table 8: Advice on Seasonality for the features: red-throated diver (non-breeding); common scoter (non-breeding); little gull (non-breeding); common tern (breeding); and little tern (breeding). This table is provided as a general guide only.

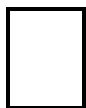
Feature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Red throated diver (nb)												
Common scoter (nb)												
Little gull (nb)				*	*	*	*					
Common tern (breeding)												
Little tern (breeding)												



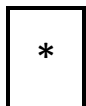
Months in which significant numbers of each designated species are most likely to be present at the site during a typical calendar year.



Months where there is potential for significant numbers of the designated species to be present at the site.



Months where features may be present in less significant numbers in typical years.



* These months have not been defined due to a lack of survey data.

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Appendix B Ribble and Alt Estuaries SPA (and Ramsar site)

European Site Conservation Objectives for Ribble and Alt Estuaries Special Protection Area Site Code: UK9005103



With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

- A037 *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)
- A038 *Cygnus cygnus*; Whooper swan (Non-breeding)
- A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)
- A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
- A050 *Anas penelope*; Eurasian wigeon (Non-breeding)
- A052 *Anas crecca*; Eurasian teal (Non-breeding)
- A054 *Anas acuta*; Northern pintail (Non-breeding)
- A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)
- A137 *Charadrius hiaticula*; Ringed plover (Non-breeding)
- A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
- A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)

Contd/

A144 *Calidris alba*; Sanderling (Non-breeding)
A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
A151 *Philomachus pugnax*; Ruff (Breeding)
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
A162 *Tringa totanus*; Common redshank (Non-breeding)
A183 *Larus fuscus*; Lesser black-backed gull (Breeding)
A193 *Sterna hirundo*; Common tern (Breeding)
Waterbird assemblage
Seabird assemblage

This is a European Marine Site

This SPA is a part of the Ribble and Alt Estuaries European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 4). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

Appendix C Irish Sea Front SPA



Irish Sea Front
Special Protection Area
UK site: UK9020328

Conservation Objectives and Advice on Operations

March 2023

Advice under Regulation 21 of The Conservation of
Offshore Marine Habitats and Species Regulations 2017

Summary

The Conservation Objectives and Advice on Operations for Irish Sea Special Protection Area (SPA) provided in this document are based on best available evidence and should be read in conjunction with [wider site information](#). The site occurs entirely within UK offshore waters (beyond 12 nautical miles of coast) and thus the Joint Nature Conservation Committee (JNCC) has advisory responsibilities under the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended). The advice is site- and feature-specific and has been developed using the best-available scientific information and expert interpretation as of March 2023. The advice provided here will be subject to change as our knowledge about the site, its feature and the impacts of human activities develops over time. The Advice on Operations has been generated through a broad assessment of sensitivity of the feature of interest and their supporting habitats to physical, chemical and biological pressures associated with human activity.

Management actions should enable the site to support the regularly occurring migratory species Manx shearwater (*Puffinus puffinus*) in the Irish Sea Front SPA (subject to natural change) by ensuring the natural processes and supporting habitats, and therefore prey populations are maintained. Detailed Conservation Objectives (with attributes) are provided in this document. Manx shearwaters are Amber listed in both the [Birds of Conservation Concern in the UK, Channel Islands and Isle of Man](#) (Stanbury *et al.* 2021) and in the [Birds of Conservation Concern in Ireland 2020–2026](#) (Gilbert *et al.* 2021).

To fulfil the Conservation Objectives for the feature and their supporting habitat for this SPA, competent authorities¹ should consider whether any human activities whose control is within their remit might affect the site and the Conservation Objectives of the site as described. Any human activities likely to have an adverse impact on the listed feature within the site, including activities likely to affect processes on which the population is dependent as outlined in the Conservation Objectives in Section 2 of this document, should be assessed against the Conservation Objectives and may require management measures to enable the feature to meet their Conservation Objectives.

¹ Defined by [Regulation 5](#) of the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) as:

- (a) a Minister of the Crown, government department, public or statutory undertaker, or public body of any description or person holding a public office;
- (b) the Scottish Ministers;
- (c) the Welsh Ministers;
- (d) any Northern Ireland department; and
- (e) any person exercising any function of a person or body referred to in sub-paragraphs (a) to (d).

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Glossary

AIS – Automatic Identification System

AOS – Apparently Occupied Sites

CR – Chick-rearing period of the breeding season

ESAS – European Seabirds at Sea

GPS – Global Positioning System

HRA – Habitats Regulations Assessment

INC – Incubation period of the breeding season

ISF – Irish Sea Front

IUCN – International Union for the Conservation of Nature

JNCC – Joint Nature Conservation Committee

MPA – Marine Protected Area

MCZ – Marine Conservation Zone

MoD – Ministry of Defence

SAC – Special Area of Conservation

SMP – Seabird Monitoring Programme

SPA – Special Protection Area

SST – Sea Surface Temperature

1 Introduction

1.1 Background and context to the site

The Irish Sea Front (ISF) SPA was classified in 2017 under the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) (hereafter ‘Offshore Regulations’) for its importance as a foraging location for Manx shearwaters listed in Annex 1 of the EU Birds Directive (2009/147/EC). Post EU-Exit these regulations have been superseded by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 which ensure that the habitat and species protection and standards derived from EU law continue to apply. The SPA is located in the Irish Sea and coincides with part of a tidal front in the western Irish Sea which is known to be an important foraging location for Manx shearwaters.

This document presents JNCC’s advice as required under Regulation 21 of the Offshore Regulations for the Irish Sea Front SPA. The obligations of competent authorities and organisations under such designations and legislation are not affected by the advice contained in this document. Supporting information is also provided for transparency and to aid interpretation. For more information on JNCC’s responsibilities under the Offshore Regulations, see [Regulation 21](#).

Irish Sea Front SPA has been classified to protect one species of breeding seabird, Manx shearwater, and contributes to the Favourable Conservation Status of this species in the Atlantic biogeographic region. The Irish Sea Front SPA forms part of the UK and OSPAR MPA networks, supporting the conservation of the wider marine environment, and progress towards Good Environmental Status within the North-East Atlantic marine region.

The Conservation Objectives form the framework for establishing appropriate management measures and assessing all future plans and projects that have the potential to affect the protected feature of the SPA.

1.2 Overlapping designations

The Irish Sea Front SPA sits within the [North Anglesey Marine/ Gogledd Môn Forol](#) Special Area of Conservation (SAC), which was designated in 2019. This SAC was designated as it is an area of importance for harbour porpoise (*Phocoena phocoena*), supporting 2.4% of the UK Celtic and Irish Seas Management Unit (MU) population. The protection afforded to this site may also benefit Manx shearwaters as there is overlap between diets of the two species, including herring (*Clupea harengus*), sand eel (*Ammodytes sp*) and sprat (*Sprattus sprattus*). There are no apparent management conflicts between the classified/designated features of the SPA and the SAC.

To the north-west of the Irish Sea Front SPA is a Marine Conservation Zone (MCZ), [Queenie Corner](#), which does not overlap with the SPA but lies around 2 km from the north-west corner. This site was designated in 2019 for the features subtidal mud, sea-pen and burrowing megafauna, which support a wide range of species including the economically important Norwegian lobster (*Nephrops norvegicus*) and a variety of other crustaceans. Mud habitats such as this are very important sites for biodiversity and can be a source of mud to other MPAs within the Irish Sea.

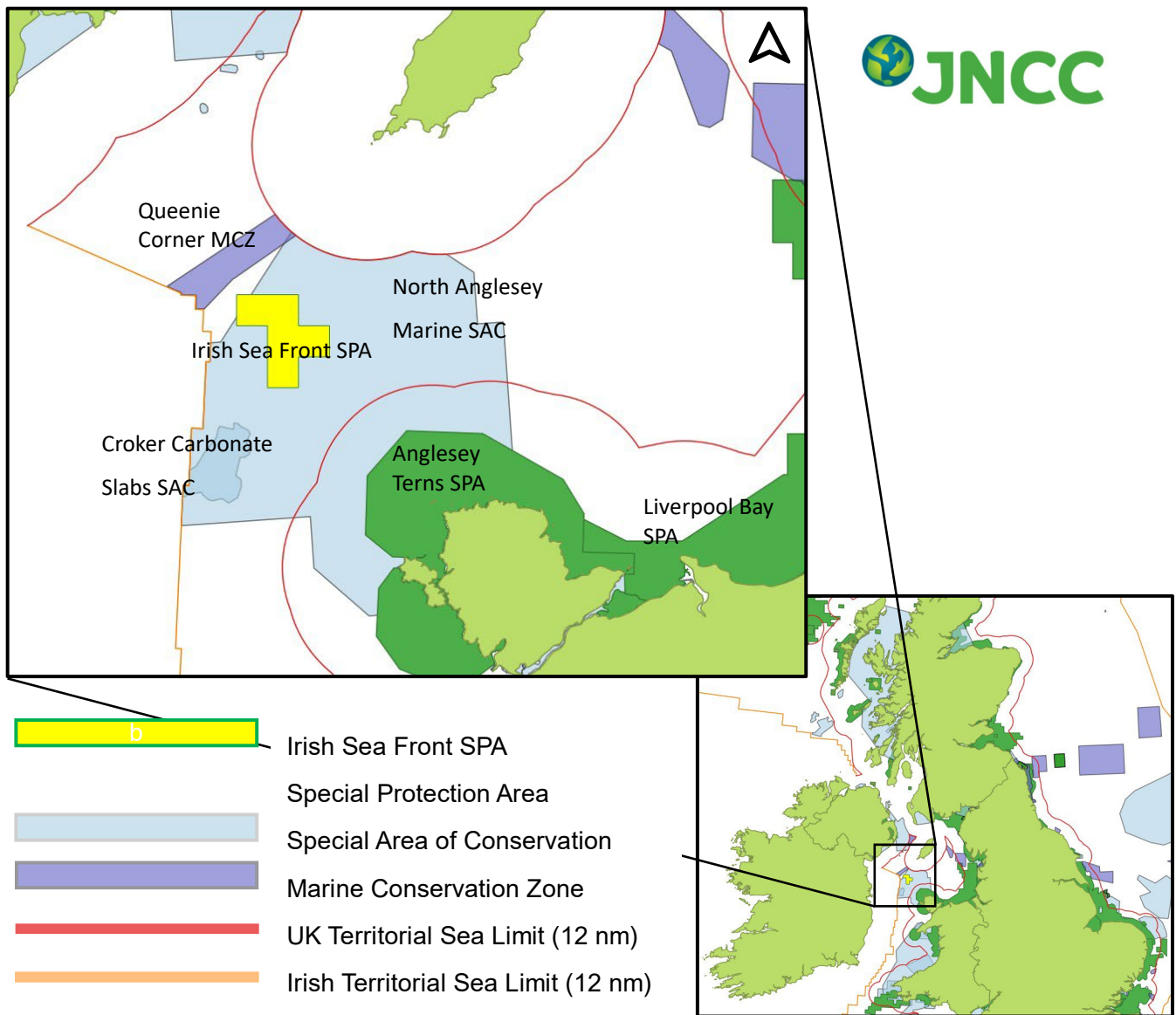


Figure 1. Location of the Irish Sea Front SPA together with other Marine Protected Areas in the region.

1.3 The role of Conservation Objectives

The role of the Conservation Objectives is to ensure that the obligations of the relevant Habitats Regulations are met by ensuring the integrity of the site is maintained, or where necessary restored, and that the qualifying feature, Manx shearwater, makes an appropriate contribution to favourable conservation status (FCS) at the national level. Conservation Objectives constitute a necessary reference for defining what will maintain the favourable condition of the feature or restore it to FCS. They provide the basis for advice on any site-based conservation or management measures and inform the consideration of whether plans and projects are likely to have significant effect on the site; the scope and conclusions of appropriate assessments; and the determination of whether plans or projects will adversely affect the integrity of the site. Advice should be referred to if you:

- undertake Habitat Regulations Assessments (HRAs) to identify and assess the potential impacts of plans or projects that could impact the site;
- provide information for an HRA;

- respond to specific measures to support delivery of the conservation objectives for the site; and
- consider the need to put new or additional management measures in place.

The key role of an HRA is to establish whether a plan or project, individually or in combination with other plans/projects, will affect the site's integrity (i.e. its ability to achieve its Conservation Objectives and consequently contribute to Favourable Conservation Status).

Manx shearwaters are protected throughout UK waters by virtue of the Offshore Regulations. This site has been classified for its significance as a foraging location for breeding Manx shearwaters and the aim of the Conservation Objectives is to maintain this function. It is not appropriate to set a population level target for this site, as usually applied in SPAs adjacent to breeding colonies, for two reasons:

- There is an inherent strong variability of numbers of Manx shearwaters present at the Irish Sea Front due to the nature of the site. The formation of the Irish Sea Front, the feature creating the favourable foraging conditions for Manx shearwaters, is annual and the timing and strength can vary between years, meaning that its value as a resource for Manx shearwaters may not be consistent and numbers of birds at the site fluctuate. Manx shearwaters have an extensive foraging range (Woodward *et al.* 2019) and previous studies have shown that at-sea foraging distribution varies between individuals and between years. For this highly mobile species this site is one of several possible foraging locations, although an important one, and they travel between sites depending on environmental conditions. Tracking data indicates that individuals from multiple colonies consistently use the front, but that the overall at-sea distribution varies between years (Dean *et al.* 2015; Guilford *et al.* 2008).
- Population level targets have already been set for this species at its SPA-protected colonies. Numbers at colonies will be more stable than at the Irish Sea Front SPA and monitoring of population sizes is more feasible at colonies. As these are the colonies from which the individuals feeding at the Irish Sea Front SPA are likely to originate, including but not limited to the [Skomer, Skokholm and Seas of Pembrokeshire SPA](#), [Aberdaron Coast and Bardsey Island SPA](#) and [Rum SPA](#), maintaining the population sizes at colonies should also maintain the individuals foraging at the Irish Sea Front SPA, if the Irish Sea Front SPA is kept intact as an attractive and available foraging area.

The Conservation Objectives for the Irish Sea Front SPA therefore focus on maintaining the foraging habitat, its important prey resources, and the access to those, such that Manx shearwaters from breeding colonies can continue to utilise the site.

2 Conservation Objectives for the Irish Sea Front SPA

2.1 Background to Conservation Objectives

The Conservation Objectives are designed to ensure that the obligations under the Offshore Regulations can be met; that is, deterioration or significant disturbance of the qualifying feature or to the habitat upon which they rely should be avoided. Meeting such obligations will ensure that the site achieves Favourable Conservation Status for its feature, Manx shearwater, and contributes to the UK Marine Strategy vision of “clean, healthy, safe, productive and biologically diverse oceans and seas”.

The Conservation Objectives include both a general statement in Section 3.2 setting out the overall objectives for the site, supplemented with advice on specific attributes which can help measure if the objectives are met, and which are important to ensure the site contributes

appropriately to the status of the wider populations of the bird feature. Section 7 (Table 2) lists these attributes.

As described before, no population abundance target has been set for the site itself, with the focus being on the relevant, linked populations from colony SPAs and the supporting habitats and processes. Population estimates of Manx shearwaters in colonies where a link has been established to the Irish Sea Front region through tracking can be used as indicators of whether the overall population size of Manx shearwaters has changed over the time. Shearwater population estimates from these colonies suggest in most cases an increase of these populations. In the absence of any other evidence to the contrary and at the time of writing, JNCC considers the current level of use by Manx shearwaters of Irish Sea Front SPA is comparable to the scale of that originally estimated at classification based on the analysis of the ESAS data.

The Conservation Objectives seek to *maintain* the protected SPA feature where evidence exists that the feature is in favourable condition in the site, or where there is uncertainty concerning the assessed condition of the feature but no reason to suspect deterioration in condition since classification. The objectives were set by reviewing the existing evidence on Manx shearwater distribution and abundance, both at sea and at colonies, based on established databases such as the ESAS programme and the Seabird Monitoring Programme (SMP). In addition, publications using the targeted deployment of Global Positioning System (GPS) tags have been reviewed to establish links between specific colonies of the feature and the site itself.

2.2 Irish Sea Front SPA Conservation Objectives

The qualifying feature of the Irish Sea Front SPA is:

- Manx shearwater *Puffinus puffinus* (breeding)

The Conservation Objectives for the Irish Sea Front SPA are:

Site conservation objective:

To avoid significant deterioration of the habitats used by the qualifying species, or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long term and makes an appropriate contribution to achieving the aims of the Conservation of Habitats and Species Regulations 2017.

This contribution would be achieved through delivering the following objectives for the site's qualifying feature:

- A. Avoid significant disturbance of the qualifying feature within the site, so that the ability of the species to use the site is maintained in the long-term;**
- B. Maintain the habitats, processes and food resources of the qualifying feature in favourable condition;**
- C. Ensure connectivity between the site and its supporting habitats and Manx shearwater breeding colonies is maintained.**

The explanatory notes with supplementary advice on the Conservation Objectives for Irish Sea Front SPA provide more site-specific detail.

Explanatory notes:

General

Marine bird species are exposed to a range of wider drivers of change. Some of these are natural (e.g. population fluctuations/ shifts or habitat changes resulting from natural processes) and are not a direct result of human influences. Such changes in the qualifying species' distribution and use of the site which are brought about by entirely natural drivers, directly or indirectly, are considered compatible with the site's Conservation Objectives.

There may also be wide scale anthropogenic impacts driving change within the site, such as climate change, ocean acidification or dispersed pollution, which cannot be managed effectively at site level. Where impacts can be identified a review of the definition of favourable condition may be appropriate.

A) Avoid significant disturbance of the qualifying feature within the site, such that the ability of the species to use the site is maintained in the long-term.

The purpose of this objective is to protect the qualifying feature from significant disturbance (mortality, injury or removal) that can lead to a long-term decline of the feature within the site, including continued access to all areas within the site required for feeding, loafing and other maintenance activities. It protects the feature from significant risk of incidental killing and injury from activities both within and outside the site. Impacts and effects are considered 'significant' where they could result in a permanent reduction or continued decline in the population. It should be ensured that the qualifying features are protected from anthropogenic pressures that could lead to a significant long-term decline in numbers using the site, such that recovery cannot be expected.

This site has been selected because evidence indicates it is a hotspot for Manx shearwaters and important in supporting the wider population of this species. The viability of the species within the Irish Sea Front SPA is linked to their ability to access and use breeding habitat in areas of functionally linked land outside the site, in addition to the ability of the site to support breeding adult survival and chick rearing. Disturbance of these birds within the site would have a detrimental effect on the contribution that this site makes to wider populations, including those in breeding colony SPAs, and therefore should be avoided.

There is no site-specific population target for this site and therefore any effects should be apportioned to breeding colonies. The relevant breeding colonies to which to refer to for references populations are:

- [Rum](#) (Rum SPA)
- [Copeland Islands](#) (Copeland Islands SPA)
- [Skomer Island](#) (Skomer, Skokholm and Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA)
- [Skokholm Island](#) (Skomer, Skokholm and Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA)
- [Bardsey Island](#) (Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA)
- [Lundy Island](#) (Lundy SSSI)

This is not an exhaustive list of all the possible breeding colonies with connectivity (i.e. within species-specific foraging range, which is extensive for this species; mean maximum foraging range of 1,346.8 +/- 1,018.7 km), however it is based on evidence from tracking data and provides a starting point for those carrying out plan or project assessments. Species-specific foraging ranges were taken from Woodward *et al.* 2019.

All birds require energy, which they obtain from food, to survive and to breed. Significant disturbance can impair the birds' ability to obtain energy or minimize the loss of energy which could detrimentally affect productivity, adult condition and potentially survival. Impacts such as displacement, the exclusion of birds from a site, and barrier effects, preventing birds accessing a site, can increase energy expenditure. Where such disturbance is brought about by human activities which affect the qualifying species' distribution and use of the site, such that their ability to survive and/or breed is compromised in the longer term, it is considered significant.

For this site "significant" is taken to mean anthropogenic disturbance that affects the qualifying species' distribution within and use of the site such that recovery either cannot be expected or would only occur in the long-term (full recovery expected within 10–25 years, based on long lifespan, deferred maturity, low natural mortality and low reproductive output (FeAST, Rogerson *et al.* 2021)).

B) To maintain the supporting habitats, processes and food resources of the qualifying feature in favourable condition.

Manx shearwaters using the site require sufficient, high-quality food resources to be available during the breeding season. Their diet consists of a variety of pelagic or benthic prey and these prey species should be maintained at a level that is able to materially contribute to supporting healthy populations in Favourable Conservation Status. Where prey species have particular habitat requirements and these can be identified, management measures may be needed to ensure the extent and quality of the habitats are sufficient to maintain these prey species in the longer term.

C) Ensure connectivity between the site and its supporting habitats and Manx shearwater breeding colonies is maintained.

For Manx shearwaters to be able to continue using the site as delineated, it is important that they continue to have access to the site for foraging within the breeding season, ensuring safe movements between the site and spatially disjointed breeding colonies, and ensuring no significant increase in energetic costs for the birds in those movements.

3 The role of Advice on Operations

JNCC's Advice on Operations identifies operations (human activities) that may cause damage or deterioration of the qualifying species for which the site has been classified or of their supporting habitats. The aim of this advice is to enable the competent/relevant authorities and practitioners to conduct and prioritise the management of activities within and out-with the site in order to reduce/minimise the potential threat to Manx shearwaters within the SPA.

Our advice is divided into two sections. Section 4 – advice on operations – lists activities that might adversely impact the feature of the SPA because the best-available evidence indicates that Manx shearwaters are moderately, or highly, sensitive to associated pressures as described in FEAST (Rogerson *et al.* 2021). This advice includes operations that may not currently be occurring in the Irish Sea Front SPA. The second section (4.1) – advice on existing operations – lists operations that are currently occurring in the Irish Sea Front SPA and where best available evidence indicates the feature is moderately or highly sensitive to them.

The lists provide a basis for discussion about the nature and extent of the operations taking place that may have an impact on the feature of interest. The advice should also be used to identify the extent to which existing measures of control, management and forms of use are,

or can be made, consistent with the Conservation Objectives, and thereby highlights to relevant authorities the areas that may need management measures.

The Offshore Regulations require that where an authority concludes that a development proposal is incompatible with the nature conservation management of a site and is likely to have a significant effect on that site, it must undertake an appropriate assessment of the implications for the qualifying feature of interest for which the area has been classified.

Competent authorities are required by the Offshore Regulations to undertake a review of all consents and permissions for activities affecting the site as soon as reasonably practicable after it becomes a European site.

4 Advice on Operations

JNCC's advice covers a range of different human activities and infrastructural developments that could occur in the marine environment but is not exhaustive. By stating those activities and their associated pressures to which the feature is considered to be sensitive, our advice focuses on where we consider there could be a risk of the feature not achieving its Conservation Objectives for the site should these activities occur in or near the SPA. This section does not attempt to cover all possible future activities or eventualities (e.g. as a result of accidents), and does not consider likely cumulative effects that could result from different types of activities being carried out simultaneously within or outside of the SPA. This advice is not a prohibition, but rather indicates that some form of management measure(s) may be required, or further measures may be required where actions are already in force. The advice is indicative and does not remove the need for formal consultation on individual plans and projects.

The pressures and activities identified in the Advice on Operations package have been extracted from the [Feature Activity Sensitivity Tool](#) (FeAST) which has been developed by NatureScot (available on request) (Rogerson *et al.* 2021). This tool investigates the sensitivity of marine features to anthropogenic activities with a focus on Scottish waters, although the same pressures exist throughout the UK. The activities exerting pressures were identified using the [Marine Pressures Activity Database](#).

Manx shearwater is thought to be sensitive to a number of direct and indirect pressures at sea which can be exerted by a number of activities:

- Extraction of living resources
- Extraction of non-living resources
- Energy generation (renewable and hydrocarbon)
- Transport (shipping)
- Recreation and leisure
- Defence and national security
- Waste management
- Other man-made structures
- Research

For more information on the sensitivities and pressures see the [Advice on Operations spreadsheet](#).

Given the importance of prey availability as a supporting feature, pressures which impact on abundance and availability of prey species are also important. It is likely that removal of target species is an important pressure for prey species which are of commercial interest (such as herring, sprat, sand eels and cephalopods). Removal of non-target species is also an important pressure for any non-commercial prey species that are bycaught during fishing activities. Fishing types that have the greatest bycatch risk are demersal longlines and

< 10 m set nets (gillnets) which occur at very low levels within the site (Anderson *et al.* 2022). The effect of this pressure is increased mortality. Benthic, surface and water column feeders represent the species guilds most susceptible to entanglement in nets due to their foraging strategies. In the UK, offshore demersal longline and < 10 m static nets (gillnets) have been observed to be the greatest cause of seabird bycatch, particularly for fulmar (*Fulmarus glacialis*) and guillemot (*Uria aalge*) in longlines and gillnets respectively. Entanglement can occur during net setting, hauling, trawls, most often when birds are foraging/scavenging around nets. One of the prey species, herring, are targeted using pelagic trawls and purse seine fisheries within the Irish Sea, however this only occurs at low levels in the north and north-west of the site respectively and very low levels throughout the rest of the site (based on VMS data 2009–2020). The level of fishing activity for most other gear types is either low or negligible, with the exception of beam trawls where overall activity levels are low to moderate (VMS data). However, beam trawls are not expected to target the key prey species of Manx shearwater.

Any activity that can cause a pressure or pressures to which the feature and supporting habitats or species may be sensitive could present a risk to the feature of not achieving the conservation objectives and should be assessed against the attributes listed in Table 2.

The next section looks at which of the potentially damaging activities which can cause pressures to which Manx shearwater are sensitive. This is provided to highlight where JNCC advises that more immediate management effort be focused.

4.1 Advice on existing operations

This section provides advice on those activities that might impact the species and are known to occur, or are planned to occur, within the SPA at present (March 2023). It lists the most important activities and potential associated pressures as identified by FeAST and provides advice on operations. The activities, pressures and further information can be found in the associated [Advice on Operations spreadsheet](#). Our advice does not go into detail about the level of exposure to associated pressures caused by these activities and hence the level of impact that might be expected on the species. This section should therefore be considered as the starting point for discussions about the appropriate management actions relating to the SPA. Detailed information on current exposure levels held by the relevant authorities responsible for management should be used to inform the management of any activity that might impact upon the site's integrity.

The comments below are general and should not be considered definitive. They are made without prejudice to any comments JNCC may provide or any assessment that may be required for individual plans or projects to be considered by a competent or relevant authority. The level of any impact will depend on the location, intensity and duration of the specific activity. The advice is provided to assist and focus the authorities on their consideration of the management of these operations.

Military activity

MOD operations could occur in and around the site and may include low-flying aircraft, firing munitions and exploding ordinance, high speed vessel manoeuvres or military exercises which could cause disturbance to the feature.

Fisheries

Fishing activity of various types (beam trawl, demersal trawl, dredges, demersal seine, pelagic trawls, pots and traps, hooks and lines, gillnets and purse seines) occur within or close to the site and may exert direct pressure on the feature through disturbance from vessels, mortality through bycatch and removal of prey species.

Cables

Telecommunications cables pass through the north-west of the site and power cables pass close to the southern edge of the site. Impacts to the feature are only likely to occur during maintenance activities.

4.1.1 Supporting habitats and processes

As set out in Objective B of the Conservation Objectives, key supporting processes that are vital for the formation and functioning of the Irish Sea Front need to be maintained. In the Irish Sea, deep water and reduced tidal flows to the south-west of the Isle of Man result in annual seasonal stratification. This causes the formation of a cyclonic, seasonal gyre which has a significant impact on water circulation in the region and separates the well-mixed waters from stratified ones (Gowen *et al.* 1995; Hill *et al.* 1994; O'Reilly *et al.* 2014; Trimmer *et al.* 1999). One key feature of the gyre and its circulatory nature is its function in retaining planktonic larvae, juvenile and larval fish, and zooplankton (Hill *et al.* 1994; Dickey-Collas *et al.* 1996; 1997). The timing of formation and stability of the Irish Sea Front is vital to maintaining the site's reliable and productive characteristics.

The only current issue possibly affecting the timing, formation and stability of the front is climate change, which is not something that can be managed at a site level. Climate change is likely to have a variety of impacts including increases in sea surface temperature (SST) and more frequent extreme events, evidence has shown that severe gales can have an impact on stratification of the Irish Sea (Scrope-Howe and Jones 1985). In addition, construction of sub-surface infrastructure, in particular to the north-west where the seasonal gyre forms which is vital for the retention of prey, could be of concern. Such structures can have impacts on the currents/water flow and sediment regime of the seabed. Alterations to the hydrodynamic regime (tidal flows/seasonal stratification & seasonal gyre formation) have the potential to affect larval recruitment and the availability of food and oxygen, and waste removal (De Dominicis *et al.* 2017; Dickey-Collas *et al.* 1996; Hill *et al.* 1994 & 1997; O'Reilly *et al.* 2014; Trimmer *et al.* 2003).

4.1.2 Prey

As outlined above, the physical processes present within and in the areas surrounding the SPA are vital for the accumulation and retention of prey species within the Irish Sea Front and the SPA itself. Given the lack of data and certainty around the diet of Manx shearwaters, the potential reproductive activity of fish within and in the vicinity of the site and the origin of prey species occurring within the SPA, assessing the impact of activities on prey species is not straightforward. Therefore at this time of writing, we cannot provide evidence-based management advice concerning the prey species themselves.

4.1.3 Advice on Seasonality

Manx shearwaters spend the winter in the southern hemisphere, arriving back to their breeding colonies in the UK at the beginning of March, and they have an extended breeding period with chicks still present in the burrow into September. Table 1 indicates the months in which significant numbers of Manx shearwater are most likely to be present at the site during a typical calendar year, as well as months where the species is known to be present during a typical calendar year but in fewer numbers (adapted from Waggitt *et al.* 2020).

Applicants considering plans or projects scheduled in the periods where Manx shearwater are most likely to be present at the site during a typical calendar year would benefit from early consultation with JNCC given the greater scope for there to be likely significant effects that require consideration. The months outside these periods are not ones in which the feature is necessarily absent, rather that the feature may be present in less significant

numbers in typical years, but there may still be a significant effect. Please note that this period can vary between years and that in any one year considerable numbers may be present outside of the months indicated below. Any assessment of potential impacts on the feature must be based on up-to-date count data and take account of population trends evident from these data and any other available information. Additional surveys may be required.

Table 1. Seasonality table showing the months where Manx shearwater are most likely to be present at the site during a typical calendar year. Dark shading (**) represents months where significant numbers of Manx shearwater are likely to be present (April to September inclusive). Paler shading (*) represents months where the species is present, but in fewer numbers (March, October) (adapted from Waggitt *et al.* 2020).

Feature name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manx shearwater, breeding			*	**	**	**	**	**	**	*		

5 Links to wider conservation strategy for the species

Any seabird conservation strategies in the four devolved nations will directly inform the conservation advice presented in this document. The strategies assess the most important pressures for each species and across different seasons, based on assessments of existing evidence and informed by expert opinions. Manx shearwater assessments from each of the country strategies will be relevant as birds from colonies in England (Lundy), Wales (Skomer), Scotland (Rum) and Northern Ireland (Copeland) use the Irish Sea Front during the breeding season (Dean *et al.* 2015).

The seabird strategies also provide a broader context and address the wider issues affecting this species that cannot be covered within this conservation advice package, such as those covered in the Advice on operations (Section 4). They also provide some contextual discussion on issues such as climate change and prey availability which will act via multiple pathways, such as sea surface temperature, extreme weather and changes in species distribution and composition.

6 Supplementary information on the Conservation Objectives

Table 2. Additional evidence for the Conservation Objectives

Objective	Action	Additional Evidence
<p>A. Avoid significant disturbance of the qualifying feature within the site, such that the ability of the species to use the site is maintained in the long-term.</p>	<p>Ensure Manx shearwaters are not at significant risk from disturbance within the breeding season</p>	<p>An area as outlined in Figure 1 has been identified as an aggregation hotspot for Manx shearwater (Kober <i>et al.</i> 2010, 2012). Tracking data has shown that birds from Skomer, Skokholm, Bardsey, Rum, Copeland and Lundy all use the Irish Sea Front region for foraging during the breeding season (Dean <i>et al.</i> 2013; Guilford <i>et al.</i> 2008). ESAS data suggest that shearwaters are present throughout the site between March and September. They will mainly be using this site for foraging, although it may also be an important site for maintenance behaviours and resting/roosting as demonstrated by tracking data collected by Dean <i>et al.</i> (2015).</p> <p>There is high uncertainty surrounding assessments of various forms of disturbance, for example shearwaters have been observed within the footprint of a windfarm in the Celtic Sea, but there is little evidence of their occurrence within other established windfarms (Dierschke <i>et al.</i> 2016; Furness <i>et al.</i> 2013; Wade <i>et al.</i> 2016). Surveys before, during and post-construction at the Robin Rigg windfarm found numbers within the windfarm did appear to decrease during operational years compared with pre- and during-construction, however numbers were always relatively low (Canning <i>et al.</i> 2013).</p>
<p>B. Maintain the habitats, processes and food resources of the qualifying feature in favourable condition</p>	<p>Maintain the variety and abundance of food resources</p>	<p>In the UK, Manx shearwater diet studies are few and the forage species listed here are based on the only diet study identified through review and other opportunistic studies. Manx shearwater diet may mainly consist of small fish, particularly clupeids, including herring and sprat, as well as sand eels and a variety of cephalopod species (Brooke 1990; Camphuysen 2005; Cramp and Brooks 1992; Stone <i>et al.</i> 1995; Tasker and Furness 1996; Thompson 1987; Warham 1990). They tend to forage more on fish during the chick rearing period and fledging weight (which is related to survival) has shown to be significantly linked to the quality of herring stocks, therefore the abundance and quality of forage fish stocks during the chick rearing period of end of June to September will be vital for breeding success (Riou <i>et al.</i> 2011; Perrins <i>et al.</i> 1973; Thompson 1987). Manx shearwater breeding success has been assessed to have a very low vulnerability to a reduction in prey in the vicinity of the colony, due to their extensive foraging range, low flight costs, flexible daily energy budget and varied diet (Furness and Tasker 2000). This study was conducted in the North Sea and focussed on sand eels therefore the sensitivity to reduction in other prey species (herring) in the Irish Sea may not be the same.</p>

Objective	Action	Additional Evidence
<p>B. Maintain the habitats, processes and food resources of the qualifying feature in favourable condition (continued)</p>	<p>and the condition of supporting habitats</p>	<p>Atlantic herring are benthic spawners, they tend to spawn in discreet beds and require substrates such as gravel, stones, shells and/or flat rock, see Appendix 2 Figures 1 & 2 (Breslin 1998; Campanella and van der Kooij 2021; Hay <i>et al.</i> 2001; Townsend 1992). They prefer to spawn at depths of around 15–40 m, in well-mixed, “high energy environments”, at these sites they can spawn at very high densities (BEIS 2016; Maravelias <i>et al.</i> 2000; O’Sullivan <i>et al.</i> 2013). Key spawning areas that contribute juvenile herring to the Irish Sea were identified as the east coast of the Isle of Man, the south coast of Ireland and a small area off the south-west of Pembrokeshire, although these data may need updating (Coull <i>et al.</i> 1998; BEIS 2016; Ellis 2012).</p> <p>A recent review, which used adult herring density as a proxy for spawning activity, identified a hotspot in the northern Irish Sea around the Isle of Man (Campanella & van der Kooij 2021). The spawning grounds around the coast of Isle of Man and Pembrokeshire are partially protected by Marine Nature Reserves and SACs, however, the waters off Ireland do not appear to have any protections in place and therefore may be vulnerable to anthropogenic impacts (Isle of Man Government 2021; NRW & JNCC 2017).</p> <p>Alongside spawning grounds which ensure the replenishment of prey for shearwaters, fish nursery grounds play an important role for prey availability to seabirds and research has shown that shearwaters favour juvenile fish (Riou <i>et al.</i> 2011; Thompson 1987). Herring stay in nursery grounds until they are between 2 and 3 years old when they migrate to their spawning grounds (Hay <i>et al.</i> 2001). The northern part of the Irish Sea, particularly the Liverpool Bay area, is an important nursery ground for juvenile herring hatched in the Celtic Sea around the South and West coasts of Ireland. They can form dense aggregations, often associating with sprats (BEIS 2016; Brophy and Danilowicz 2002; Dickey-Collas <i>et al.</i> 2015; Hay <i>et al.</i> 2001). In a recent study, all these main nursery areas have been confirmed by the presence of juvenile herring, and in addition a new nursery ground in the Bristol Channel has been identified (Campanella & van der Kooij 2021).</p> <p>The Irish Sea Front SPA overlaps low intensity spawning grounds for sand eel (<i>Ammodytidae</i> species) and high intensity nursery areas located to the south-west (Campanella & van der Kooij 2021; Ellis 2012) (See Appendix 2). Sand eels are reliant on favourable sandy benthic habitats, preferring sandy seabeds with high proportion of coarse and medium sand particles (Greenstreet <i>et al.</i> 2010, Holland <i>et al.</i> 2005). Sand eels are highly site-faithful and non-migratory, with large-scale dispersal only possible during larval phase and this is generally to a limited extent (Proctor <i>et al.</i> 1998; Christensen <i>et al.</i> 2008 & 2009; Van Deurs <i>et al.</i> 2010). Therefore, sand eel seabed habitats in or linked to the Irish Sea Front SPA should be maintained in favourable condition.</p>

Objective	Action	Additional Evidence
B. Maintain the habitats, processes and food resources of the qualifying feature in favourable condition <i>(continued)</i>	and the condition of supporting habitats <i>(continued)</i>	Sprat are prevalent across the entire Irish Sea region; they spawn pelagic eggs in batches around the entire UK coast between May-August, near the coast or up to 100 km offshore between depths 10–20 m (De Silva 1973; Dickey-Collas <i>et al.</i> 2015; Gordon 2006). The most recent study did not identify egg data, adult density of adults was used as a proxy and the main spawning areas were distributed along the English coast of the western English Channel and in coastal waters of the northern Irish Sea (Campanella and van der Kooij 2021).
	and associated processes	<p>Seasonal stratification in the western Irish Sea is a key factor controlling the production, distribution and fate of marine organic matter (O'Reilly <i>et al.</i> 2014). The timing of formation and stability of the Irish Sea Front is vital to maintaining its reliable and productive characteristics. Early stratification and the formation of a stable front has been associated with significantly higher concentrations of plankton in the Irish Sea when compared with years of later stratification. A further study showed that when disrupted by severe gales, a breakdown in stratification led to a decrease in zooplankton abundance (Lee <i>et al.</i> 2005; Scrope-Howe and Jones 1985). A similar association was found in the north-eastern North Sea where a weakened frontal structure was linked to a decrease in gadoid larvae (Munk <i>et al.</i> 1999).</p> <p>Tidal fronts are areas of high primary productivity and subsequently attract and support a wide range of other organisms throughout the food chain. Ichthyoplankton surveys off the coast of the Isle of Man found that the frontal waters were the preferred habitat of both clupeids and sand eel larvae (Lee <i>et al.</i> 2005). The front attracts large aggregations of fish, such as herring, which are a key forage species for seabirds such as Manx shearwaters (Begg and Reid 1997; Fernandes 1993; Hardy 1936; Maravelias <i>et al.</i> 2000). Manx shearwaters can cover vast distances searching for food, however, tracking studies have shown that birds breeding on Skomer carry out most of their foraging within 100 km of fronts (Shoji <i>et al.</i> 2015).</p>

Objective	Action	Additional Evidence
<p>B. Maintain the habitats, processes and food resources of the qualifying feature in favourable condition (continued)</p>	<p>Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	<p>Seasonal stratification in the western Irish Sea is a key factor controlling the production, distribution and fate of marine organic matter (O'Reilly <i>et al.</i> 2014). Long periods of increased turbidity, caused by persistent high levels of suspended sediments, could potentially affect Manx shearwaters directly and indirectly. Prey availability can be affected through reduced primary productivity, as well as the impacts on the health of fish and other organisms within the habitat. As shearwaters are visual predators, increased turbidity may impair their ability to locate prey patches within the environment (Ainley 1977; Baduini <i>et al.</i> 2001; Eriksson 1985; Hanley and Stone 1988; Lovvorn <i>et al.</i> 2001). Evidence collected using biologgers attached to Manx shearwaters suggests that visual cues are vital for successful foraging and that fine-scale prey capture was constrained by the detectability of prey underwater (Darby <i>et al.</i> 2022).</p>
<p>C. Ensure connectivity between the site and its supporting habitats and Manx shearwater breeding colonies is maintained</p>	<p>Ensure Manx shearwaters continue to have access to and utilise the site for foraging within the breeding season and avoid significant disturbance to Manx shearwaters to ensure individuals can move safely between the site and their breeding colonies</p>	<p>Given the extensive foraging ranges of Manx shearwaters during the breeding season (mean maximum foraging range of 1,346.8 +/- 1,018.7 km but the maximum foraging distance recorded can be over 2,890 km), there are 57 colonies in the UK with the ability to forage within the SPA, although the number of colonies with individuals that regularly use this area is more likely to be between 16 - 21 (Woodward <i>et al.</i> 2019). Manx shearwaters show moderate displacement towards offshore activities such as wind, wave and tidal development, low displacement from dredging, aggregates, oil and gas activities and very low displacement from vessel activities such as traffic, fishing and transport (Dierschke <i>et al.</i> 2016; MMO 2018). Currently there are no operational wind farms that may act as a barrier for shearwaters accessing the site, although noting the planned floating and fixed wind projects off Pembrokeshire, Northern Ireland, Ireland, the ScotWind plan areas and Round 4 sites off the coast of Wales and Cumbria. Potential impacts on the Irish Sea Front SPA will be considered as part of the impact assessment process for these projects.</p>

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Appendix 1. Supplementary information

Ecology and life-history – Manx shearwater

Manx shearwaters are transatlantic migrants, spending the winter off the coast of South America before returning to the UK to breed in early spring (February/March). They can be found on their breeding grounds from the end of February and begin their return migration at the end of September (Brooke 1990). These efficient fliers are able to cover vast distances in search of prey or on their migration.

Manx shearwaters are listed as “Least Concern” by International Union for Conservation of Nature (IUCN) at both a global and European level of assessment (BirdLife International 2015; 2018). Within the UK they are listed as a species of Least Concern by the IUCN due to their large range and current population estimates (BirdLife International 2021). However, the UK has a special responsibility for this species as the majority of the world population of Manx shearwaters breed in the UK, where they are mainly restricted to small offshore islands. They are extremely site faithful and often return to their natal colony to breed, often to the same burrow and partner as in previous years. Studies have shown that many seabirds, including Manx shearwaters, become more successful breeders with age and the longer partners have been together (Brooke 1978 & 1990; Mauck *et al.* 2018; Riou *et al.* 2011).

Manx shearwater is a long-lived species. The oldest known bird was re-trapped on Bardsey in 2003, having been ringed there as an adult (> 5 years old) in 1953, making it at least 55 years old (Clark *et al.* 2004). Like many other seabird species, they invest heavily in a single egg, which they lay in a burrow, usually acquired from a rabbit or puffin (*Fratercula arctica*), although they are capable of digging burrows themselves. Both parents contribute to incubating the egg until it hatches after around 51 days and then continue to feed the chick for around 10 weeks until fledging. Shearwaters display a dual-foraging strategy; parents make either short trips to gather food for the chick or longer excursions to improve their own body condition (Shoji *et al.* 2015).

Manx shearwaters are ungainly on land due to their physiological adaptations to life at sea with their legs situated very far back on their bodies. They therefore only come back to land at night to avoid the risk of predation from large gulls, raptors and corvids. Being nocturnal can have disadvantages, for example in poor weather conditions they can become disorientated by light. This is of particular concern for fledging juveniles as they can easily become grounded on large vessels or on the mainland where they are very vulnerable to predation, vehicle collision or starvation as they struggle to take off again.

Manx shearwater feeding behaviour

Manx shearwaters can travel vast distances to find prey. On average they travel 136.1 +/- 88.7 km, and they can change their feeding strategy by making either short or long trips from the colony (Guilford *et al.* 2008; Shoji *et al.* 2015; Woodward *et al.* 2019). The mean maximum foraging range is 1,346.8 +/- 1,018.7 km when associated with a breeding colony, but the maximum foraging distance recorded can be over 2,890 km in the breeding period (Woodward *et al.* 2019).

They are visual predators, grabbing prey at the surface or beneath the surface by pursuit-plunging or pursuit-diving, using their feet and wings to propel themselves beneath the water (Cramp and Simmons 1977; Shoji *et al.* 2016). They routinely make shallow dives of around 7 m but can dive up to 55 m in pursuit of prey (Shoji *et al.* 2016).

Distribution

Given their extensive foraging range, individuals from all UK colonies will have the ability to forage within the Irish Sea Front SPA. The majority of UK colonies are along the west coast of the UK and Ireland and almost exclusively on islands. In the latest UK wide census (Seabird 2000), 57 potential colonies were identified and surveyed. Skomer holds the biggest single colony, with its estimated 350,000 Apparently Occupied Sites (AOS) being nearly three times the size of the next biggest colony on Rum (120,000) (Murray *et al.* 2003; Perrins *et al.* 2020). The most concentrated area in the UK for Manx shearwaters is off the southwest coast of Pembrokeshire, where the islands of Skomer, Skokholm and Middleholm are estimated to hold 456,000 AOS (Perrins *et al.* 2020).

The Irish Sea Front

The Irish Sea Front is a tidal front which forms every year in early summer (Lee *et al.* 2005). This type of front forms at the transition between an area of low tidal energy, where waters become stratified, and an area of high tidal energy with well mixed water (Franks 1992). Stratification causes a thermal gradient, with surface waters up to 3°C warmer than the rest of the water column. This stratification in turn causes the formation of a cyclonic, seasonal gyre; a dome of cold, dense bottom water in the western Irish Sea Basin, which has a significant impact on circulation in the region and separates the well-mixed regions from stratified ones (Hill *et al.* 1994; O'Reilly *et al.* 2014; Trimmer *et al.* 1999).

Manx shearwater use of the site

Tracking data collected from several colonies over multiple years have demonstrated that Manx shearwaters use the Irish Sea Front region, and by extension likely use the SPA itself in a variety of ways. Behavioural states data can be interpreted using GPS tracks, based on flight speed and/or variation in turning angle or in combination with other devices such as immersion loggers or time-depth recorders (TDR) (Dean *et al.* 2013; 2015). Interrogation of such data presented in research papers has demonstrated that Manx shearwaters use the Irish Sea Front region for foraging and resting as well as passing through the area whilst commuting between foraging locations and their colonies (Dean *et al.* 2013; 2015; Guilford *et al.* 2008). The data are not all publicly available (although some is via the [Seabird Tracking Database](#)), and therefore it is not possible to definitively outline the use of and behaviours expressed within the SPA. However, it is likely that it is used for vital feeding, maintenance and transiting activities by Manx shearwaters.

Appendix 2

Herring juveniles

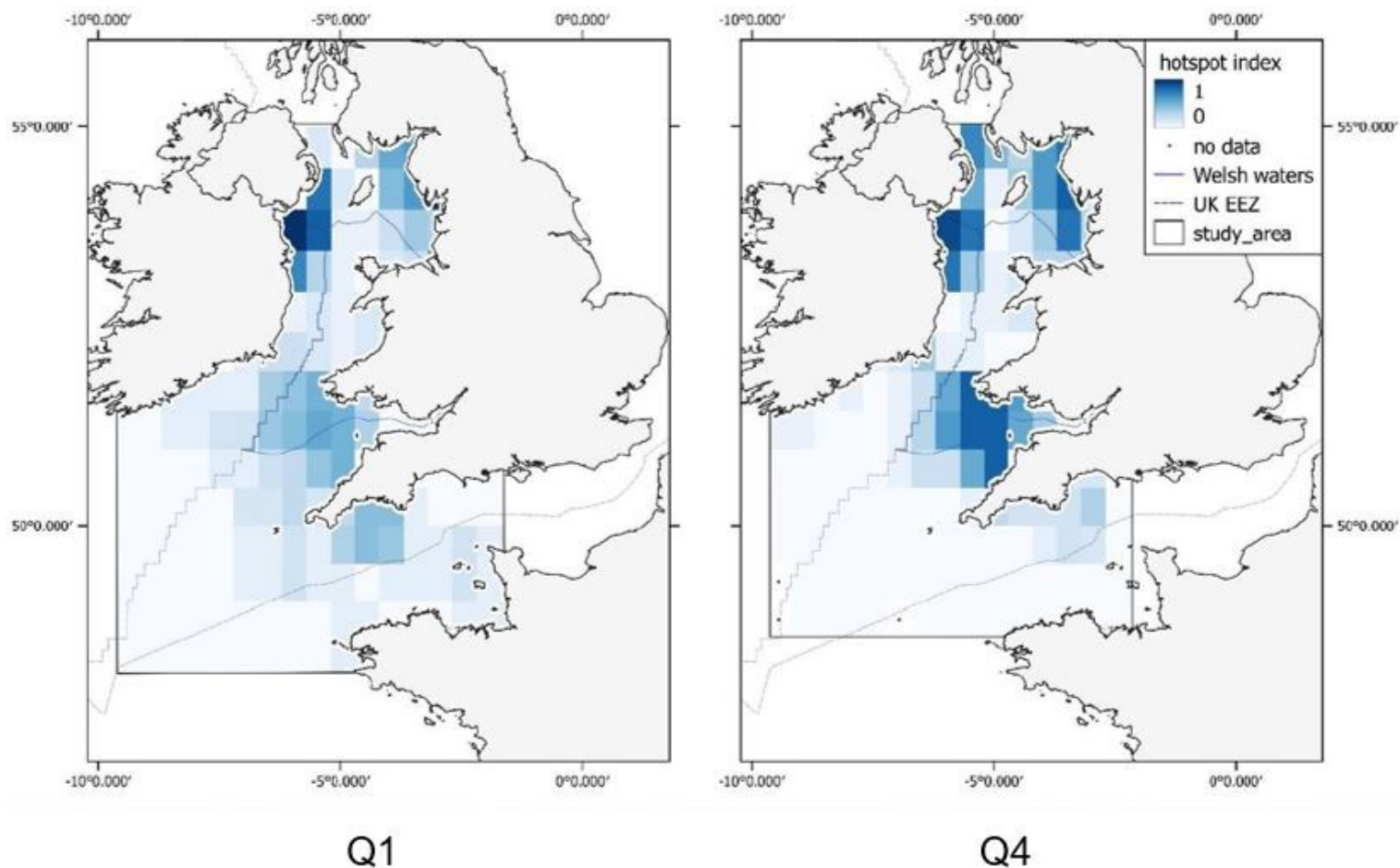


Figure 2. Hotspot maps of juvenile herring (*Clupea harengus*) in Welsh and surrounding waters in Quarters 1 (February to April) and 4 (September to December). Please note that Grid-cells for which no data were available in a particular Quarter are left blank with a point in the centre. Figure taken from Cefas Project Report for RSPB (Campanella and Van der Kooij 2021).

Herring adults

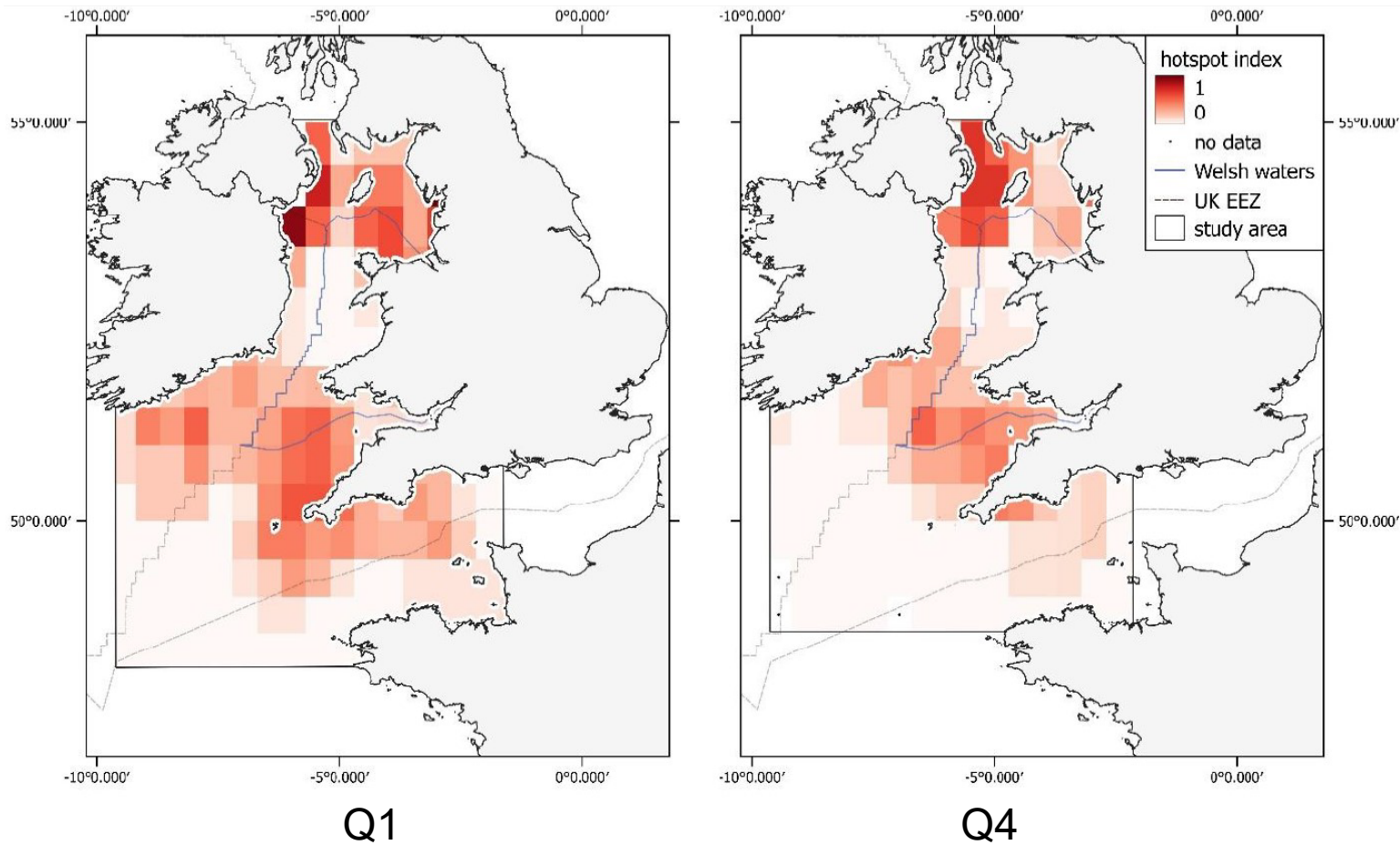


Figure 1. Hotspot maps of adult herring (*Clupea harengus*) in Welsh and surrounding waters in Quarters 1 (February to April) and 4 (September to December). Please note that grid-cells for which no data were available in a particular Quarter are left blank with a point in the centre. Figure taken from Cefas Project Report for RSPB (Campanella and Van der Kooij 2021).

Appendix D Morecambe Bay and Duddon Estuary SPA

European Site Conservation Objectives for Morecambe Bay & Duddon Estuary Special Protection Area

Site Code: UK9020326



With regard to this SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features'), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying Conservation Advice document which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features

- A026 *Egretta garzetta*; Little egret (Non-breeding)
- A038 *Cygnus cygnus*; Whooper swan (Non-breeding)
- A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)
- A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
- A054 *Anas acuta*; Northern pintail (Non-breeding)
- A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)
- A137 *Charadrius hiaticula*; Ringed plover (Non-breeding)
- A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
- A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)
- A144 *Calidris alba*; Sanderling (Non-breeding)
- A149 *Calidris alpina alpina*; Dunlin (Non-breeding)

Contd/

A151 *Philomachus pugnax*; Ruff (Non-breeding)
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
A160 *Numenius arquata*; Eurasian curlew (Non-breeding)
A162 *Tringa totanus*; Common redshank (Non-breeding)
A169 *Arenaria interpres*; Ruddy turnstone (Non-breeding)
A176 *Larus melanocephalus*; Mediterranean gull (Non-breeding)
A183 *Larus fuscus*; Lesser black-backed gull (Non-breeding)
A183 *Larus fuscus*; Lesser black-backed gull (Breeding)
A184 *Larus argentatus*; Herring gull (Breeding)
A191 *Sterna sandvicensis*; Sandwich tern (Breeding)
A193 *Sterna hirundo*; Common tern (Breeding)
A195 *Sterna albifrons*; Little tern (Breeding)
Waterbird assemblage
Seabird assemblage

This is a European Marine Site

This SPA is a part of the Morecambe Bay European Marine Site ('EMS'). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

This is a new combined site

This SPA replaces two individual sites – Morecambe Bay SPA (UK9005081) and Duddon Estuary SPA (UK9005031).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 6). This document updates and replaces an earlier version dated 7 December 2017 to reflect the consolidation of the Habitats Regulations in 2017.

Appendix E Bowland Fells SPA

European Site Conservation Objectives for Bowland Fells Special Protection Area and potential Special Protection Area Site Code: UK9005151



With regard to the SPA and potential SPA, and the individual species and/or assemblage of species for which the site has been or may be classified (the 'Qualifying Features' including the 'Additional Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying Supplementary Advice document (where available), which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A082 *Circus cyaneus*; Hen harrier (Breeding)

A098 *Falco columbarius*; Merlin (Breeding)

Additional Qualifying Features*

A183. *Larus fuscus*; Lesser black-backed gull (Breeding)

*Government has undertaken public consultation on the scientific case for the classification of these additional features as part of this Special Protection Area (SPA).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

This is a potential Special Protection Area (pSPA)

This site is also a pSPA because Government has previously undertaken a [public consultation on the scientific case for the classification of breeding lesser black-backed gull](#) as an additional qualifying feature of this Special Protection Area (SPA). As a matter of Government policy, potential SPAs and their features are treated as if they are formally classified. The provisions of the Habitats Regulations therefore apply to them (see above).

Publication date: 21 February 2019 (version 4). This document updates and replaces an earlier version dated 13 July 2018 to reflect the consolidation of the Habitats Regulations in 2017.

Appendix F Glannau Aberdaron ac Ynys Enlli/Aberdaron Coast and Bardsey Island SPA

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

**CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES**

**FOR
GLANNAU ABERDARON AND YNYS ENLLI /ABERDARON
COAST AND BARDSEY ISLAND SPA**

(including part of CLOGWYNI PEN LLŶN/LLEYN SEACLIFFS SAC and
PEN LLŶN A'R SARNAU SAC.

These sites are underpinned by GLANNAU ABERDARON SSSI, YNYS
ENLLI SSSI, AND YNYSOEDD Y GWYLANOD SSSI)

Version: 2.0

Date: 27 March 2008

Approved by: Mike Willis

**More detailed maps of management units can be provided on request.
A Welsh version of all or part of this document can be made available on request.**



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PREFACE

This document provides the main elements of CCW's management plan for the sites named. It sets out what needs to be achieved on the sites, the results of monitoring and advice on the action required. This document is made available through CCW's web site and may be revised in response to changing circumstances or new information. This is a technical document that supplements summary information on the web site.

One of the key functions of this document is to provide CCW's statement of the Conservation Objectives for the relevant Natura 2000 sites. This is required to implement the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (Section 4). As a matter of Welsh Assembly Government Policy, the provisions of those regulations are also to be applied to Ramsar sites in Wales.

1. VISION FOR THE SITE

This is a descriptive overview of what needs to be achieved for conservation on the site. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site.

This site encompasses an extensive stretch of the Lleyn Peninsula from Porth Oer on the northern coast, around the tip of the Lleyn to Aberdaron on the southern coast, including the islands of Bardsey (Enlli) and the Gwylans. This geologically diverse coast supports maritime and coastal heath and grassland habitats, which in turn support a range of important vascular and non-vascular plants, and an internationally important population of chough. Bardsey island is the home of one of the largest breeding populations of the Manx shearwater in the UK, for which the island is internationally important.

The site should continue to support a strong breeding population of chough with at least 14 nesting pairs, with 4 of these on Ynys Enlli. The site should also continue to provide sufficient habitat of sufficient quality to support this breeding population, and the non-breeding flocks. Maintenance of grazing of the grassland and heath, bracken control and rotational repair of the traditional cloddiau should be undertaken to maximise available feeding habitat.

Ynys Enlli should continue to sustain a breeding population of at least 10,000 pairs of Manx shearwaters. Their nest sites in the earth banks (cloddiau) in the lowlands of the island and in old rabbit burrows on Mynydd Enlli, and access to them, will remain undisturbed by boundary maintenance or heath management.

There will be no decrease in the areas of heathland present, and we will encourage restoration of the heathland, in terms of its extent and condition, aiming towards re-establishing the areas of heathland that existed (according to mapped evidence) in the early 20th century. This could be achieved by managed rotational cutting and/or burning of the dry heath, grazing management and the control of bracken and European gorse. Maintaining an open structure and diverse age-structure will ensure that the heath is available as a feeding habitat for chough.

The intertidal habitat will continue to support the full range of associated communities. The cliffs offer breeding sites for chough, and the intertidal area is also used by chough as an occasional feeding resource, while Manx shearwaters rely entirely on the sea for feeding.

The heath at Trwyn y Gwyddel is also very important as it supports one of only two UK locations for the spotted rockrose, *Tuburaria guttata*. This plant is hanging on at the edge of its range, and is susceptible to overgrazing and trampling pressures, and control of these factors is necessary to ensure its continued survival. Also present at this site, and more abundantly on the south western slopes of Mynydd Enlli, are two nationally rare heathland lichens, the ciliate strap lichen *Heterodermia leucomela* and the golden hair moss *Teloschistes flavicans*. Peny Cil supports a population of the prostate broom *Cytisus scoparius* subsp. *maritimus*, occurring here as a very isolated outlier at the north of its range. The sites should continue to support healthy populations of all these species.

The site also supports notable breeding populations of cormorant *Phalacrocorax carbo*, shag *P. aristotelis*, peregrine *Falco peregrinus*, herring gull *Larus argentatus* and puffin *Fratercula arctica*, particularly on Ynysoedd y Gwylanod, and should continue to do so.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Grid references: SH167263 to SH167301, SH120220, SH184246 and SH182243.

Unitary authority: Gwynedd Council

Area (hectares): 512.8ha

Designations covered:

Glannau Aberdaron and Ynys Enlli Special Protection Area (SPA) is underpinned by three Sites of Special Scientific Interest (SSSIs): Glannau Aberdaron SSSI, Ynys Enlli SSSI and Ynysoedd y Gwylanod SSSI. The intertidal habitat within these sites is part of Pen Llyn a'r Sarnau Special Area of Conservation (SAC) and the entire remainder of the terrestrial habitat is also part of Clogwyni Pen Llyn SAC. Ynys Enlli/Bardsey Island is also a National Nature Reserve (NNR), and the entire site falls within the Llyn Area of Outstanding Natural Beauty (AONB). The coast is also designated a Heritage Coast.

Detailed maps of the designated sites are available through CCW's web site:

<http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx>

For a summary map showing the coverage of this document is see separate Unit Map.

2.2 Outline Description

The site lies at the very southwestern tip of the Llyn Peninsula, almost surrounded by the Irish Sea and exposed to the prevailing winds and weather systems. Its habitats are necessarily influenced by its location, geology and the climate, and the coastal area supports some of the best remaining examples of coastal and maritime heaths and grasslands on the Llyn, while areas further inland supporting more agriculturally improved areas. The site includes three islands, Ynys Enlli and two small islands known as Ynysoedd y Gwylanod. The site is designated an SPA for its ornithological interest, and is particularly important for its chough and Manx shearwater breeding populations.

The area has long been a stronghold for the chough, and over 14 pairs regularly nest here. Chough thrive in the area which supports 5% of the UK population because of the variety of short turf and thin soil feeding habitats and available breeding sites - the sea cliffs and caves provide breeding sites, while the cliffs, heath, maritime grassland, and inland pasture and arable fields provide feeding sites throughout the year for these specialist invertebrate feeders. Manx shearwaters spend most of their lives out in the open sea, but congregate at breeding sites to which they faithfully return throughout their lives. These tend to be offshore islands that are free of predators, and Bardsey supports over 2% of the UK breeding population. They are long-lived birds (a bird ringed in 1955 was recorded again in 2002 and 2003) but productivity is typically low, with a single egg produced by adults (>5years) annually. They are present on the island from mid-March to mid-October, and nest in burrows on the mountain, cliff slopes and in man-made banks and walls.

Ynysoedd y Gwylanod, and particularly the larger Ynys Gwylan Fawr, are important for supporting the largest breeding colony of puffin in North Wales, and razorbills and guillemots also nest in small numbers. There is also a healthy population of breeding cormorant which is in excess of 1% of the UK breeding population.

The site is also important for several vascular and non-vascular plant species, particularly spotted rockrose, *Tuburaria guttata* and prostate broom *Cytisus scoparius* subsp. *maritimus* and two nationally rare heathland lichens, the ciliate strap lichen *Heterodermia leucomela* and the golden hair moss *Teloschistes flavicans*.

2.3 Outline of Past and Current Management

This site includes a long stretch of the coast including two areas of common land, Mynydd Anelog and Mynydd Bychestyn, and three offshore islands, Ynys Elli, Ynys Gwylan Fawr and Ynys Gwylan Fach, and management of different areas has obviously varied over time. Grazing levels and stock type have varied historically, although it is likely that grazing levels were much heavier previously. Areas of heath on the Lleyrn have suffered severe decline since the war (Rees 1929) because of overgrazing and agricultural improvements, and that which remains is only a remnant of what once existed. More common problems these days relate to undergrazing and neglect leading to rank heath and bracken areas, and uncontrolled and too frequent burning, although there is still localised overgrazing. Continued sheep overgrazing is particularly a concern at Trwyn y Gwyddel where the last mainland UK site for spotted rockrose, *Tuburaria guttata* is clinging on. The overgrazing problem here is compounded by trampling problems due to walkers accessing the site.

The structure and composition of the heathland habitats vary across the site. Some good quality coastal heath is to be found, particularly on Ynys Enlli (where maritime heath is well represented), Mynydd Mawr (Trwyn y Gwyddel and Braich y Pwll) and Mynydd Anelog, but in places this has become invaded by bracken. Bracken used to be cut and used for bedding historically, but this practice has not been carried through to the modern day. In some places, for instance at Mynydd Bychestyn, western gorse dominates, possibly due to climatic change since it is susceptible to frosts which occur less frequently nowadays, but almost certainly due to past overburning, and sheep grazing patterns which have an emphasis towards heavier grazing in the autumn and winter. There would be a great advantage in introducing heavy stock at Bychestyn, and many other sections of this site, and cattle and/or pony grazing could be appropriate all year round at low levels. Trampling will help control bracken and open up new areas for heath colonisation. Cattle grazing has recently been reintroduced to Mynydd Enlli following gorse control and it is hoped this will help prevent gorse regeneration and bracken growth. Sheep grazing on these sites should be heaviest in the spring and early summer (April-July) as this will encourage livestock to remove young palatable gorse and grasses whilst allowing ericoids to regenerate. Sheep stocking levels should be much reduced or removed in autumn and winter (September-March) in heathland area as this is the period when they do most damage to ericoids. Young gorse used to be milled locally, and used as nutritious feed, but this practice has died out. Burning favours bracken and western gorse, so this should not be used as a management tool where these species are likely to invade. Large areas, particularly at Mynydd Anelog and along the coast from Porth y Pistyll northwards (where sections are not grazed at all due to fear of losing stock on open cliff slopes), are now dominated by bracken, which limits the areas available for chough to feed and for heathland vegetation to develop. NT has been active in controlling bracken at its holding at Muriau, and work has been carried out recently at Pen y Cil and on Ynys Enlli, but plenty remains to be managed. In 2005, a Management Schedule was drawn up for four sections of the site, Mynydd Anelog, Mynydd Mawr, Mynydd Bychestyn and Pen y Cil, involving partners including NT, RSPB, Cyngor Gwynedd and CYMAD. Some of the work was implemented under the Cadw'r Lliw yn Llyn project, and further work will be implemented as part of the Llyn Heaths Project which has just gained Heritage lottery funding. Sympathetic grazing regimes with heavy stock, the establishment of cutting and burning of heath blocks on long rotation, and control of gorse and bracken form the backbone of these plans.

The UK chough population has suffered a significant decline in the 20th Century as a result of persecution and changing agricultural practice. These pressures led to a contraction of the species range and the fragmentation and reduction of most remaining populations. This national trend mirrored one seen throughout Europe where the species was estimated to be in decline in 90% of its range (Tucker & Heath, 1994). The past two or three decades have seen the UK chough population as a whole stabilising while populations around the Welsh coast appear to be making a recovery in numbers. Despite the population now stabilising in most of

its European range, ongoing declines in some areas mean that it is still regarded as a declining species (Birdlife International 2004).

Glannau Aberdaron and Bardsey are important feeding and breeding areas for chough. The current grazing regime provides the areas of suitable short turf for feeding chough over a good proportion of the site. Management to open up areas of dense heath and provide a wider range of age structure and to clear areas of European gorse and bracken should increase the area of feeding habitat. Areas of pasture, arable land and semi-improved and improved pasture are associated with the coastal strip and within easy reach of the cliff breeding sites.

The Manx shearwater population on Ynys Enlli is largely self-maintaining, and requires little in the way of active management. They simply require suitable nesting locations which are available in abundance on Enlli, access to fish in the open sea, and minimal disturbance. They are entirely pelagic outside the breeding season, and are ill-adapted to movement on land and particularly vulnerable to predation. For this reason, breeding birds are largely restricted to offshore islands with no predators. There used to be rabbits on the island, but they died out on the island in 1996. Prior to this, Manx shearwaters and rabbits coexisted and were even known to share entrance burrows. Manx shearwaters can excavate their own burrows, but will also make use of unoccupied rabbit burrows and may have benefitted from the recent extinction of rabbits and the increased availability of empty burrows. Many of the burrows in use on Enlli are in man-made earthbanks and walls, and restoration management of boundary features must take their presence into account, along with minimising disturbance by human access and management in all other areas with active burrows.

2.4 Management Units

The plan area has been divided into management units to enable practical communication about features, objectives, and management. This will also allow us to differentiate between the different designations where necessary. In this plan, the management subunits have been based on tenure, but these have been lumped together into identifiable management blocks, often related to NT ownership. The National Trust is a major landowner on this section of the coast and an important partner in managing the sites. None of the land within this site belongs to CCW.

The following table confirms the relationships between the management units and the designations covered:

Unit No	SPA	Clogwyni Pen Llŷn SAC	Pen Llŷn a'r Sarnau SAC	SSSI	NNR
<i>Glannau Aberdaron SSSI</i>					
1	✓		✓	✓	
2	✓	✓		✓	
3	✓	✓		✓	
4	✓	✓		✓	
5	✓	✓		✓	
6	✓	✓		✓	
8	✓	✓		✓	
9	✓	✓		✓	
10	✓	✓		✓	
11	✓	✓		✓	
12	✓	✓		✓	
13	✓	✓		✓	
14	✓	✓		✓	
15	✓	✓		✓	
16	✓	✓		✓	
17	✓	✓		✓	
18	✓	✓		✓	
43	✓	✓		✓	
19	✓	✓		✓	
20	✓	✓		✓	
21	✓	✓		✓	
22	✓	✓		✓	
23	✓	✓		✓	
24	✓	✓		✓	
25	✓	✓		✓	
26	✓	✓		✓	
27	✓	✓		✓	
28	✓	✓		✓	
29	✓	✓		✓	
31	✓	✓		✓	
34	✓	✓		✓	
39	✓		✓	✓	
<i>Ynys Enlli SSSI</i>					
35	✓	✓		✓	✓
36	✓	✓		✓	
41	✓	✓		✓	✓
42	✓		✓	✓	
<i>Ynysoedd y Gwylanod SSSI</i>					
37	✓	✓		✓	
38	✓	✓		✓	

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

<i>Designated feature</i>	<i>Relationships, nomenclature etc</i>	<i>Conservation Objective in part 4</i>
SPA features		
<p><i>Annex 1 species that are a primary reason for selection of</i></p> <p>Glannau Aberdaron and Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA</p> <p>1. The site qualifies under Article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain population of a species listed on Annex 1, in the breeding and non-breeding season:</p> <p>Chough <i>Pyrhocorax pyrrhocorax</i></p> <p>14^P breeding 5% GB 28ⁱ wintering 5% GB ^P = pairs ⁱ = individuals Data source = RSPB 2000</p>	<p>Chough utilise both the mainland and offshore islands for breeding and feeding.</p>	<p>Conservation Objective 1.</p>
<p>2. The site qualifies under Article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain population of a species listed on Annex 1, in the breeding season:</p> <p>Manx shearwater <i>Puffinus puffinus</i>:</p> <p>Data submitted Natura 2000: 6930 pairs (count as at late 1990s, 3.5% of the British population)</p> <p>Bird data submitted at time of classification (updated citation April 1992): About 4.300 pairs (2% of the British breeding population)</p>	<p>Manx shearwaters breed on Ynys Enlli.</p>	<p>Conservation Objective 2.</p>

SAC features		
<p><i>Annex 1 habitats that are a primary reason for selection of</i></p> <p>Clogwyni Pen Llŷn SAC:</p> <p>3. Vegetated sea cliffs of the Atlantic and Baltic coast</p> <p>for which this is considered to be one of the best areas in the United Kingdom (EU Habitat code: 1230)</p>	<p>Atlantic sea cliff is also taken to include coastal heath (dry and maritime), and this feature covers the H8 <i>Calluna vulgaris-Ulex gallii</i> lowland heathland SSSI feature</p>	<p>Conservation Objective 3.</p>
<p><i>Annex 1 habitats that are a primary reason for selection of</i></p> <p>Pen Llŷn a'r Sarnau SAC:</p> <p>4. Reefs</p> <p>for which this is considered to be one of the best areas in the United Kingdom. (EU Habitat code: 1170)</p>	<p>The intertidal area is used by chough for occasional feeding at low tides and the cliffs include nesting sites. Manx shearwaters fish in the open sea habitat.</p>	<p>[Conservation Objectives for Pen Llŷn a'r Sarnau covered in Reg 33 package]</p>
Ramsar features		
Not applicable		
SSSI features		
<p>5. Coastal heath and grassland communities, including seacliff slope vegetation</p>	<p>Occurring on the mainland coast and on the islands.</p>	<p>Conservation Objective 3.</p>
<p>6. Nationally important flowering plants, including the vulnerable spotted rockrose, <i>Tuburaria guttata</i> and prostrate broom <i>Cytisus scoparius</i> subsp, <i>maritimus</i>.</p>	<p>Spotted rockrose occurs on Trwyn y Gwyddel on the mainland. Prostrate broom occurs on cliffs above Paradwys on the mainland</p>	<p>Conservation Objective 3.</p>
<p>7. Two nationally rare heath lichens: Ciliate strap-lichen <i>Heterodermia leucomela</i> and golden hair lichen <i>Teloschistes flavicans</i></p>	<p>Occurring at Trwyn y Gwyddel on the mainland and on the southwestern slopes of Mynydd Enlli.</p>	<p>Conservation Objective 3.</p>
<p>8. Assemblages of nationally important lichens, characteristic of different habitats:</p> <ul style="list-style-type: none"> • An assemblage of lichens found growing on trees and other plants. • An assemblage of lichens of natural rock habitats. • An assemblage of lichens found growing on man-made structures. 	<p>Occurring on Ynys Enlli.</p>	

<p>9. A population of chough, an internationally protected bird species.</p>	<p>Also SPA feature. Birds use both the mainland and islands.</p>	<p>Conservation Objective 1.</p>
<p>10. A variety of high-quality shore types which represent the range and variation present on wave-exposed rocky shores in Cardigan Bay. Marine habitats and communities:</p> <ul style="list-style-type: none"> • good examples of wave-exposed and tide-swept rocky shore communities • communities on overhanging bedrock and in rockpools • complete zonation of rocky shore communities. • Seaweeds in sediment-floored rockpools • Brown seaweeds and kelps in deep rockpools • Coral weed and encrusting coralline seaweed in shallow rockpools • Serrated wrack and under-boulder animals on lower shore boulders • Sponges and red seaweeds on overhanging lower shore bedrock 	<p>Occurring off the coast of the mainland and the islands.</p>	<p>[Conservation Objectives for Pen Llyn a'r Sarnau covered in Reg 33 package]</p>
<p>11. Important geological exposures:</p> <ul style="list-style-type: none"> • Porth Oer: Rocky raised shore platform and sediment sequences associated with glacial events about 20,000 years ago. • Braich y Pwll – Parwyd: Remarkably varied sequence of Precambrian rocks (over 670 million years old) overlain by younger Ordovician sediments (about 500 million years old). 	<p>Occurring on the mainland.</p>	

<p>12. Nationally important flowering plants, including the rare rock sea-lavender, <i>Limonium britannicum</i> subsp. <i>pharense</i>, nationally scarce small adder's tongue, <i>Ophioglossum azoricum</i>, western clover, <i>Trifolium occidentale</i> and sharp rush <i>Juncus acutus</i>.</p>	<p>Occuring on Ynys Enlli in therophyte and maritime grassland and cliffs.</p>	<p>Conservation Objective 3.</p>
<p>13. An assemblage of moss and liverwort species with restricted European distributions, including a number of rare and scarce species.</p>	<p>Occuring on Ynys Enlli.</p>	
<p>14. Breeding population of the seabird Manx shearwater of European importance.</p>	<p>SPA feature. Occuring on Ynys Enlli.</p>	<p>Conservation Objective 2.</p>
<p>15. An important breeding population of puffin <i>Fratercula arctica</i> and cormorant <i>Phalacrocorax carbo</i>.</p>	<p>Occuring primarily on Ynysoedd y Gwylanod.</p>	

3.2 Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features. All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features

KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main driver of management and focus of monitoring effort, perhaps because of the dependence of a key species (see KS below). There will usually only be one Key Habitat in a unit but there can be more, especially with large units.

KS – a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat.

Geo – an earth science feature that is the main driver of management and focus of monitoring effort in a unit.

Other Features

Sym - habitats, species and earth science features that are of importance in a unit but are not the main drivers of management or focus of monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as 'Sym' features because:

- a) they are present in the unit but may be of less conservation importance than the key feature; and/or
- b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or

c) their requirements are broader than and compatible with the management needs of the key feature(s), e.g. a mobile species that uses large parts of the site and surrounding areas.

Nm - an infrequently used category where features are at risk of decline within a unit as a result of meeting the management needs of the key feature(s), i.e. under Negative Management. These cases will usually be compensated for by management elsewhere in the plan, and can be used where minor occurrences of a feature would otherwise lead to apparent conflict with another key feature in a unit.

Mn - Management units that are essential for the management of features elsewhere on a site e.g. livestock over-wintering area included within designation boundaries, buffer zones around water bodies, etc.

x – Features not known to be present in the management unit.

The tables below sets out the relationship between the special features and management units identified in this plan:

Glannau Aberdaron SSSI	Management unit							
	1	2	3	4	5	6	8	9
SPA	✓	✓	✓	✓	✓	✓	✓	✓
Clogwyni Pen Llyn SAC		✓	✓	✓	✓	✓	✓	✓
Pen Llyn a'r Sarnau SAC	✓							
SSSI	✓	✓	✓	✓	✓	✓	✓	✓
NNR								
SPA features								
1. Chough	Sym	KS	KS	KS	KS	KS	KS	KS
2. Manx shearwaters	Sym	x	x	x	x	x	x	x
SAC features								
3. Dry heath (Atlantic Sea Cliff)	x	KH	KH	KH	KH	KH	KH	KH
4. Reefs	KH	x	x	x	x	x	x	x
SSSI features								
5. Coastal heath and grassland communities, including seacliff slope vegetation.	x	KH	KH	KH	KH	KH	KH	KH
6. Nationally important flowering plants, including the vulnerable spotted rockrose and prostrate broom	x	x	x	x	x	x	x	x
7. Two nationally rare heath lichens: ciliate strap-lichen and golden hair lichen.	x	x	x	x	x	x	x	x
9. A population of chough, an internationally protected bird species.	Sym	KS	KS	KS	KS	KS	KS	KS
10. A variety marine habitats and communities including high-quality shore types which represent the range and variation present on wave-exposed rocky shores in Cardigan Bay.	KH	x	x	x	x	x	x	x
11. Important geological exposures at Porth Oer and Braich y Pwll – Parwyd.	x	Sym	x	x	x	x	x	x

Glannau Aberdaron SSSI	Management unit									
	10	11	12	13	14	15	16	17	18	43
SPA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clogwyni Pen Llyn SAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pen Llyn a'r Sarnau SAC										
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NNR										
SPA features										
1. Cough	KS	KS	KS	KS	KS	KS	KS	KS	KS	Sym
2. Manx shearwaters	x	x	x	x	x	x	x	x	x	x
SAC features										
3. Dry heath (Atlantic Sea Cliff)	KH	KH	KH	KH	KH	KH	KH	KH	KH	KH
4. Reefs	x	x	x	x	x	x	x	x	x	x
SSSI features										
5. Coastal heath and grassland communities, including seacliff slope vegetation.	KH	KH	KH	KH	KH	KH	KH	KH	KH	KH
6. Nationally important flowering plants, including the vulnerable spotted rockrose and prostrate broom	x	x	x	x	x	x	x	Sym	x	KS
7. Two nationally rare heath lichens: ciliate strap-lichen and golden hair lichen.	x	x	x	x	x	x	x	Sym	x	Sym
9. A population of cough, an internationally protected bird species.	KS	KS	KS	KS	KS	KS	KS	KS	KS	Sym
10. A variety marine habitats and communities including high-quality shore types which represent the range and variation present on wave-exposed rocky shores in Cardigan Bay.	x	x	x	x	x	x	x	x	x	x
11. Important geological exposures Braich y Pwll – Parwyd.	x	x	x	x	x	x	x	Sym	Sym	Sym

Glannau Aberdaron SSSI	Management unit									
	19	20	21	22	23	24	25	26	27	
SPA	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Clogwyni Pen Llyn SAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pen Llyn a'r Sarnau SAC										
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	
NNR										
SPA features										
1. Cough	KS	KS	KS	KS	KS	KS	KS	KS	KS	
2. Manx shearwaters	x	x	x	x	x	x	x	x	x	
SAC features										
3. Dry heath (Atlantic Sea Cliff)	KH	KH	KH	KH	KH	KH	KH	KH	KH	
4. Reefs	x	x	x	x	x	x	x	x	x	
SSSI features										
5. Coastal heath and grassland communities, including seacliff slope vegetation.	KH	KH	KH	KH	KH	KH	KH	KH	KH	

6. Nationally important flowering plants, including the vulnerable spotted rockrose and prostrate broom	x	x	x	x	x	Sym	x	x	x
7. Two nationally rare heath lichens: ciliate strap-lichen and golden hair lichen.	x	x	x	x	x	x	x	x	x
9. A population of chough, an internationally protected bird species.	KS	KS	KS	KS	KS	KS	KS	KS	KS
10. A variety marine habitats and communities including high-quality shore types which represent the range and variation present on wave-exposed rocky shores in Cardigan Bay.	x	x	x	x	x	x	x	x	x
11. Important geological exposures at Braich y Pwll – Parwyd.	Sym	Sym	Sym	Sym	Sym	Sym	Sym	Sym	x

Glannau Aberdaron SSSI	Management unit				
	28	29	31	34	39
SPA	✓	✓	✓	✓	✓
Clogwyni Pen Llyn SAC	✓	✓	✓	✓	✓
Pen Llyn a'r Sarnau SAC					
SSSI	✓	✓	✓	✓	✓
NNR					
SPA features					
1. Chough	KS	KS	KS	KS	KS
2. Manx shearwaters	x	x	x	x	x
SAC features					
3. Dry heath (Atlantic Sea Cliff)	KH	KH	KH	KH	x
4. Reefs	x	x	x	x	x
SSSI features					
5. Coastal heath and grassland communities, including seacliff slope vegetation.	KH	KH	KH	KH	x
6. Nationally important flowering plants, including the vulnerable spotted rockrose and prostrate broom	x	x	x	x	x
7. Two nationally rare heath lichens: ciliate strap-lichen and golden hair lichen.	x	x	x	x	x
9. A population of chough, an internationally protected bird species.	KS	KS	KS	KS	KS
10. A variety marine habitats and communities including high-quality shore types which represent the range and variation present on	x	x	x	x	x

wave-exposed rocky shores in Cardigan Bay.					
11. Important geological exposures at Porth Oer and Braich y Pwll – Parwyd.	x	x	x	x	

Ynys Enlli SSSI	Management unit			
	42	35	36	41
SPA	✓	✓	✓	✓
Clogwyni Pen Llyn SAC		✓	✓	✓
Pen Llyn a'r Samau SAC	✓			
SSSI	✓	✓	✓	✓
NNR		✓	✓	✓
SPA features				
1. Chough	Sym	KS	KS	KS
2. Manx shearwaters	Sym	KS	KS	KS
SAC features				
3. Dry heath (Atlantic Sea Cliff)	x	KH	KH	x
4. Reefs	KH	x	x	x
SSSI features				
5. Coastal heath and grassland communities, including seacliff slope vegetation.	x	KH	KH	x
7. Two nationally rare heath lichens: ciliate strap-lichen and golden hair lichen.	x	Sym	x	x
8. Assemblages of nationally important lichens, characteristic of different habitats.	x	Sym	Sym	Sym
9. A population of chough, an internationally protected bird species.	Sym	KS	KS	KS
10. A variety marine habitats and communities including high-quality shore types which represent the range and variation present on wave-exposed rocky shores in Cardigan Bay.	KH	x	x	x
12. Nationally important flowering plants, including the rock sea-lavender, small adder's tongue, western clover and sharp rush.	x	Sym	x	x
13. An assemblage of moss and liverwort species with restricted European distributions, including a number of rare and scarce species.	x	Sym	x	Sym
14. Breeding population of the seabird Manx shearwater of European importance.	Sym	KS	KS	KS

Ynysoedd y Gwylanod SSSI	Management unit	
	37	38
SPA	✓	✓
Clogwyni Pen Llyn SAC		
Pen Llyn a'r Sarnau SAC		
SSSI	✓	✓
NNR		
SPA features		
1. Chough	KS	KS
2. Manx shearwaters	x	x
SAC features		
3. Dry heath (Atlantic Sea Cliff)	x	x
4. Reefs	x	x
SSSI features		
5. Coastal heath and grassland communities, including seacliff slope vegetation.	Sym	x
10. A variety marine habitats and communities including high-quality shore types which represent the range and variation present on wave-exposed rocky shores in Cardigan Bay.	x	x
15. An important breeding population of puffin and cormorant.	Sym	Sym

Given that spotted rockrose occurs at its only mainland Wales location within Glannau Aberdaron SSSI, the management of the coastal heath (dry and maritime heath) (Atlantic Sea Cliff) in Management Unit 7d where it occurs should aim to maintain or increase the population.

4. CONSERVATION OBJECTIVES

Background to Conservation Objectives:

a. Outline of the legal context and purpose of conservation objectives.

Conservation objectives are required by the 1992 'Habitats' Directive (92/43/EEC). The aim of the Habitats Directives is the maintenance, or where appropriate the restoration of the 'favourable conservation status' of habitats and species features for which SACs and SPAs are designated (see Box 1).

In the broadest terms, 'favourable conservation status' means a feature is in satisfactory condition and all the things needed to keep it that way are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites.

Box 1

Favourable conservation status as defined in Articles 1(e) and 1(i) of the Habitats Directive

“The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.”

Achieving these objectives requires appropriate management and the control of factors that may cause deterioration of habitats or significant disturbance to species.

As well as the overall function of communication, Conservation objectives have a number of specific roles:

- Conservation planning and management.

The conservation objectives guide management of sites, to maintain or restore the habitats and species in favourable condition.

- Assessing plans and projects.

Article 6(3) of the ‘Habitats’ Directive requires appropriate assessment of proposed plans and projects against a site's conservation objectives. Subject to certain exceptions, plans or projects may not proceed unless it is established that they will not adversely affect the integrity of sites. This role for testing plans and projects also applies to the review of existing decisions and consents.

- Monitoring and reporting.

The conservation objectives provide the basis for assessing the condition of a feature and the status of factors that affect it. CCW uses ‘performance indicators’ within the conservation objectives, as the basis for monitoring and reporting. Performance indicators are selected to provide useful information about the condition of a feature and the factors that affect it.

The conservation objectives in this document reflect CCW’s current information and understanding of the site and its features and their importance in an international context. The conservation objectives are subject to review by CCW in light of new knowledge.

b. Format of the conservation objectives

There is one conservation objective for each feature listed in part 3. Each conservation objective is a composite statement representing a site-specific description of what is considered to be the favourable conservation status of the feature. These statements apply to a whole feature as it occurs within the whole plan area, although section 3.2 sets out their relevance to individual management units.

Each conservation objective consists of the following two elements:

1. Vision for the feature
2. Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring¹.

There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators.** The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors which have an important influence on the condition of the feature are identified in the performance indicators.

¹ Web link: <http://www.jncc.gov.uk/page-2199>

4.1 Conservation Objective for Feature 1: Internationally important population (1% or more of the Great Britain population) of breeding and non-breeding season chough *Pyrrhocolax pyrrhocolax*.

Vision for feature 1: Chough.

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- The breeding population of chough is at least 14 pairs, or 5% of the GB population.
- The wintering population of chough is at least 28 individuals, or 5% of the GB population.
- Sufficient suitable habitat is present to support the populations.
- Breeding population is stable or increasing.
- Productivity is stable.
- Non-breeding flocks are stable or increasing (summer and winter).
- Breeding and non-breeding birds use Ynys Enlli for feeding throughout the year.
- Chough feeding habitats are themselves in a favourable conservation status and that the specified and operational limits and grazing prescriptions for these habitats incorporate chough feeding requirements (i.e. sward height and bare ground).
- Disturbance of breeding and feeding chough is minimal.
- The factors affecting the feature are under control.

Performance indicators for Feature 1: Chough.

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators

<i>Performance indicators for chough feature condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
A1. Population size	The Glannau Aberdaron chough (<i>Pyrrhocolax pyrrhocolax</i>) population will be considered in favourable condition when (based on performance indicators and targets as set out in the SPA review site account):	<i>Upper limit:</i> Not required. <i>Lower limit:</i> The SPA wintering population is at least 28 individuals. The SPA population represents at least 5% of the GB breeding and wintering populations
A2. Population extent	The Glannau Aberdaron chough (<i>Pyrrhocolax pyrrhocolax</i>) population will be considered in favourable condition when (based on performance indicators and targets as set out in the SPA review site account):	<i>Upper limit:</i> Not required. <i>Lower limit:</i> >14 pairs are breeding in the SPA, and where traditional breeding sites are occupied in at least 4 of Sections 1, 2, 3, 4, 5 and 6. Sections are defined as: Section 1 = Units 8,9,10,11 Section 2 = Units 13,14 Section 3 = Units 15,16,17,18,43 Section 4 = Units 19,20,21,22,23,24,25,26 Section 5 = Units 27,28,29,31,34 Section 6 = Units 35,36,41,42

A3. Forage habitat extent	The foraging habitat for chough will need to be in favourable condition for chough to be favourable.	<p>Upper limit: None set (although other interest features on the site need to be considered, and should not be compromised).</p> <p>Lower limit: The Vegetated sea cliffs of the Atlantic and Baltic coasts (H7 <i>Calluna vulgaris</i> – <i>Scilla verna</i> heath, H8d <i>Calluna vulgaris</i>-<i>Ulex gallii</i> heath, <i>Scilla verna</i> sub-community, MC8 <i>Festuca rubra</i> – <i>Armeria maritima</i>, MC9 <i>Festuca rubra</i> – <i>Holcus lanatus</i> and MC10 <i>Festuca rubra</i> – <i>Plantago spp</i> maritime grassland communities, coastal grassland and maritime cliff and slope feature within Clogwyni Pen Llŷn SAC must achieve favourable condition.</p> <p>>50% of earthbank is suitable for chough feeding.</p> <p>The approximate extent of heath and short-grazed grassland should be as present in 2001</p>
A4. Habitat quality	Open heath is defined as vegetation where ericoids or <i>Ulex gallii</i> form >30% cover with >20% open ground (occupied by bare soil, annual plants and/or terricolous macro-lichens) or closely-grazed grassland in any 1m radius.	<p>Upper limit: None set (although other interest features on the site need to be considered, and should not be compromised).</p> <p>Lower limit: Within each of plots A - F on the Uwchmynydd, Mynydd Bychestyn, Pen y Cil, and Bardsey sections of the site, there should</p>

	<p>Closely grazed grassland is defined as vegetation in which >50% of the sward is <3cm high in any 1m radius</p> <p>Six monitoring plots, spread across three of the mainland sections of the site (Uwchmynydd, Pen y Cil, Mynydd Bychestyn) were established in 2001. (Refer to Annex 2 of the Clogwyni Pen Llyn 2004 SAC Monitoring Report). Further plots will need to be established on Bardsey. These four sections of the site are known to be the most important both in terms of numbers of breeding pairs and usage by birds outside the breeding season.</p>	<p>be no significant decrease in the proportion of short grazed grassland and open heath relative to that seen in 2001</p> <p>The lower limits for the proportion of open heath and closely grazed grassland in the monitoring plots is as follows: A, B & E = 55% C = 70% D = 60% F = 65%.</p>
Performance indicators for factors affecting the feature		
Factor	Factor rationale and other comments	Operational Limits
F1. Livestock grazing	<p>The site is grazed to various levels, but in some sections, not at all. There is a reluctance to put stock on habitat open to cliffs, but lack of grazing is usually due to the dominance of gorse or bracken scrub, which, in a vicious circle, is due to lack of heathland management, including grazing. Grazing pasture land overwinter is important for chough as the invertebrates found in their dung is an important food source over winter. The use of avermectins should not occur within this site too allow natural invertebrate flora to develop in dung</p>	<p>Upper limit: Not set (although other interest features on the site need to be considered, and should not be compromised).</p> <p>Lower limit: Grazing levels will ensure extent of forage of sufficient quality to support the chough population.</p>
F2 Disturbance	<p>Nest and roost sites are considered to be subject to few direct threats, as climbing near known nest sites is effectively controlled by voluntary codes of conduct.</p>	<p>Upper limit: no breeding attempts to be known to fail because of impact of human disturbance</p> <p>Lower limit: None set</p>

<i>Performance indicators for chough feature condition specifically on Ynys Elli</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
A1. Breeding population	On Ynys Enlli, the breeding population is stable or increasing .	<i>Upper limit:</i> None set <i>Lower limit:</i> 5 pairs in 3 out of 5 consecutive years. Lowest acceptable annual population of 4 pairs or 1% of the UK population or 2% of the Welsh population.
A2. Productivity/ breeding success	On Ynys Enlli, productivity is stable.	<i>Upper limit:</i> None set <i>Lower limit:</i> 15 chicks fledging in 3 out of 5 consecutive years or > 2.5 fledglings per breeding pair
A3. Non-breeding population	On Ynys Enlli, the non-breeding flocks are stable or increasing (summer and winter).	<i>Upper limit:</i> None set <i>Lower limit:</i> 10 non-breeding individuals (in addition to breeding pairs and their young), summer and winter.
A4 Chough feeding	Breeding and non-breeding birds use Ynys Enlli for feeding throughout the year	<i>Upper limit:</i> None set <i>Lower limit:</i> All breeding pairs, fledglings and non-breeding individuals observed feeding on the island.

4.2 Conservation Objective for Feature 2: Internationally important population (1% or more of the Great Britain population) of breeding Manx shearwaters *Puffinus puffinus*.

Vision for Feature 2: Manx shearwater.

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- Breeding population of Manx shearwater (confined to Ynys Enlli) is stable or increasing.
- Reproductive rates remain stable.
- Deaths from the lighthouse attractions, fencing and other infrastructure are minimal.
- No ground predators are introduced.
- Nesting birds are not disturbed by restoration works on boundary walls or recreational activities.
- All factors affecting the achievement of these conditions are under control.

Performance indicators for Feature 2: Manx shearwater.

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

<i>Performance indicators for feature condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
A1. Breeding population size	Breeding population of Manx shearwater (confined to Ynys Enlli) is stable or increasing	Upper limit: None set Lower limit: 10,000 pairs or 1% of the UK population
A2. Productivity /breeding success	Reproductive rates remain stable.	Upper limit: None set Lower limit: 5 year mean of 0.6 per pair. Lowest tolerable limit of >0.5 for 3 consecutive years
<i>Performance indicators for factors affecting the feature</i>		
<i>Factor</i>	<i>Factor rationale and other comments</i>	<i>Operational Limits</i>
F1. Deaths from lighthouse attraction	On dark moonless nights or when there is poor visibility due to fog, drizzle, cloud cover or rain the lighthouse attracts night flying birds. Individuals may collide with the lighthouse or become exhausted from flying repeatedly round the light.	Upper limit: 30 fatalities per year or <0.3% of the Enlli population. Lower limit: Gantry lights and light exclusion zone in place annually.
F2. Deaths from barbed wire/ other fencing and similar materials.	A small number of Manx shearwater mortalities occur each year as a direct result of entanglement in barbed wire on existing fences, or fence netting. BBFO keep annual records of the number and locations of fatalities.	Upper limit: 5 fatalities per year or <0.05% of the Enlli population. No unnecessary barbed wire erected. Lower limit: All unnecessary barbed wire removed.
F3. Ground-based predators	At present ground predators, such as common rat, fox, mink or hedgehog do not inhabit the island. Should such predators be introduced they could severely threaten the Manx Shearwater population. All measures must be taken to avoid their introduction.	Upper limit: No domestic or wild predators introduced to the island Lower limit: None set.

<p>F4. Avian predators</p>	<p>In recent years crows have been observed taking Manx shearwater eggs from burrows. If not controlled, this apparent learnt behaviour could become more widespread.</p>	<p>Upper limit: None set Lower limit: All crows seen predated in burrows should be controlled</p>
<p>F5. Boundary wall maintenance practice</p>	<p>Many Manx shearwaters dig nesting burrows into both stone-faced and earth walls. Maintenance can only be carried out carefully and on a rotation, as Manx shearwaters seem to be site faithful and perhaps even burrow faithful. Although burrowing Manx shearwaters appear to benefit from easier access in derelict stone/earth boundary walls, landscape issues and other conservation features would benefit from restoration and <i>repair of such boundaries</i>. All burrows are protected under UK law. They are protected while in use by the birds as nest sites, and protected outside the nesting season by the provisions of the SSSI legislation.</p>	<p>Upper limit: None set Lower limit: All boundary restoration work must take account of the potential effects on Manx shearwaters and must only be carried out to the strict guidelines set out in the Ynys Enlli Management Plan. All staff, contractors or volunteers working on field boundaries must be made aware of the guidelines.</p> <p>All field boundaries have been surveyed and the number of Manx shearwater burrows in each recorded. Boundaries have thus been categorised as to whether they are of importance to Manx shearwaters. Significant boundaries are those with 5 or more burrows per 100m</p>
<p>F6. Marine pollution incidents</p>	<p>Manx shearwaters frequently settle on the water surface to rest, swim and dive for food. They are therefore, particularly vulnerable to pollution at sea, particularly oil pollution.</p>	<p>Upper limit: No incidences of island generated pollution. No major pollution incidents within 30 miles of Ynys Enlli Lower limit: None set.</p>
<p>F7. Human disturbance/trampling</p>	<p>Human disturbance can be through erosion or collapse of shearwater burrows or by disturbing individuals on land at night. Collapse of burrows during the breeding season would be particularly detrimental to breeding success</p>	<p>Upper limit: 2 burrows accidentally damaged per year Lower limit: All promoted paths should avoid Manx shearwater burrows. All visitors to be advised of sensitive areas.</p>

4.3 Conservation Objective for Feature 3: Vegetated sea cliffs of the Atlantic and Baltic coasts (H7 *Calluna vulgaris* – *Scilla verna* heath, H8d *Calluna vulgaris*-*Ulex gallii* heath, *Scilla verna* sub-community, MC8 *Festuca rubra* – *Armeria maritima*, MC9 *Festuca rubra* – *Holcus lanatus* and MC10 *Festuca rubra* – *Plantago spp* maritime grassland communities, coastal grassland and maritime cliff and slope).

Vision for Feature 3: Coastal heath (Dry and maritime heath) (Atlantic Sea Cliff).

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- Extent of coastal or maritime heath is stable or increasing.
- At least 2 different coastal or maritime heath NVC community types are present and support a range of characteristic plant species.
- Areas of heath form a mosaic with maritime grassland with patches of bare ground – no blanket heath cover
- Pioneer heath plants are present
- Grazing occurs annually at a level which prevents a long sward developing but does not suppress heather growth or flowering. A low sward height in grassland habitats and an open, varied structure in heath will be maintained within the cliff top habitats for feeding chough, without causing a decline in the extent or quality of the grassland and heathland.
- The coastal heath will comprise vegetation with *Ulex gallii* present and at least 30% ericoid cover, usually *Calluna vulgaris*, with at least one maritime indicator present such as *Armeria maritima*, *Plantago maritima*, *Plantago coronopus* or *Scilla verna*.
- Healthy populations of the rare vascular plants (including spotted rockrose, *Tuburaria guttata*, prostrate broom *Cytisus scoparius* subsp. *maritimus*, rock sea-lavender *Limonium britannicum* subsp. *pharense*, small adder's tongue, *Ophioglossum azoricum*, western clover, *Trifolium occidentale* and sharp rush *Juncus acutus* will be present.
- Healthy populations of rare non-vascular plant species, including moss and liverwort species with restricted European distributions, and the soil-living lichens, ciliate strap-lichen *Heterodermia leucomela* and golden hair lichen *Teloschistes flavicans* will be present.
- Species indicative of rank or unmanaged conditions including European gorse, *Ulex europeus*, bracken *Pteridium aquilinum*, foxglove *Digitalis purpurea*, ragwort species *Senecio sp*, dock *Rumex obtusifolius* and nettle *Urtica dioica* should be largely absent:
- Grass species indicative of improvement including creeping bent *Agrostis stolonifera*, cock's foot *Dactylus glomerata*, perennial rye-grass *Lolium perenne* and Yorkshire fog *Holcus lanatus* should be largely absent.
- Associated important species such as feeding Chough and nesting Manx shearwater are recorded in coastal or maritime heath areas.
- All factors affecting the achievement of these conditions, including grazing intensity and burning, will be under control.

Performance indicators for Feature 3: Coastal heath (Dry and maritime heath) (Atlantic Sea Cliff).

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators

Performance indicators for feature condition		
Attribute	Attribute rationale and other comments	Specified limits
A1. Extent of the coastal heath (dry and maritime)	Lower limit is based on 2003 mapped extent (mainland) and 1996 survey of Ynys Enlli.	Upper limit: As limited by other habitats, but not set. Lower limit: 92.7 ha Recording should initially target those Management Units where dry heath is a Key Habitat (KH). These are all units except 1, 37, 38, 39, 41, 42
A2. Condition of the coastal heath (dry and maritime)	At least 75% of coastal heath should be good quality open heath <ul style="list-style-type: none"> • Dwarf-shrubs should make up between 25-75% cover • <i>Ulex gallii</i> cover should be <50% of the dwarf-shrub cover • A quarter of the heathland vegetation will be in early pioneer stage (0-3 years old) at any time (i.e. $\frac{1}{12}$ vegetation managed in each year giving a total of $\frac{1}{4}$ in 3 years. Three year old heather is taken to be less than 5cm high). • There should be less than 5% of unbroken stands of bracken, European gorse and other scrub. • There should be no more than 5 fronds bracken or European gorse >50cm tall within a 2m radius in 75% of the habitat. • There should be less than 5% of the following grasses and weedy species indicative of improvement within a 1m radius over 75% of the site: <i>Agrostis stolonifera</i>, <i>Dactylus glomerata</i>, <i>Lolium perenne</i>, <i>Holcus lanatus</i>, <i>Urtica dioica</i> and <i>Cirsium spp.</i> • In maritime heath one of the following should be present: <i>Scilla verna</i>, <i>Armeria maritime</i> or <i>Plantago maritima</i>. 	Upper limit: Not required Lower limit: At least 75% of coastal heath should be good quality open heath Recording should initially target those Management Units where dry heath is a Key Habitat (KH). These are all units, except 1, 37, 38, 39, 41, 42 The specified limits also meet the requirements for maritime grassland, chough and lichen interests.
A3. Associated significant features	This habitat needs to meet the requirements for other habitats and species associated with coastal or maritime heath, including maritime grassland, chough, lichens (ciliate strap-lichen <i>Heterodermia leucomela</i> and golden hair lichen <i>Teloschistes flavicans</i>) and rare vascular plants (particularly spotted rockrose, <i>Tuberaria guttata</i>).	Upper limit: Same as lower limit. Lower limit: Chough should be recorded using all areas of maritime heath for feeding. Nationally significant lichen species should be present. Healthy populations of nationally rare vascular plants should be present.

<i>Performance indicators for factors affecting the feature</i>		
<i>Factor</i>	<i>Factor rationale and other comments</i>	<i>Operational Limits</i>
F1.Grazing	Coastal heath and grasslands require grazing to maintain a good open structure and to prevent the heath becoming dominated by scrub, bracken and gorse. Ideally, cattle and ponies are preferable to sheep as they are less- selective grazers. Graziers must be encouraged to appropriately graze the two blocks of common in this site: Mynydd Anelog and Mynydd Bychestyn. The number of active graziers has been falling in recent years. At present, only two graziers are associated with Mynydd Bychestyn, and exact graziers of Mynydd Anelog are unknown.	Upper limit: Grazing levels will not lead to excessive poaching damage or reduction of dwarf-shrub cover to below 25%. Lower limit: The site will be lightly grazed by a mixture of stock during the spring and summer.
F2 Burning	Burning is likely to favour bracken and western gorse, so this should not be used as a management tool where these species are likely to invade. Cutting may be more appropriate in these areas. Some cutting or burning management is necessary to maintain a diverse age structure. This should occur as long-term small-patch burning on a 12-year rotation. Burning should not occur unless followed up by grazing.	Upper limit: To maintain open heathland the dwarf-shrub vegetation will be managed by burning or cutting on a 12 year rotation so that $\frac{1}{12}$ of the habitat will be managed each year. Lower limit: A quarter of the heathland vegetation will be in early pioneer stage (0-3 years old) at any time.
F3 Bracken	Bracken does dominate large areas of the cliffs and has spread up into the heath in places. This has happened due to decreased grazing pressure and a shift away from cattle grazing. Heavy stock control bracken by damaging the rhizomes and crushing new growth.	Upper limit: There should be no more than 5 fronds bracken within a 2m radius in 75% of the habitat. Lower limit: There should no more than 5% of unbroken stands of bracken.

Site-specific habitat definitions

Open coastal heath

Dwarf-shrub vegetation where $\frac{1}{4}$ of the vegetation has been cut or burnt within the last 3 years and is in early pioneer stage. To maintain open heathland the dwarf-shrub vegetation will be managed by burning or cutting on a 12 year rotation so that $\frac{1}{12}$ of the habitat will be managed each year. On *Ulex gallii* dominated heath the minimum rotation recommended is 12 years to help break *Ulex* dominance. On sites with no particular species interest a longer rotation is recommended, however where chough are present there is a need to maintain open vegetation so the minimum 12 year rotation is considered most appropriate. Rapid *Ulex* re-growth will be controlled by appropriate grazing.

5. ASSESSMENT OF CONSERVATION STATUS AND MANAGEMENT REQUIREMENTS

This part of the document provides:

- A summary of the assessments of the conservation status of each feature.
- A summary of the management issues that need to be addressed to maintain or restore each feature.

5.1 Conservation Status and Management Requirements of Feature 1: Internationally important population (1% or more of the Great Britain population) of breeding and non-breeding season chough *Pyrhocorax pyrrhocorax*.

Conservation Status of Feature 1: Chough.

The condition of the chough population at January 2008 is **Favourable, Maintained**.

The past two or three decades have seen the UK chough population as a whole stabilising while populations around the Welsh coast appear to be making a recovery in numbers. At a local level the breeding population has been stable over the last 10 years and there is no evidence that the area included within the SPA boundary as a whole has ever supported significantly higher numbers of breeding birds.

However, it is important to note that recent grazing regimes on Ynys Enlli have led to decline in some areas of chough feeding habitat and that non-breeding summer flocks have declined in recent years. The non-breeding flock may have been lost to nearby areas on the mainland where chough feeding habitat may have increased in quality and extent. It cannot be assumed that breeding and non-breeding populations on Ynys Enlli will be secure in the medium or long term. Suitable alterations in habitat management, particularly grazing regimes have the potential to improve the quality and extent of chough feeding areas on the island and reverse the recent decline in some areas.

Management Requirements of Feature 1: Chough

Habitat Type

Choughs use a wide variety of invertebrate-rich habitats, including improved semi-improved and unimproved pasture, lowland, coastal and maritime heath, arable stubble and maritime grassland. In addition, Ynys Enlli is the only place in Wales where choughs have regularly been recorded feeding on invertebrates in accumulated rotting seaweed, regularly sighted on the beach at Solfach. Stone features such as rocky outcrops and traditional cloddiau are also important, particularly where bare earth is evident. Grazed earth banks provide an additional important feeding habitat. Management to maintain short swards, through for example grazing, is important to allow choughs easy access to the ground. Adjacent area of grazed pasture outside the boundary of the site are also important to the population as they are also used by chough who access them for feeding.

Breeding choughs nest on rocky ledges, the majority of which are around the mainland coast, but some sites have been recorded on Mynydd Enlli. Due to their inaccessibility, these areas are largely self-maintained. Climbing near known nest sites apparently being effectively controlled by voluntary codes of conduct.

Grazing and Sward Height

Short swards and bare ground are important for feeding choughs as they allow easy access to invertebrate food in the soil and on the ground surface. In some areas, these conditions can be created and maintained by natural conditions (e.g. wind and salt spray, naturally formed thin soils over/around rock outcrops); elsewhere management is a necessity. In most cases management of short swards and bare ground is maintained through suitable grazing regimes. Grazing animals also provide an

additional source of food for chough by creating dung invertebrate habitats. Burning can also be an important management activity, reducing vegetation height and exposing bare ground.

Winter grazing should be carried out to help maintain a short sward throughout the year. Wherever possible, a variety of stock type (sheep, cattle or ponies) should be used. Grazing with cattle or ponies should be encouraged in any areas where they will not compromise other conservation interests. The feasibility of introducing more cattle or ponies should be investigated

Stock Type

The type of stock used will affect the type of sward achieved and dung produced. Beetles and other insects associated with animal dung are a major component of the chough's diet (McCracken & Foster 1990). The practice of wintering stock outside provides an ongoing supply of dung. Sheep tend to graze close to the ground and produce close-cropped swards beneficial to feeding chough. Cattle tend to graze longer vegetation and can deal with rank grasses, which sheep leave. Cattle do not tend to produce close-cropped swards, but they do create a large amount of bare ground through poaching/scuffing and help control the spread of bracken/scrub which would be beneficial to feeding chough. In addition, cattle dung has been reported to support greater invertebrate populations. Grazing ponies would provide similar benefits to those of cattle.

In practice, it is the effect of the type of grazing on sward height, bare ground and dung invertebrate habitat that is important rather than the actual type of stock used. In North Wales choughs use areas grazed by sheep, ponies and cattle. Mixed grazing regimes providing a variety of chough feeding habitats would be most beneficial to chough.

Pesticides

Livestock suffer from the livestock pests, liver fluke and blowfly. The use of certain anti-parasitic drugs or worming agents such as the avermectins results in the release of chemical treatments into the wider environment through livestock dung and urine. This subsequently destroys those insects that feed on, or lay eggs in, dung. The use of such pesticides potentially reduces food supply for chough. Batten (1990) states that recently fledged birds may rely heavily on dung insects for food; as such they would be particularly affected by the use of these treatments. A precautionary approach is advised, and use of avermectins should be avoided.

Bracken Control

Choughs have been observed feeding in areas where bracken had been cleared but not recorded feeding in areas with thick bracken cover. Bracken control could provide additional feeding habitat to benefit chough, and may help restore heathland habitat. Bracken control on Ynys Enlli may also help encourage non-breeding summer flocks back to feed. Control should only be undertaken where suitable grazing follow-up can be ensured to prevent bracken re-growth, which could take the form of grazing with heavier stock, or where repeat cutting is possible.

Fencing of Cloddiau

Earth and stone-faced field boundaries (cloddiau) provide an important feeding habitat for chough. It is necessary that these are grazed to prevent excessive growth of vegetation which would be of little value to feeding chough. The position of fencing on walls is therefore significant. A fence located close to the base of the wall (on one or both sides) will prevent livestock access to the wall and hence grazing.

Preferred options for the alignment of fences which also allows grazing access would be:

- along the top of walls
- along one side of the wall to allow livestock access from the other side. Fencing should be positioned at a distance which allows access to both sides of the wall from the open side.

On Ynys Enlli, if fencing along the top of the wall is proposed, potential damage to Manx shearwater burrows and the integrity of the wall itself must be evaluated.

Seaweed Clearance

On Ynys Enlli, large quantities of seaweed can be washed-up at Porth Solfach and other shores around the island. The washed up seaweed creates an important invertebrate habitat and these areas are known to be important sources of insect food for choughs (Roberts, 1983).

The presence of large quantities may be considered by some to be detrimental to aesthetics of the island. However, its removal will result in the loss of a food supply, particularly in winter when other invertebrate sources tend to be limited.

The retention of natural strandline seaweed should also occur on mainland beaches.

Arable Crops

Choughs have been recorded feeding on invertebrates and grains in cereal arable fields (McCracken & Foster 1990) and were found to use spring barley stubbles on the mainland following an RSPB trial. In general, a small number of fields are cultivated each year. Where cereals are grown, the retention of winter stubble is desirable.

Anthills

Anthills provide an important feeding habitat for chough. A number of areas on the mainland and Ynys Enlli contain anthills. In general, anthills are not under threat but activities such as mowing with a tractor driven flail may harm them and should be avoided.

Predation

Avian predators, particularly peregrine falcon (*Falco peregrinus*), may predate choughs. Control of raptors is illegal in the UK. The current impact on the chough population is thought to be low and does not require intervention.

Human Disturbance

Breeding birds are vulnerable to human disturbance during the breeding season. Disturbance may be by informal scrambling close to nest sites. Most nest sites are naturally protected from disturbance as they are in inaccessible cliff areas. Birds at the nest could potentially be disturbed by boating or diving activity in the immediate vicinity of the cliffs.

Feeding birds may also be disturbed by walkers, although chough seem generally unperturbed by passers by unless directly approached. Increases in visitor pressure may prove a cause for concern, and monitoring should be undertaken with necessary mitigation where problems exist.

5.2 Conservation Status and Management Requirements of Feature 2: Internationally important population (1% or more of the Great Britain population) of breeding Manx shearwaters *Puffinus puffinus*.

Conservation Status of Feature 2: Manx shearwaters.

The condition of the Manx shearwater population at January 2008 is **Favourable, Maintained**.

Data are not currently available for all the performance indicators listed, however the increase in population figures over a long period combined with sustained reproductive success indicates that the feature can be considered 'favourable maintained'.

Management Requirements of Feature 2: Manx shearwaters.

The Manx shearwater population is largely self-maintaining and requires little in the form of active management. However, precautions are required to ensure that that birds are not disturbed in any way or that boundary restoration works are not harmful to breeding birds or burrow sites.

Introduction of Ground Predators

At present ground predators, such as common rat, fox, weasels, mink, hedgehog or snakes do not inhabit the island. Should such predators be introduced, they could severely threaten the Manx shearwater population. All measures must be taken to avoid their introduction. Domestic animals, particularly cats, ferrets, and some dog breeds could pose a serious risk to shearwaters and must not be introduced. No wild or domestic animal may be brought onto Ynys Enlli without prior permission from CCW.

Predation by Birds

Leaper (2001) observed 73 corpses of Manx shearwater during the May to June survey period. 70% showed signs of attack by peregrine falcon (*Falco peregrinus*). A resident breeding pair is thought to be responsible. It is likely that a considerable proportion of the remaining casualties were due to predation by ravens, crows and gulls. Gull populations have increased considerably in the last 100 years but there is no evidence to suggest that this increase has seriously affected the numbers of Manx shearwaters in British colonies, presumably because Shearwaters come to land, and change over at the nest burrow, only at night. In recent years crows have been observed taking Manx shearwater eggs from burrows. If not controlled, this apparent learnt behaviour could become more widespread. Protected predator species such as peregrine falcon (*Falco peregrinus*) cannot be controlled. Any pairs of crows, magpies etc known to harm Manx shearwaters through, for example, the taking of eggs from burrows, should be eliminated to prevent the spread of learned behaviour. CCW consent and permit must be sought in advance of any control. Control must be by shooting or the use of Larsen traps. Control of gulls should only be undertaken if new evidence suggests that they are a serious predation problem.

Fencing and Stone/Earth Field Boundary Maintenance

Many Manx shearwaters dig nesting burrows into both stone-faced and earth walls. Of the 1,750 pairs breeding recorded in the lowlands in 1997, 94% were found to nest in boundary walls. Even remnant walls (low linear banks where stone-work has been removed) contain numerous burrows. Access can be gained more easily into remnant walls and it appears that a period of less meticulous wall repair in the middle and latter part of the 20th Century has encouraged Manx shearwaters to burrow in these remnant boundaries.

Although burrowing Manx shearwaters appear to benefit from easier access in derelict stone/earth boundary walls, landscape issues and other conservation features would benefit from restoration and repair of such boundaries. All burrows are protected under UK law. They are protected while in use by the birds as nest sites, and protected outside the nesting season by the provisions of the SSSI

legislation. To ensure the interests of the island's Manx shearwater population, all boundary restoration work must take account of the potential effects on Manx shearwaters and must only be carried out to the strict guidelines outlined in the Ynys Enlli Management Plan. All staff, contractors or volunteers working on field boundaries must be made aware of the guidelines.

The island's stock proof fences are erected either on top of boundary walls or along the base of the wall. Fencing posts (particularly large straining posts) erected on the bank itself may damage the bank and interfere with burrowing sites. If such fencing is carried out during the breeding season inserted posts may intrude into a burrow and cause the burrow to cave in; obstruct the burrow entrance; or cause direct damage to eggs, nestlings or adults. Again, guidelines on fencing are available in the Ynys Enlli Management Plan. All staff, contractors or volunteers working on field boundaries must be made aware of the guidelines.

Gorse Burning

In some locations Manx shearwaters burrow beneath gorse, and some areas of gorse scrub contain a high density of Manx shearwater. It is not known whether the presence of gorse, possibly providing additional cover from predators, affects the desirability of these sites. Loss of gorse cover through burning may prove detrimental in such areas. Under UK law, lowland gorse can be burned from 1 November to 31 March. However, since Manx shearwater can be present on the island from mid-March, burning during the breeding season could potentially damage adults, eggs or chicks. Gorse burning should be avoided in areas with a high density of burrows. Gorse burning must not be carried out between mid-February and mid-October to avoid the breeding season.

Lighthouse Attractions

On dark moonless nights or when there is poor visibility due to fog, drizzle, cloud cover or rain the lighthouse attracts night flying birds. Individuals may collide with the lighthouse or become exhausted from flying repeatedly round the light. Down-lights are fitted on each corner of the lighthouse to light the surrounding ground and encourage birds to land. Portable floodlights placed outside the lighthouse compound with the aim of attracting birds to the ground have been shown to have little or no effect in attracting Manx Shearwaters away from the lighthouse. Birds will often come to land, but once rested will return to circling the light.

On nights when large numbers of birds are attracted to the light, landed birds are collected and placed in sheds during the night to protect them from predation and prevent them from returning to circling the light. Likewise, birds found around the lighthouse compound in daylight are also collected and held in sheds to prevent attack by crows or other predators. The stored birds are released safely at dusk.

Between 1953 and 1999 660 Manx Shearwaters were killed by attraction to the lighthouse. Annual numbers vary between 1 and 42 (BBFO reports) and have risen over the period, probably in line with the overall population rise, but perhaps also due to an increase in intensity of the light in 1986. Between 1985 and 1999 the average has been nearly 25 per year (BBFO reports). Attractions peak in late May and August and early September, the latter corresponding to the time when juveniles embark on their first flight. The majority of casualties are not ringed, indicating that they are likely to be either juveniles of that year or individuals returning to land for the first time to breed.

It is not known whether measures to reduce mortalities significantly reduce the number of resultant deaths, however, they will have some positive impact. The current mortality rate of Manx shearwaters resulting from lighthouse attractions is a small proportion of the overall population (<0.25%) and therefore not considered a cause for concern.

- The two down-pointing sodium lights positioned immediately below the balcony railings at the NE and SW corners of the lighthouse tower should be maintained and in operation. These light the ground below the lighthouse.
- Maintain the blocked-off section of glazing in the lighthouse to produce a 'dark area' which breaks the circle of the beams and creates a non-lit area towards Mynydd Enlli in the NE.

- Manx shearwaters landing in the lighthouse compound during attractions should continue to be collected and placed in sheds before being released the following evening. Collection should take place both during the attraction and the following morning if necessary

Human Disturbance

Human disturbance can be through erosion or collapse of shearwater burrows or by disturbing individuals on land at night. Collapse of burrows during the breeding season would be particularly detrimental to breeding success. Boating and diving activity in the vicinity of the island may lead to the disturbance of feeding Manx shearwater. There are currently no official constraints on any vessels operating around the island, either in terms of speed restrictions or exclusion zones/periods.

- Visitors and new residents should be informed of the presence of Manx shearwaters and the importance of the island's population. They should be advised to avoid sensitive areas and to avoid disturbance.
- Paths should be diverted away from sensitive areas.
- Visitors should be advised not to walk on burrows or field boundary walls.

Disturbing Manx shearwaters in the course of scientific research (ringing, intrusive survey techniques etc) is strictly regulated by law. CCW permits and ringing permits are required for individuals studying/ringing Manx shearwaters. In general all activity on the island complies with the necessary regulations and is not considered a threat to the well being of the birds.

Egg Collecting and Taking of Birds for Scientific Purposes

Earlier this century, collecting eggs and chicks for food may have been significant on the island. Today the collection of birds or their eggs is prohibited under UK law. There is the possibility that eggs could be taken illegally for collections; however, it is thought that, if at all, this is a very rare occurrence on Enlli. The taking of birds and eggs for scientific research is also strictly regulated by law and require a permit from CCW. Current activities on the island comply with the necessary regulations.

Pollution at Sea

Manx shearwaters frequently settle on the water surface to rest, swim and dive for food. They are therefore, particularly vulnerable to pollution at sea, particularly oil pollution. Small-scale oil or chemical pollution may be caused by discharges from small boats in the vicinity of Ynys Enlli or spill during the transfer of oil or diesel supplies to the island from boats. Providing such discharges are small and infrequent, natural currents around the island should disperse pollutants and therefore will not pose a great threat. Manx shearwaters may also suffer through ingestion of discarded plastic articles. The species features little among beached corpses and the actual affects of localised marine pollution are not known.

There is also a risk of a major oil spill from heavy tanker traffic in the Irish Sea and the potential for future oil and gas exploration or drilling in nearby waters. Large-scale oil or chemical pollution incidents are rare but could have devastating consequences. Prevention of such incidents is outside of the scope of this management plan. Ensuring that appropriate emergency response plans are in place will help to minimise impact in such an event.

Fishing, Food Availability and Feeding Conditions

Food supply is clearly a key factor in influencing Manx shearwater populations, however, they feed over very large sea areas and fish stocks and fishing pressures are beyond the scope of this management plan. Certain fishing practices may also harm Manx shearwaters, as they may become trapped and drown in monofilament nets as they dive for fish. Such pressures are also outside of the remit of this plan.

5.3 Conservation Status and Management Requirements of Feature 3: Vegetated sea cliffs of the Atlantic and Baltic coasts (H7 *Calluna vulgaris* – *Scilla verna* heath, H8d *Calluna vulgaris*-*Ulex galli* heath, *Scilla verna* sub-community, MC8 *Festuca rubra* – *Armeria maritima*, MC9 *Festuca rubra* – *Holcus lanatus* and MC10 *Festuca rubra* – *Plantago spp* maritime grassland communities, coastal grassland and maritime cliff and slope).

Conservation Status of Feature 2: Coastal heath (Dry and maritime heath) (Atlantic Sea Cliff)

The condition of the dry coastal and maritime heaths (Atlantic Sea Cliff) at January 2008 is **Unfavourable, Recovering**.

The condition of the feature was assessed by using sample plots placed in key areas of maritime grassland and maritime or coastal heath (SAC Monitoring Report 09/01/04). Overall, the vegetated sea cliffs were recorded to be in an unfavourable condition, although separate monitoring of the coastal or maritime heath on Ynys Enlli in 2003 found that it was Favourable, Recovering.

On Ynys Enlli, areas of coastal heath which were historically overgrazed have recovered considerably since the 1980's and early 90's. In all grazing compartments heather cover is at an acceptable level and pioneer and mature plants are present along with characteristic species. There is no immediate risk of loss or sudden decline. Choughs are known to feed in all areas and associated soil lichens and notable vascular plants are present in healthy populations. All compartments are grazed annually and are not at risk of agricultural improvement or other development. Bracken, gorse and other negative species are within specified limits. Erosion is restricted to a few narrow paths. However, some areas are currently under-grazed where sward height exceeds specified limits. Future adjustments to the grazing regime should address this issue; hence the condition of coastal or maritime heath is considered 'favourable recovering'.

(Note caution regarding the definition of dry heath. This is not officially is not a feature of this the Clogwyni Pen Llŷn SAC. Considering that dry heath is makes up a large percentage of this site and it is a notified feature of the component SSSIs it makes little sense that it has not been designated as a SAC feature, and it is intended to rectify this situation).

The populations of rare vascular plants on the mainland, particularly spotted rockrose, *Tuberaria guttata* and prostrate broom *Cytisus scoparius* subsp, *maritimus*, and the mainland soil-lichens ciliate strap-lichen *Heterodermia leucomela* and golden hair lichen *Teloschistes flavicans* are all considered to be Unfavourable, Declining.

Management Requirements of Feature 3: Dry heath (Atlantic Sea Cliff)

Rare vascular and non-vascular plants:

Mynydd Mawr is an extremely important site for spotted rockrose *Tuberaria guttata* which is found on the summit and slopes of Mynydd y Gwyddel. This is the only site for the species on mainland Wales. The population has been closely monitored and shows fluctuations in size and extent, although the ephemeral life cycle of this species means that such counts may not give a complete picture. The plants are much smaller and less luxuriant than plants at a comparable location on Anglesey. Sheep grazing is thought to reduce the vigour of the population and is therefore threatening its long-term survival. There are proposals to reduce sheep grazing in favour of ponies which should help halt the decline of this species in particular.

Prostrate broom *Cytisus scoparius* subsp, *maritimus* occurs on the cliff above the important geological exposure at Parwyd. The cliff top is fenced off from the heavily grazed improved fields behind, although the fence doesn't quite meet the cliff edge and the sheep can get around the fence at the edges and obviously do graze occasionally. A 1993 survey found plants occurring on both the actual cliff and on the cliff top fenced off section. Growth on the cliff was recorded as more luxuriant than the stunted, grazed plants on the cliff top, and repair of the fencing would prevent grazing and allow further recovery of this species.

The two rare soil lichen species, golden hair lichen *Teloschistes flavicans* and ciliate strap lichen *Heterodermia leucomela* are present on the Mynydd Mawr. The former is found on rocky outcrops and short turf the latter is found primarily at the heathland/coastal grassland transition. Again, they are both less luxuriant than at their Ynys Enlli locations. Both species of lichen and the spotted rockrose are very sensitive to burning and every effort should be made to prevent burning where they occur.

Grazing:

The 2004 assessment of condition was based on the fact that habitat was under-grazed in parts and overgrazed in parts. Some good quality western gorse heath is found on the National Trust land but in places this has become invaded by bracken due to undergrazing. Bracken encroachment is also a serious problem in some sections of the site. There has been a more active management of sections of the heath since this assessment, including bracken control and rotational cutting of some areas, hence the current qualifier that it is recovering. The NT has been active in controlling bracken at its holding at Muriau, and work has been carried out recently at Pen y Cil and on Ynys Enlli.

In 2005, a Management Schedule was drawn up for four sections of the site, Mynydd Anelog, Mynydd Mawr, Mynydd Bychestyn and Pen y Cil, involving partners including NT, RSPB, Cyngor Gwynedd and CYMAD. Some of the work was implemented under the Cadw'r Lliw yn Llyn project, and further work will be implemented as part of the Llyn Heaths Project which has just gained Heritage lottery funding. Sympathetic grazing regimes with heavy stock, the establishment of cutting and burning of heath blocks on long rotation, and control of gorse and bracken form the backbone of these plans.

In the long-term favourable condition of the vegetation will only be achieved with appropriate grazing. Grazing should remove excess grass growth preventing the build-up of litter and a dense thatch. Grazing should also remove young western gorse and a small proportion of ericoid (heather) growth. Heavy grazing in the autumn can result in excessive removal of ericoids resulting in their gradual replacement by western gorse. Grazing is best focused early in the season when grasses and young gorse are most palatable. Heavy livestock such as cattle or ponies are better than sheep at controlling both gorse and bracken regeneration.

Burning/Cutting

Management will promote the development of more diverse heathland vegetation with an increase in the cover and abundance of ericoids (bell heather *Erica cinerea* and common heather *Calluna vulgaris*) and a concurrent decrease in the dominance of western gorse *Ulex gallii*. Structural diversity will be improved by rotational management to provide areas of short open heath with all the intermediate stages through to tall mature heath. A rotation of 12 years or more is recommended to break the dominance of western gorse. Burning tends to encourage the spread and dominance of western gorse and bracken therefore burning of heathland will be discouraged during the restoration phase but may be reintroduced at a later date for maintenance management. Restoration management will be carried out by patch cutting with patches measuring approximately 0.5-1ha.

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
001	001683	Unit 1 Intertidal	Identify any issues and remedies through the updating and revision of the SAC management plan for Pen Llyn a'r Sarnau SAC in 2008-09. This work to be led by the relevant authorities for the SAC (Countryside Council for Wales, Gwynedd Council, Ceredigion County Council, Powys County Council, Snowdonia National Park Authority, North Western & North Wales Sea Fisheries Committee, Environment Agency Wales, Dwr Cymru, Severn Trent Water and Trinity House), working with the SAC Liaison Group and other groups, organisations and individuals.	No
002	001684	Unit 2a Porth Oer	Overgrazing with sheep an issue here - needs to be lighter, possibly the timing adjusted to allow for heavier grazing in the spring. Ideally heavier stock are needed - cattle or ponies. The coastal path is a constraint for cattle grazing - long-term aim to open up the coastal corridor a field back to allow freer stock movement or incorporate 'break-outs' along the path.	Yes
003	001685	Unit 2b Porth Oer	Overgrazing with sheep an issue here - needs to be lighter, possibly the timing adjusted to allow for heavier grazing in the spring. Ideally heavier stock are needed - cattle or ponies. The coastal path is a constraint for cattle grazing - long-term aim to open up the coastal corridor a field back to allow freer stock movement or incorporate 'break-outs' along the path.	Yes
004	001686	Unit 3a Carreg Farm	Overgrazing with sheep an issue here - needs to be lighter, possibly the timing adjusted to allow for heavier grazing in the spring. Ideally heavier stock are needed - cattle or ponies. The coastal path is a constraint for cattle grazing - long-term aim to open up the coastal corridor a field back to allow freer stock movement or incorporate 'break-outs' along the path.	Yes
005	001687	Unit 3b Carreg Farm	Problem here possibly undergrazing - need to negotiate increased grazing levels and appropriate stock management - again heavier stock would be desirable.	Yes
007	001689	Unit 3c Carreg Farm	Units 34 and 35 run together. Land tends to be grazed in winter, with nothing in spring. Emphasis of grazing pattern needs to change to spring grazing.	Yes
008	001690	Unit 4a Mynydd Anelog	Units 34 and 35 run together. Land tends to be grazed in winter, with nothing in spring. Emphasis of grazing pattern needs to be changed to spring grazing. Previous issues with illegal spreading of slurry on heath and cutting. Shetland ponies recently introduced.	Yes

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
009	001701	Unit 4b Mynydd Anelog	Common land, open to Unit 37. However ownership of the common unclear, and grazing levels are unmanaged. Heath used to overgrazed, now probably undergrazed, but good quality.	Yes
010	001702	Unit 4c Mynydd Anelog	Common land belonging to the National Trust. Used to be heavily overgrazed, but stocking levels have dramatically dropped in recent years, and now undergrazed. Only active grazier is at Anelog Farm. The common is open to Unit 36. Bracken control is needed. Heavy stock grazing, ideally ponies, would be desirable here.	Yes
011	001703	Unit 4d Mynydd Anelog	Very small unit. Management unknown.	Yes
012	001704	Unit 4e Mynydd Anelog	Very small unit. Management unknown.	Yes
013	001707	Unit 5a Porth Llanllawen	Historically deliberately heavily grazed for Chough. Now managed along with land under S15 Management Agreement and heath in good condition. Gorse control under the agreement, and bracken controlled 2007 by NT.	Yes
014	001711	Unit 5b Porth Llanllawen	Historically deliberately heavily grazed for Chough. Now managed along with land under S15 Management Agreement and heath in good condition. Gorse control under the agreement, and bracken controlled 2007 by NT.	Yes
015	001713	Unit 6 Llanllawen Fawr	Historically deliberately heavily grazed for Chough. Now managed along with land under S15 Management Agreement and heath in good condition. Gorse control under the agreement, and bracken controlled 2007 by NT.	Yes
016	001714	Unit 7a Braich y Pwll	Historically deliberately heavily grazed for Chough. Now managed along with land under S15 Management Agreement and heath in good condition. Gorse control under the agreement, and bracken controlled 2007 by NT.	Yes
017	001716	Unit 7b Braich y Pwll	Generally overgrazed, with most serious effects in Unit 46, which is open to adjoining units. <i>Tuberaria guttata</i> occurs here at its only mainland site and is suffering from the effects of sheep grazing. To protect this species, the grazing needs to be modified to lighter pony grazing, with possibly a complete break from grazing for a period to allow the population to recover. Impacts also on soil lichens <i>Heterodermia</i> and <i>Teloschistes</i> which also occur here. Burning at this site inappropriate at this stage due to areas over-burned in the past, and cutting favoured instead, along with bracken and gorse control. RSPB involvement necessary due to importance of area for chough, but the mosaic habitat which should develop will support both heath and associated vascular and non-vascular species and chough. TG agreement being negotiated.	Yes

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
018	001721	Unit 7c Braich y Pwll	Generally overgrazed, with most serious effects in Unit 46, which is open to adjoining units. <i>Tuberaria guttata</i> occurs here at its only mainland site and is suffering from the effects of sheep grazing. To protect this species, the grazing needs to be modified to lighter pony grazing, with possibly a complete break from grazing for a period to allow the population to recover. Impacts also on soil lichens <i>Heterodermia</i> and <i>Teloschistes</i> which also occur here. Burning at this site inappropriate at this stage due to areas over-burned in the past, and cutting favoured instead, along with bracken and gorse control. RSPB involvement necessary due to importance of area for chough, but the mosaic habitat which should develop will support both heath and associated vascular and non-vascular species and chough. TG agreement being negotiated.	Yes
019	001722	Unit 8 Porth Felen	Possible issues with grazing type and timing. Narrow strip above cliffs with improved pasture behind.	Yes
020	001724	Unit 9	This section has become quite rank in recent years, and the timing of grazing is probably the problem. NT tenancy renewed recently with conservation clause for variation of grazing regime as necessary. Stocking will be 50 sheep in Spring then remove half for the rest of the grazing season. Cattle will be run in the field adjoining with access to the coastal strip. Gorse control by NT.	Yes
021	001728	Unit 10a Mynydd Bychestyn	Common dominated by western gorse with very little heather. Currently sheep grazed autumn/winter, but stock absent in spring, so grazing regime issues need to be resolved. Studies have revealed an absence of heather seed in the soil seed bank, almost certainly due to past frequent over-burning. Seedbank needs to be restored artificially, by cutting patches and putting on heather brash harvested by brush-cutter from adjoining land in Sept/Oct, or burning heather brash on scarified land to stimulate seed. Subsequently, cattle grazing could be introduced, through management agreement with CCW.	Yes
022	001729	Unit 10b Mynydd Bychestyn	Common dominated by western gorse with very little heather. Currently sheep grazed autumn/winter, but stock absent in spring, so grazing regime issues need to be resolved. Studies have revealed an absence of heather seed in the soil seed bank, almost certainly due to past frequent over-burning. Seedbank needs to be restored artificially, by cutting patches and putting on heather brash harvested by brush-cutter from adjoining land in Sept/Oct, or burning heather brash on scarified land to stimulate seed. Subsequently, cattle grazing could be introduced, through management agreement with CCW.	Yes

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
023	001730	Unit 10c Mynydd Bychestyn	Common dominated by western gorse with very little heather. Currently sheep grazed autumn/winter, but stock absent in spring, so grazing regime issues need to be resolved. Studies have revealed an absence of heather seed in the soil seed bank, almost certainly due to past frequent over-burning. Seedbank needs to be restored artificially, by cutting patches and putting on heather brash harvested by brush-cutter from adjoining land in Sept/Oct, or burning heather brash on scarified land to stimulate seed. Subsequently, cattle grazing could be introduced, through management agreement with CCW.	Yes
024	001732	Unit 11 Parwyd	Prostrate broom occurs here on the cliffs of Parwyd. Fenced off section at the top of the cliff is not fully stockproof, allowing some sheep access, and the broom may be being constrained to the inaccessible cliff because of this. Improved land above heavily grazed, but on thin soils and very exposed to salt-laden wind so potential for restoration/expansion of maritime grassland area. Possible management agreement or Llyn Partnership project.	Yes
025	001734	Unit 12a Pen y Cil	Moderate to heavy sheep grazing, with areas that are grassy with agricultural weeds due to previous stock feeding. Some nice areas of maritime grassland. Heavier stock would help break up the land and create opportunities for heath colonisation/expansion. Burning plan needs to be developed - burning on the coastal slopes with dense gorse has been consented previously to allow stock access.	Yes
026	001736	Unit 12b Pen y Cil	Moderate to heavy sheep grazing, with areas that are grassy with agricultural weeds due to previous stock feeding. Some nice areas of maritime grassland. Heavier stock would help break up the land and create opportunities for heath colonisation/expansion. Burning plan needs to be developed - burning on the coastal slopes with dense gorse has been consented previously to allow stock access.	Yes
027	001738	Unit 12c Pen y Cil	Small unit. No known issues.	No
028	001742	Unit 13a Porth y Pistyll	No known issues.	No
029	001743	Unit 13b Porth y Pistyll	No known issues.	No
031	001745	Unit 15 Cwrt (inc Porth Meudwy)	Large unit owned by NT and tenanted by Cwrt includes coast from Porth y Pistyll to Porth Simdde. Issues with accessibility to stock, leading to areas which are dominated by bracken and scrub. Water supply also an issue if grazing to be encouraged. Cwrt has an existing TG agreement.	Yes
034	001748	Unit 16. Porth Simdde	No known issues. Scrub?	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
035	001749	Unit 17a Ynys Enlli	Interior land on Ynys Enlli; mainly agricultural land with the SAC features mainly confined to the coastal areas and Mountain in Unit 66. Land covered by Management Agreements with BITL, BBFO and new agreement being negotiated with RSPB and sub-tenant with project proposals identified annually. Lowland gorse burning on rotation, annual bracken cutting, drainage and boundary management issues in this area.	Yes
036	001750	Unit 17b Ynys Enlli	Lighthouse compound. Current issues relate to proposals for wind turbines and solar panels.	Yes
037	001751	Unit 18a Ynys Gwylan Fawr	This unit is considered to be under appropriate conservation management.	No
038	001752	Unit 18b Ynys Gwylan Fach	This unit is considered to be under appropriate conservation management.	No
039	002054	Unit 1a Intertidal	Porth Oer. Not included in Pellyn a'r Sarnau SAC, but part of Clogwyni Penllyn SAC and Glannau Aberadaron SPA, underpinned by Glannau Aberadaron SSSI.	Yes
041	002056	Unit 17c Ynys Enlli	Unit includes coastal land and mountain land which supports the majority of the SAC features. A management agreement exists with BBFO, BITL and a new agreement is being negotiated with RSPB as BITL tenant, and their sub-tenant. Management under this agreement already being implemented, including cattle grazing of the mountain and gorse burning on 7 year rotation. The overall condition of the site features are favourable or unfavourable improving, and this will be maintained by this management.	Yes
042	002383	Unit 14 Bardsey Island SSSI- marine 1	Identify any issues and remedies through the updating and revision of the SAC management plan for Pen Llyn a'r Sarnau SAC in 2008-09. This work to be led by the relevant authorities for the SAC (Countryside Council for Wales, Gwynedd Council, Ceredigion County Council, Powys County Council, Snowdonia National Park Authority, North Western & North Wales Sea Fisheries Committee, Environment Agency Wales, Dwr Cymru, Severn Trent Water and Trinity House), working with the SAC Liaison Group and other groups, organisations and individuals.	No
043	002925	Unit 7d Braich y Pwll	This unit is considered to be under appropriate conservation management.	No

7. GLOSSARY

This glossary defines some of the terms used in this **Core Management Plan**. Some of the definitions are based on definitions contained in other documents, including legislation and other publications of CCW and the UK nature conservation agencies. None of these definitions is legally definitive.

Action	A recognisable and individually described act, undertaking or project of any kind, specified in section 6 of a Core Management Plan or Management Plan , as being required for the conservation management of a site.
Attribute	A quantifiable and monitorable characteristic of a feature that, in combination with other such attributes, describes its condition .
Common Standards Monitoring	A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to monitoring and reporting on the features of sites designated for nature conservation, supported by guidance on identification of attributes and monitoring methodologies.
Condition	A description of the state of a feature in terms of qualities or attributes that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.
Condition assessment	The process of characterising the condition of a feature with particular reference to whether the aspirations for its condition, as expressed in its conservation objective , are being met.
Condition categories	The condition of feature can be categorised, following condition assessment as one of the following ² : <ul style="list-style-type: none"> Favourable: maintained; Favourable: recovered; Favourable: un-classified Unfavourable: recovering; Unfavourable: no change; Unfavourable: declining; Unfavourable: un-classified Partially destroyed; Destroyed.
Conservation management	Acts or undertaking of all kinds, including but not necessarily limited to actions , taken with the aim of achieving the conservation objectives of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.
Conservation objective	The expression of the desired conservation status of a feature , expressed as a vision for the feature and a series of performance indicators . The conservation objective for a feature is thus a composite statement, and each feature has one conservation objective.

² See JNCC guidance on Common Standards Monitoring <http://www.jncc.gov.uk/page-2272>

Conservation status	A description of the state of a feature that comprises both its condition and the state of the factors affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.
Conservation status assessment	The process of characterising the conservation status of a feature with particular reference to whether the aspirations for it, as expressed in its conservation objective , are being met. The results of conservation status assessment can be summarised either as ‘favourable’ (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about conservation management , lies mainly in the details of the assessment of feature condition , factors and trend information derived from comparisons between current and previous conservation status assessments and condition assessments.
Core Management Plan	A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site Management Plan .
Factor	Anything that has influenced, is influencing or may influence the condition of a feature . Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on conservation management can also be considered as factors.
Favourable condition	See condition and condition assessment
Favourable conservation status	See conservation status and conservation status assessment . ³
Feature	The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.
Integrity	See site integrity
Key Feature	The habitat or species population within a management unit that is the primary focus of conservation management and monitoring in that unit.
Management Plan	The full expression of a designated site’s legal status, vision , features , conservation objectives , performance indicators and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular the Core Management Plan) and sets of electronically stored information.
Management Unit	An area within a site, defined according to one or more of a range of criteria, such as topography, location of features , tenure, patterns of land/sea use. The

³ A full definition of favourable conservation status is given in Section 4.

key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.

Monitoring An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.

Operational limits The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.

Performance indicators The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits**, which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

Plan or project **Project:** Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects**. Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.

Site integrity The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.

Site Management Statement (SMS) The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.

Special Feature See **feature**.

Specified limit The levels or values for an **attribute** which define the degree to which the attribute can fluctuate without creating cause for concern about the **condition** of the **feature**. The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.

Unit See **management unit**.

Vision for the feature The expression, within a **conservation objective**, of the aspirations for the **feature** concerned. See also **performance indicators**.

Vision Statement The statement conveying an impression of the whole site in the state that is intended to be the product of its **conservation management**. A ‘pen portrait’ outlining the **conditions** that should prevail when all the **conservation objectives** are met. A description of the site as it would be when all the **features** are in **favourable condition**.

8. REFERENCES

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Appendix G Lambay Island SPA



Conservation objectives for Lambay Island SPA [004069]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A009	Fulmar	<i>Fulmarus glacialis</i>
A017	Cormorant	<i>Phalacrocorax carbo</i>
A018	Shag	<i>Phalacrocorax aristotelis</i>
A043	Greylag Goose	<i>Anser anser</i>
A183	Lesser Black-backed Gull	<i>Larus fuscus</i>
A184	Herring Gull	<i>Larus argentatus</i>
A188	Kittiwake	<i>Rissa tridactyla</i>
A199	Guillemot	<i>Uria aalge</i>



A200	Razorbill	<i>Alca torda</i>
A204	Puffin	<i>Fratercula arctica</i>

Citation: NPWS (2022) Conservation objectives for Lambay Island SPA [004069]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.

This First Order Site-specific Conservation Objectives Version 1.0 document replaces the Generic Conservation Objectives Version 9.0 document.

Appendix H Howth Head Coast SPA



Conservation objectives for Howth Head Coast SPA [004113]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A188	Kittiwake	<i>Rissa tridactyla</i>



Citation: *NPWS (2022) Conservation objectives for Howth Head Coast SPA [004113]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.*

This First Order Site-specific Conservation Objectives Version 1.0 document replaces the Generic Conservation Objectives Version 9.0 document.

Appendix I Ireland's Eye SPA



Conservation objectives for Ireland's Eye SPA [004117]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A017	Cormorant	<i>Phalacrocorax carbo</i>
A184	Herring Gull	<i>Larus argentatus</i>
A188	Kittiwake	<i>Rissa tridactyla</i>
A199	Guillemot	<i>Uria aalge</i>
A200	Razorbill	<i>Alca torda</i>



Citation: NPWS (2022) *Conservation objectives for Ireland's Eye SPA [004117]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.*

This First Order Site-specific Conservation Objectives Version 1.0 document replaces the Generic Conservation Objectives Version 9.0 document.

Appendix J Copeland Islands SPA

COPELAND ISLANDS **SPECIAL PROTECTION AREA (SPA)**

UK9020291

CONSERVATION OBJECTIVES

Document Details

Title	Copeland Islands SPA Conservation Objectives
Prepared By	<i>Ian Enlander</i>
Approved By	<i>Mark Wright</i>
Date Effective From	<i>01/04/2015</i>
Version Number	<i>V2</i>
Next Review Date	January 2020
Contact	cdp@doeni.gov.uk

Revision History:

Version	Date	Summary of Changes	Initials	Changes Marked
V1	29/09/2009	Internal working document	IE	
V1.1	August 2013	Review	IE	
V2.0	February 2015	Draft	IE	Complete review

Site relationship

To fully understand the site conservation requirements for this site it may be necessary to also refer to other site Conservation Objectives

This SPA is in close proximity to Belfast Lough SPA, Belfast Lough Open Water SPA and Outer Ards SPA. It adjoins the proposed East Coast Marine SPA.

See also Boundary Rationale

1. INTRODUCTION

EU Member States have a clear responsibility under the Habitats and Birds Directives¹ to ensure that all habitats and species of Community Interest are maintained or restored to Favourable Conservation Status (FCS). Natura 2000 sites have a crucial role to play in achieving this overall objective since they are the most important core sites for these species and habitats. Each site must therefore be managed in a way that ensures it contributes as effectively as possible to helping the species and habitats for which it has been designated reach a favourable conservation status within the EU.

To ensure that each Natura 2000 site contributes fully to reaching this overall target of FCS, it is important to set clear conservation objectives for each individual site. These should define the desired state, within that particular site, of each of the species and habitat types for which the site was designated.

Once a site has been included in the Natura 2000 network, Member States are required to implement, on each site, the necessary conservation measures which correspond to the ecological requirements of the protected habitat types and species of Community Interest present, according to Article 6.1 of the Habitats Directive. They must also prevent any damaging activities that could significantly disturb those species and habitats (Article 6.2) and to protect the site from new potentially damaging plans and projects likely to have a significant effect on a Natura 2000 site (Article 6.3, 6.4).

Conservation measures can include both site-specific measures (i.e. management actions and/or management restrictions) and horizontal measures that apply to many Natura 2000 sites over a larger area (e.g. measures to reduce nitrate pollution or to regulate hunting or resource use).

In Northern Ireland, terrestrial/inter-tidal Natura 2000 sites are usually underpinned by the designation of an Area of Special Scientific Interest (ASSI) under the Environment (NI) Order 2002 (as amended).

2. ROLE OF CONSERVATION OBJECTIVES

Conservation Objectives have a role in

- Conservation Planning and Management – guide management of sites, to maintain or restore the habitats and species in favourable condition
- Assessing Plans and Projects, as required under Article 6(3) of the Habitats Directive - Habitats Regulations Assessments (HRA) are required to assess proposed plans and projects in light of the site's conservation objectives.
- Monitoring and Reporting – Provide the basis for assessing the condition of a feature, the factors that affect it and the actions required.

¹ 92/43/EEC and 2009/147/EC (codified version of Directive 79/409/EEC as amended)

3. DEFINITION OF FAVOURABLE CONSERVATION STATUS

Favourable Conservation Status is defined in Articles 1(e) and 1(i) of the Habitats Directive:

The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable as defined in Article 1(i).

For species, favourable conservation status is defined in Article 1(i) as when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and;
- there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long term basis.

3.1 DEFINITION OF FAVOURABLE CONDITION

Favourable Condition is defined as “**the target condition for an interest feature in terms of the abundance, distribution and/or quality of that feature within the site**”.

The standards for favourable condition (Common Standards) have been developed by JNCC and are applied throughout the UK. Achieving Favourable Condition on individual sites will make an important contribution to achieving Favourable Conservation Status across the Natura 2000 network.

4 GENERAL INFORMATION

COUNTY: Down

Copeland Islands ASSI:		AREA: 201.15ha
Big Copeland	G.R. J593 835	
Light House Island	G.R. J596 858	
Mew Island	G.R. J602 860	
Copeland Islands SPA	G.R. J600 850	AREA: 201.20ha

NB – UK MARINE SPA PROGRAMME HAS IDENTIFIED THE NEED FOR A MARINE EXTENSION TO THE COPELAND ISLANDS SPA TO REFLECT USAGE OF THE MARINE AREA BY RAFTING MANX SHEARWATER.

THE EXTENT OF THE MARINE AREA MANX SHEARWATER RAFTING IS AVAILABLE FROM NIEA.

THIS BOUNDARY WILL BE FURTHER REVISED ONCE JNCC REPORT ON MARINE USAGE BY TERN SPECIES FROM EXISTING SPA'S DESIGNATED FOR BREEDING TERNS IS PUBLISHED.

CONSERVATION OBJECTIVES WILL BE REVISED AS THESE ISSUE PROGRESS

5 SUMMARY SITE DESCRIPTION

The site is composed of three islands, Big Copeland, Light House Island and Mew Island, which collectively make up the Copeland Islands ASSI, lying off the north-east coast of the Outer Ards SPA. The islands are sites for breeding seabirds, with Big Copeland and Lighthouse Island being home to the main colonies. Important breeding and wintering populations of Eider Duck occur. Notable breeding populations of wader species also occur on Big Copeland.

5.1 BOUNDARY RATIONALE

The ASSI/SPA includes all land areas, excluding those with buildings and adjoining gardens, as the Manx Shearwater population especially use both inland and coastal areas for breeding purposes. The inland breeding gull and wader populations also support inclusion of the core of Big Copeland. Sea areas adjoining the Copeland Islands have also been included in the SPA (used by breeding tern and Manx Shearwater). Such areas adjoining colonies are of particular importance for courtship, preening and loafing behaviours, and also feeding.

6 SPA SELECTION FEATURES

Feature Type	Feature	Population	Population at time of designation (ASSI)	Population at time of designation (SPA)	SPA Review population
Species	Manx Shearwater breeding population ^a	Total 4800 pairs Lighthouse Island (surveyed 2000) and Big Copeland – (surveyed 2002 and 2003)	Total 4800 pairs Lighthouse Island (surveyed 2000) and Big Copeland – (surveyed 2002 and 2003)	Total 4800 pairs Lighthouse Island (surveyed 2000) and Big Copeland – (surveyed 2002 and 2003)	New feature
Species	Arctic Tern breeding population ^a	1998 to 2002 - 5 year average of 566	1998 to 2002 - 5 year average of 566	1998 to 2002 - 5 year average of 566	New feature
Habitat ¹	Habitat extent				

Table 1. List of SPA selection features.

¹ Habitat is not a selection feature but is a factor and is more easily treated as if it were a feature. Habitat extent is also used for breeding birds reported as an area.

Notes on SPA features – may not be applicable to all SPAs

The above table lists all relevant qualifying species for this site. As the identification of SPA features has and continues to evolve, species may have different status but all should be considered in the context of any HRA process. Ultimately all SPAs will be renotified to formalise species features.

^a – species cited in current SPA citation and listed on current N2K dataform

^b – species selected post SPA designation through UK SPA Review 2001

^c – species highlighted as additional qualifying features through the UK SPA Review 2015 or the UK marine SPA programmes.

6.1. ADDITIONAL ASSI SELECTION FEATURES

Feature Type (i.e. habitat, species or earth science)	Feature	Size/ extent/ pop'	Population at time of designation (ASSI)	Common Standards Monitoring baseline
Species	Common Gull	250 pr	250 pr	250 pr
Species	Eider (breeding)	140 pr	140 pr	140 pr
Species	Eider (non-breeding)	200	200	458

Table 2. List of ASSI features, additional to those that form all or part of SPA selection features. These will be referred to in ANNEX II.

7. CONSERVATION OBJECTIVES

The Conservation Objectives for this site are:

To maintain each feature in favourable condition.

For each feature there are a number of component objectives which are outlined in the tables below. Component objectives for Additional ASSI Selection Features are not yet complete. For each feature there are a series of attributes and measures which form the basis of *Condition Assessment*. The results of this will determine whether a feature is in favourable condition, or not. The feature attributes and measures are found in the attached annexes. Those for Additional ASSI Selection Features (Annex II) are not yet completed.

8. COPELAND ISLANDS SPA CONDITION ASSESSMENT 2014

Species	2007	2011	CSM	5 yr mean	% CSM	Status
Arctic tern	1050	1025	556	1037.5	186.60	Favourable

Species	2008	2009	2010	CSM	5 yr mean	% CSM	Status
Manx Shearwater	5994	5506	6209	4800	5903	122.98	Favourable

9 SPA SELECTION FEATURE OBJECTIVES

To maintain or enhance the population of the qualifying species

Fledging success sufficient to maintain or enhance population

To maintain or enhance the range of habitats utilised by the qualifying species

To ensure that the integrity of the site is maintained;

To ensure there is no significant disturbance of the species and

To ensure that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species

Feature	Component Objective
Manx Shearwater breeding population	No significant decrease in population against national trends
Manx Shearwater breeding population	Fledging success sufficient to maintain or enhance population
Arctic Tern breeding population	No significant decrease in population against national trends
Arctic Tern breeding population	Fledging success sufficient to maintain or enhance population
Habitat extent	To maintain or enhance the area of natural and semi-natural habitats used or potentially usable by Feature bird species, (breeding areas 201.20ha) subject to natural processes
Habitat extent	Maintain the extent of main habitat components subject to natural processes

Table 3. List of SPA Selection Feature Component Objectives

Tern nesting localities current and historical (TO BE FINALISED)

Big Copeland
Lighthouse Island
Mew Island

Table 4. Tern nesting locations within the SPA

9.1 ADDITIONAL ASSI SELECTION FEATURE OBJECTIVES

Feature Type (i.e. habitat, species or earth science)	Feature
Species	Common Gull
Species	Eider (breeding)
Species	Eider (non-breeding)

10. MANAGEMENT CONSIDERATIONS

See also Views About Management for relevant ASSI

Owner/Occupier's – (to be used to identify any key management considerations arising from ownership e.g. owners/organisations having an obvious bearing on conservation matters or from management agreements).

Approximately x individuals/organisations own land within the SPA. Major landowners and leasees within the SPA, relevant to the site management include, Crown Estate Commissioners, National Trust, Commissioner of Irish Lights, the Copeland Bird Observatory and Private Individuals. There may be conflicts of interest between the requirements of individual/organisations, both within and adjacent to the SPA, and the site management needs.

A managed shoot is established on Big Copeland. This is not thought to have an adverse impact on the breeding seabirds (Arctic Tern numbers have increased during the period during which the shoot has been managed while no aspect of the shoot would have a specific impact on the Manx Shearwater). Provision of feeding points for game birds supports the local population of Stock Dove, together with many passerine species.

Activities of the Copeland Bird Observatory are positively directed towards both the Arctic Tern and Manx Shearwater populations. In addition they undertake population monitoring actions and habitat enhancement schemes.

The proposed new sewage treatment works for the greater Bangor area at Donaghadee and associated infrastructure may impact upon the SPA.

There are no management agreements within the SPA.

11. MAIN THREATS, PRESSURES, ACTIVITIES WITH IMPACTS ON THE SITE OR SITE FEATURES

Notifiable Operations - Carrying out any of the Notifiable Operations listed in the schedule could affect the site. The list below is not exhaustive, but deals with the most likely factors that are either affecting Outer Ards SPA, or could affect it in the future. Although, features 1, 2, 3, 4 etc, are the qualifying SPA features, factors affecting ASSI features are also considered.

Generic site/feature issues

No	Issue	Threat/comments	Local considerations	Action
1	Boating activity – commercial	Disturbance and potential for impact from high-speed liners.	Fishing boat activity is widespread, centred on the main harbours. Shipping within the Irish Sea may have a bearing with regard to the potential for pollution incidents. No immediate issues evident.	Formal consultation likely relating to new schemes. Consider the collective impact.
2	Boating activity – recreational	Disturbance and potential for impact. Generally relevant to particularly sensitive areas within site.	Main boating centres are at Bangor and Donaghadee. Most activity is likely to be	Liaise with appropriate authority with codes of good practice, zoning and use of by-laws as necessary.

			in the summer period. Implications for seabird nesting sites.	Consider the collective impact.
3	Cull of fledglings/ young	Licensed selective culling of species impacting on 'more desirable' species. Licensed by NIEA.	Potentially an issue at tern colonies but numbers of breeding large gulls has declined considerably in recent years.	NIEA to review all licenses. Consider the collective impact.
4	Enhanced bird competition	Activities onsite or offsite that influences or results in a shift in balance of species utilising a site.	Future of landfill operations especially in the wider area could impact on breeding seabirds	Liaise with Planning Service. Review wider countryside changes.
5	Fishing – commercial or recreational	Minimal disturbance consideration but may represent 'competition' for piscivorous birds. Represents a net loss to the system in terms of biomass.	Scallop dredging and other trawling is ongoing.	Liaise with DARD and fishing authority as required. Liaise with angling clubs as required.
6	Habitat quality – open water	Alteration of habitat quality through diminution of water quality or invasive species.	Not a significant issue given the sites position in open coastal waters. Impacts are localised.	Assess planning applications. Deal with invasive alien species by preventing their spread or reducing their impact. Liaise with Environmental Protection. Consider the collective impact.
7	Habitat extent and quality-breeding	Alteration of habitat area or quality through inappropriate use or absence of site management.	Habitat management is main issue in context of seabirds. Manx Shearwater on Lighthouse Island are positively managed. This is not the case for Terns and Shearwaters on Big Copeland.	Assess needs of breeding species. Liaise with owner or appropriate authority to adjust or introduce site management.
8	Introduced species	Range of threats from loss of habitat, feeding competition, disease, hosting species presenting a threat outside of the site.	Significant problem on Lighthouse Island.	Liaise with appropriate authority. Consider feasibility of elimination. Participate in national/ international initiatives.
9	Predation.	Mainly of concern on bird breeding sites.	Extent unknown. Introduction of ground predators eg rats, is a major risk to Shearwaters especially.	Must be dealt with as part of wider countryside management considerations.
10	Recreational activities	Disturbance is the main consideration. Breeding birds, especially seabirds, are vulnerable to disturbance as absence of adults can often result in predation or chilling of young with a reduction/loss in fledging success.	Widespread in summer with main concerns being access to Copeland Island (Lighthouse and Mew Islands have greater control on access).	Liaise with local authorities and other managing parties. Signage at vulnerable sites should be reviewed.

11	Game Bird Management	Habitat management.	Potential conflict of habitat management. NB: The game bird rearing on Big Copeland is helping to support the Stock Dove population but may result in competition with waders for some invertebrate prey during the breeding season.	Liaise with holder of sporting rights.
12	Grazing regime	Stock levels must represent a balance between the need to keep a low sward and minimise soil erosion. Grazing/cutting needs also to be assessed in the context of the fluctuating rabbit populations.	On Lighthouse Island an artificial mowing regime is maintained, and on some areas of Big Copeland livestock grazing is maintained. On Mew Island the introduction of a grazing regime would be attractive.	For all islands, depending on rabbit activities, to seek measures to get rid of extra amounts of herbage
13	Field boundaries on Big Copeland	Some Manx Shearwater use the stone walls and dry turf banks.	The stone walls and turf banks need to be managed and maintained appropriately.	Liaise with local landowners.
14	Alien species	Himalayan Balsam invasion.	Eradication.	To contain or reduce extent of ground cover
15	Research activities	Census and ringing activities especially have the potential to impact on bird populations, particularly at breeding sites.	Breeding seabirds are surveyed annually.	Census and ringing activities to be undertaken by competent individuals, appropriately trained. In case of ringers, appropriate license must be held.

Table 5. List of site/feature management issues

12. MONITORING

Monitoring of our Special Protection Areas takes place at a number of levels, using a variety of methods. Methods for both Site Integrity Monitoring and Condition Assessment can be found in the Monitoring Handbook (To be written).

Maintain the integrity of the site. Undertake Site Integrity Monitoring (SIM) at least annually to ensure compliance with the SPA/ASSI schedule. The most likely processes of change (e.g. dumping, infilling, gross pollution) will either be picked up by Site Integrity Monitoring, or will be comparatively slow (e.g. change in habitat such as growth of mussel beds). More detailed monitoring of site features should therefore be carried out by Site Condition Assessment on a less frequent basis (every 6 years initially to pick up long-term or more subtle changes). A baseline survey will be necessary to establish the full extent of the communities present together with the current condition of the features, against which all further condition assessments will be compared.

In addition, detailed quality monitoring or verification monitoring may be carried out from time to time to check whether condition assessment is adequate to detect long-term changes that could affect the site. This type of quality monitoring may involve assessment of aerial photographs to determine site morphological changes. Methodology for this is being developed.

12.1 MONITORING SUMMARY

1. Monitor the integrity of the site (Site Integrity Monitoring or SIM) – Complete boundary survey to ensure integrity of site and that any fencing is still intact. Ensure that no sand extraction or dumping has been carried out within the SAC boundary. This SIM should be carried out once a year.
2. Monitor the condition of the site (Condition Assessment) - Monitor the key attributes for each selection feature (dune, saltmarsh, species). This will detect if the features are in favourable condition or not. See Annexes I and II for SAC and Additional ASSI Features respectively.

The favourable condition table provided in Annex 1 is intended to supplement the conservation objectives only in relation to management of established and ongoing activities and future reporting requirements on monitoring condition of the site and its features. It does not by itself provide a comprehensive basis on which to assess plans and projects, but it does provide a basis to inform the scope and nature of any appropriate assessment that may be needed. It should be noted that appropriate assessments are a separate activity to condition monitoring, requiring consideration of issues specific to individual plans or projects.

12.2. ADDITIONAL MONITORING ACTIONS UNDERTAKEN FOR SITES IN UNFAVOURABLE CONDITION

Monitoring actions set out in section 6 and Annex 1 will use, amongst other attributes, bird population data to determine site condition. In the event of a significant population decline being detected, a series of subsequent actions will be initiated. The following list is not exhaustive, actions will be site dependant, but the order of these points IS hierarchical i.e. consider point 1, then 2, etc.

1. Assess the site population in a wider geographical context – Northern Ireland, Ireland, UK, world. Refer to BTO ALERT limits etc. Liaise with other competent bodies to meaningfully assess wider pattern. No site action if site decline mirrors regional pattern the cause of which is not related to the site. Action may be required at regional or larger scale. If the cause of the regional population decline (e.g. eutrophication) is found at the site then action may be necessary, but this may need to form part of a network of strategic species action. Further research may be required.
2. Assess the site population in a wider geographical context – Northern Ireland, Ireland, UK, Europe, world. Determine if site losses are balanced by gains elsewhere e.g. breeding terns. Review site condition to determine if losses are due to site deterioration. Determine if possible whether population has

relocated within SPA series (national, biogeographical, European). Note that the reasons for such locational changes may not be readily identifiable. Further research may be required.

3. For passage/wintering species assess breeding information. No site action if site decline is due to breeding ground failure, unless breeding ground failure is related to poor adult condition resulting from factors affecting wintering / passage birds.
4. Determine whether a major incident has affected the site e.g. toxic impact on prey items, predation event or geographical shift in available prey. Ability to respond to impacts may be limited.
5. Assess condition of principal site habitats e.g. vegetational composition and structure, change in habitat balance e.g. mudflats reduced by encroaching mussel beds.
6. Assess prey availability. Issues to consider are both within site e.g. water quality, broad site management, and without site e.g. climatically driven factors.
7. Assess whether there have been any changes in any other site features or management practices (see Table 3) that may have affected populations of site selection features.
8. Long-term site value must be considered even when it is found to be in unfavourable condition for a number of reporting cycles. This is particularly important for breeding seabird and wader sites where ongoing appropriate management may ultimately encourage re-establishment of a favourable population.

13. SELECTION FEATURE POPULATION TRENDS

Site trends are reported using running 5 year means of annual maximum count (WeBS data). Long term trends in index values have been used to assess changes in overall wintering populations for Northern Ireland and UK (WeBS data). Caution is always necessary in the interpretation and application of waterbird counts given the limitations of these data. The reduced number of both sites and birds in Northern Ireland, result in a greater degree of fluctuation. Trends for Ireland are based on five years of data 1994-1999 (I-WeBS data). Consequently short-term fluctuations apparent in the data series may reflect changes in between year productivity, or other short term phenomena, rather than being indicative of a real change in a population.

SPECIES	SITE TREND	NI TREND	ROI TREND	UK TREND	COMMENTS
Arctic Tern	-	-	-	-	Not known, to be compiled.
Manx Shearwater	-	-	-	-	Not known, to be compiled.

ANNEX I

Feature (SPA) – Breeding Seabirds

* = primary attribute. One failure among primary attribute = unfavourable condition

= optional factors. These can be in unfavourable condition without the site being in unfavourable condition

Attribute	Measure	Targets	Comments
* Arctic Tern breeding population	Apparently occupied nests	No significant decrease in Arctic Tern breeding population against national trends	Requirement that annual data is collected, apply 5 year mean criteria. Ideally the population will be maintained above 1% of the national population.
# Arctic Tern fledging success	Annual survey (as per Gilbert <i>et al.</i> 1998). Determine number of fledglings raised and add to total number of fledglings raised over previous four years and divide by five to obtain average. This should remove variation from season to season, e.g. in response to bad weather.	>1 fledgling per pair successfully raised per year over five year period.	Appropriate level of fledgling survival to be determined.
* Manx Shearwater breeding population	Occupied nests	No significant decrease in Manx Shearwater breeding population against national trends.	Requirement that data is collected once every reporting cycle. Ideally the population will be maintained above 1% of the national population.
# Manx Shearwater fledging success	Fledging success	>1 fledgling per pair successfully raised over five year period.	Appropriate level of fledgling survival to be determined.

Non-Avian Factors – habitat

Attribute	Measure	Targets	Comments
* Habitat extent	Area of natural and semi-natural habitat	To maintain or enhance the area of natural and semi-natural habitats potentially usable by Feature bird species, (breeding areas 201.20ha) subject to natural processes.	Monitor once every reporting cycle by aerial photography.
# Extent of different habitats	Extent of different habitats	Maintain the extent of main habitat components subject to natural processes.	Evaluate habitat quality should bird populations decline due to on site factors. Map any changes in area. This may include mapping areas with different vegetation structures or breeding sites, where this would lead to different usage by notified species.

Appendix K Wicklow Head SPA

National Parks and Wildlife Service

Conservation Objectives Series

Wicklow Head SPA 004127



NPWS

An tSeirbhís Páirceanna
Náisiúnta agus Fiadhúlra
National Parks and Wildlife
Service

**National Parks and Wildlife Service,
Department of Housing, Local Government and Heritage,
90 King Street North, Dublin 7, D07 N7CV, Ireland.
Web: www.npws.ie
E-mail: natureconservation@npws.gov.ie**

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Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

** indicates a priority habitat under the Habitats Directive*

004127 Wicklow Head SPA

A188 Kittiwake *Rissa tridactyla*

Please note that this SPA is adjacent to Wicklow Reef SAC (002274). See map 2. The conservation objectives for this site should be used in conjunction with those for the adjacent site as appropriate.

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year : 2021

Title : Estimated foraging ranges of the breeding seabirds of Ireland's marine special protected area network

Author : Power, A.; McDonnell, P.; Tierney, T.D.

Series : Published NPWS report

Other References

Year :	1987
Title :	Recent changes in breeding seabird populations in counties Dublin and Wicklow
Author :	Merne, O.J.
Series :	Irish East Coast Bird Report, p. 68-77. Irish Wildbird Conservancy, Dublin
Year :	2003
Title :	Implications for seaward extensions to existing breeding seabird colony Special Protection Areas
Author :	McSorley, C.A.; Dean, B.J.; Webb, A.; Reid J.B.
Series :	JNCC Report No. 329
Year :	2004
Title :	Seabird populations of Britain and Ireland
Author :	Mitchell, P.I.; Newton, S.F.; Ratcliffe, N.; Dunn, T.E.
Series :	Poyser, London
Year :	2007
Title :	Arklow Bank Seabird and Marine Mammal Monitoring Programme □ Wicklow Head Seabird Colony Monitoring 2007
Author :	Cork Ecology
Series :	Unpublished Report to Airtricity
Year :	2017
Title :	Productivity of the Black-legged Kittiwake <i>Rissa tridactyla</i> required to maintain numbers
Author :	Coulson, J.C.
Series :	Bird Study 64: 84-89
Year :	2019
Title :	Desk-based revision of seabird foraging ranges used for HRA screening
Author :	Woodward, I.; Thaxter, C.B.; Owen, E.; Cook, A.S.C.P.
Series :	BTO Research Report No. 724
Year :	2020
Title :	Black-legged Kittiwake (<i>Rissa tridactyla</i>), version 1.0. In Birds of the World (S. M. Billerman, Editor)
Author :	Hatch, S. A.; Robertson, G. J.; Baird, P. H.
Series :	Cornell Lab of Ornithology, Ithaca, NY, USA
Year :	2022
Title :	Monitoring the breeding seabird colony at Wicklow Head: 2018-2021
Author :	Tierney, T.D.
Series :	Irish Birds 44: 27-34
Year :	2023
Title :	Seabirds Count: a census of breeding seabirds in Britain and Ireland (2015-2021)
Author :	Burnell, D.; Perkins, A.J.; Newton, S.F.; Bolton, M.; Tierney, T.D.; Dunn, T.E.
Series :	Lynx Nature Books, Barcelona
Year :	2023
Title :	Wicklow Head Seabird Colony Monitoring 2023
Author :	Cork Ecology
Series :	Unpublished Report to Airtricity

A188 Kittiwake *Rissa tridactyla*


To restore the Favourable conservation condition of Kittiwake in Wicklow Head SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Breeding population size	Number of Apparently Occupied Nests (AON)	Long term SPA population trend is stable or increasing	Kittiwake were breeding on Wicklow Head by 1974, with 164 pairs recorded, and this population increased to 786-800 pairs by 1986-1987 (Merne, 1987). The population increased further to 956 pairs in 1999 (Mitchell et al., 2004). Monitoring effort increased at this site in the 21st century, which tracked an initial decline followed by a recovery to 999 pairs in 2007 (Cork Ecology, 2007). Subsequent estimated abundances indicate a declining trend (Tierney, 2022). In 2023, the population was estimated to be 645 pairs (Cork Ecology, 2023) equating to a decline of 33% since 1999, which is similar to the national declining trend of 36% between 1998-2002 and 2015-2021 (Burnell et al., 2023)
Productivity rate	Number of fledged young per breeding pair	Sufficient to maintain a stable or increasing population	Coulson (2017) established, based on data from UK Kittiwake colonies during the period 1985-2015, that 0.80 fledglings per pair were needed to maintain the size of these colonies. Since 2001, two bouts of annual productivity monitoring at Wicklow Head has occurred: the first, covering the period 2001-2007 (Cork Ecology, 2007); and more recently, 2018-2023 (Tierney, 2022; Cork Ecology, 2023). A seven year mean of 0.70 chicks per nest for the period 2001-2007 is reported (Cork Ecology, 2007). For the 2023 breeding season, Cork Ecology (2023) estimated a productivity rate of 0.25 (± 0.13 SE) chicks per nest based on the same five sub-colonies used in previous years by NPWS for the period 2018-2022. This contributes to an overall reported six year mean of 0.56 (± 0.12 SE) chicks per nest for Wicklow Head for the period 2018-2023 (Cork Ecology, 2023). Current breeding productivity rates may be insufficient to drive a reversal of the negative population trend in the near term (Tierney, 2022)
Distribution: extent of available nesting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable nesting sites throughout the SPA to maintain a stable or increasing population	Distribution encapsulates the number of locations and area of potentially suitable nesting habitat for the breeding population and its availability for use. The suitability and availability of habitat across the SPA may vary through time. This will affect the spatio-temporal patterns of use of the habitats by Kittiwake. Typically this species is a cliff-nester on ledges of offshore islands, sea stacks, or inaccessible areas of coastal mainland (Hatch et al., 2020)
Forage spatial distribution, extent, abundance and availability	Location and hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	Kittiwake is a surface feeding seabird and primarily piscivorous (e.g. sandeels, herring, gadoids) with some invertebrates (e.g. euphausiids, amphipods) in the diet also recorded (Hatch et al., 2020). Woodward et al. (2019) provides estimates (i.e. overall mean, mean of maximum distances across all studies, and maximum distance recorded) of Kittiwake foraging ranges from the nest site during the breeding season, which are 55km, 156km, and 770km respectively (see Power et al., 2021)

Disturbance at the breeding site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on birds at the breeding site	Disturbance events at the nest site/breeding colony level can result in a reduction of overall productivity and even lead to the abandonment of the breeding colony. The impact of any significant disturbance (direct or indirect) to the breeding population will ultimately affect the achievement of targets for population size and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Disturbance at areas ecologically connected to the colony	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on breeding population	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific maintenance behaviours (e.g. courtship, bathing, preening) as defined in McSorley et al. (2003)
Barriers to connectivity	Number; location; shape; area (hectares)	Barriers do not significantly impact the population's access to the SPA or other ecologically important sites outside the SPA	Seabirds, particularly during the breeding season, require regular and efficient access to marine waters ecologically connected to the colony in order to forage as well as to engage in other maintenance behaviours. Woodward et al. (2019) provides estimates (i.e. overall mean, mean of maximum distances across all studies, and maximum distance recorded) of Kittiwake foraging ranges from the nest site during the breeding season, which are 55km, 156km, and 770km respectively (see Power et al., 2021)



Legend

 Wicklow Head SPA 004127




NPWS
An tSeirbhís Páircanna Náisiúnta agus Fiadhúlra
National Parks and Wildlife Service

**MAP 1:
WICKLOW HEAD SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION**

Map to be read in conjunction with the NPWS Conservation Objectives Document

**SITE CODE:
SPA 004127; version 3
CO. WICKLOW**

0 0.5 1 2 Kilometres



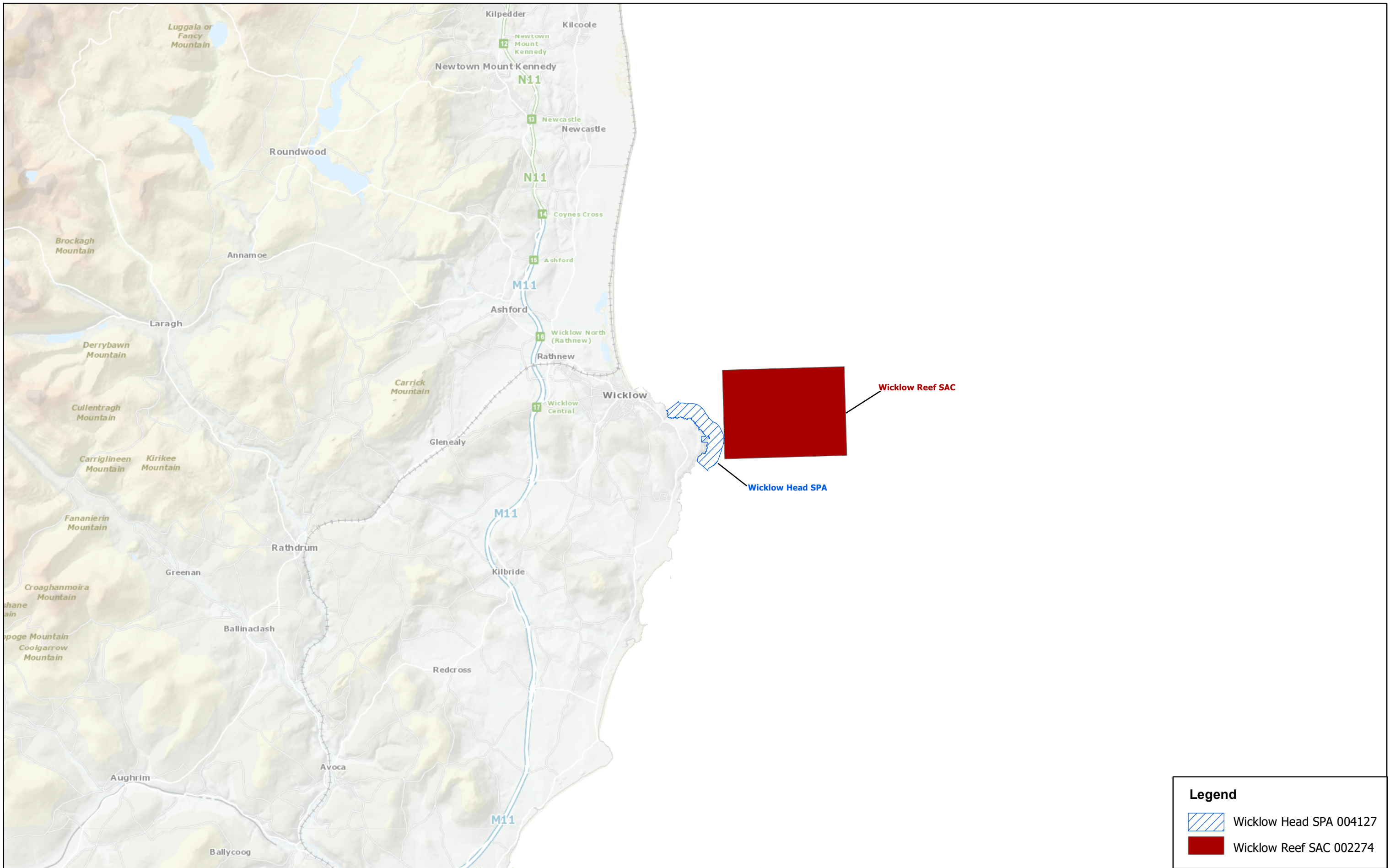
The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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N



**Map version 1
Date: May 2024**



Legend

-  Wicklow Head SPA 004127
-  Wicklow Reef SAC 002274




NPWS
 An tSeirbhís Páircanna Náisiúnta agus Fiadhúlra
 National Parks and Wildlife Service

**MAP 2:
 WICKLOW HEAD SPA
 CONSERVATION OBJECTIVES
 OVERLAPPING AND ADJACENT SITES**

Map to be read in conjunction with the NPWS Conservation Objectives Document

**SITE CODE:
 SPA 004127; version 3
 CO. WICKLOW**

0 1.25 2.5 5 Kilometres



The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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**Map version 1
 Date: May 2024**

Appendix L Ailsa Craig SPA

Conservation Objectives for Ailsa Craig Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Gannet (*Morus bassanus*)
- Guillemot (*Uria aalge*)*
- Herring gull (*Larus argentatus*)*
- Kittiwake (*Rissa tridactyla*)*
- Lesser black-backed gull (*Larus fuscus*)

- Seabird assemblage

* indicates assemblage qualifier only

Appendix M Rathlin Island SPA

RATHLIN ISLAND - SPECIAL PROTECTION AREA (SPA)

UK9020011

CONSERVATION OBJECTIVES

Document Details

Title	Rathlin Island SPA Conservation Objectives
Prepared By	<i>Ian Enlander</i>
Approved By	<i>Mark Wright</i>
Date Effective From	<i>01/04/2015</i>
Version Number	<i>V3</i>
Next Review Date	January 2020
Contact	cdp@doeni.gov.uk

Revision History:

Version	Date	Summary of Changes	Initials	Changes Marked
V1	25/02/1999	Internal working document	IE	
V1.1	August 2013	Review	IE	
V2.0	February 2015	Draft	IE	Complete review

Site relationship

To fully understand the site conservation requirements for this site it may be necessary to also refer to other site Conservation Objectives

This SPA coincides with Rathlin Island SAC

See also Boundary Rationale

1. INTRODUCTION

EU Member States have a clear responsibility under the Habitats and Birds Directives¹ to ensure that all habitats and species of Community Interest are maintained or restored to Favourable Conservation Status (FCS). Natura 2000 sites have a crucial role to play in achieving this overall objective since they are the most important core sites for these species and habitats. Each site must therefore be managed in a way that ensures it contributes as effectively as possible to helping the species and habitats for which it has been designated reach a favourable conservation status within the EU.

To ensure that each Natura 2000 site contributes fully to reaching this overall target of FCS, it is important to set clear conservation objectives for each individual site. These should define the desired state, within that particular site, of each of the species and habitat types for which the site was designated.

Once a site has been included in the Natura 2000 network, Member States are required to implement, on each site, the necessary conservation measures which correspond to the ecological requirements of the protected habitat types and species of Community Interest present, according to Article 6.1 of the Habitats Directive. They must also prevent any damaging activities that could significantly disturb those species and habitats (Article 6.2) and to protect the site from new potentially damaging plans and projects likely to have a significant effect on a Natura 2000 site (Article 6.3, 6.4).

Conservation measures can include both site-specific measures (i.e. management actions and/or management restrictions) and horizontal measures that apply to many Natura 2000 sites over a larger area (e.g. measures to reduce nitrate pollution or to regulate hunting or resource use).

In Northern Ireland, terrestrial/inter-tidal Natura 2000 sites are usually underpinned by the designation of an Area of Special Scientific Interest (ASSI) under the Environment (NI) Order 2002 (as amended).

2. ROLE OF CONSERVATION OBJECTIVES

Conservation Objectives have a role in

- Conservation Planning and Management – guide management of sites, to maintain or restore the habitats and species in favourable condition
- Assessing Plans and Projects, as required under Article 6(3) of the Habitats Directive - Habitats Regulations Assessments (HRA) are required to assess proposed plans and projects in light of the site's conservation objectives.
- Monitoring and Reporting – Provide the basis for assessing the condition of a feature, the factors that affect it and the actions required.

¹ 92/43/EEC and 2009/147/EC (codified version of Directive 79/409/EEC as amended)

3. DEFINITION OF FAVOURABLE CONSERVATION STATUS

Favourable Conservation Status is defined in Articles 1(e) and 1(i) of the Habitats Directive:

The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable as defined in Article 1(i).

For species, favourable conservation status is defined in Article 1(i) as when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and;
- there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long term basis.

3.1 DEFINITION OF FAVOURABLE CONDITION

Favourable Condition is defined as “**the target condition for an interest feature in terms of the abundance, distribution and/or quality of that feature within the site**”.

The standards for favourable condition (Common Standards) have been developed by JNCC and are applied throughout the UK. Achieving Favourable Condition on individual sites will make an important contribution to achieving Favourable Conservation Status across the Natura 2000 network.

REVIEW OF THE ADJOINING MARINE AREA WILL BE INFORMED BY JNCC GUIDANCE ON MARINE EXTENSIONS TO SEABIRD COLONIES. ANY CHANGES, IF ANY, ARE LIKELY TO BE MINIMAL.

CONSERVATION OBJECTIVES WILL BE REVISED AS THIS ISSUE PROGRESSES

4 GENERAL INFORMATION

COUNTY: Antrim

G.R. Rathlin Island SPA D127 507 AREA: 3344.62 ha.

G.R. Rathlin Island Cliffs SPA D136 525 AREA: 257 ha.

5 SUMMARY SITE DESCRIPTION

The site comprises the major sea-cliffs around Rathlin Island. The basalt and limestone cliffs are principally important for the seabird colonies, most notably around the area of West Light, but also along sections of the north coast. This extensive habitat also supports a notable breeding population of Peregrine.

5.1 BOUNDARY RATIONALE

The cliffs lie within the Rathlin Island Coast ASSI. The landward boundary has generally been taken to the clifftop except where small units of semi-natural vegetation, mainly comprising maritime heath and grassland, immediately adjoin the cliff-top. The sea area has been included for seabirds. Such areas adjoining colonies are of particular importance for courtship, preening and loafing behaviours, and also, to a lesser extent, feeding.

6 SPA SELECTION FEATURES

Feature Type (i.e. habitat or species)	Feature	Population ¹	Population at time of designation (ASSI)	Population at time of designation (SPA)	SPA Review population
Species	Peregrine Falcon breeding population ^a	6 pairs (Five year mean 1992-96)		6 pairs	6
Species	Guillemot breeding population ^a	95,567 individuals		41887 inds.	28064 pairs
Species	Razorbill breeding population ^a	20,860 individuals		8922 inds.	5978 pairs
Species	Kittiwake breeding population ^a	9,917 Apparently Occupied Nests		6822 pairs	6822 pairs
Assemblage species	Fulmar breeding population ^d	2,032 Apparently Occupied Nests		1482 pairs	1482 pairs
Assemblage species	Common Gull breeding population ^d	91 Apparently Occupied Nests		64 pairs	64 pairs
Assemblage species	Lesser Black-backed Gull breeding population ^d	127 Apparently Occupied Nests		155 pairs	155 pairs
Assemblage species	Herring Gull breeding population ^d	14 Apparently Occupied Nests		4037 pairs	4037 pairs
Assemblage species	Puffin breeding population ^d	1,579 individuals		2398 inds.	2398 inds.
Species assemblage	Seabird Assemblage breeding population ^a (Component species: Guillemot, Razorbill, Kittiwake, Fulmar, Common Gull, Lesser Black-backed Gull, Herring Gull, , Puffin)	142,268 individuals		66000 inds.	66000 inds.
Habitat ²	Habitat extent				

Table 1. List of SPA selection features.

¹ Population given as number of pairs / individuals recorded during the Seabird 2000 survey (except where stated). These figures differ from the designation populations given in the SPA citation (which were taken from the 1985 Seafarer survey) but are considered to be more relevant to future monitoring. The 1985 and 2000 figures are not directly comparable due to differences in survey methods.

² Habitat is not a selection feature but is a factor and is more easily treated as if it were a feature. Habitat extent is used for breeding birds reported as linear extent for cliff sites.

Notes on SPA features – may not be applicable to all SPAs

The above table lists all relevant qualifying species for this site. As the identification of SPA features has and continues to evolve, species may have different status but all should be considered in the context of any HRA process. Ultimately all SPAs will be renotified to formalise species features.

^a – species cited in current SPA citation and listed on current N2K dataform

^b – species selected post SPA designation through UK SPA Review 2001

^c – species highlighted as additional qualifying features through the UK SPA Review 2015 or the UK marine SPA programmes.

^d – component species contributing to the assemblage feature i.e. not features in their own right but treated as such due to relationship with assemblage feature

6.1 ADDITIONAL ASSI SELECTION FEATURES

Feature Type (i.e. habitat, species or earth science)	Feature	Size/ extent/ pop'
See SAC conservation objectives for ASSI feature details		

Table 2. List of ASSI features, additional to those that form all or part of SPA selection features. These will be referred to in ANNEX II.

7 CONSERVATION OBJECTIVES

The Conservation Objectives for this site are:

To maintain each feature in favourable condition.

For each feature there are a number of component objectives which are outlined in the tables below. Component objectives for Additional ASSI Selection Features are not yet complete. For each feature there are a series of attributes and measures which form the basis of *Condition Assessment*. The results of this will determine whether a feature is in favourable condition, or not. The feature attributes and measures are found in the attached annexes.

8 RATHLIN ISLAND SPA CONDITION ASSESSMENT 2014

Species	1985	2000	2007	2011	CSM	5 yr mean	% CSM	Status
Peregrine	6	5	3	5	6	4	66.67	Unfavourable
Razorbill	8922	20860	10684	22975	8922	16829.5	188.63	Favourable
Guillemot	41887	95567	81303	130445	41887	105874	252.76	Favourable
Kittiwake	6822	9917	9896	7922	6822	8909	130.59	Favourable
Seabird Assemblage	66000	142268	115217	174305	66000	144761	219.33	Favourable

9 SPA SELECTION FEATURE OBJECTIVES

To maintain or enhance the population of the qualifying species

- Fledging success sufficient to maintain or enhance population
 To maintain or enhance the range of habitats utilised by the qualifying species
 To ensure that the integrity of the site is maintained;
 To ensure there is no significant disturbance of the species and
 To ensure that the following are maintained in the long term:
- Population of the species as a viable component of the site
 - Distribution of the species within site
 - Distribution and extent of habitats supporting the species
 - Structure, function and supporting processes of habitats supporting the species

Feature	Component Objective
Peregrine Falcon breeding population	As above
Peregrine Falcon breeding population	Fledging success sufficient to maintain or enhance population
Guillemot breeding population	As above
Guillemot breeding population	Fledging success sufficient to maintain or enhance population
Razorbill breeding population	As above
Razorbill breeding population	Fledging success sufficient to maintain or enhance population
Fulmar breeding population	As above
Fulmar breeding population	Fledging success sufficient to maintain or enhance population
Common Gull breeding population	As above
Common Gull breeding population	Fledging success sufficient to maintain or enhance population
Lesser Black-backed Gull breeding population	As above
Lesser Black-backed Gull breeding population	Fledging success sufficient to maintain or enhance population
Herring Gull breeding population	As above
Herring Gull breeding population	Fledging success sufficient to maintain or enhance population
Kittiwake breeding population	As above
Kittiwake breeding population	Fledging success sufficient to maintain or enhance population
Puffin breeding population	As above
Puffin breeding population	Fledging success sufficient to maintain or enhance population
Seabird Assemblage breeding population	No significant decrease in population against national trends
Seabird Assemblage breeding population	Maintain species diversity contributing to the breeding seabird assemblage
Habitat	To maintain or enhance the area of natural and semi-natural habitats used or potentially usable by Feature bird species subject to natural processes

Table 4. List of SPA Selection Feature Component Objectives

9.1 ADDITIONAL ASSI SELECTION FEATURE OBJECTIVES

Feature	Component Objective
See SAC conservation objectives for ASSI feature details	

Table 5. List of Additional ASSI Selection Feature Objectives

10 MANAGEMENT CONSIDERATIONS

See also Views About Management for relevant ASSI

Owner/Occupier's – At time of designation there were three major landowners within the Rathlin Island Cliffs SPA. These were the Crown Estate Commissioners (CEC) who own the area of land between high and low water mark together with much of the seabed, the Department of Environment for Northern Ireland, (DoE (NI)) and the Royal Society for the Protection of Birds (RSPB).

At time of designation there were nine other smaller landowners within the SPA, the majority of which are local residents. There were a further ten people who own land solely within the Rathlin Island Coast ASSI. A number of stacks and small islands are situated around the coast and ownership of these is assigned to the adjacent folio owner.

11. MAIN THREATS, PRESSURES, ACTIVITIES WITH IMPACTS ON THE SITE OR SITE FEATURES

Notifiable Operations - Carrying out any of the Notifiable Operations listed in the schedule could affect the site. The list below is not exhaustive, but deals with the most likely factors that are either affecting Rathlin Island SPA, or could affect it in the future. Although, features 1, 2, 3, 4 etc, are the qualifying SPA features, factors affecting ASSI features are also considered.

Site/feature management issues

No	Issue	Threat/comments	Local considerations	Action
6	Boating activity – commercial	Disturbance and potential for impact.	Limited activity. Regular ferry. Not thought to be a significant problem.	Formal consultation likely relating to new schemes. Consider the collective impact.
7	Boating activity – recreational	Disturbance and potential for impact especially from jet skis and other fast boats. Generally relevant to particularly sensitive areas within site.	Increasing issue with anecdotal evidence of actual disturbance and fatalities through impact.	Liaise with appropriate authority with codes of good practice, zoning and use of by-laws as necessary. Consider the collective impact.
14	Fishing – commercial or recreational	Minimal disturbance consideration but may represent 'competition' for piscivorous birds. Represents a net loss to the system in terms of biomass.	Limited commercial fishing from NI based boats – pressure from other boats is unknown.	Liaise with DARD and fishing authority as required. Liaise with angling clubs as required.
19	Habitat extent and quality-breeding	Alteration of habitat area or quality through inappropriate use or absence of site management.	Seacliffs predominate and are only subject to natural processes. Site includes sea area – past pollution incidents	Assess needs of breeding species. Liaise with owner or appropriate authority to adjust or introduce site management if necessary. Liaise with Environmental Protection as required with

No	Issue	Threat/comments	Local considerations	Action
			have occurred in area.	regard to water quality issues and pollution incidents.
23	Predation	Mainly of concern on bird breeding sites. Issue of alien invasive species (ferrets, rats etc) likely to be an issue – consistent decline (Puffins) and probable local extinction (Manx Shearwater) may indicate that this is an issue.	This mainly from birds of prey, which should be viewed as part of the sites natural condition.	Alien species must be dealt with as part of wider countryside management considerations. Carry out appropriate site management.
24	Recreational activities	Disturbance is the main consideration. Apart from disturbance of birds themselves, breeding birds, especially seabirds, are vulnerable to disturbance as absence of adults can often result in predation or chilling of young with a reduction/loss in fledging success.	Managed reserve facilitates visitors but does not exert any pressure on the birds. Potential issue with development of wider path network through nature reserve especially	Liaise with local authorities and other managing parties.
25	Research activities	Census and ringing activities especially have the potential to impact on bird populations, particularly at breeding sites.	Routine seabird and other census work undertaken.	Census and ringing activities to be undertaken by competent individuals, appropriately trained. In case of ringers, appropriate license must be held.

Table 3. List of site/feature management issues

12 MONITORING

Monitoring of our Special Protection Areas takes place at a number of levels, using a variety of methods. Methods for both Site Integrity Monitoring and Condition Assessment can be found in the Monitoring Handbook (To be written).

In addition, detailed quality monitoring or verification monitoring may be carried out from time to time to check whether condition assessment is adequate to detect long-term changes that could affect the site. This type of quality monitoring may involve assessment of aerial photographs to determine site morphological changes. Methodology for this is being developed.

12.1 MONITORING SUMMARY

1. Monitor the integrity of the site (Site Integrity Monitoring or SIM) – to ensure compliance with the SPA/ASSI schedule and identify likely processes of change (e.g. dumping, disturbance, increases in rat population). This SIM should be carried out once a year.

2. Monitor the condition of the site (Condition Assessment) - Monitor the key attributes for each selection feature (species, assemblage, habitat, etc). This will detect

if the features are in favourable condition or not. See Annexes I and II for SPA and Additional ASSI Features respectively.

The favourable condition table provided in Annex 1 is intended to supplement the conservation objectives only in relation to management of established and ongoing activities and future reporting requirements on monitoring condition of the site and its features. It does not by itself provide a comprehensive basis on which to assess plans and projects, but it does provide a basis to inform the scope and nature of any appropriate assessment that may be needed. It should be noted that appropriate assessments are a separate activity to condition monitoring, requiring consideration of issues specific to individual plans or projects.

12.2 ADDITIONAL MONITORING ACTIONS UNDERTAKEN FOR SITES IN UNFAVOURABLE CONDITION

Monitoring actions set out in section 6 and Annex 1 will use, amongst other attributes, bird population data to determine site condition. In the event of a significant population decline being detected, a series of subsequent actions will be initiated. The following list is not exhaustive, actions will be site dependant, but the order of these points IS hierarchical i.e. consider point 1, then 2, etc.

1. Assess the site population in a wider geographical context – Northern Ireland, Ireland, UK, world. Refer to BTO ALERT limits etc. Liaise with other competent bodies to meaningfully assess wider pattern. No site action if site decline mirrors regional pattern the cause of which is not related to the site. Action may be required at regional or larger scale. If the cause of the regional population decline (e.g. eutrophication) is found at the site then action may be necessary, but this may need to form part of a network of strategic species action. Further research may be required.
2. Assess the site population in a wider geographical context – Northern Ireland, Ireland, UK, Europe, world. Determine if site losses are balanced by gains elsewhere e.g. breeding terns. Review site condition to determine if losses are due to site deterioration. Determine if possible whether population has relocated within SPA series (national, biogeographical, European). Note that the reasons for such locational changes may not be readily identifiable. Further research may be required.
3. For passage/wintering species assess breeding information. No site action if site decline is due to breeding ground failure, unless breeding ground failure is related to poor adult condition resulting from factors affecting wintering / passage birds.
4. Determine whether a major incident has affected the site e.g. toxic impact on prey items, predation event or geographical shift in available prey. Ability to respond to impacts may be limited.
5. Assess condition of principal site habitats e.g. vegetational composition and structure, change in habitat balance e.g. mudflats reduced by encroaching mussel beds.
6. Assess prey availability. Issues to consider are both within site e.g. water quality, broad site management, and without site e.g. climatically driven factors.

7. Assess whether there have been any changes in any other site features or management practices (see Table 3) that may have affected populations of site selection features.
8. Long-term site value must be considered even when it is found to be in unfavourable condition for a number of reporting cycles. This is particularly important for breeding seabird and wader sites where ongoing appropriate management may ultimately encourage re-establishment of a favourable population.

13 SELECTION FEATURE POPULATION TRENDS

A summary statement of site population trends, together with wider geographical trends. Date of completion is given as well as information sources used. Site trends are not reported as data from the two most recent surveys, in 2000 and 1985, is not directly comparable due to differences in survey methods. Information on other trends is generally limited, especially for the period covering the last ten-fifteen years, but a summary of any available trend information is given (see also note 1).

SPECIES	SITE TREND	NI TREND ¹	IRISH TREND ¹	UK TREND ¹	COMMENTS
Peregrine (Breeding)	Data unavailable	Data unavailable	Data unavailable	76% increase 1981-1991 (BTO/JNCC/RSPB/ Raptor Study Group surveys)	
Guillemot (Breeding)	Data unavailable	Data unavailable	Data unavailable	Population 'doubled' between 1969-70 and 1985-87 surveys	
Razorbill (Breeding)	Data unavailable	Data unavailable	Data unavailable	No discernible trend between 1969-70 and 1985-87 surveys	
Fulmar (Breeding)	Data unavailable	Data unavailable	Data unavailable (but see UK trend information)	524% increase in Britain and Ireland between 1949 and 1985-87 (per SPA review)	
Common Gull (Breeding)	Data unavailable	Data unavailable	Data unavailable	No complete census data	
Lesser Black-backed Gull (Breeding)	Data unavailable	Data unavailable	29% increase between 1969-70 and 1985-87 surveys	29% increase between 1969-70 and 1985-87 surveys	
Herring Gull (Breeding)	Data unavailable	'Increased' between 1969-70 and 1985-87 surveys	'Decreased' between 1969-70 and 1985-87 surveys	36% decline between 1969-70 and 1985-87 surveys	
Kittiwake (Breeding)	Data unavailable	'Increased' between 1969-70 and 1985-87 surveys	Data unavailable	20% increase between 1969-70 and 1985-87 surveys	
Puffin (Breeding)	Data unavailable	Data unavailable	Data unavailable	No discernible trend between 1969-70 and 1985-87 surveys	

SPECIES	SITE TREND	NI TREND¹	IRISH TREND¹	UK TREND¹	COMMENTS
Seabird Assemblage (Component species: Fulmar, Common Gull, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin)	Data unavailable	N/a	N/a	N/a	

¹ UK, Northern Ireland and Ireland trend information for seabirds is based on the 1969-70 and 1985-87 national surveys (per SPA Review), except where stated. Seabird 2000 data is not yet available for more up-to-date comparison. Note however there are differences in survey methods and coverage between the two surveys and trends must therefore be treated with caution.

ANNEX I

Feature (SPA) –Breeding birds of prey

* = primary attribute. One failure among primary attribute = unfavourable condition

= optional factors – these can be in unfavourable condition without the site being in unfavourable condition

Attribute	Measure	Targets	Comments
*Peregrine Falcon breeding population	Annual count of occupied nest sites (see Gilbert <i>et al.</i> 1998). Calculate new five year running mean (2005 onwards). Plot running five-year means.	No significant decrease in population against national trends	Site condition favourable if: 5 yr mean greater than 3 (i.e. within 50% of designation population) or 5 yr mean is above minimum historical count
# Fledging success	Annual productivity surveys (see Gilbert <i>et al.</i> 1998). Determine number of fledged young. Calculate productivity as the total number of young fledged divided by the number of occupied nest sites nests.	Site condition favourable if: Mean of one chick fledges per pair ¹	Present condition not known - productivity data unavailable

¹ Mean productivity across UK is 1.28 young / pair (BTO/JNCC/RSPB/Raptor Study Group survey 1991)

Feature (SPA) – Breeding seabirds

* = primary attribute. One failure among primary attribute = unfavourable condition

= optional factors – these can be in unfavourable condition without the site being in unfavourable condition

Attribute	Measure	Targets	Comments
* Guillemot breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 47,784 (i.e. within 50% of 2000 population) or above minimum historical count
# Fledging success	Annual productivity surveys (see Gilbert <i>et al.</i> 1998)	Site condition favourable if: Mean of 0.7 chicks fledge per pair, each year.	Appropriate level of fledgling survival to be determined
* Razorbill breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 10,430 (i.e. within 50% of 2000 population) or above minimum historical count
# Fledging success	Annual productivity surveys (see Gilbert <i>et al.</i> 1998)	Site condition favourable if: Mean of 0.7 chicks fledge per pair, each year.	Appropriate level of fledgling survival to be determined
# Fulmar breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 1016 (i.e. within 50% of 2000 population) or above minimum historical count
# Common Gull breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 46 (i.e. within 50% of 2000 population) or above minimum historical count
# Lesser Black-backed Gull breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 64 (i.e. within 50% of 2000 population) or above minimum historical count
# Herring Gull breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 7 (i.e. within 50% of 2000 population) or above minimum historical count
# Kittiwake breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 4,959 (i.e. within 50% of 2000 population) or above minimum historical count
# Puffin breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 790 (i.e. within 50% of 2000 population) or above minimum historical count

* Seabird assemblage breeding population	Survey as per Seabird 2000 methodology (see also Gilbert <i>et al.</i> 1998). Calculate new population mean	No significant decrease in population against national trends	Requirement that data is collected once every reporting cycle. Mean population greater than 71,134 (i.e. within 50% of designation population).or above minimum historical count
* Seabird assemblage breeding population	Species diversity	Maintain species diversity contributing to the Seabird Assemblage	

Non-Avian Factors - habitat

Attribute	Measure	Targets	Comments
* Habitat extent	Extent of natural and semi-natural habitat	Maintain the extent of natural and semi-natural habitats used by notified species, within the SPA, subject to natural processes.	Monitor linear cliff length utilised by breeding seabirds

ANNEX II

Feature (ASSI) –

= primary attribute. One failure among primary attribute = unfavourable condition

= optional factors – these can be in unfavourable condition without the site being in unfavourable condition

Attribute	Measure	Targets	Comments
See SAC conservation objectives for ASSI feature details			

Appendix N Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA

Skomer, Skokholm and the seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro potential Special Protection Area: Draft conservation objectives

December 2015

Crynodeb a Chefndir

Mae'r ddogfen yma yn cyflwyno amcanion cadwraeth drafft ar gyfer Ardal Gwarchodaeth Arbennig arfaethedig Skomer, Skokholm and the seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro.

Mae'r AGA arfaethedig yn cael ei gynnis fel ymestyniad morol pellach i AGA presennol Skokholm and Skomer, a ddynodwyd (neu 'ddosbarthwyd') felly yn gyntaf yn 1982, a'i ymestyn yn ddiweddarach yn 2014 i gynnwys rhai ardaloedd morol cyfagos. Mae'r AGA presennol yno er mwyn amddiffyn poblogaethau bridio nifer o rywogaethau o adar môr, gan gynnwys aderyn drycin Manaw *Puffinus puffinus*, y pâl *Fratercula arctica*, pedryn drycin *Hydrobates pelagicus* a'r wylan gefnddu leiaf *Larus fuscus*. Mae hefyd yn amddiffyn poblogaethau bychain yr ynysoedd o frain coesgoch *Pyrhocorax pyrrhocorax* a thylluanod clustiog *Asio flammeus*. Mae'r ymestyniad morol arfaethedig, sy'n cynnwys rhanbarth o fewn cyfyngiad 12 milltir dyfroedd tiriogaethol Cymru yn ogystal â rhanbarth alltraeth y tu hwnt i'r cyfyngiad 12 milltir, yn cynrychioli poethfan ddwys i adar drycin Manaw ac adar pâl o fewn y DU. Oherwydd agosrwydd y boethfan at AGA presennol Skokholm and Skomer a'r nythfeydd bridio sylweddol i'r ddwy rywogaeth yno, y cynnis yw i ddynodi'r ardal forol yn estyniad i'r AGA presennol.

Cafodd y ddogfen hon ei pharatoi fel rhan o ystod o wybodaeth gefndirol er mwyn cefnogi ymgynghoriad cyhoeddus ynghylch cynigion i restru amryw o ardaloedd morol newydd o amgylch Cymru yn Ardaloedd Gwarchodaeth Arbennig ac yn Ardaloedd Cadwraeth Arbennig (ACA). Caiff ei darparu er gwybodaeth yn unig ac nid yw'n destun yr ymgynghoriad. Mae map o'r AGA arfaethedig ar gael ar y dudalen ymgynghoriadau ar wefan CNC: www.cyfoethnaturiol.cymru/mn2k

Mae AGA yn anghenraid yn ôl Cyfarwyddeb yr UE ar Warchod Adar Gwyllt yn 2009 (deddfwyd yn wreiddiol yn 1979). Maent, ynghyd ag ACA, a ddynodwyd yn sgil Cyfarwyddeb yr UE ar Gynefinoedd a Rhywogaethau yn 1992, yn cael eu galw'n safleoedd Ewropeaidd, neu'n safleoedd morol Ewropeaidd pan maent yn cynnwys ardaloedd morol.

Dan Reoliad 35 Rheoliadau Gwarchod Cynefinoedd a Rhywogaethau 2010, fel y'i diwygiwyd, mae gofyn i CNC roi cyngor ynghylch yr amcanion cadwraeth ar gyfer safleoedd morol Ewropeaidd yn nyfroedd Cymru, ac unrhyw weithredoedd a all achosi dirywiad neu amharu ar nodweddion y safleoedd. Gelwir hyn yn aml yn 'cyngor Rheoliad 35'. Mae gan Cyd-bwyllgor Cadwraeth Natur swyddogaeth

gyfatebol mewn perthynas â dyfroedd môr mawr y DU dan Reoliad 18 Rheoliadau Cadwraeth Forol Alltraeth 2007. Mae ar CNC gyfrifoldeb i gynnig cyngor Rheoliad 35 unwaith y caiff AGA ei ddynodi (neu 'ei ddsbarthu') yn ffurfiol gan y Gweinidogion Cymreig. Mae cyfrifoldeb cyfatebol Cyd-bwyllgor Cadwraeth Natur dros safleoedd alltraeth dan Reoliad 19 Rheoliadau 2007 yn codi pan gaiff safle ei gynnwys ar gofrestr y safleoedd morol alltraeth Ewropeaidd, sy'n digwydd unwaith caiff AGA ei ddsbarthu felly gan Ysgrifennydd Gwladol y DU.

Mae'r amcanion cadwraeth ar gyfer AGA presennol Skokholm and Skomer yn cael eu nodi yng nghynllun rheoli craidd yr AGA a gyhoeddwyd gan CNC. Mae'r amcanion hyn yn parhau yn weithredol nes i CNC a Cyd-bwyllgor Cadwraeth Natur yn eu tro gyhoeddi 'cyngor Rheoliad 35/18' diwygiedig ar gyfer estyniad/aillddosbarthiad yr AGA, pe dewisai Gweinidogion Cymreig a'r DU aillddosbarthu ac ymestyn y safle. Mae'r cynllun rheoli ar gael o:

[https://naturalresources.wales/media/674159/Skomer\[1\].Skokholm%20management%20plan%2007%20Cymraeg.pdf](https://naturalresources.wales/media/674159/Skomer[1].Skokholm%20management%20plan%2007%20Cymraeg.pdf)

Os oes gennych unrhyw gwestiynau ynghylch y ddogfen, a fydddech cystal ag e-bostio morol.n2k@cyfoethnaturiolcymru.gov.uk, neu roi galwad ffôn i ni ar 0300 065 3000. Os yw eich ymholiad yn ymwneud yn bennaf â dyfroedd alltraeth, cysylltwch â Cyd-bwyllgor Cadwraeth Natur os gwelwch yn dda drwy e-bostio seabirds@jncc.gov.uk.

Summary and background

This document presents draft conservation objectives for Skomer, Skokholm and the seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro potential Special Protection Area (pSPA).

The pSPA is being proposed as a further marine extension to the existing Skokholm and Skomer SPA, which was first designated (or 'classified') in 1982, and subsequently extended in 2014 to include some adjacent marine areas. The existing SPA is designated to protect breeding populations of a number of species of seabirds, including Manx shearwater *Puffinus puffinus*, Atlantic puffin *Fratercula arctica*, European storm petrel *Hydrobates pelagicus* and lesser black-backed gull *Larus fuscus*. It also protects the islands' small populations of chough *Pyrrhocorax pyrrhocorax* and short eared owl *Asio flammeus*. The proposed marine extension, which includes both an area within the 12 mile limit of Welsh Territorial waters and an area of offshore waters beyond the 12 mile limit, represents a density 'hotspot' for Manx shearwater and Atlantic puffin in a UK context. Because of the proximity of this hotspot to the existing Skokholm and Skomer SPA with its major breeding colonies of these two species, the proposal is to designate the marine area as an extension to the existing SPA.

This document has been prepared as part of a range of background information in support of a public consultation over proposals to designate a number of new marine areas around Wales as SPAs and Special Areas of Conservation (SACs). It is provided for information only and is not the subject of the consultation. A map of the pSPA is available on the consultation page on the NRW website:

www.naturalresources.wales/mn2k

SPAs are a requirement of 2009 EU Wild Birds Directive (originally enacted in 1979). Together with SACs, which are designated under the 1992 EU Habitats and Species

Directive, they are referred to as European sites, or European marine sites where they include marine areas.

Under Regulation 35 of the Conservation of Habitats and Species Regulations 2010, as amended, NRW is required to issue advice as to the conservation objectives for European marine sites in Welsh waters, and any operations which may cause deterioration or disturbance to the sites' features. This is often called 'Regulation 35 advice'. JNCC has a corresponding duty in relation to UK offshore waters under Regulation 18 of the Offshore Marine Conservation Regulations 2007. NRW's duty to issue Regulation 35 advice arises once an SPA is formally designated (or 'classified') by the Welsh Ministers. JNCC's corresponding duty in relation for offshore sites under Regulation 18 of the 2007 Regulations arises when a site is included in the register of European offshore marine sites, which happens once the SPA has been classified by the UK Secretary of State.

The conservation objectives for the existing Skokholm and Skomer SPA are set out in the core management plan for the SPA published by NRW. These objectives continue to apply until in due course NRW and JNCC have issued revised 'Regulation 35/18 advice' for the extended/reclassified SPA, should Welsh and UK Ministers decide to reclassify and extend the site. The management plan is available from:

[http://naturalresources.wales/media/674164/Skomer\[1\].Skokholm%20management%20plan%2007.pdf](http://naturalresources.wales/media/674164/Skomer[1].Skokholm%20management%20plan%2007.pdf)

If you have any questions about this document, please email marine.n2k@naturalresourceswales.gov.uk, or call us on 0300 065 3000. If your query is mainly in relation to offshore waters, please contact JNCC at seabirds@jncc.gov.uk.

Draft conservation objectives

- Feature 1: Breeding population of storm petrel *Hydrobates pelagicus*
- Feature 2: Breeding population of lesser black-backed gull *Larus fuscus*
- Feature 3: Breeding population of Manx shearwater *Puffinus puffinus*
- Feature 4: Breeding population of Atlantic puffin *Fratercula arctica*
- Feature 5: Breeding seabird assemblage

Please note that draft conservation objectives for other, terrestrial qualifying species of the SPA are not included here (namely short-eared owl *Asio flammeus* and chough *Pyrrhocorax pyrrhocorax*)

Feature 1: Breeding population of storm petrel <i>Hydrobates pelagicus</i>	
The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term.	The breeding population of storm petrel should be stable or increasing. The aim, across the 2 islands is for at least 3500 pairs, with this number to be stable or increasing.
The distribution of the	The distribution of this species within the site should not

population should be being maintained, or where appropriate increasing.	be constrained by anthropogenic factors, including disturbance by the public and activities leading to possible loss of suitable nesting sites.
There should be sufficient habitat, of sufficient quality, to support the population in the long term.	The foraging habitat of this species should be stable or increasing in terms of its area, and its quality should remain unaffected by anthropogenic factors. There should be no contraction of the distribution of nesting sites as a result of anthropogenic factors.
Factors affecting the population or its habitat should be under appropriate control.	Breeding success of this species should remain unaffected by negative human influence. Factors affecting the species within the site should be under control

Feature 2: Breeding population of lesser black-backed gull <i>Larus fuscus</i>	
The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term.	The breeding population size of lesser black-backed gull should be stable or increasing, aiming for at least 20,300, with a breeding productivity rate and an adult survival rate that allows this number to be maintained/increased.. Colonies of this species must not be lost as a result of anthropogenic influence.
The distribution of the population should be being maintained, or where appropriate increasing.	The distribution of this species within the site should not be constrained by anthropogenic factors. Reductions in the range of this species can only be acceptable if there is significant risk of detriment, to the FCS of priority features of this SPA.
There should be sufficient habitat, of sufficient quality, to support the population in the long term.	The breeding and foraging habitat of this species should be stable or increasing in terms of its area, and its quality should remain unaffected by anthropogenic factors.
Factors affecting the population or its habitat should be under appropriate control.	There should be no mammalian land predators present in the SPA, and control measures should be in place to ensure that accidental introduction does not take place. Access beyond designated footpaths, should be under appropriate control. Factors affecting the species within the site should be under control

Feature 3: Breeding population of Manx shearwater <i>Puffinus puffinus</i>	
The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term.	The breeding population of Manx shearwater should be stable or increasing with no measured decrease in numbers (based on a population count of 150,968), based on annual study plots.
The distribution of the population should be being maintained, or where appropriate increasing.	The distribution of this species within the site should not be constrained by anthropogenic factors, including disturbance of nesting sites by the public and activities leading to possible loss of suitable nesting sites.
There should be sufficient habitat, of sufficient quality, to support the population in the long term.	The breeding and foraging habitat of this species should be stable or increasing in terms of its area, and its quality should remain unaffected by anthropogenic factors.
Factors affecting the population or its habitat should be under appropriate control.	Rafting birds should remain unaffected by boat use and other anthropogenic factors; appropriate codes of conduct must be followed by all visitors and craft surrounding the islands. Factors affecting the species within the site should be under control

Feature 4: Breeding population of Atlantic puffin <i>Fratercula arctica</i>	
The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term.	The breeding population of Atlantic puffin should be stable or increasing with an aim of 9500 individuals being achieved.
The distribution of the population should be being maintained, or where appropriate increasing.	The distribution of this species within the site should not be constrained by anthropogenic factors. There should be no contraction of the distribution of nesting sites as a result of anthropogenic factors.
There should be sufficient habitat, of sufficient quality, to support the population in the long term.	The breeding and foraging habitat of this species should be stable or increasing in terms of its area, and its quality should remain unaffected by anthropogenic factors.
Factors affecting the population or its habitat should be under appropriate control.	There should be no mammalian land predators present in the SPA, and control measures should be in place to ensure that accidental introduction does not take place. Access beyond designated footpaths, should be under appropriate control.

	Rafting birds should remain unaffected by boat use and other anthropogenic factors; appropriate codes of conduct must be followed by all visitors and craft surrounding the islands. Factors affecting the species within the site should be under control
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Feature 5: Breeding seabird assemblage	
The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term.	The breeding populations should be stable or increasing based on a total population of 394,260.
The distribution of the population should be being maintained, or where appropriate increasing.	The distribution of these species within the site should not be constrained by anthropogenic factors, including disturbance by the public and activities leading to possible loss of suitable nesting sites.
There should be sufficient habitat, of sufficient quality, to support the population in the long term.	The breeding and foraging habitat of these species should be stable or increasing in terms of their area, and its quality should remain unaffected by anthropogenic factors. There should be no contraction of the distribution of nesting sites as a result of anthropogenic factors.
Factors affecting the population or its habitat should be under appropriate control.	There should be no mammalian land predators present in the SPA, and control measures should be in place to ensure that accidental introduction does not take place. Access beyond designated footpaths, should be under appropriate control. Rafting birds should remain unaffected by boat use and other anthropogenic factors; appropriate codes of conduct must be followed by all visitors and craft surrounding the islands. Factors affecting these species within the site should be under control

Appendix O Grassholm SPA

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

**CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES
FOR
GRASSHOLM SPA**

Version: 2

Date: 8 April 2008

Approved by: Tracey Lovering

A Welsh version of all or part of this document can be made available on request.



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PREFACE

This document provides the main elements of CCW's management plan for the site named. It sets out what needs to be achieved on the site, the results of monitoring and advice on the action required. This document is made available through CCW's web site and may be revised in response to changing circumstances or new information. This is a technical document that supplements summary information on the web site.

One of the key functions of this document is to provide CCW's statement of the Conservation Objectives for the relevant Natura 2000 site. This is required to implement the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (Section 4). As a matter of Welsh Assembly Government Policy, the provisions of those regulations are also to be applied to Ramsar sites in Wales.

1. VISION FOR THE SITE

This is a descriptive overview of what needs to be achieved for conservation on the site. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site.

CCW's aim for the gannet colony is to see it contribute towards maintaining the North Atlantic gannet population in favourable conservation status. The population on Grassholm should not fall below 30,000 pairs in three consecutive years, nor should it drop by more than 25% of the previous year's figures in any one year. There should be no decline in the Grassholm/Ynys Gwales population which is significantly more than any decline in the North Atlantic population as a whole.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Grid references: SM598093

Unitary authority: Pembrokeshire Coast National Park Authority

Area (hectares): 10.7 ha

Designations covered: Grassholm SSSI / SPA (areas below Mean High Water are part of Pembrokeshire Marine SAC and are covered by that plan)

Detailed maps of the designated sites are available through CCW's web site:
<http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx>

See map of management units which show the area covered by this plan.

2.2 Outline Description

Grassholm Island is situated 10 miles off the Pembrokeshire coast, separated from the mainland by the often turbulent waters of the Irish sea.

In 1948 Grassholm became the first reserve to be purchased by the RSPB in Wales.

The island is a mere 9ha in size. It is a National Nature Reserve and is included within the Pembrokeshire Coast National Park. It is protected under both UK and EU legislation.

Grassholm is a tourist attraction within the St.Davids peninsula. During the breeding season the 32,000 pairs of gannets nesting on the reserve make it impossible for visitors to land without causing undue disturbance. However, boat trips around the island, run by local private operators, enable several thousand people every year to enjoy the spectacle.

The colony is of international importance, supporting approximately 12% of the world population of this species.

The island is a remnant of ancient lava flows, with shallow soils overlaying the basalt. No vegetation survives the guano and trampling of the gannets but the half of the island, as yet unoccupied by the gannets, supports a classic example of vegetation, typical of an ungrazed seabird island, including the grasses red fescue and Yorkshire fog.

Small colonies of lesser, herring and great black-backed gulls nest in the turf and rocks of the eastern side of the island, while the western rock ledges support small numbers of guillemot, razorbill and kittiwake. Small numbers of storm petrels are also thought to breed among the rock boulders.

Atlantic grey seals use the island as a seasonal haul-out, and the offshore currents and upwellings are a source of attraction for several species of cetacean including good numbers of common dolphin and frequent sightings of minke whale.

When the island is free of birds in the winter, traces of old stone walls and cairns can be seen across the summit implying human occupation in the past. The name "Grassholm" is Norse and refers to the island's once green appearance. The Welsh name "Gwales" means "sanctuary" and may itself commemorate an ancient hermitage.

The first account of gannets occupying the island comes in the late 1800s with a record of up to 20 gannet nests in 1860 and anecdotal accounts of their presence as early as 1820.

2.3 Outline of Past and Current Management

Current management comprises the following work by the RSPB:

- Protect the nesting gannets by maintaining a no landing policy on the island.
- Monitor productivity of the gannets each year.
- Carry out a full population survey every 5 years.
- Visit the island each autumn to cut free chicks entangled in fishing line.
- Liaise with, and assist, local boat operators who run trips around the island to minimise disturbance to the colony.
- Monitor other breeding seabird numbers on a periodic basis.
- Encourage additional scientific research on gannet ecology

2.4 Management Units

The plan area has been divided into management units to enable practical communication about features, objectives, and management. This will also allow us to differentiate between the different designations where necessary. In this plan the management units have been based on tenure and enclosure pattern. In some cases where, there are numerous owners of small sections of the coastal strip, these have been amalgamated into larger units.

Grassholm has been split for the purposes of this plan into the area above Mean High Water, and the area below it which, in addition to being part of the SPA - is part of Pembrokeshire Marine SAC.

The following table confirms the relationships between the management units and the designations covered:

Unit number	SSSI	SAC	SPA	Name
1	✓		✓	Grassholm
2	✓	✓	✓	Grassholm marine

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

<i>Designated feature</i>	<i>Relationships, nomenclature etc</i>	<i>Conservation Objective in part 4</i>
<i>SPA features</i>		
1. Gannet	<i>Sula bassana</i>	4.1
<i>SSSI features</i>		
2. Reefs (Littoral Rock)		
3. Grey Seal <i>Halichoerus grypus</i>		

3.2 Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features. All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features

KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main focus of management and monitoring effort, perhaps because of the dependence of a key species (see KS below). There will rarely be more than one Key Habitat in a unit.

KS - a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat.

Geo - an earth science feature that is the main focus of management and monitoring effort in a unit.

Other Features

Sym - habitats, species and earth science features that are of importance in a unit but are not the main focus of management or monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as 'Sym' features because:

- a) they are present in the unit but are of less conservation importance than the key feature; and/or
- b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or
- c) their requirements are broader than and compatible with the management needs of the key feature(s) , e.g. a mobile species that uses large parts of the site and surrounding areas.

Nm - an infrequently used category where features are at risk of decline within a unit as a result of meeting the management needs of the key feature(s), i.e. under Negative Management. These cases will usually be compensated for by management elsewhere in the plan, and can be used where minor occurrences of a feature would otherwise lead to apparent conflict with another key feature in a unit.

Mn - Management units with no special feature present but which are of importance for management of features elsewhere on a site e.g. livestock over-wintering area included within designation boundaries, buffer zones around water bodies, etc.

x – Features not present in the management unit.

The table below sets out the relationship between the special features and management units identified in this plan:

Grassholm SPA		
	1	2
SSSI	✓	✓
SPA	✓	✓
SAC		✓
SPA feature		
1. Gannet	KS	x

4. CONSERVATION OBJECTIVES

Background to Conservation Objectives:

a. Outline of the legal context and purpose of conservation objectives.

Conservation objectives are required by the 1992 'Habitats' Directive (92/43/EEC). The aim of the Habitats Directives is the maintenance, or where appropriate the restoration of the 'favourable conservation status' of habitats and species features for which SACs and SPAs are designated (see Box 1).

In the broadest terms, 'favourable conservation status' means a feature is in satisfactory condition and all the things needed to keep it that way are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites.

Box 1

Favourable conservation status as defined in Articles 1(e) and 1(i) of the Habitats Directive

“The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.”

Achieving these objectives requires appropriate management and the control of factors that may cause deterioration of habitats or significant disturbance to species.

As well as the overall function of communication, Conservation objectives have a number of specific roles:

- Conservation planning and management.

The conservation objectives guide management of sites, to maintain or restore the habitats and species in favourable condition.

- Assessing plans and projects.

Article 6(3) of the ‘Habitats’ Directive requires appropriate assessment of proposed plans and projects against a site's conservation objectives. Subject to certain exceptions, plans or projects may not proceed unless it is established that they will not adversely affect the integrity of sites. This role for testing plans and projects also applies to the review of existing decisions and consents.

- Monitoring and reporting.

The conservation objectives provide the basis for assessing the condition of a feature and the status of factors that affect it. CCW uses ‘performance indicators’ within the conservation objectives, as the basis for monitoring and reporting. Performance indicators are selected to provide useful information about the condition of a feature and the factors that affect it.

The conservation objectives in this document reflect CCW’s current information and understanding of the site and its features and their importance in an international context. The conservation objectives are subject to review by CCW in light of new knowledge.

b. Format of the conservation objectives

There is one conservation objective for each feature listed in part 3. Each conservation objective is a composite statement representing a site-specific description of what is considered to be the favourable conservation status of the feature. These statements apply to a whole feature as it occurs within the whole plan area, although section 3.2 sets out their relevance to individual management units.

Each conservation objective consists of the following two elements:

1. Vision for the feature
2. Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring¹.

There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators.** The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors which have an important influence on the condition of the feature are identified in the performance indicators.

¹ Available through www.jncc.gov.uk and follow links to Protected Sites and Common Standards Monitoring.

4.1 Conservation Objective for Feature 1: Gannet

Vision for Gannet

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- The population will not fall below 30,000 pairs in three consecutive years,
- It will not drop by more than 25% of the previous year's figures in any one year.
- There will be no decline in this population significantly greater than any decline in the North Atlantic population as a whole.

Performance indicators for Gannet

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

<i>Performance indicators for feature condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
A1. Number of pairs	Lower limit is based on current extent	<i>Upper limit:</i> Not set <i>Lower limit:</i> 30,000
A2. Measurable change		<i>Upper limit:</i> Not required <i>Lower limit:</i> decline of 25% on previous year
<i>Performance indicators for factors affecting the feature</i>		
<i>Factor</i>	<i>Factor rationale and other comments</i>	<i>Operational Limits</i>
F1. Pollution	Oil spills and other pollution episodes may cause damage.	<i>Upper limit:</i> none set <i>Lower limit:</i> none set
F2. Litter	Marine litter, especially plastic, can result in wounding and/or death of individual gannets that become entangled. This may, for example, occur during feeding at sea, when entanglement can cause drowning, or because plastic or nylon line, together with other persistent litter is often used as a nesting material, causing entanglement on the nest of both adults and young	<i>Upper limit:</i> none set <i>Lower limit:</i> none set

<i>Performance indicators for factors affecting the feature</i>		
<i>Factor</i>	<i>Factor rationale and other comments</i>	<i>Operational Limits</i>
F3. Human disturbance	Human disturbance from visitors has been significantly reduced since landings on the island by the public were stopped in 1997. Tourist boats now circumnavigate the island, and there is a code of conduct agreed with tourist boat operators to minimise disturbance from the sea. There is still the potential for private boats to cause disturbance, although the remote nature of the island tends to deter all but the most intrepid visitors. Disturbance by RAF aircraft has occurred on occasion in the past, but there has been an agreement with the RAF in place since 1998 regarding air avoidance areas, which are avoided except in emergencies.	<i>Upper limit: none set</i> <i>Lower limit: none set</i>
F4. Fisheries Management	Changes in the availability of food due to changes in fisheries policy or fishing methods are likely to have a significant impact on the population.	<i>Upper limit: none set</i> <i>Lower limit: none set</i>

5. ASSESSMENT OF CONSERVATION STATUS AND MANAGEMENT REQUIREMENTS

This part of the document provides:

- A summary of the assessment of the conservation status of each feature.
- A summary of the management issues that need to be addressed to maintain or restore each feature.

5.1 Conservation Status and Management Requirements of Feature 1: Gannet

Conservation Status of Gannet 2004: Favourable Maintained

Monitoring has demonstrated a year-on-year increase to a current estimate of 32,409 pairs.

Management Requirements of Gannet

None.

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
1	001968	Grassholm	This unit is considered to be under appropriate conservation management	No
2	002450	Grassholm SPA unit	This unit is considered to be under appropriate conservation management	No

7. GLOSSARY

This glossary defines some of the terms used in this **Core Management Plan**. Some of the definitions are based on definitions contained in other documents, including legislation and other publications of CCW and the UK nature conservation agencies. None of these definitions is legally definitive.

Action A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.

Attribute A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.

Common Standards Monitoring	A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to monitoring and reporting on the features of sites designated for nature conservation, supported by guidance on identification of attributes and monitoring methodologies.
Condition	A description of the state of a feature in terms of qualities or attributes that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.
Condition assessment	The process of characterising the condition of a feature with particular reference to whether the aspirations for its condition, as expressed in its conservation objective , are being met.
Condition categories	The condition of feature can be categorised, following condition assessment as one of the following ² : <ul style="list-style-type: none"> Favourable: maintained; Favourable: recovered; Favourable: un-classified Unfavourable: recovering; Unfavourable: no change; Unfavourable: declining; Unfavourable: un-classified Partially destroyed; Destroyed.
Conservation management	Acts or undertaking of all kinds, including but not necessarily limited to actions , taken with the aim of achieving the conservation objectives of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.
Conservation objective	The expression of the desired conservation status of a feature , expressed as a vision for the feature and a series of performance indicators . The conservation objective for a

² See JNCC guidance on Common Standards Monitoring <http://www.jncc.gov.uk/page-2272>

feature is thus a composite statement, and each feature has one conservation objective.

Conservation status A description of the state of a **feature** that comprises both its **condition** and the state of the **factors** affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.

Conservation status assessment The process of characterising the **conservation status** of a **feature** with particular reference to whether the aspirations for it, as expressed in its **conservation objective**, are being met. The results of conservation status assessment can be summarised either as ‘favourable’ (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about **conservation management**, lies mainly in the details of the assessment of feature **condition**, **factors** and trend information derived from comparisons between current and previous conservation status assessments and condition assessments.

Core Management Plan A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site **Management Plan**.

Factor Anything that has influenced, is influencing or may influence the **condition** of a **feature**. Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on **conservation management** can also be considered as factors.

Favourable condition See **condition** and **condition assessment**

Favourable conservation status See **conservation status** and **conservation status assessment**.³

Feature The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.

Integrity See **site integrity**

Key Feature The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.

³ A full definition of favourable conservation status is given in Section 4.

- Management Plan** The full expression of a designated site's legal status, **vision, features, conservation objectives, performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.
- Management Unit** An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.
- Monitoring** An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.
- Operational limits** The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.
- Performance indicators** The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits**, which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.
- Plan or project** **Project:** Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects**.
Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.
- Site integrity** The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.

Site Management Statement (SMS) The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.

Special Feature See **feature**.

Specified limit The levels or values for an **attribute** which define the degree to which the attribute can fluctuate without creating cause for concern about the **condition** of the **feature**. The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.

Unit See **management unit**.

Vision for the feature The expression, within a **conservation objective**, of the aspirations for the **feature** concerned. See also **performance indicators**.

Vision Statement The statement conveying an impression of the whole site in the state that is intended to be the product of its **conservation management**. A 'pen portrait' outlining the **conditions** that should prevail when all the **conservation objectives** are met. A description of the site as it would be when all the **features** are in **favourable condition**.

8. REFERENCES

Minimum Format Management Plans for Tyddewi / St David's cSAC (LIFE – Nature Reports, CCW 1999)
St David's SAC Monitoring Report (Wilkinson, 2006)

Appendix P Saltee Islands SPA

National Parks and Wildlife Service

Conservation Objectives Series

Saltee Islands SAC 000707

Saltee Islands SPA 004002



An Roinn
Ealaíon, Oidhreachta agus Gaeltachta

Department of
Arts, Heritage and the Gaeltacht



**National Parks and Wildlife Service,
Department of Arts, Heritage and the Gaeltacht,
7 Ely Place, Dublin 2, Ireland.
Web: www.npws.ie
E-mail: natureconservation@environ.ie**

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NPWS (2011) Conservation Objectives: Saltee Islands SAC 000707 and Saltee Islands SPA 004002. Version 1.0.
National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

**Series Editors: Rebecca Jeffrey & Naomi Kingston
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Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

* indicates a priority habitat under the Habitats Directive

000707 Saltee Islands SAC

- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1160 Large shallow inlets and bays
- 1170 Reefs
- 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts
- 1364 Grey Seal *Halichoerus grypus*
- 8330 Submerged or partially submerged sea caves

004002 Saltee Islands SPA

- A009 Fulmar *Fulmarus glacialis* breeding
- A016 Gannet *Morus bassanus* breeding
- A018 Shag *Phalacrocorax aristotelis* breeding
- A188 Kittiwake *Rissa tridactyla* breeding
- A199 Guillemot *Uria aalge* breeding
- A200 Razorbill *Alca torda* breeding
- A204 Puffin *Fratercula arctica* breeding

Supporting documents, relevant reports & publications (listed by date)

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

Title: Reef Investigations in Saltee Islands cSAC (Site Code: IE000707), Co. Wexford

Year: 2011

Author: Aquafact

Series: Unpublished Report to NPWS

Title: Subtidal Benthic Investigations in Saltee Islands cSAC (Site Code: IE000707), Co. Wexford

Year: 2011

Author: Aquafact

Series: Unpublished Report to NPWS

Title: BirdLife International Seabird Ecology and Foraging Range Database

Year: 2011

Author: BirdLife International

Series: <http://seabird.wikispaces.com>

Title: Seabird Monitoring Programme (SMP) Database

Year: 2011

Author: JNCC

Series: <http://jncc.defra.gov.uk/smp/Default.aspx>

Title: Saltee Islands SAC (000707): Conservation objectives supporting document - marine habitats and species [Version 1]

Year: 2011

Author: NPWS

Series: Unpublished Report to NPWS

Title: Saltee Islands SAC (000707): Conservation objectives supporting document - coastal habitats [Version 1]

Year: 2011

Author: NPWS

Series: Unpublished Report to NPWS

Title: An assessment of the breeding population of grey seals in the Republic of Ireland, 2005

Year: 2008

Author: Ó Cadhla, O.; Strong, D.; O'Keeffe, C.; Coleman, M.; Cronin, M.; Duck, C.; Murray, T.; Dower, P.; Nairn, R.; Murphy, P.; Smiddy, P.; Saich, C.; Lyons, D.; Hiby, L.

Series: Irish Wildlife Manuals No. 34

Title: Grey seal moult population survey in the Republic of Ireland, 2007

Year: 2007

Author: Ó Cadhla, O.; Strong, D.

Series: Unpublished Report to NPWS & CMRC

Title: Marine Natura 2000 recommendations for the extension of existing seabird (colony) special protection areas into the marine environment

Year: 2005

Author: Reid, J.; Webb, A.

Series: JNCC Committee Paper 05P14B

-
- Title:** Harbour seal population assessment in the Republic of Ireland: August 2003
Year: 2004
Author: Cronin, M.; Duck, C.; Ó Cadhla, O.; Nairn, R.; Strong, D.; O'Keeffe, C.
Series: Irish Wildlife Manuals No. 11
-
- Title:** Summary of National Parks & Wildlife Service surveys for common (harbour) seals (*Phoca vitulina*) and grey seals (*Halichoerus grypus*), 1978 to 2003
Year: 2004
Author: Lyons, D.O.
Series: Irish Wildlife Manuals No. 13
-
- Title:** Seabird Populations of Britain and Ireland
Year: 2004
Author: Mitchell, P.I.; Newton, S.F.; Ratcliffe, N.; Dunn, T.E.
Series: Poyser, London
-
- Title:** The status of breeding grey seals (*Halichoerus grypus*) on the east and south-east coast of Ireland
Year: 2001
Author: Lidgard, D.C.; Kiely, O.; Rogan, E.; Connolly, N.
Series: Mammalia 65 (3): 283-294
-
- Title:** Grey Seals: Status & Monitoring in the Irish & Celtic Seas
Year: 2000
Author: Kiely, O.; Lidgard, D.C.; McKibben, M.; Baines, M.E.; Connolly, N.
Series: Maritime Ireland/Wales INTERREG Report no. 3. Marine Institute
-
- Title:** Population biology of grey seals (*Halichoerus grypus* Fabricius 1791) in western Ireland
Year: 1998
Author: Kiely, O.R.M.
Series: Unpublished PhD. Thesis, National University of Ireland, University College Cork
-
- Title:** The BioMar biotope viewer: a guide to marine habitats, fauna and flora in Britain and Ireland
Year: 1997
Author: Picton, B.E.; Costello, M.J.
Series: Trinity College Dublin
-
- Title:** Seabird monitoring handbook for Britain and Ireland: a compilation of methods for survey and monitoring of breeding seabirds.
Year: 1995
Author: Walsh, P.; Halley, D.J.; Harris, M.P.; del Nevo, A.; Sim, I.M.W.; Tasker, M.L.
Series: JNCC, Peterborough
-

Spatial data sources

Year:	Interpolated 2011
Title:	1994 BioMar Survey; 2010 subtidal and intertidal surveys
GIS operations:	Polygon feature classes from marine community types base data sub-divided based on interpolation of marine survey data. Expert opinion used as necessary to resolve any issues arising
Used for:	Marine community types, 1140, 1170 (maps 2, 4 and 5)
Year:	2005
Title:	OSi Discovery series vector data
GIS operations:	High Water Mark (HWM) polyline feature class converted into polygon feature class; clipped to SAC boundary. Seaward boundary defined by expert judgement
Used for:	1160 (map 3)
Year:	2005
Title:	OSi Discovery series vector data
GIS operations:	High water mark (HWM) and low water mark (LWM) polyline feature classes converted into polygon feature classes and combined
Used for:	Marine community types base data (map 5)
Year:	2011
Title:	Internal NPWS files
GIS operations:	Digitised using the OSi six inch (1:10560) mapping series with reference to draft conservation plan map (2000). Clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used for:	1230 (map 6)
Year:	Derived 2011
Title:	Coast of Ireland Oblique Imagery Survey 2003
GIS operations:	Point dataset created from visual inspection of survey
Used for:	8330 (map 6)
Year:	2011
Title:	NPWS rare and threatened species database
GIS operations:	Dataset created from spatial references in database records. Expert opinion used as necessary to resolve any issues arising
Used for:	1364 (map 7)
Year:	2005
Title:	OSi Discovery series vector data
GIS operations:	High Water Mark (HWM) polyline feature class converted into polygon feature class; clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used for:	1364 (map 7)

Conservation objectives for: Saltee Islands SAC [000707]

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in the Saltee Islands SAC, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 2	Habitat area was estimated using OSi data as 20ha. See marine supporting document for further details
Community extent	Hectares	The following community should be maintained in a natural condition: Intertidal sand to muddy sand dominated polychaetes community complex. See map 5	Based on information from a intertidal survey (EcoServe, 2011). See marine supporting document for further details

1160 Large shallow inlets and bays

To maintain the favourable conservation condition of Large shallow inlets and bays in the Saltee Islands SAC, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 3	Habitat area was estimated using OSi data as 3651ha. See marine supporting document for further details
Community extent	Hectares	The following communities should be maintained in a natural condition: Coarse sediment with <i>Pomatoceros</i> spp. and <i>Pisidia longicornis</i> community. See map 5	Based on information from 1994 BioMar Survey (Picton and Costello, 1997) and a subtidal survey (Aquafact, 2011). See marine supporting document for further details

1170 Reefs

To maintain the favourable conservation condition of Reefs in the Saltee Islands SAC, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Distribution	Occurrence	The distribution of reefs should remain stable, subject to natural processes. See map 4	Reef mapping based on information from 1994 BioMar Survey (Picton and Costello, 1997), subtidal survey (Aquafact, 2011) and intertidal survey (EcoServe, 2011). See marine supporting document for further details
Habitat area	Hectares	The permanent habitat area is stable, subject to natural processes. See map 4	Habitat area was estimated from the 2010 survey data as 4,595ha. See marine supporting document for further details
Community structure	Biological composition	The following reef community complexes should be maintained in a natural condition: Intertidal reef community complex; and Subtidal reef dominated by echinoderms and sponges community complex. See map 5	Reef mapping based on information from 1994 BioMar Survey (Picton and Costello, 1997), subtidal survey (Aquafact, 2011) and intertidal survey (EcoServe, 2011). See marine supporting document for further details
Community extent	Hectares	The extent of <i>Laminaria</i> dominated community should be conserved, subject to natural processes. See map 5	Based on information from 1994 BioMar Survey (Picton and Costello, 1997) and subtidal reef survey (Aquafact, 2011). See marine supporting document for further details
Community structure	Biological composition	The biology of the <i>Laminaria</i> dominated community should be conserved, subject to natural processes	Based on information from 1994 BioMar Survey (Picton and Costello, 1997) and subtidal reef survey (Aquafact, 2011). See marine supporting document for further details

1230 Vegetated sea cliffs of the Atlantic and Baltic coasts

To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in the Saltee Islands SAC, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Habitat length	Kilometres	Area stable, subject to natural processes, including erosion. For sub-sites mapped: Great Saltee Island - 5.51km and Little Saltee Island - 3.11km. See map 6	Two sub-sites were identified giving a total estimated area of 8.62km within the SAC. Cliffs are linear features and are therefore measured in kilometres. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6	See coastal habitats supporting document for further details
Physical structure: functionality and hydrological regime	Occurrence of artificial barriers	No alteration to natural functioning of geomorphological and hydrological processes due to artificial structures	Maintaining natural geomorphological processes including natural erosion is important for the health of a vegetated sea cliff. Hydrological processes maintain flushes and in some cases tufa formations that can be associated with sea cliffs, although it is not known if such formations occur on the Saltee Islands. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of sea cliff habitat zonations including transitional zones, subject to natural processes including erosion and succession	See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in the Irish Sea Cliff Survey (Barron et al., 2011)	See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage	Negative indicator species (including non-natives) to represent less than 5% cover	See coastal habitats supporting document for further details
Vegetation composition: bracken and woody species	Percentage	Cover of bracken (<i>Pteridium aquilinum</i>) on grassland less than 10%. Cover of woody species on grassland less than 20%	See coastal habitats supporting document for further details

1364 Grey Seal *Halichoerus grypus*

To maintain the favourable conservation condition of Grey Seal in the Saltee Islands SAC, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use. See map 7	See marine supporting document for further details
Breeding behaviour	Breeding sites	The breeding sites should be maintained in a natural condition. See map 7 for known sites	Attribute and target based on background knowledge of Irish breeding populations; review of data from Kiely et al. (2000); Lidgard et al. (2001); Lyons (2004); a comprehensive breeding survey in 2005 (Ó Cadhla et al., 2007); and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Moulting behaviour	Moult haul-out sites	The moult haul-out sites should be maintained in a natural condition. See map 7 for known sites	Attribute and target based on background knowledge of Irish populations; research by Kiely et al. (2000); a national moult survey (Ó Cadhla and Strong, 2007); and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Resting behaviour	Resting haul-out sites	The resting haul-out sites should be maintained in a natural condition. See map 7 for known sites	Attribute and target based on review of data from Kiely (1998); Kiely et al. (2000); Lyons (2004); Cronin et al. (2004); Ó Cadhla et al. (2007); Ó Cadhla and Strong (2007); and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Population composition	Number of cohorts	The grey seal population occurring within this site should contain adult, juvenile and pup cohorts annually	Attribute and target based on review of data from Kiely (1998), Kiely et al. (2000), Lyons (2004), Ó Cadhla et al. (2007), Ó Cadhla and Strong (2007); and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the grey seal population	See marine supporting document for further details

8330 Submerged or partially submerged sea caves

To maintain the favourable conservation condition of submerged or partly submerged sea caves in the Saltee Islands SAC, which is defined by the following list of attributes and targets subject to natural variation

Attribute	Measure	Target	Notes
Distribution	Occurrence	The distribution of sea caves should remain stable, subject to natural processes. See map 6 for known distribution	Sea cave distribution was derived from an oblique aerial survey and therefore only detects the presence of sea caves visible intertidally in the flight path
Community structure	Biological composition	Human activities should occur at levels that do not adversely affect the ecology of sea caves	

A009 Fulmar *Fulmarus glacialis*

To maintain the favourable conservation condition of Fulmar in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied sites (AOSs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Typically, fulmar nest near the tops of grassy cliffs on relatively wide ledges (Mitchell et al., 2004)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: broad diet encompassing fish, zooplankton, squid, offal and fishery discards. Key habitats: relatively clear 'oceanic' water with high salinity, thermally stratified in summer. Shelf breaks, offshore banks, frontal zones, tide and rip currents may also be important. Foraging range: max. 664km, mean max. 311.43km, mean 69.35km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of fulmar performing these behaviours occurred within 2km of the breeding colony (Reid and Webb, 2005). Foraging range: max. 664km, mean max. 311.43km, mean 69.35km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	Typically, fulmar nest near the top of grassy cliffs on relatively wide ledges (Mitchell et al., 2004)
Disturbance at marine areas immediately adjacent to the colony	Level of impact	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of fulmar performing these behaviours occurred within 2km of the breeding colony (Reid and Webb, 2005)

A016 Gannet *Morus bassanus*

To maintain the favourable conservation condition of Gannet in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Gannetries are conspicuous with high densities of nests built with seaweed, other vegetation and earth stuck together with excreta
Prey biomass available	Kilogrammes	No significant decline	Key prey items: surface schooling fish, fisheries waste; discards important for some colonies and/or in some seasons. Key habitats: Deep-water depressions, tidal mixing fronts, shelf breaks, sandbanks, inshore and coastal waters. Foraging range: max. 640km, mean max. 308.36km, mean 140.09km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of gannet performing these behaviours occurred within 2km of the breeding colony (Reid and Webb, 2005). Foraging range: max. 640km, mean max. 308.36km, mean 140.09km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	Gannetries are conspicuous with high densities of nests built with seaweed, other vegetation and earth stuck together with excreta. Often 'clubs' of immature and adult plumage non-breeders are discrete from the breeding birds

A016 Gannet *Morus bassanus*

To maintain the favourable conservation condition of Gannet in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Disturbance at marine areas immediately adjacent to the colony	Level of impact	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of gannet performing these behaviours occurred within 2km of the breeding colony (Reid and Webb, 2005)

A017 Cormorant *Phalacrocorax carbo*

To maintain the favourable conservation condition of Cormorant in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species.
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Cormorant colonies are usually sited on flat or rocky islets or sea stack tops, less often on cliffs (Walsh et al., 1995)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: fish (mostly benthic), some crustaceans. Key habitats: populations use sandy areas, rocky and vegetated substrate. Foraging range: max. 50km, mean max. 31.67km, mean 8.46km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Foraging Range: max. 50km, mean max. 31.67km, mean 8.46km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	Cormorant colonies are usually sited on flat or rocky islets or stack tops, less often on cliffs (Walsh et al., 1995)

Conservation objectives for: Saltee Islands SPA [004002]

A018 Shag *Phalacrocorax aristotelis*

To maintain the favourable conservation condition of Shag in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Shags can nest in small groups spread along several kilometres of coastline. In general, colonies are discrete and normally on cliffs/offshore islands (Mitchell et al., 2004)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: benthic, demersal and schooling pelagic fish- especially sandeels (<i>Ammodytes</i> spp.). Key habitats: shallow waters, particularly over sand and gravel banks, areas of high tidal flow. Foraging range: max. 20km, mean max. 16.42km, mean 6.53km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Foraging range: max. 20km, mean max. 16.42km, mean 6.53km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	Shags can nest in small groups spread along several kilometres of coastline. In general colonies are discrete and normally on cliffs/offshore islands (Mitchell et al., 2004)

A183 Lesser Black-backed Gull *Larus fuscus*

To maintain the favourable conservation condition of Lesser Black-backed Gull in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Lesser black-backed gull nests colonially, often with other gull species on offshore islands and coastal cliffs often within vegetated areas (Mitchell et al., 2004)
Prey biomass available	Kilogrammes	No significant decline	Lesser black-backed gulls are surface feeders whose diet includes fish, invertebrates and fishery-related discards. max. foraging range 40km
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Foraging range: max. 40km
Disturbance at the breeding site	Level of impact	No significant increase	Lesser black-backed gull nests colonially, often with other gull species on offshore islands and coastal cliffs often within vegetated areas (Mitchell et al., 2004)

A184 Herring Gull *Larus argentatus*

To maintain the favourable conservation condition of Herring Gull in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Rocky coastline with cliffs, islets and offshore islands, is the preferred breeding habitat (Mitchell et al., 2004)
Prey biomass available	Kilogrammes	No significant decline	Primarily a coastal feeder, mainly in the littoral and shallow sub-littoral zones; also targets anthropogenic sources of food in both marine and terrestrial areas. max. foraging range approximately 50km
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Foraging range: max. 50km
Disturbance at the breeding site	Level of impact	No significant increase	Herring gull colonies are usually sited on flat or rocky islets or stack stops, less often on cliffs (Walsh et al., 1995)

A188 Kittiwake *Rissa tridactyla*

To maintain the favourable conservation condition of Kittiwake in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	In general, kittiwake colonies are found on vertical rocky sea cliffs
Prey biomass available	Kilogrammes	No significant decline	Key prey items: small pelagic shoaling fish, marine invertebrates. Key habitats: fronts, tidal upwellings and eddies, offshore sandbanks, areas over rocky seabed. Foraging range: max. 200km, mean max. 65.81km, mean 25.45km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Foraging range: max. 200km, mean max. 65.81km, mean 25.45km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	In general, kittiwake colonies are found on vertical rocky sea cliffs

A199 Guillemot *Uria aalge*

To maintain the favourable conservation condition of Guillemot in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: individual adult	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	In general, guillemot colonies are found on vertical rocky sea cliffs and sea stacks
Prey biomass available	Kilogrammes	No significant decline	Key prey items: schooling pelagic fish, crustaceans. Key habitats: fronts and other ocean features that concentrate prey, offshore sandbanks, areas of sandy sediment. Foraging range: max. 200km, mean max. 60.61km, mean 24.49km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of guillemot performing these behaviours occurred within 1km of the breeding colony (Reid and Webb, 2005). Foraging range: max. 200km, mean max. 60.61km, mean 24.49km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	In general, guillemot colonies are found on vertical rocky sea cliffs and sea stacks
Disturbance at marine areas immediately adjacent to the colony	Level of impact	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of guillemot performing these behaviours occurred within 1km of the breeding colony (Reid and Webb, 2005)

A200 Razorbill *Alca torda*

To maintain the favourable conservation condition of Razorbill in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: individual adult	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Razorbill breed mainly on small ledges or in cracks of rocky cliffs and in associated screes, and on boulder fields (Mitchell et al., 2004)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: Sandeels (<i>Ammodytes</i> spp.), clupeids. Key habitats: shallow waters, sandy seabeds, upwelling areas and tidal fronts. Foraging range: max. 51km, mean max. 31km, mean 10.27km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of razorbill performing these behaviours occurred within 1km of the breeding colony (Reid and Webb, 2005). Foraging range: max. 51km, mean max. 31km, mean 10.27km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	Razorbill breed mainly on small ledges or in cracks of rocky cliffs and in associated screes, and on boulder fields (Mitchell et al., 2004)
Disturbance at marine areas immediately adjacent to the colony	Level of impact	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of razorbill performing these behaviours occurred within 1km of the breeding colony (Reid and Webb, 2005)

A204 Puffin *Fratercula arctica*

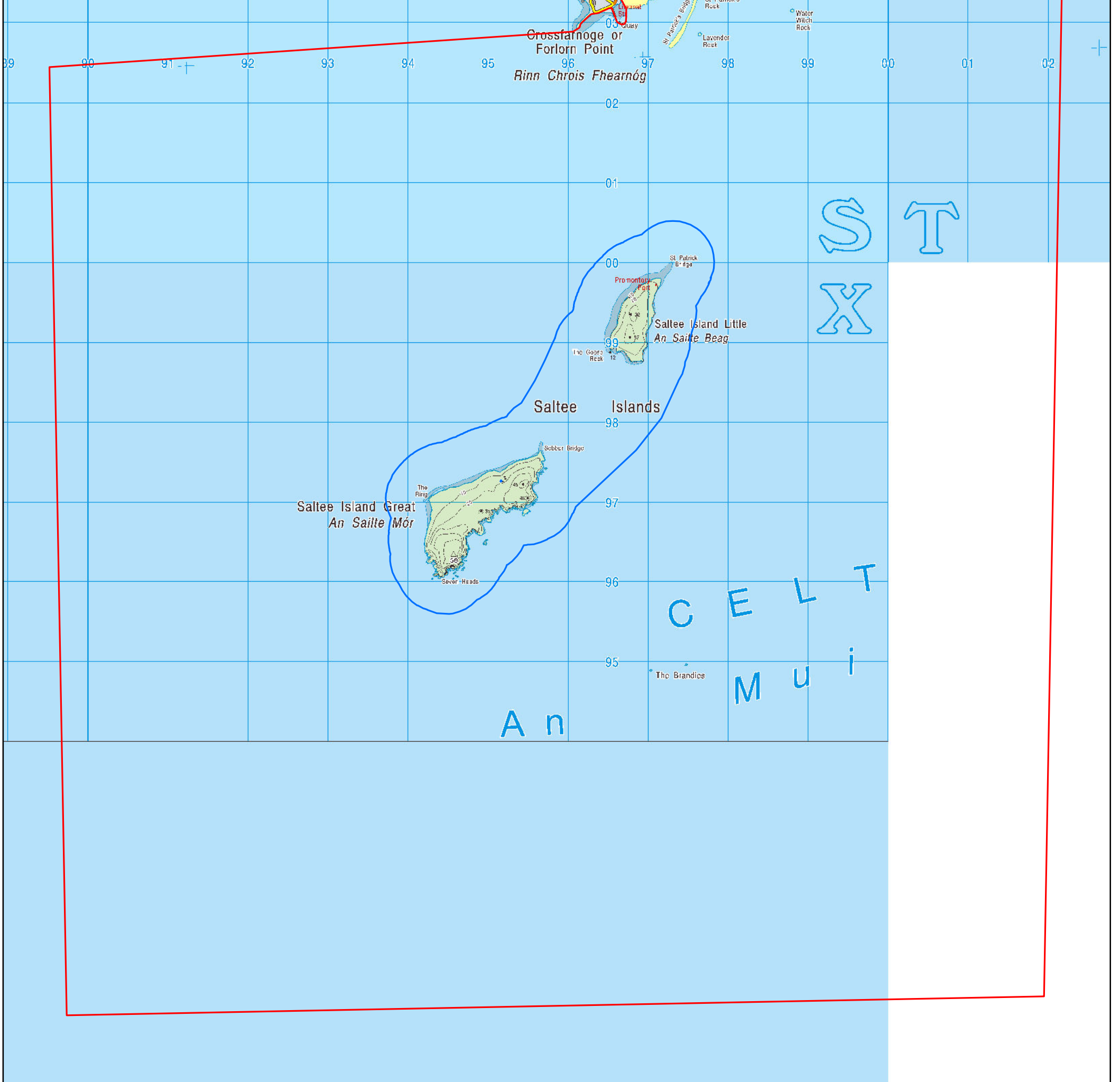
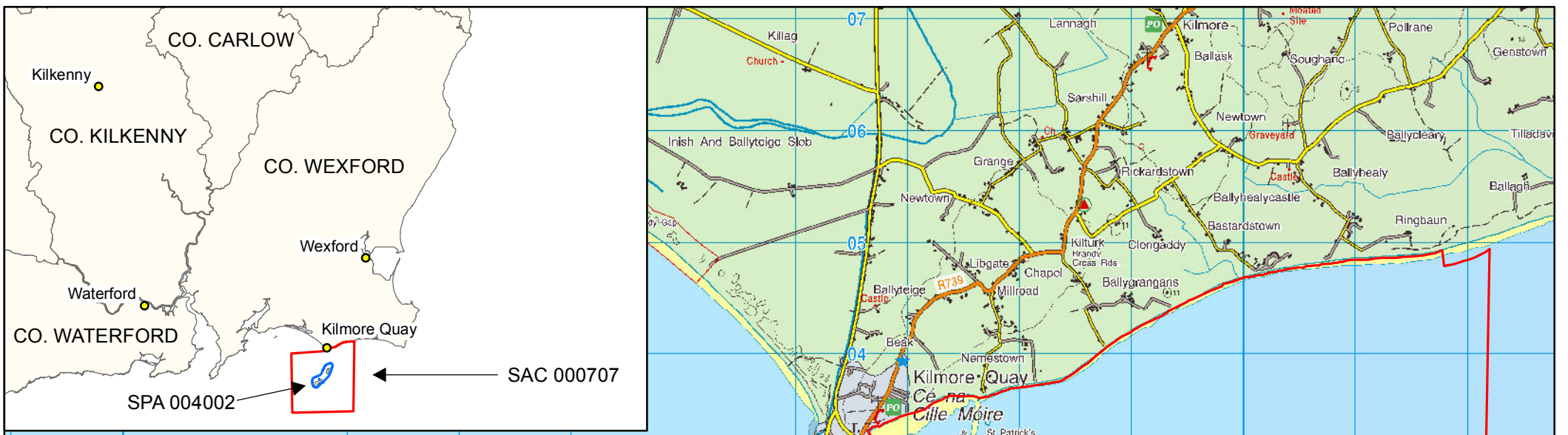
To maintain the favourable conservation condition of Puffin in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied burrow (AOB)	Number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information. The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species.
Productivity rate	Mean number	No significant decline	Measure based on standard survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) online database (JNCC, 2011) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Highly colonial species with pairs typically nesting underground in burrows dug in the soil of offshore islands. If such habitat is in short supply puffins can nest among boulder screes or at low densities in cracks in sheer cliffs (Mitchell et al., 2004)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: mid-sized schooling mid-water fish, especially sandeels (<i>Ammodytes</i> spp.). Key habitats: shallow waters, tidal fronts. Foraging range: max. 200km, mean max. 62.2km, mean 30.35km (BirdLife International Seabird Database (Birdlife International, 2011))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of puffin performing these behaviours occurred within 1km of the breeding colony (Reid and Webb, 2005). Foraging range: max. 200km, mean max. 62.2km, mean 30.35km (BirdLife International Seabird Database (Birdlife International, 2011))
Disturbance at the breeding site	Level of impact	No significant increase	Highly colonial species with pairs typically nesting underground in burrows dug in the soil of offshore islands. If such habitat is in short supply Puffins can nest among boulder screes or at low densities in cracks in sheer cliffs (Mitchell et al., 2004)

A204 Puffin *Fratercula arctica*

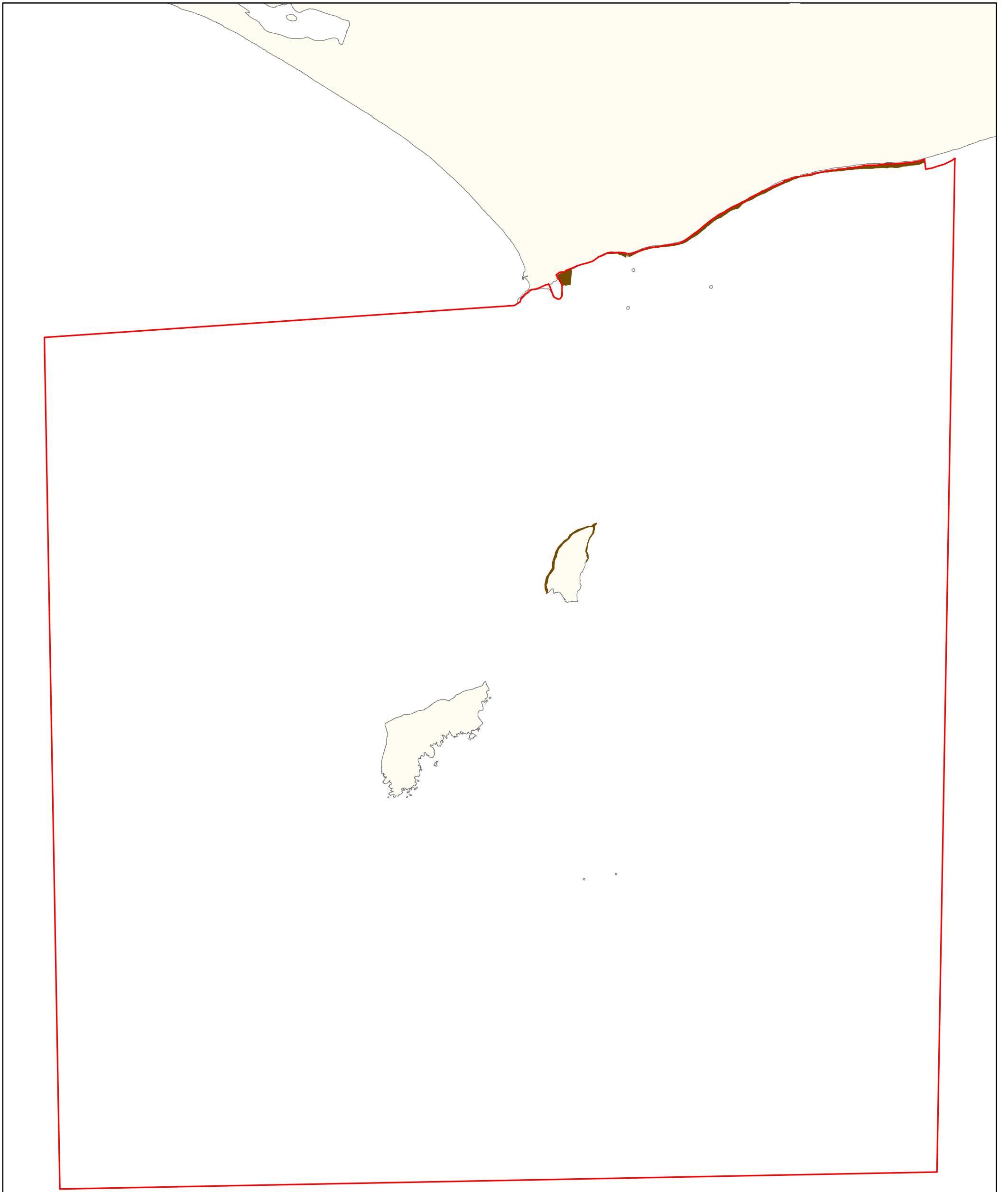
To maintain the favourable conservation condition of Puffin in the Saltee Islands SPA, which is defined by the following list of attributes and targets

Attribute	Measure	Target	Notes
Disturbance at marine areas immediately adjacent to the colony	Level of impact	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that highest densities of puffin performing these behaviours occurred within 1km of the breeding colony (Reid and Webb, 2005)
Occurrence of mammalian predators	Level of impact	Absent or under control	Puffin and other cavity/burrow nesting seabirds can be particularly susceptible to rat (<i>Rattus</i> spp.) predation



Legend

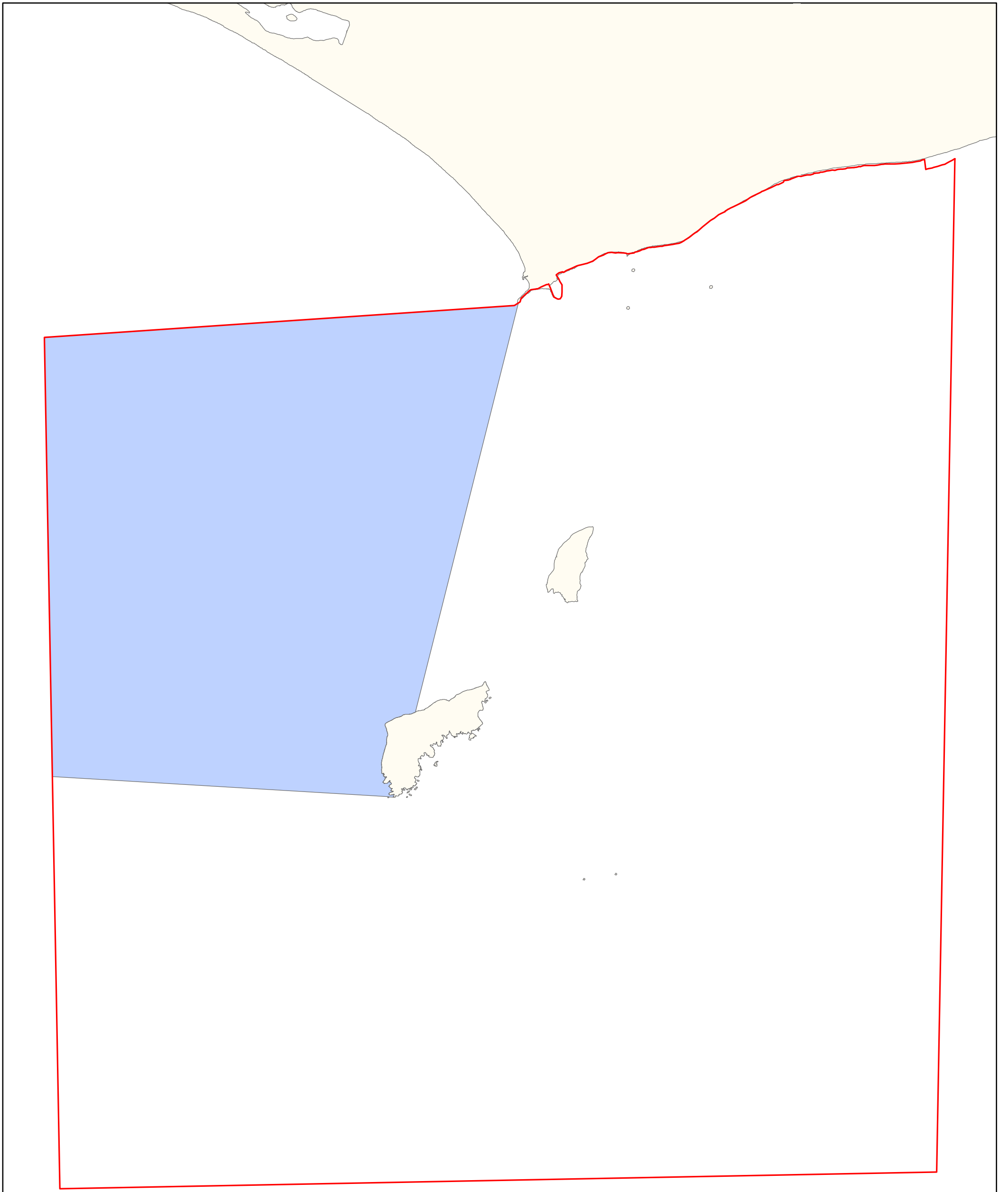
- SAC 000707
- SPA 004002



Legend

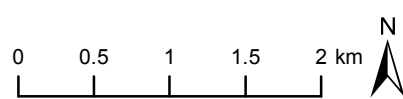
- SAC 000707
- 1140 Mudflats and sandflats not covered by sea water at low tide
- OSi Discovery Series Coastal Boundary

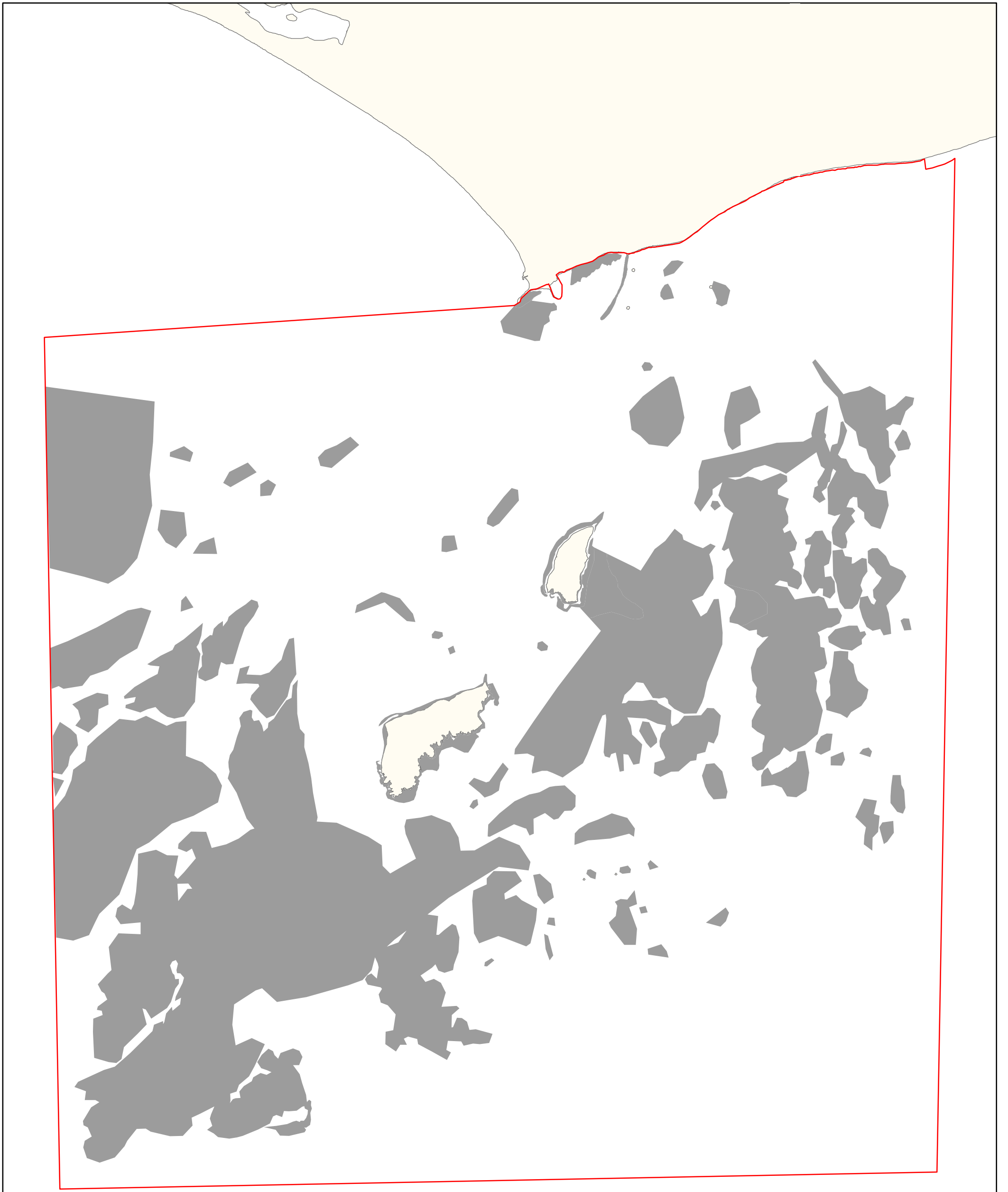




Legend

- SAC 000707
- 1160 Large shallow inlets and bays
- OSi Discovery Series Coastal Boundary





Legend


- SAC 000707
- 1170 Reefs
- OSi Discovery Series Coastal Boundary


Legend


 SAC 000707


 OSI Discovery Series Coastal Boundary


Marine Community Types

 Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community complex

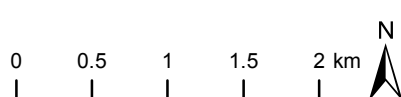
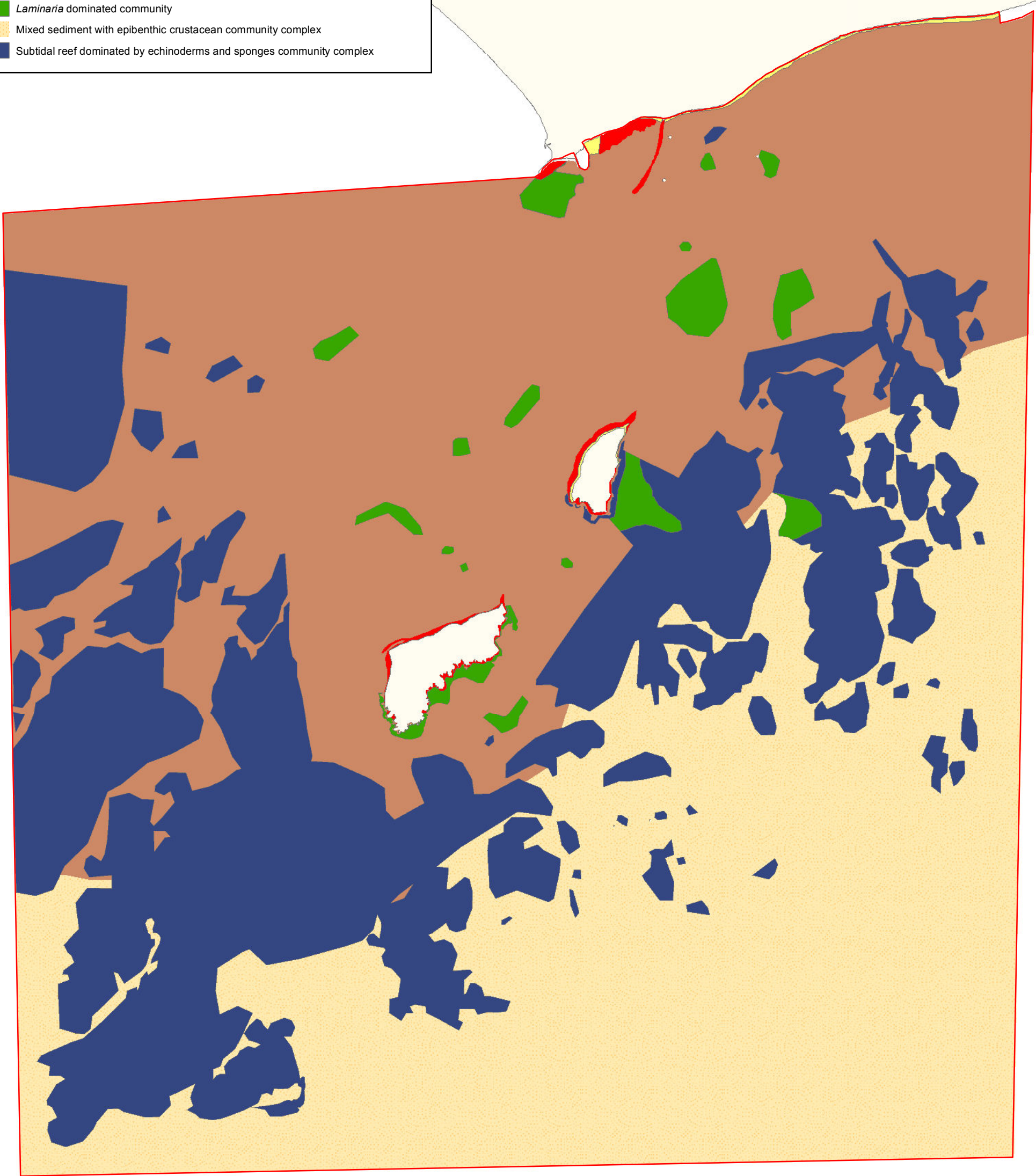
 Intertidal reef community complex

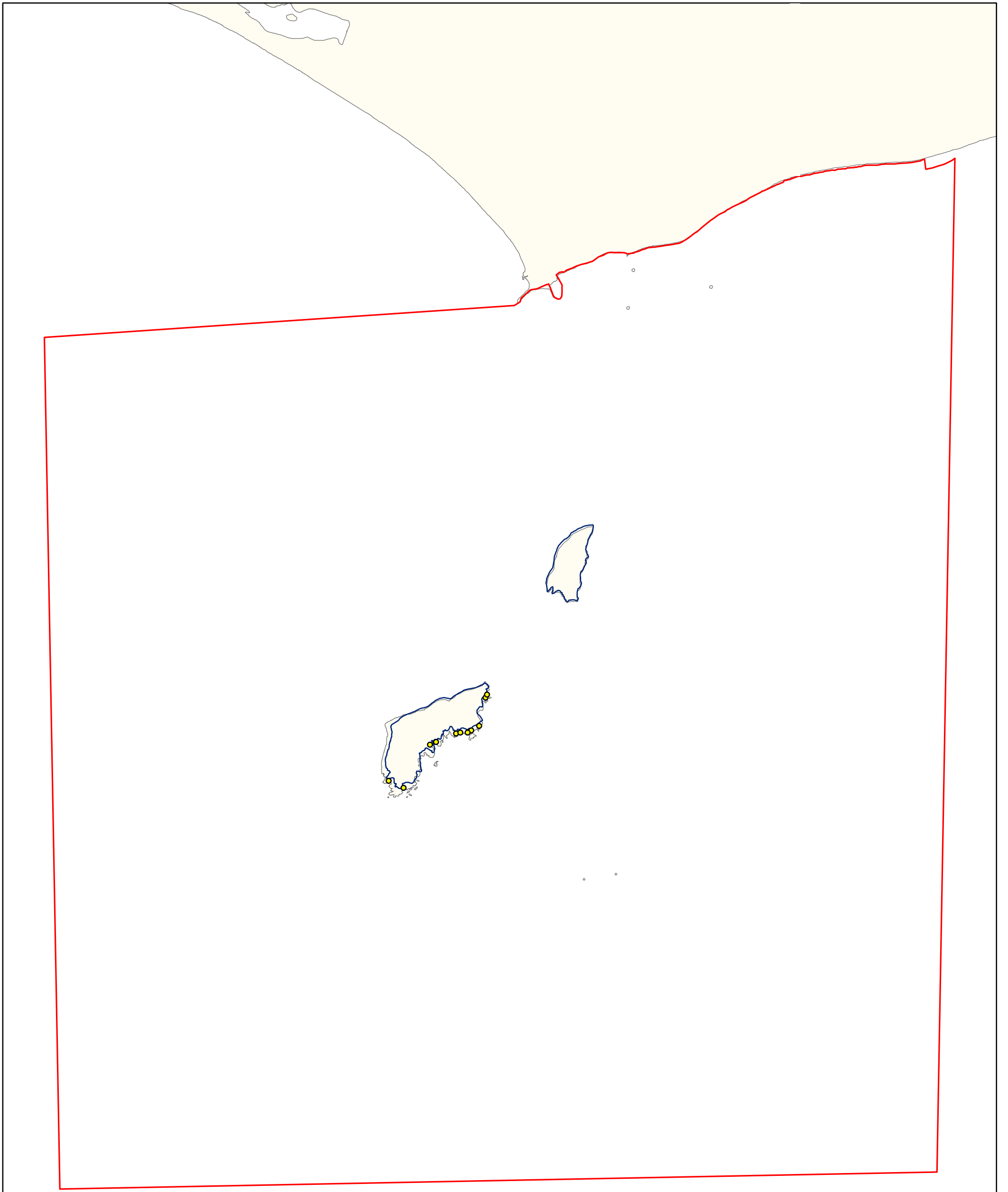
 Intertidal sand to muddy sand dominated by polychaetes community complex

 *Laminaria* dominated community

 Mixed sediment with epibenthic crustacean community complex

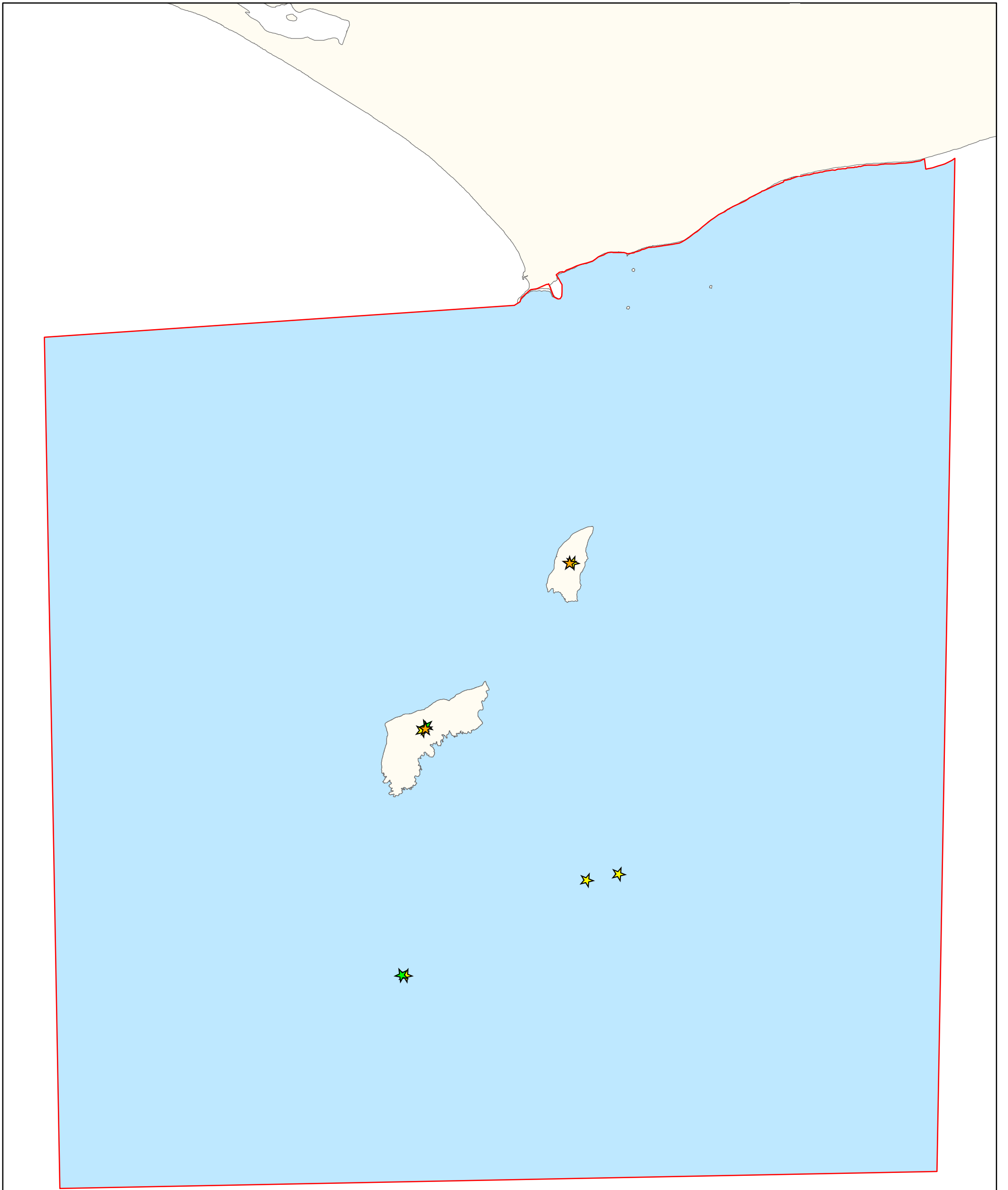
 Subtidal reef dominated by echinoderms and sponges community complex





Legend

- SAC 000707
- 1230 Vegetated Sea Cliffs of the Atlantic and Baltic coasts
- 8330 Submerged or partially submerged sea caves
- OSi Discovery Series Coastal Boundary



Legend

- SAC 000707
- OSi Discovery Series Coastal Boundary
- 1364 Grey Seal - *Halichoerus grypus* habitat
- ★ 1364 Grey Seal - *Halichoerus grypus* breeding sites
- ★ 1364 Grey Seal - *Halichoerus grypus* moult haul-out sites
- ★ 1364 Grey Seal - *Halichoerus grypus* resting haul-out sites

Appendix Q North Colonsay and Western Cliffs SPA

**Conservation Objectives for North Colonsay and Western Cliffs
Special Protection Area**

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- **Population of the species as a viable component of the site**
- **Distribution of the species within site**
- **Distribution and extent of habitats supporting the species**
- **Structure, function and supporting processes of habitats supporting the species**
- **No significant disturbance of the species**

Qualifying Species:

- Chough (*Pyrrhocorax pyrrhocorax*)
- Guillemot (*Uria aalge*)*
- Kittiwake (*Rissa tridactyla*)*

- Seabird assemblage

* indicates assemblage qualifier only

Appendix R Rum SPA

RUM SPECIAL PROTECTION AREA (SPA) CONSERVATION OBJECTIVES

The box below provides the draft high-level Conservation Objective statements for Rum SPA.

NatureScot is currently preparing Conservation and Management Advice for all inshore marine protected areas. The Conservation and Management Advice documents will include the full Conservation Objectives which incorporates site-specific supplementary advice and information to assist in the interpretation of the high-level Conservation Objectives. Whilst the site-specific advice and information is developed, the high-level Conservation Objectives will remain as draft but are unlikely to change. **These draft high-level Conservation Objectives should be used for Habitats Regulations Appraisals of plans or projects.**

The Conservation and Management Advice documents will also include NatureScot's initial advice to support management at these marine protected areas.

The * denotes a qualifying feature that is an assemblage feature only.

<p>Rum SPA</p> <p>Qualifying features:</p> <ul style="list-style-type: none"> • Red-throated diver (<i>Gavia stellata</i>) • Common guillemot* (<i>Uria aalge</i>) • Black-legged kittiwake* (<i>Rissa tridactyla</i>) • Manx shearwater (<i>Puffinus puffinus</i>) • Golden eagle (<i>Aquila chrysaetos</i>)
<p>Draft Conservation Objectives:</p> <p>1. To ensure that the qualifying features of Rum SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p> <p>2. To ensure that the integrity of Rum SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:</p> <p>2a. The populations of the qualifying features are viable components of Rum SPA.</p> <p>2b. The distributions of the qualifying features throughout the site are maintained by avoiding significant disturbance of the species.</p> <p>2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate, restored at Rum SPA.</p>

Black-legged kittiwake is considered to be in an unfavourable condition at Rum SPA and therefore an overarching 'restore' objective is set for the site.

For the Rum SPA, when carrying out appraisals of plans or projects, the focus of the appraisal should be to understand the impact of the plan or project on site integrity. For qualifying features that are in favourable condition this means maintaining that condition. For black-legged kittiwake that is in unfavourable condition, it means ensuring that the plan or project does not prevent or reduce the potential for recovery. The expectation is not for the plan or project to restore site integrity. Should the plan or project compromise the ability of the black-legged kittiwake to recover (e.g. result in a further decline or accelerate the rate of decline, or prevent a recovery from occurring), then the Rum SPA will not make an appropriate contribution to achieving FCS across the Atlantic Biogeographic Region.

Appendix S Shiant Isles SPA

Conservation Objectives for Shiant Isles Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Barnacle goose (*Branta leucopsis*)
- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)*
- Kittiwake (*Rissa tridactyla*)*
- Puffin (*Fratercula arctica*)
- Razorbill (*Alca torda*)
- Shag (*Phalacrocorax aristotelis*)

- Seabird assemblage

* indicates assemblage qualifier only

Appendix T Skelligs SPA



Conservation objectives for Skelligs SPA [004007]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A009	Fulmar	<i>Fulmarus glacialis</i>
A013	Manx Shearwater	<i>Puffinus puffinus</i>
A014	Storm Petrel	<i>Hydrobates pelagicus</i>
A016	Gannet	<i>Morus bassanus</i>
A188	Kittiwake	<i>Rissa tridactyla</i>
A199	Guillemot	<i>Uria aalge</i>
A204	Puffin	<i>Fratercula arctica</i>



Citation: NPWS (2022) *Conservation objectives for Skelligs SPA [004007]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.*

This First Order Site-specific Conservation Objectives Version 1.0 document replaces the Generic Conservation Objectives Version 9.0 document.

Appendix U Handa SPA

Conservation Objectives for Handa Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Great skua (*Catharacta skua*)*
- Guillemot (*Uria aalge*)
- Kittiwake (*Rissa tridactyla*)*
- Razorbill (*Alca torda*)

- Seabird assemblage

* indicates assemblage qualifier only

Appendix V St Kilda SPA

ST KILDA SPECIAL PROTECTION AREA (SPA) AND SEAS OFF ST KILDA SPA DRAFT CONSERVATION OBJECTIVES

The box below provides the draft high-level Conservation Objective statements for St Kilda SPA and Seas off St Kilda SPA.

NatureScot is currently preparing Conservation and Management Advice for all inshore marine protected areas. The Conservation and Management Advice documents will include the full Conservation Objectives which incorporates site-specific supplementary advice and information to assist in the interpretation of the high-level Conservation Objectives. Whilst the site-specific advice and information is developed, the high-level Conservation Objectives will remain as draft but are unlikely to change. **These draft high-level Conservation Objectives should be used for Habitats Regulations Appraisals of plans or projects.**

The Conservation and Management Advice documents will also include our initial advice to support management at these marine protected areas.

For the Seas off St Kilda SPA our Conservation and Management Advice is being developed in partnership with the Joint Nature Conservation Committee (JNCC).

The * denotes a qualifying feature that is an assemblage feature only.

St Kilda SPA	Seas off St Kilda SPA
<p>Qualifying features:</p> <ul style="list-style-type: none"> • Atlantic puffin (<i>Fratercula arctica</i>) • Black-legged kittiwake* (<i>Rissa tridactyla</i>) • Common guillemot* (<i>Uria aalge</i>) • European storm petrel (<i>Hydrobates pelagicus</i>) • Great skua (<i>Stercorarius skua</i>) • Leach's storm petrel (<i>Oceanodroma leucorhoa</i>) • Manx shearwater* (<i>Puffinus puffinus</i>) • Northern fulmar* (<i>Fulmarus glacialis</i>) • Northern gannet (<i>Morus bassanus</i>) • Razorbill* (<i>Alca torda</i>) 	<p>Qualifying features:</p> <ul style="list-style-type: none"> • Atlantic puffin* (<i>Fratercula arctica</i>) • Common guillemot* (<i>Uria aalge</i>) • European storm petrel* (<i>Hydrobates pelagicus</i>) • Northern fulmar* (<i>Fulmarus glacialis</i>) • Northern gannet (<i>Morus bassanus</i>)
<p>Draft Conservation Objectives:</p> <ol style="list-style-type: none"> 1. To ensure that the qualifying features of St Kilda SPA and the Seas off St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. 2. To ensure that the integrity of St Kilda SPA and the Seas off St Kilda SPA is restored in 	

the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

2a. The populations of qualifying features are viable components of St Kilda SPA and Seas off St Kilda SPA.

2b. The distributions of the qualifying features throughout St Kilda SPA and Seas off St Kilda SPA are maintained by avoiding significant disturbance of the species.

2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate restored, at St Kilda SPA and/or Seas off St Kilda SPA.

Northern fulmar, razobill, common guillemot and black-legged kittiwake are considered to be in an unfavourable condition at St Kilda SPA, with northern fulmar and common guillemot also considered to be in an unfavourable condition at the Seas off St Kilda SPA. Therefore an overarching 'restore' objective is set for the sites.

For the St Kilda SPA and Seas off St Kilda SPA, when carrying out appraisals of plans or projects, the focus of the appraisal should be to understand the impact of the plan or project on site integrity. For qualifying features that are in favourable condition this means maintaining that condition. For northern fulmar, razobill, common guillemot and black-legged kittiwake that are in unfavourable condition, it means ensuring that the plan or project does not prevent or reduce the potential for recovery. The expectation is not for the plan or project to restore site integrity. Should the plan or project compromise the ability of the respective unfavourable qualifying features to recover (e.g. result in a further decline or accelerate the rate of decline, or prevent a recovery from occurring), then the St Kilda SPA and Seas off St Kilda SPA will not make an appropriate contribution to achieving FCS across the Atlantic Biogeographic Region.

Appendix W Cape Wrath SPA

Conservation Objectives for Cape Wrath Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)*
- Kittiwake (*Rissa tridactyla*)*
- Puffin (*Fratercula arctica*)*
- Razorbill (*Alca torda*)*

- Seabird assemblage

* indicates assemblage qualifier only

The site overlaps with Cape Wrath Special Area of Conservation

Appendix X Flannan Isles SPA

Conservation Objectives for Flannan Isles Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)*
- Kittiwake (*Rissa tridactyla*)*
- Leach's petrel (*Oceanodroma leucorhoa*)
- Puffin (*Fratercula arctica*)*
- Razorbill (*Alca torda*)*

- Seabird assemblage

* indicates assemblage qualifier only

Appendix Y Flamborough and Filey Coast SPA

**European Site Conservation Objectives for
Flamborough Head and Bempton Cliffs Special
Protection Area
Site Code: UK9006101**



With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A188 *Rissa tridactyla*; Black-legged kittiwake (Breeding)

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

Appendix Z Fowlsheugh SPA

Conservation Objectives for Fowlsheugh Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)
- Herring gull (*Larus argentatus*)*
- Kittiwake (*Rissa tridactyla*)
- Razorbill (*Alca torda*)*

- Seabird assemblage

* Indicates assemblage qualifier only

Appendix AA Mingulay and Berneray SPA

Conservation Objectives for Mingulay and Berneray Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmaris glacialis*)*
- Guillemot (*Uria aalge*)*
- Kittiwake (*Rissa tridactyla*)*
- Puffin (*Fratercula arctica*)*
- Razorbill (*Alca torda*)
- Shag (*Phalacrocorax aristotelis*)*

- Seabird assemblage

* indicates assemblage qualifier only

Appendix BB Canna and Sanday SPA

Conservation Objectives for Canna and Sanday Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Guillemot (*Uria aalge*)*
- Herring gull (*Larus argentatus*)*
- Kittiwake (*Rissa tridactyla*)*
- Puffin (*Fratercula arctica*)*
- Shag (*Phalacrocorax aristotelis*)*

- Seabird assemblage

* indicates assemblage qualifier only

Appendix CC Isles of Scilly SPA

CONSERVATION OBJECTIVES FOR ISLES OF SCILLY
SPECIAL PROTECTION AREA

Site Code: UK9020288

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

Qualifying Features:

Great black-backed gull (*Larus marinus*), Breeding
Lesser black-backed gull (*Larus fuscus*), Breeding
Seabird assemblage, Breeding
Shag (*Phalacrocorax aristotelis*), Breeding
Storm petrel (*Hydrobates pelagicus*), Breeding

Appendix DD Buchan Ness to Collieston SPA

Conservation Objectives for Buchan Ness to Collieston Coast Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)*
- Herring gull (*Larus argentatus*)*
- Kittiwake (*Rissa tridactyla*)*
- Shag (*Phalacrocorax aristotelis*)*

- Seabird assemblage

* indicates assemblage qualifier only

The site overlaps with Buchan Ness to Collieston Special Area of Conservation

Appendix EE Troup, Pennan and Lion's Heads SPA

**Conservation Objectives for Troup, Pennan and Lion's Heads
Special Protection Area**

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- **Population of the species as a viable component of the site**
- **Distribution of the species within site**
- **Distribution and extent of habitats supporting the species**
- **Structure, function and supporting processes of habitats supporting the species**
- **No significant disturbance of the species**

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)
- Herring gull (*Larus argentatus*)*
- Kittiwake (*Rissa tridactyla*)*
- Razorbill (*Alca torda*)*

- Seabird assemblage

* indicates assemblage qualifier only

Appendix FF East Caithness Cliffs SPA

Conservation Objectives for East Caithness Cliffs Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Cormorant (*Phalacrocorax carbo*)*
- Fulmar (*Fulmarus glacialis*)*
- Great black-backed gull (*Larus marinus*)*
- Guillemot (*Uria aalge*)
- Herring gull (*Larus argentatus*)
- Kittiwake (*Rissa tridactyla*)
- Peregrine (*Falco peregrinus*)
- Razorbill (*Alca torda*)
- Shag (*Phalacrocorax aristotelis*)

- Seabird assemblage

* indicates assemblage qualifier only

The site overlaps with East Caithness Cliffs Special Area of Conservation

Appendix GG North Caithness Cliffs SPA

Conservation Objectives for North Caithness Cliffs Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Guillemot (*Uria aalge*)
- Kittiwake (*Rissa tridactyla*)*
- Peregrine (*Falco peregrinus*)
- Puffin (*Fratercula arctica*)*
- Razorbill (*Alca torda*)*

- Seabird assemblage

* indicates assemblage qualifier only

Appendix HH Sule Skerry and Sule Stack SPA

Conservation Objectives for Sule Skerry and Sule Stack Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Gannet (*Morus bassanus*)
- Guillemot (*Uria aalge*)*
- Leach's petrel (*Oceanodroma leucorhoa*)
- Puffin (*Fratercula arctica*)
- Shag (*Phalacrocorax aristotelis*)*
- Storm petrel (*Hydrobates pelagicus*)

- Seabird assemblage

* indicates assemblage qualifier only

Appendix II North Rona and Sula Sgeir SPA

**Conservation Objectives for North Rona and Sula Sgeir
Special Protection Area**

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- **Population of the species as a viable component of the site**
- **Distribution of the species within site**
- **Distribution and extent of habitats supporting the species**
- **Structure, function and supporting processes of habitats supporting the species**
- **No significant disturbance of the species**

Qualifying Species:

- Fulmar (*Fulmarus glacialis*)*
- Gannet (*Morus bassanus*)
- Great black-backed gull (*Larus marinus*)*
- Guillemot (*Uria aalge*)
- Kittiwake (*Rissa tridactyla*)*
- Leach's petrel (*Oceanodroma leucorhoa*)
- Puffin (*Fratercula arctica*)*
- Razorbill (*Alca torda*)*
- Storm petrel (*Hydrobates pelagicus*)

- Seabird assemblage

* indicates assemblage qualifier only

The site overlaps with North Rona Special Area of Conservation

Appendix JJ West Westray SPA

Conservation Objectives for West Westray Special Protection Area

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Arctic skua (*Stercorarius parasiticus*)*
- Arctic tern (*Sterna paradisaea*)
- Fulmar (*Fulmarus glacialis*) *
- Guillemot (*Uria aalge*)
- Kittiwake (*Rissa tridactyla*)*
- Razorbill (*Alca torda*)*

- Seabird assemblage

* indicates assemblage qualifier only