



Awel y Môr Offshore Wind Farm

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Abbreviations and acronyms

TERM	DEFINITION
ES	Environmental Statement
FCS	Favorable Conservation Status
JNCC	Joint Nature Conservation Committee
NRW	Natural Resources Wales
pSPA	proposed Special Protection Area
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Units

UNIT	DEFINITION
km	Kilometer
km ²	Kilometer Squared
nm	Nautical Miles

1 European Site Information

1.1 Cardigan Bay (UK) Special Area of Conservation (SAC)

1 Cardigan Bay is one of the largest bays in the British Isles, measuring over 100 kilometres (km) (60 miles) across its westernmost extent from the Lley Peninsula to St David's Head (Figure 1). Cardigan Bay SAC covers a proportion of the bay, between Aberarth and Moylgrove, south of Cardigan. Key literature sources, including relevant project literature, are as follows:

- Environmental Statement (ES) Volume 2, Chapter 4 Offshore Ornithology (application ref: 6.2.4);
- The Cardigan Bay (UK) SAC Indicative site level feature condition assessments 2018, NRW Evidence Report No:226 (dated January 2018)ⁱ; and
- The Cardigan Bay (UK) SAC Data Form (dated December 2015)ⁱⁱ.

ⁱ <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012712.pdf>



Figure 1: Location of Cardigan Bay SAC in relation to AyM.

1.1.1 Qualifying features

2 The Cardigan Bay (UK) SAC is designated for the following qualifying features:

- 1102 Allis shad (*Alosa alosa*);
- 1103 Twaite shad (*Alosa fallax*);
- 1095 Sea lamprey (*Petromyzon marinus*);
- 1099 European river lamprey (*Lampetra fluviatilis*);
- 1349 Bottlenose dolphin (*Tursiops truncatus*);
- 1364 Grey Seal (*Halischoerus grypus*).

1.1.2 The characteristics of the European site

- 3 A population of bottlenose dolphins forms a primary interest of the Bay and it was for this that the Bay was first selected as a SAC. Bottlenose dolphins range widely throughout UK waters and considerably further afield, but Cardigan Bay is one of the very few areas around the UK where significant numbers are known to occur regularly. The Cardigan Bay SAC is a multiple interest site which has been selected for the presence of seven marine interest features that qualify under Annex I and Annex II of the Habitats Directive.

1.1.3 Conservation advice

- 4 Advice on operations and Management measures can be found within the Cardigan Bay/ Bae Ceredigion Special Area of Conservation Advice provided by Natural Resources Wales in fulfilment of Regulation 37 of the Conservation of Habitats and Species Regulations 2017 (dated March 2018)ⁱⁱⁱ.
- 5 The Conservation Objectives for the site are as follows (for all species):
- The population is maintaining itself on a long-term basis as a viable component of its natural habitat;
 - The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future; and
 - The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing.

1.2 North Anglesey Marine/ Gogledd Môn Forol SAC

6 Stretching from the northern coast of the Isle of Anglesey into the Irish Sea (Figure 2), the North Anglesey Marine SAC has been identified as an area of importance for harbour porpoise, covering an area almost five times the size of Anglesey. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: North Anglesey Marine/ Gogledd Môn Forol Conservation Objectives and Advice on Operations (dated March 2019)^{iv}; and
- ▲ North Anglesey Marine/ Gogledd Môn Forol SAC Data Form (dated March 2019)^v.

^{iv}<https://data.jncc.gov.uk/data/f4c19257-2341-46b3-8e29-49665cd8f3d2/NorthAnglesey-Conservation-Advice.pdf>

^v <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030398.pdf>

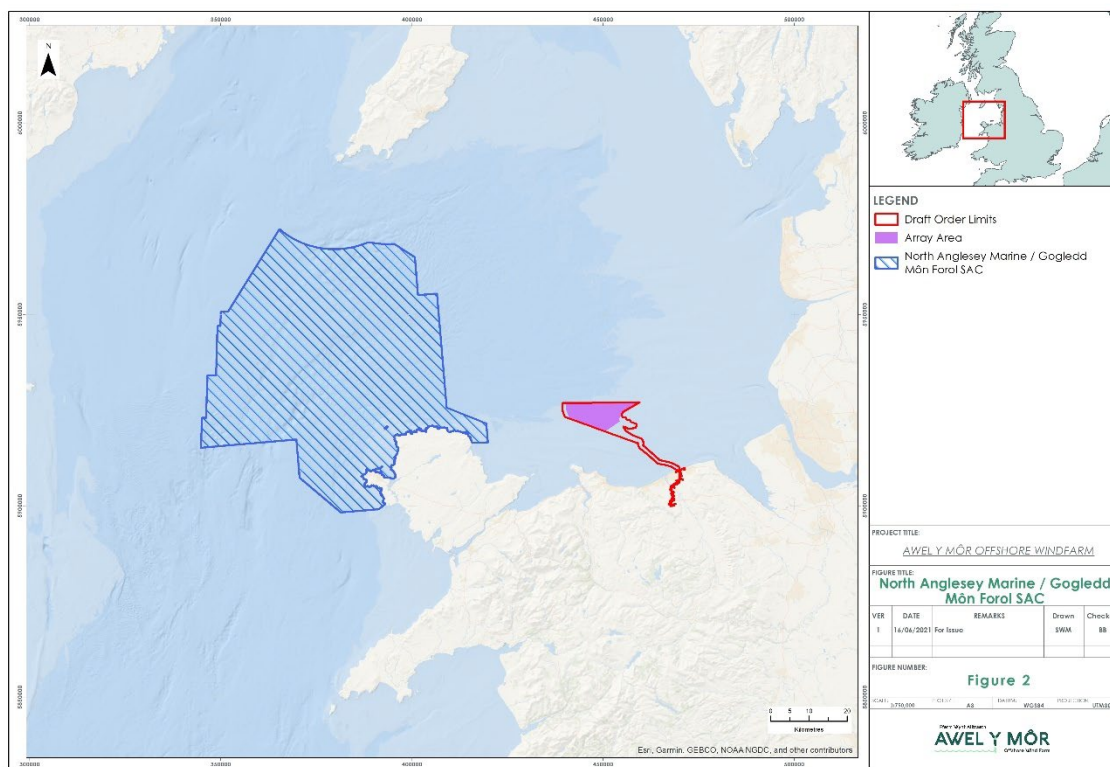


Figure 2: Location of North Anglesey SAC in relation to AyM.

1.2.1 Qualifying features

7 The SAC is designated for the following qualifying features:

- 1351 Harbour porpoise (*Phocoena phocoena*).

1.2.2 The characteristics of the European site

8 The North Anglesey Marine SAC has been designated for the protection of the harbour porpoise *Phocoena phocoena*, and is estimated to support 2.4% of the UK Celtic and Irish Seas Management Unit (MU) population. Situated off the northwest corner of Wales, this site extends from the Anglesey coast into the offshore waters (> 12 nautical miles (nm)) between Ireland and the Isle of Man, and it is therefore the joint responsibility of both Natural Resources Wales (NRW) and JNCC to provide statutory advice.

1.2.3 Conservation advice

- 9 Advice on operations and Management measures can be found within the Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: North Anglesey Marine/ Gogledd Môn Forol Conservation Objectives and Advice on Operations document (dated March 2019)^{vi}.
- 10 The Conservation Objectives for the site are to ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:
- Harbour porpoise is a viable component of the site;
 - There is no significant disturbance of the species; and
 - The condition of supporting habitats and processes, and the availability of prey is maintained.

1.3 Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC

- 11 The Bristol Channel Approaches/ Dynesfeydd Môr Hafren site covers an area of 5,850 km² and stretches along the north Cornish coast and across the Bristol Channel north towards Carmarthen Bay in Wales (Figure 3). Key literature sources, including relevant project literature, are as follows:
- ES Volume 2, Chapter 4;
 - Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: Bristol Channel Approaches/ Dynesfeydd Môr Hafren Conservation Objectives and Advice on Operations (dated March 2019)^{vii}; and
 - Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC Data Form (dated March 2019)^{viii}.

^{vi}<https://data.jncc.gov.uk/data/f4c19257-2341-46b3-8e29-49665cd8f3d2/NorthAnglesey-Conservation-Advice.pdf>

^{vii}<https://data.jncc.gov.uk/data/505b3bab-a974-41e5-991c-c29ef3e01c0a/BCA-ConsAdvice.pdf>

^{viii} <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030396.pdf>

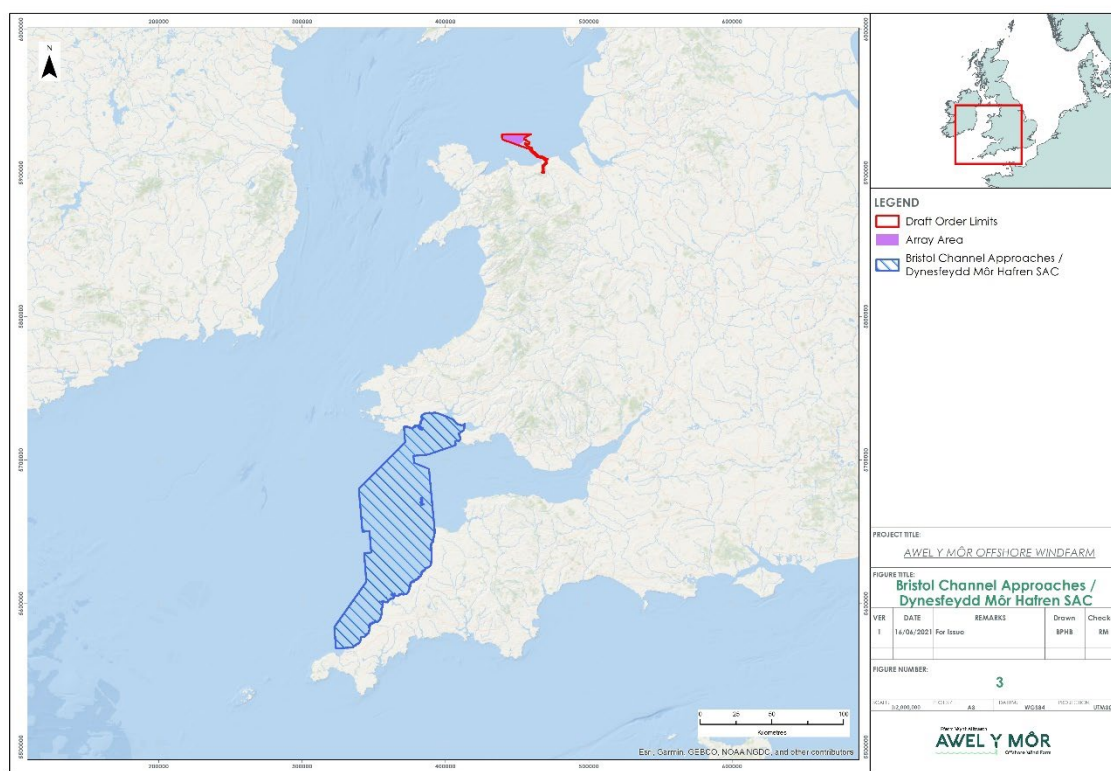


Figure 3: Location of Bristol Channel Approaches SAC in relation to AyM.

1.3.1 Qualifying features

12 The SAC is designated for the following qualifying features:

- ▲ 1351 Harbour porpoise (*Phocoena phocoena*).

1.3.2 The characteristics of the European site

13 This is a single feature site, proposed for designation solely for the purpose of aiding the management of harbour porpoise populations throughout UK waters, in accordance with EU legislation. The Bristol Channel Approaches/ Dynesfeydd Môr Hafren site has been recognised as an area with predicted persistent high densities of harbour porpoise. The entire site has been identified as an important area for porpoises during the winter season. This emerged as part of the top 10% persistent high density and high model confidence winter area in the Celtic and Irish Seas region.

1.3.3 Conservation advice

- 14 Advice on operations and Management measures can be found within the Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: Bristol Channel Approaches/ Dynesfeydd Môr Hafren Conservation Objectives and Advice on Operations document (dated March 2019)^{ix}.
- 15 The Conservation Objectives for the site are to ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining FCS for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:
- Harbour porpoise is a viable component of the site;
 - There is no significant disturbance of the species; and
 - The condition of supporting habitats and processes, and the availability of prey is maintained.

1.4 North Channel SAC

- 16 The North Channel site comprises an area of 1,604 km². The site is located along part of the east coast of Northern Ireland from Island Magee in the north to south of Cloughey (Figure 4). Key literature sources, including relevant project literature, are as follows:
- ES Volume 2, Chapter;
 - Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: North Channel Conservation Objectives and Advice on Operations (dated March 2019)^x; and
 - The North Channel (UK) SAC Data Form (dated December 2015)^{xi}.

^{ix}<https://data.jncc.gov.uk/data/505b3bab-a974-41e5-991c-c29ef3e01c0a/BCA-ConsAdvice.pdf>

^x<https://data.jncc.gov.uk/data/be0492aa-f1d6-4197-be22-e9a695227bdb/NorthChannel-conservation-advice.pdf>

^{xi} <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030399.pdf>

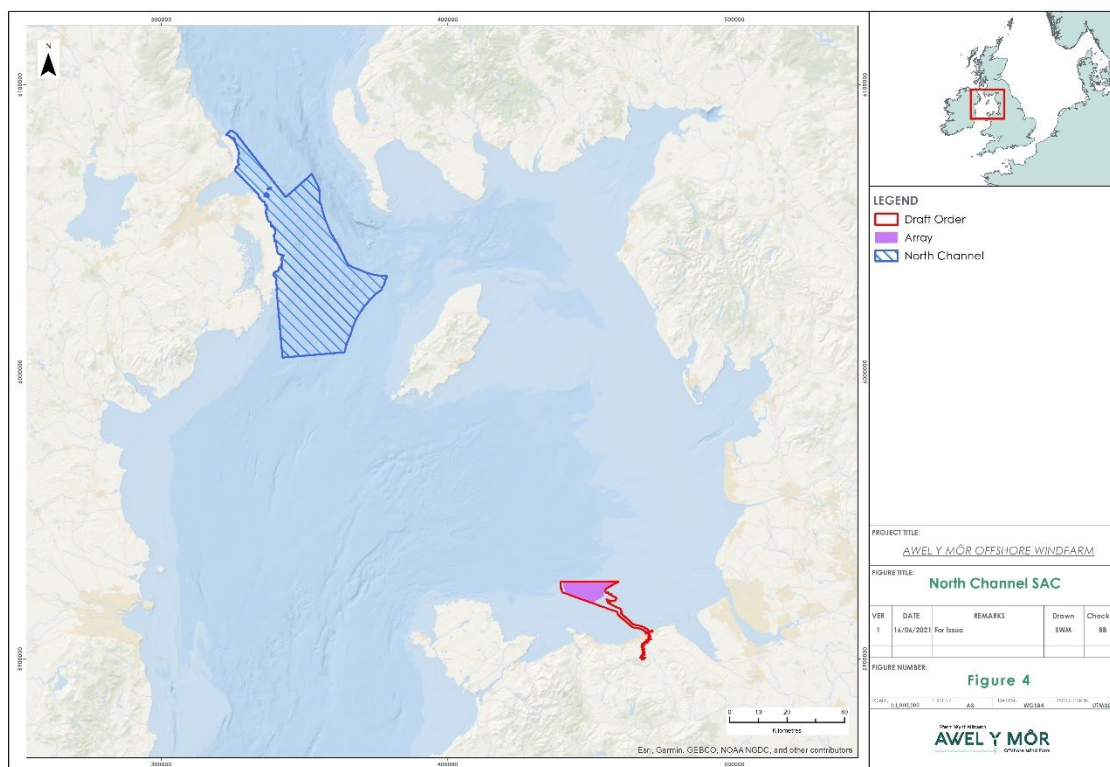


Figure 4: Location of North Channel SAC in relation to AyM.

1.4.1 Qualifying features

17 The SAC is designated for the following qualifying features:

- ▲ 1351 Harbour porpoise (*Phocoena phocoena*).

1.4.2 The characteristics of the European site

18 The area included within the site covers important winter habitat which emerged as one of the top 10% persistent high-density areas for this season in the UK. The site also includes a 2 to 8 km wide strip from Mew Island (Copelands) near Donaghadee to Island Magee, near Larne. The strip includes locations where some of the largest groups of harbour porpoise have been counted in Northern Ireland over the period from 1996 to 2014, ranging from 20 to 100 individuals in any one count.

1.4.3 Conservation advice

- 19 Advice on operations and Management measures can be found within the Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: North Channel Conservation Objectives and Advice on Operations document (dated March 2019)^{xii}.
- 20 The Conservation Objectives for the site are to ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining FCS for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:
- ▲ Harbour porpoise is a viable component of the site;
 - ▲ There is no significant disturbance of the species; and
 - ▲ The condition of supporting habitats and processes, and the availability of prey is maintained.

1.5 Menai Strait and Conwy Bay SAC

- 21 Menai Strait and Conwy Bay SAC is in north-west Wales. The unique physiographic conditions make this an unusual site, which has long been recognised as important for marine wildlife. Key literature sources, including relevant project literature, are as follows:
- ▲ ES Volume 2, Chapter 4;
 - ▲ The Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay Special Area of Conservation Indicative site level feature condition assessments 2018, NRW Evidence Report No.232 (dated January 2018)^{xiii}
 - ▲ The Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay (UK) SAC Data Form (dated December 2015)^{xiv}.

^{xii}<https://data.jncc.gov.uk/data/be0492aa-f1d6-4197-be22-e9a695227bdb/NorthChannel-conservation-advice.pdf>

^{xiv} <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030202.pdf>

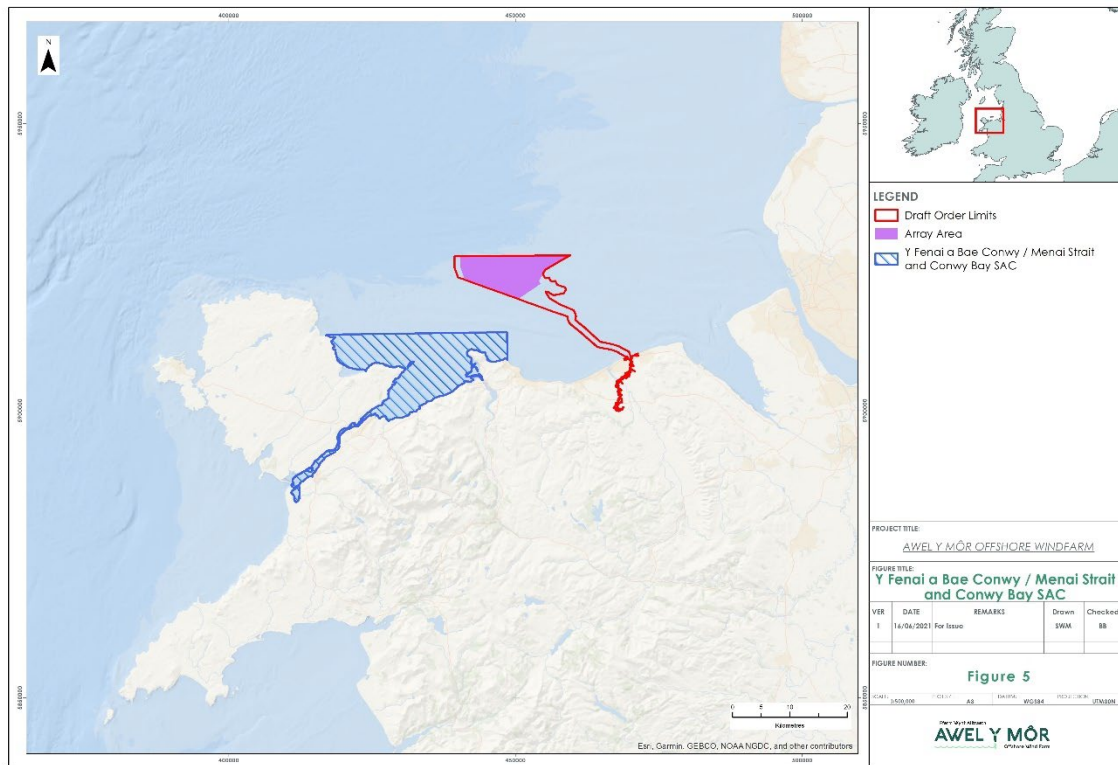


Figure 5: Location of Menai Strait and Conwy Bay SAC in relation to AyM.

1.5.1 Qualifying features

22 The SAC is designated for the following qualifying features:

- Mudflats and sandflats not covered by seawater at low tide;
- Reefs;
- Sandbanks which are slightly covered by seawater all the time;
- Large shallow inlets and bays; and
- Submerged or partially submerged sea caves.

1.5.2 The characteristics of the European site

23 The variation in physical and environmental conditions throughout the site, including rock and sediment type, aspect, water clarity and exposure to tidal currents and wave action result in a wide range of habitats and associated marine communities. Many of these community types are unusual in Wales.

1.5.3 Conservation advice

- 24 Advice on operations and Management measures can be found within the Advice Provided by the Countryside Council for Wales in Fulfilment of Regulation 33 of the Conservation (natural habitats, &c.) Regulations 1994 (Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay European Marine Site comprising: Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay Special Area of Conservation, Traeth Lafan Special Protection Area (SPA), and Ynys Seiriol/ Puffin Island SPA) (dated February 2009)^{xv}.
- 25 The Conservation Objectives for the site is to achieve favourable conservation status, which is met when all the following, subject to natural processes, are fulfilled and maintained in the long-term:
- Ensure that the overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing;
 - The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded;
 - The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded.

1.6 Rockabill to Dalkey Island SAC

- 26 This site includes a range of dynamic inshore and coastal waters in the western Irish Sea. These include sandy and muddy seabed, reefs, sandbanks and islands. This site extends southwards, in a strip approximately 7 km wide and 40 km in length, from Rockabill, running adjacent to Howth Head, and crosses Dublin Bay to Frazer Bank in south Co. Dublin (Figure 6). Key literature sources, including relevant project literature, are as follows:
- ES Volume 2, Chapter 4;
 - Rockabill to Dalkey Island SAC Site Synopsis, code 003000 (dated February 2014)^{xvi}

- Rockabill to Dalkey Island SAC Data Form (dated September 2019)^{xvii}.

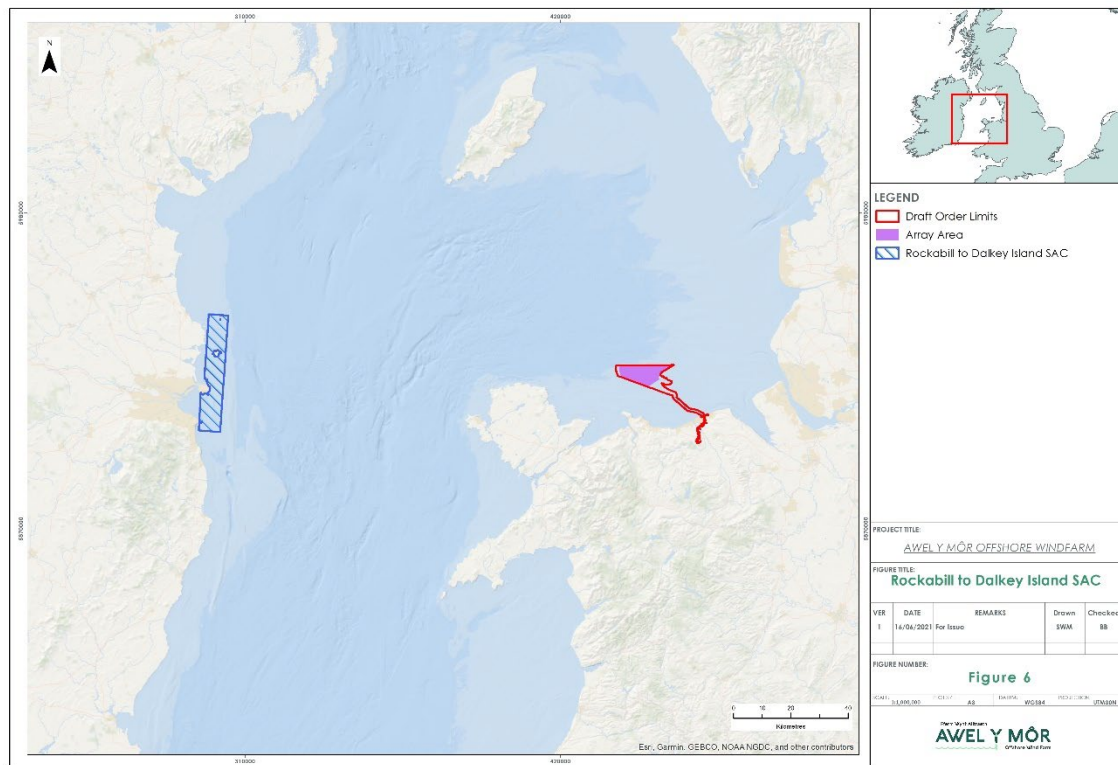


Figure 6: Location of Rockabill to Dalkey Island SAC in relation to AyM.

1.6.1 Qualifying features

27 The SAC is designated for the following qualifying features:

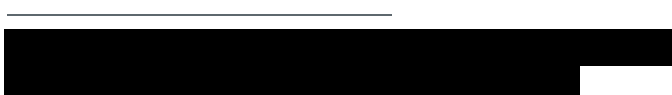
- 1170 Reefs; and
- 1351 Harbour porpoise (*Phocoena phocoena*).

1.6.2 The characteristics of the European site

- 28 Reef habitat is uncommon along the eastern seaboard of Ireland due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. Population survey data show that harbour porpoise (*Phocoena phocoena*) occurrence within the site boundary meets suitable reference values for other designated sites in Ireland. The species occurs year-round within the site and comparatively high group sizes have been recorded. Porpoises with young (i.e. calves) are observed at favourable, typical reference values for the species. Casual and effort-related sighting rates from coastal observation stations are significant for the east coast of Ireland and the latter appear to be relatively stable across all seasons.

1.6.3 Conservation advice

- 29 Advice on operations and Management measures can be found within the Conservation Objectives Series for Rockabill to Dalkey Island SAC (dated May 2013)^{xviii}.
- 30 The Conservation Objectives for the site is to ensure favourable condition for the habitats and species designated at that site. Favourable conservation status of a habitat is achieved when:
- its natural range, and area it covers within that range, are stable or increasing;
 - 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.
- 31 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;



- ▶ 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.

1.7 West Wales Marine SAC

32 The West Wales Marine/ Gorllewin Cymru Forol SAC covers an area of 7,376 square kilometres (km²) extending southwards from the western end of the Llyn Peninsula across Cardigan Bay to Pembrokeshire (Figure 7). Key literature sources, including relevant project literature, are as follows:

- ▶ ES Volume 2, Chapter 4;
- ▶ Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: West Wales Marine/ Gorllewin Cymru Forol Conservation Objectives and Advice on Operations (dated March 2019)^{xix}; and
- ▶ West Wales Marine/ Gorllewin Cymru Forol SAC Data Form (dated March 2019)^{xx}.

^{xix}<https://data.jncc.gov.uk/data/029e40f3-5f67-4168-b10d-8730f2c40e0a/WWM-conservation-advice.pdf>

^{xx} <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030397.pdf>

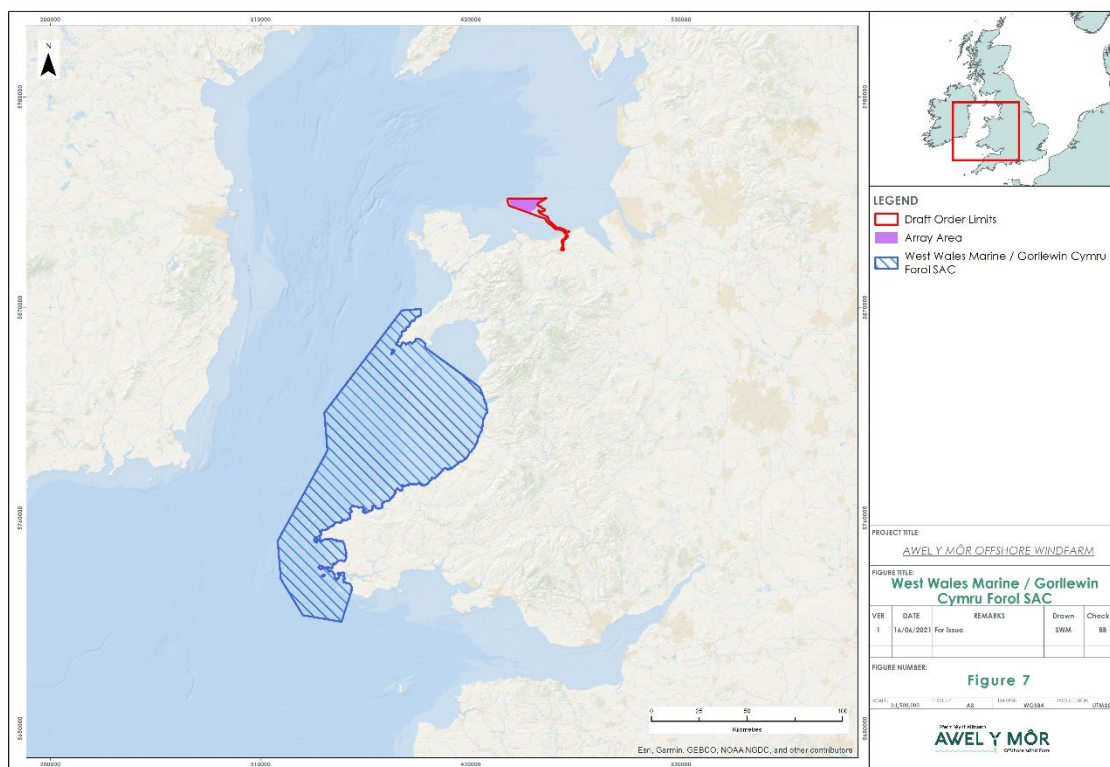


Figure 7: Location of West Wales Marine/ Gorllewin Cymru Forol SAC in relation to AyM.

1.7.1 Qualifying features

33 The SAC is designated for the following qualifying features:

- ▲ 1351 Harbour porpoise (*Phocoena phocoena*).

1.7.2 The characteristics of the European site

34 The West Wales Marine/ Gorllewin Cymru Forol site has been recognised as an area with the top 10% predicted persistent high densities of harbour porpoise. The area included within the site covers important summer habitat for porpoises, while a part of this site in Cardigan Bay was also identified as important during winter.

1.7.3 Conservation advice

- 35 Advice on operations and Management measures can be found within the Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: West Wales Marine/ Gorllewin Cymru Forol Conservation Objectives and Advice on Operations (dated March 2019)^{xxi};
- 36 The Conservation Objectives for the site are to ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining FCS for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:
- ▲ Harbour porpoise is a viable component of the site;
 - ▲ There is no significant disturbance of the species; and
 - ▲ The condition of supporting habitats and processes, and the availability of prey is maintained.

1.8 Pembrokeshire Marine/ Sir Benfro Forol SAC

- 37 The Pembrokeshire Marine/ Sir Benfro Forol SAC encompasses areas of sea, coast and estuary that support a wide range of different marine habitats and wildlife, some of which are unique in Wales (Figure 8). Key literature sources, including relevant project literature, are as follows:
- ▲ ES Volume 2, Chapter 4);
 - ▲ The Pembrokeshire Marine/ Sir Benfro Forol Special Area of Conservation Advice provided by Natural Resources Wales in fulfilment of Regulation 37 of the Conservation of Habitats and Species Regulations 2017 (dated March 2018)^{xxii}
 - ▲ The Pembrokeshire Marine/ Sir Benfro Forol (UK) SAC Data Form (dated December 2015)^{xxiii}.

^{xxi}<https://data.jncc.gov.uk/data/029e40f3-5f67-4168-b10d-8730f2c40e0a/WWM-conservation-advice.pdf>

^{xxiii} <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013116.pdf>

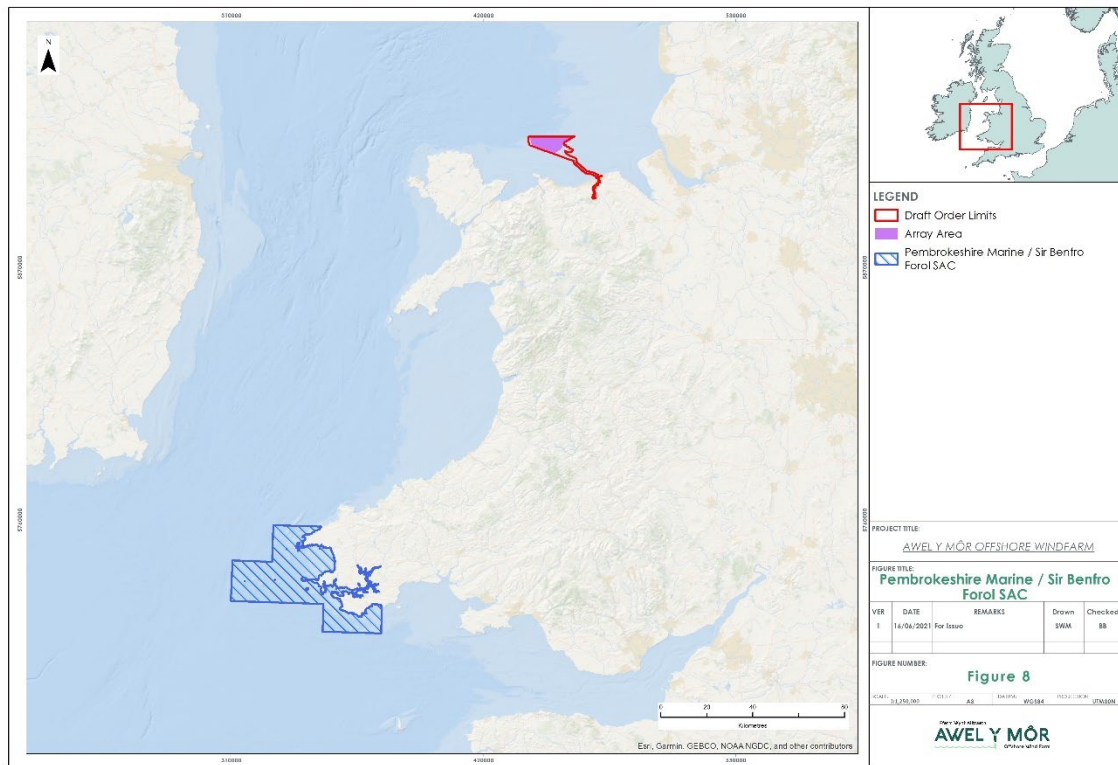


Figure 8: Location of Pembroke Marine/ Sir Benfro Forol SAC in relation to AyM.

1.8.1 Qualifying features

38 The SAC is designated for the following qualifying features:

- Sandbanks which are slightly covered by seawater all the time;
- Estuaries;
- Mudflats and sandflats not covered by seawater at low tide;
- Coastal lagoons;
- Large shallow inlets and bays;
- Reefs;
- Submerged or partially submerged sea caves;
- Atlantic salt meadows;
- Grey seal (*Halichoerus grypus*);
- Otter (*Lutra lutra*);
- Allis shad (*Alosa alosa*);
- Twaite shad (*Alosa fallax*);
- River lamprey (*Lampetra fluviatilis*);
- Sea lamprey (*Petromyzon marinus*); and

- ▲ Shore dock (*Rumex rupestris*).

1.8.2 The characteristics of the European site

- 39 The Pembrokeshire Marine SAC also overlaps wholly or in part with the Skomer MCZ and a number of SPAs classified under the Birds Directive.
- 40 The Pembrokeshire Marine SAC is considered to be one of the best areas in the UK for large shallow inlets and bays (abbreviated to inlets and bays), estuaries, reefs, and grey seals (*Halichoerus grypus*).

1.8.3 Conservation advice

- 41 Advice on operations and Management measures can be found within the Pembrokeshire Marine Sir Benfro Forol Special Area of Conservation Advice provided by Natural Resources Wales in fulfilment of Regulation 37 of the Conservation of Habitats and Species Regulations 2017 (dated March 2018)^{xxiv}
- 42 The Conservation Objectives for the site are as follows (for all species):
- ▲ The population is maintaining itself on a long-term basis as a viable component of its natural habitat;
 - ▲ The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future; and
 - ▲ The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing.

1.9 River Dee and Bala Lake/ Afon Dyfrdwy A Llyn Tegid SAC

43 The source of the River Dee lies within the Snowdonia National Park and its catchment contains a wide spectrum of landscapes from high mountains around Bala, steep-sided wooded valleys, near Llangollen, to the rich agricultural plains of Cheshire and north Shropshire and the vast mudflats of the estuary (Figure 9). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Core Management Plan, including conservation objectives for River Dee and Bala Lake/ Afon Dyfrdwy A Llyn Tegid SAC (dated March 2008)^{xxv}
- ▲ The River Dee and Bala Lake (UK) SAC Data Form (dated December 2015)^{xxvi}.

^{xxvi}  
<https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030252.pdf>

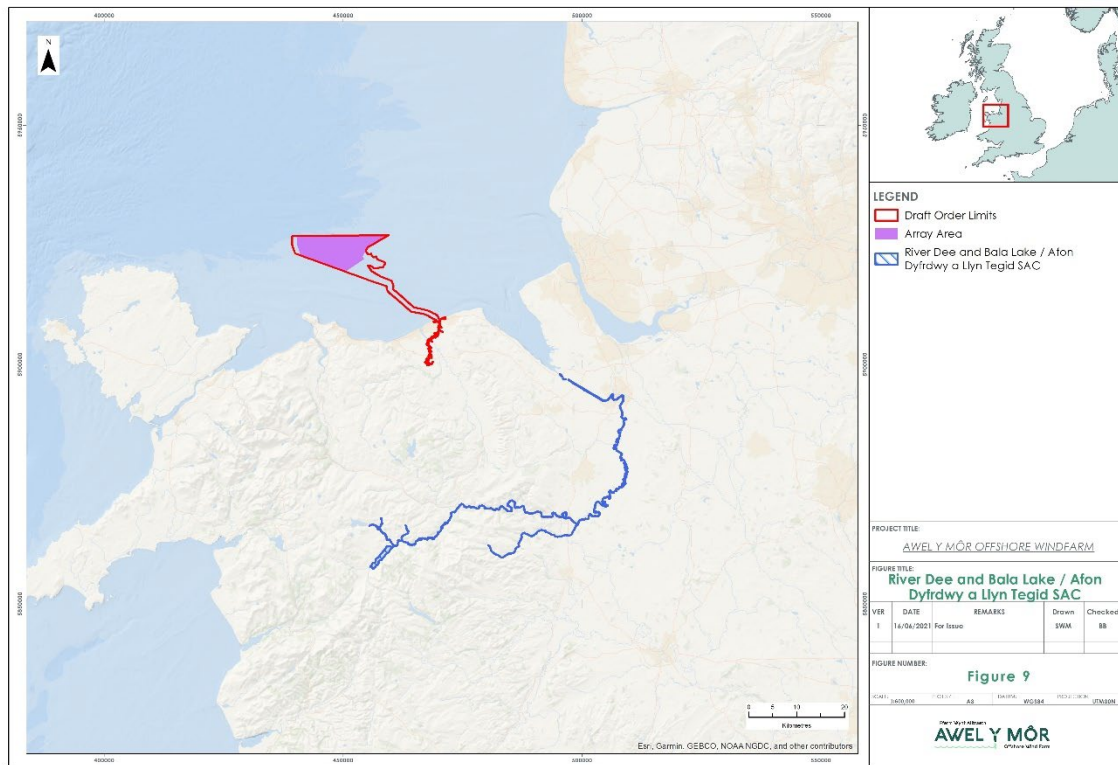


Figure 9: Location of River Dee and Bala Lake (UK) SAC in relation to AyM.

1.9.1 Qualifying features

44 The SAC is designated for the following qualifying features:

- 1029 Freshwater pearl mussel (*Margaritifera margaritifera*);
- 1095 Sea lamprey (*Petromyzon marinus*);
- 1096 Brook lamprey (*Lampetra planeri*);
- 1099 River lamprey (*Lampetra fluviatilis*);
- 1103 Twaite shad (*Alosa fallax*);
- 1106 Atlantic salmon (*Salmo salar*);
- 1163 European bullhead (*Cottus gobio*);
- 1355 Eurasian otter (*Lutra lutra*); and
- 1831 Floating water-plantain (*Luronium natans*).

1.9.2 The characteristics of the European site

- 45 The site extends from the western extremity of Llyn Tegid taking in the entire lake and its banks to its outfall into the River Dee. It then takes in the river and its banks downstream to where it joins the Dee Estuary Site of Special Scientific Interest (SSSI). Parts of the Rivers Dee and Ceiriog lie within both Wales and England. They have therefore been notified as two separate SSSIs – the Afon Dyfrdwy (River Dee) SSSI in Wales and the River Dee (England) SSSI in England. However, the features for which the SSSIs are notified, in particular migratory fish, depend upon the whole river ecosystem.

1.9.3 Conservation advice

- 46 Advice on operations and Management measures can be found within the Core Management Plan, including conservation objectives for River Dee and Bala Lake/ Afon Dyfrdwy A Llyn Tegid SAC (dated March 2008)^{xxvii}.
- 47 The objective of this site is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.
- 48 Favourable conservation status of a habitat is achieved when:
- Its natural range, and area it covers within that range, are stable or increasing;
 - The specific structure and functions which are necessary for its long-term maintenance exist;
 - Are likely to continue to exist for the foreseeable future; and
 - The conservation status of its typical species is favourable.
- 49 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;
 - 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.

1.10 Pen Llŷn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC

50 The Pen Llŷn a'r Sarnau SAC encompasses areas of sea, coast and estuary that support a wide range of different marine habitats and wildlife (Figure 10). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ Pen Llŷn a'r Sarnau/ Llyn Peninsula and the Sarnau Special Area of Conservation Advice provided by Natural Resources Wales in fulfilment of Regulation 33 of the Conservation of Habitats and Species Regulations 1994 (dated February 2009)^{xxviii};
- ▲ The Pen Llŷn a'r Sarnau/ Llyn Peninsula and the Sarnau (UK) SAC Data Form (dated December 2012)^{xxix}.

xxviii

xxix <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013117.pdf>

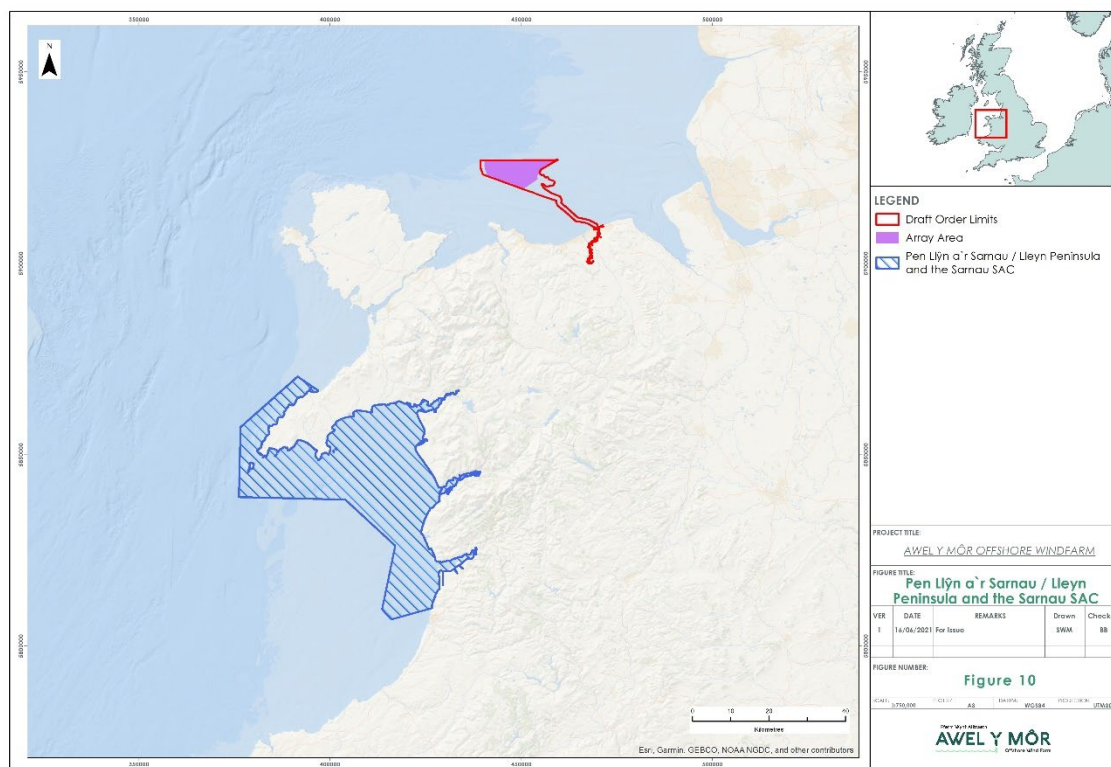


Figure 10: Location of Pen Llŷn a'r Sarnau/ Llyn Peninsula SAC in relation to AyM.

1.10.1 Qualifying features

51 The SAC is designated for the following qualifying features:

- Reefs;
- Large shallow inlets and bays;
- Sandbanks which are slightly covered by seawater all the time;
- Estuaries;
- Coastal lagoons;
- Mudflats and sandflats;
- Atlantic salt-meadow;
- *Salicornia* and other annuals colonising mud and sand feature;
- Submerged or partially submerged sea caves;
- Grey seal (*Halichoerus grypus*);
- Bottlenose dolphin (*Tursiops truncatus*); and
- Eurasian otter (*Lutra lutra*).

1.10.2 The characteristics of the European site

- 52 The nature of the seabed and coast and the range of environmental conditions present vary throughout the SAC. Differences in rock and sediment type, aspect, sediment movement, exposure to tidal currents and wave action, water clarity and salinity together with biological and food chain interactions have created a wide range of habitats and associated communities of marine plant and animal species, some of which are unique in Wales.

1.10.3 Conservation advice


- 53 Advice on operations and Management measures can be found within the Pen Llŷn a'r Sarnau/ Llyn Peninsula and the Sarnau Special Area of Conservation Advice provided by Natural Resources Wales in fulfilment of Regulation 33 of the Conservation of Habitats and Species Regulations 1994 (dated February 2009)^{xxx};
- 54 Favourable conservation status of a habitat is achieved when:
- Its natural range, and area it covers within that range, are stable or increasing;
 - The specific structure and functions which are necessary for its long-term maintenance exist;
 - Are likely to continue to exist for the foreseeable future; and
 - The conservation status of its typical species is favourable.
- 55 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;
 - 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.

xxx

1.11 The Dee Estuary (UK) SAC

56 The Dee Estuary is a funnel-shaped coastal plain estuary formed partly by erosion of Irish Sea ice moving landward up the estuary (CCW, 1993). It is the sixth largest estuary in the UK, covering an area of around 14,000 ha and contributing approximately 6% of the UK estuarine resource (Figure 11). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Dee Estuary SAC Citation (dated August 2014)^{xxxii}; and
- ▲ The Dee Estuary SAC Data Form (dated November 2011)^{xxxii}.

xxxii 
<https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030131.pdf>

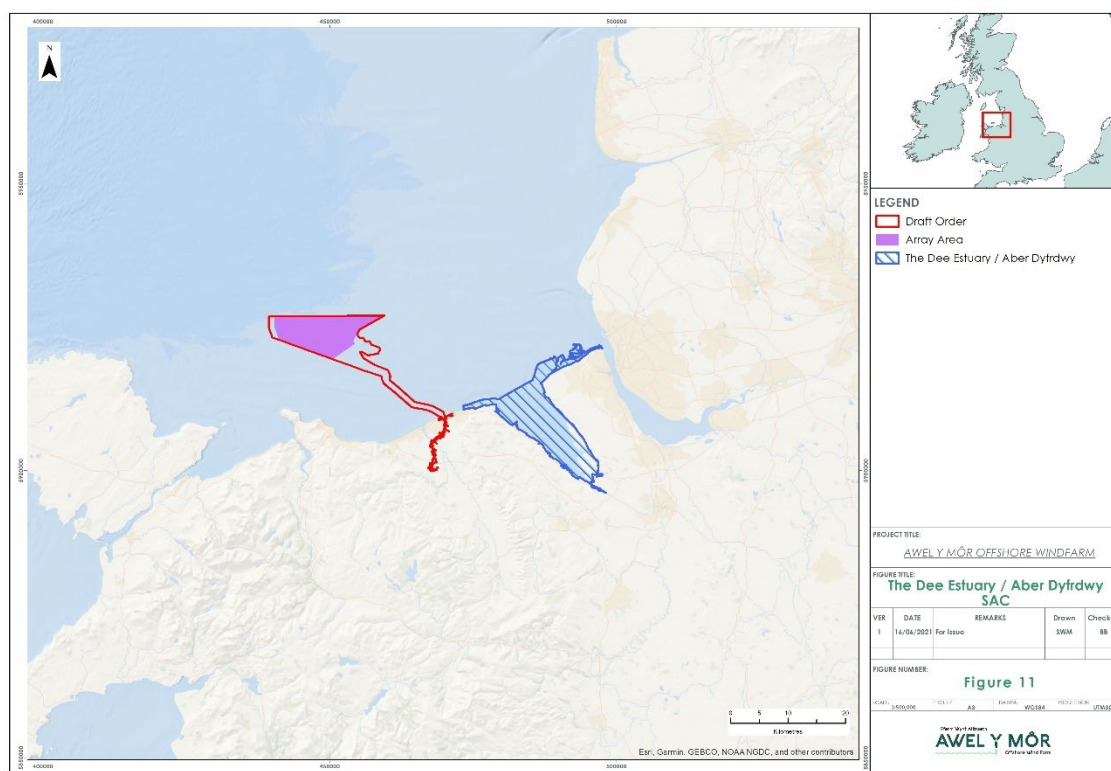


Figure 11: Location of The Dee Estuary SAC in relation to AyM.

1.11.1 Qualifying features

57 The Dee Estuary (UK) SPA is designated for the following qualifying features:

- Estuaries;
- Mudflats and sandflats not covered by seawater at low tide;
- Annual vegetation of drift lines;
- Vegetated sea cliffs of the Atlantic and Baltic coasts;
- *Salicornia* and other annuals colonising mud and sand;
- Atlantic salt meadows (*Glaucopuccinellietalia maritimae*);
- Embryonic shifting dunes; Shifting dunes
- Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes");
- Fixed dunes with herbaceous vegetation ("grey dunes");
- Humid dune slacks;
- *Petromyzon marinus*; Sea lamprey;
- *Lampetra fluviatilis*; River lamprey; and
- *Petalophyllum ralfsii*; Petalwort.

1.11.2 The characteristics of the European site

58 The Dee Estuary European marine site includes seven of the interest features of the Special Area of Conservation that qualify under Annex I and Annex II of the Habitats Directive. This section describes and explains the importance of each of these interest features together with their component sub-features.

1.11.3 Conservation advice

59 Advice on operations and Management measures can be found within the Conservation Objectives (dated February 2019)^{xxxiii}.

60 The Conservation Objectives for the site are as follows:

- 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.

1.12 The Dee Estuary (UK) SPA

61 The Dee Estuary SPA is a site of ornithological importance on the boundary between England and Wales on the north-west coast of Britain. The site covers an area of approximately 143 km². (Figure 12). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;
- The Dee Estuary SPA Citation (dated August 2014)^{xxxiv}; and
- The Dee Estuary SPA Data Form (dated November 2011)^{xxxv}.



^{xxxv} <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030131.pdf>

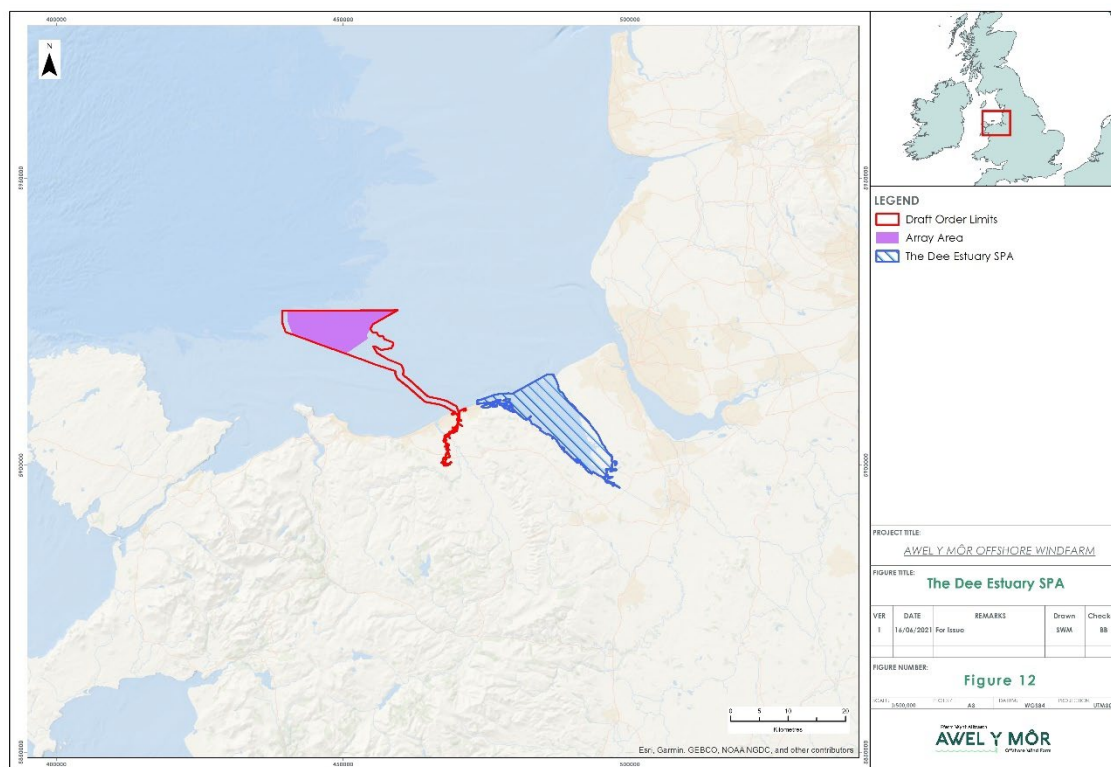


Figure 12: Location of The Dee Estuary SPA in relation to AyM.

1.12.1 Qualifying features

62 The Dee Estuary (UK) SPA is designated for the following qualifying features:

- A005 Great Crested Grebe (*Podiceps cristatus*)*;
- A017 Cormorant (*Phalacrocorax carbo*)*;
- A048 Common shelduck (*Tadorna tadorna*);
- A050 Eurasian wigeon (*Anas penelope*)*;
- A052 Eurasian teal (*Anas crecca*);
- A054 Northern pintail (*Anas acuta*);
- A130; Eurasian oystercatcher (*Haematopus ostralegus*);
- A141 Grey plover (*Pluvialis squatarola*);
- A142 Lapwing (*Vanellus vanellus*)*;
- A143 Knot (*Calidris canutus*);
- A144 Sanderling (*Calidris alba*)*;
- A149 Dunlin (*Calidris alpina alpina*);
- A156 Black-tailed godwit (*Limosa limosa islandica*);
- A157 Bar-tailed godwit (*Limosa lapponica*);

- ▲ A160 Eurasian curlew (*Numenius arquata*);
- ▲ A162 Common redshank (*Tringa totanus*);
- ▲ A191 Sandwich tern (*Sterna sandvicensis*);
- ▲ A193 Common tern (*Sterna hirundo*);
- ▲ A195 Little tern (*Sterna albifrons*); and
- ▲ Waterbird assemblage.
- ▲ *Species that are only recognised as part of the waterbird assemblage and not as individual species

1.12.2 The characteristics of the European site

63 It is a large, funnel-shaped, sheltered estuary, which supports extensive areas of intertidal sand and mudflats and saltmarsh. The site is of major importance for waterbirds; during the winter the intertidal flats, saltmarshes and fringing habitats including coastal grazing marsh/fields, provide feeding and roosting sites for internationally important numbers of ducks and waders; in summer the site supports nationally important breeding colonies of two species of tern. The site is also important during migration periods, particularly for wader populations moving along the west coast of Britain and for Sandwich terns post-breeding.

1.12.3 Conservation advice

64 Advice on operations and Management measures can be found within:

- ▲ The Site Improvement Plan (dated November 2014)^{xxxvi}; and
- ▲ The Conservation Objectives (dated February 2019)^{xxxvii}.

65 The Conservation Objectives for the site are found in The Dee Estuary European Marine Site comprising Dee Estuary / Aber Dyfrdwy Special Area of Conservation, The Dee Estuary Special Protection Area and The Dee Estuary Ramsar Site (Natural England & the Countryside Council for Wales' advice given under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994 (dated January 2010)^{xxxviii} as follows:



- 66 Interest feature 1: Conservation objective for the internationally important population of the regularly occurring Annex I species: wintering bar-tailed godwit
- 67 The conservation objective for the “wintering bar-tailed godwit” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 68 The interest feature “wintering bar-tailed godwit” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ✦ the 5-year peak mean population size for the wintering bar-tailed godwit population is no less than 1,150 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - ✦ the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - ✦ the extent and spatial distribution of vegetation less than 10cm in height across the saltmarsh is maintained;
 - ✦ existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - ✦ aggregations of bar-tailed godwit roosting or feeding on the intertidal flats or saltmarsh are not subject to significant disturbance.
- 69 Interest feature 2: Conservation objective for the internationally important population of the regularly occurring Annex I species: breeding common tern
- 70 The conservation objective for the “breeding common tern” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 71 The interest feature “breeding common tern” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ✦ the 5-year mean population size for the breeding common tern population is no less than 392 breeding pairs [i.e. the 5-year mean between 1995-1999];

- the five-year mean productivity of the breeding common tern population is no less than 1.34 chicks fledging per breeding pair per year [i.e. the 5-year mean between 1995-1999];
 - the abundance of common tern prey species within the estuary is maintained;
 - common terns are able to pass freely between the Dee Estuary and their breeding site at Shotton Lagoons and Reedbeds without obstruction; and
 - aggregations of common terns roosting on the upper shore over high tide are not subject to significant disturbance.

72 Interest feature 3: Conservation objective for the internationally important population of the regularly occurring Annex I species: breeding little tern

73 The conservation objective for the “breeding little tern” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:

74 The interest feature “breeding little tern” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

 - the 5-year mean population size for the breeding little tern population is no less than 69 breeding pairs [i.e. the 5-year mean between 1995-1999];
 - the five-year mean productivity of the breeding little tern population is no less than 0.80 chicks fledging per breeding pair per year [i.e. the 5-year mean between 1995- 1999];
 - the breeding site is not subject to significant disturbance;
 - the extent of shingle habitat at Gronant, which is suitable for nesting little terns is maintained; and
 - aggregations of little terns roosting on the beach at Gronant or Point of Ayr over high tide are not subject to significant disturbance.

75 Interest feature 4: Conservation objective for the internationally important population of the regularly occurring Annex I species: passage Sandwich tern

- 76 The conservation objective for the “passage Sandwich tern” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 77 The interest feature “passage Sandwich tern” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year mean peak population size for the autumn passage sandwich tern population is no less than 957 individuals [i.e. the 5-year mean peak between 1995- 1999]; and
 - aggregations of Sandwich terns roosting on the upper shore over high tide are not subject to significant disturbance.
- 78 Interest feature 5: Conservation objective for the internationally important population of the regularly occurring migratory species: passage redshank
- 79 The conservation objective for the “passage redshank” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 80 The interest feature “passage redshank” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the passage redshank population is no less than 8,795 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the abundance and dispersion of redshank prey species are maintained at levels sufficient to support the population size in
 - the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of roosting or feeding redshank are not subject to significant disturbance.

- 81 Interest feature 6: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering shelduck
- 82 The conservation objective for the “wintering shelduck” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 83 The interest feature “wintering shelduck” will be considered to be in favourable condition when, subject to natural processes¹, each of the following conditions are met:
- the 5-year peak mean population size for the wintering shelduck population is no less than 7,725 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the abundance and dispersion of shelduck prey species are maintained at levels sufficient to support the population size in (i);
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of loafing or feeding shelduck are not subject to significant disturbance.
- 84 Interest feature 7: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering teal
- 85 The conservation objective for the “wintering teal” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 86 The interest feature “wintering teal” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering teal population is no less than 5,251 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];

- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- the extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained;
- greater than 25% cover of seed bearing plants is maintained during winter across the saltmarsh;
- the extent of standing water pools or 'flashes' in the saltmarsh is maintained;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- aggregations of loafing or feeding teal are not subject to significant disturbance.

87 Interest feature 8: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering pintail

88 The conservation objective for the "wintering pintail" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:

89 The interest feature "wintering pintail" will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering pintail population is no less than 5,407 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- the extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained;
- the abundance and dispersion of pintail prey species is maintained at levels required to support the population size in (i);
- greater than 25% cover of soft leaved herbs and grasses is maintained during winter across the saltmarsh;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around loafing areas, and feeding areas; and

- ▲ aggregations of loafing or feeding pintail are not subject to significant disturbance.
- 90 Interest feature 9: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering oystercatcher
- 91 The conservation objective for the “wintering oystercatcher” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 92 The interest feature “wintering oystercatcher” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ▲ the 5-year peak mean population size for the wintering oystercatcher population is no less than 22,677 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - ▲ the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - ▲ the abundance and dispersion of oystercatcher prey species are maintained at levels sufficient to support the population size in (i);
 - ▲ the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
 - ▲ the extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained;
 - ▲ the extent and height of the shingle spit at Point of Ayr is maintained;
 - ▲ existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - ▲ aggregations of roosting or feeding oystercatcher are not subject to significant disturbance.
- 93 Interest feature 10: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering grey plover

- 94 The conservation objective for the “wintering grey plover” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 95 The interest feature “wintering grey plover” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering grey plover population is no less than 1,643 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the abundance and dispersion of grey plover prey species are maintained at levels sufficient to support the population size in (i);
 - the extent and spatial distribution of saltmarsh vegetation less than 10 cm in height is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of roosting or feeding grey plover are not subject to significant disturbance.
- 96 Interest feature 11: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering knot
- 97 The conservation objective for the “wintering knot” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 98 The interest feature “wintering knot” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering knot population is no less than 12,394 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;

- the abundance and dispersion of knot prey species⁶ are maintained at levels sufficient to support the population size in (i);
 - the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of roosting or feeding knot are not subject to significant disturbance.
- 99 Interest feature 12: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering dunlin
- 100 The conservation objective for the “wintering dunlin” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 101 The interest feature “wintering dunlin” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering dunlin population is no less than 27,769 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the abundance and dispersion of dunlin prey species are maintained at levels sufficient to support the population size in (i);
 - the extent and spatial distribution³ of saltmarsh vegetation less than 10cm in height is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of roosting or feeding dunlin are not subject to significant disturbance.

- 102 Interest feature 13: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering black-tailed godwit
- 103 The conservation objective for the “wintering black-tailed godwit” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 104 The interest feature “wintering black-tailed godwit” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ✦ the 5-year peak mean population size for the wintering black-tailed godwit population is no less than 1,747 individuals [i.e. the 5-year mean peak between 1994/95- 1998/99];
 - ✦ the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - ✦ the abundance and dispersion of black-tailed godwit prey species are maintained at levels sufficient to support the population size in (i);
 - ✦ the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
 - ✦ existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - ✦ aggregations of roosting and feeding black-tailed godwit are not subject to significant disturbance.
- 105 Interest feature 14: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering curlew
- 106 The conservation objective for the “wintering curlew” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 107 The interest feature “wintering curlew” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering curlew population is no less than 3,899 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- the abundance and dispersion of curlew prey species are maintained at levels sufficient to support the population size in (i);
- the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- aggregations of roosting or feeding curlew are not subject to significant disturbance.

108 Interest feature 15: Conservation objective for the internationally important population of the regularly occurring migratory species: wintering redshank

109 The conservation objective for the “wintering redshank” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:

110 The interest feature “wintering redshank” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering redshank population is no less than 5,293 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- The abundance and dispersion of redshank prey species are maintained at levels sufficient to support the population size in (i);
- the extent and spatial distribution of saltmarsh vegetation less than 10 cm is maintained;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and

- aggregations of roosting or feeding redshank are not subject to significant disturbance.
- 111 Interest feature 16: Conservation objective for the internationally important assemblage of regularly occurring waterbirds
- 112 The conservation objective for the “internationally important assemblage of regularly occurring waterbirds” feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below:
- 113 The interest feature “internationally important assemblage of regularly occurring waterbirds” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering waterbird assemblage is no less than 120,726 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the relative proportions of waders and wildfowl comprising the wintering waterbird assemblage is maintained;
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained;
 - the extent and spatial distribution of saltmarsh vegetation less than 10 cm in height is maintained;
 - the extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained;
 - the extent and height of the shingle spit at Point of Ayr is maintained;
 - the abundance of waterbird prey species are maintained at levels sufficient to support the population size in (i);
 - greater than 25% cover of both seed bearing plants and soft leaved herbs and grasses is maintained during winter across the saltmarsh;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around roosting sites, loafing and feeding areas; and
 - aggregations of roosting, loafing or feeding waterbirds are not subject to significant disturbance.

1.13 The Dee Estuary (UK) Ramsar

114 The Dee is a large funnel-shaped sheltered estuary (Figure 13) and is one of the top ten estuaries in the UK for wintering and passage waterfowl populations. The estuary supports internationally important numbers of waterfowl and waders. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ The Dee Estuary Information Sheet on Ramsar Wetlands (dated December 2012)^{xxxix}.

^{xxxix} <https://jncc.gov.uk/jncc-assets/RIS/UK11082.pdf>

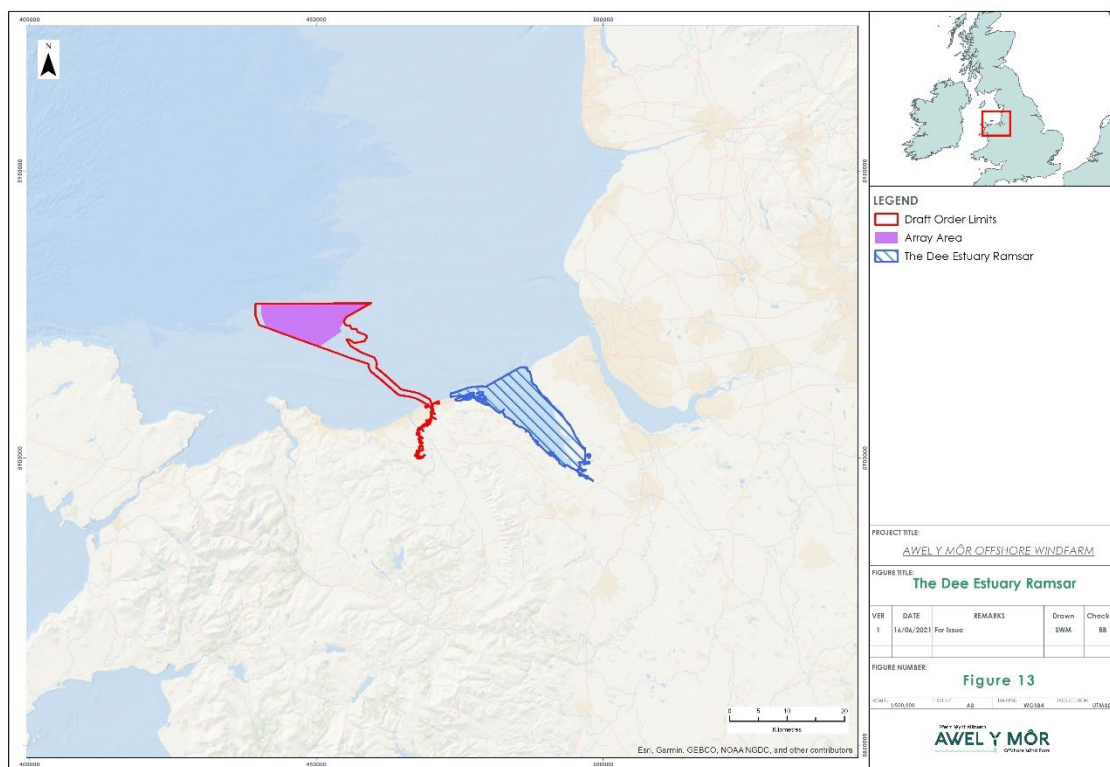


Figure 13: Location of The Dee Estuary Ramsar site in relation to AyM.

1.13.1 Qualifying features

115 The Dee Estuary (UK) Ramsar is designated for the following qualifying features:

- A048 Shelduck (*Tadorna tadorna*);
- A052 Eurasian teal (*Anas crecca*);
- A160 Eurasian curlew (*Numenius arquata*);
- A054 Northern pintail (*Anas acuta*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A141 Grey plover (*Pluvialis squatarola*);
- A143 Knot (*Calidris canutus islandica*);
- A149 Dunlin (*Calidris alpina alpina*);
- A156 Black-tailed godwit (*Limosa limosa islandica*);
- A157 Bar-tailed godwit (*Limosa lapponica*); and
- A162 Common redshank (*Tringa totanus*);

1.13.2 The characteristics of the European site

116 The Dee is a large funnel-shaped sheltered estuary and is one of the top ten estuaries in the UK for wintering and passage waterfowl populations. The estuary supports internationally important numbers of waterfowl and waders. The estuary is an accreting system, and the extent of saltmarsh continues to expand as the estuary seeks to achieve a new equilibrium situation following large-scale historical land-claim at the head of the estuary which commenced in the 1730s. Nevertheless, the estuary still supports extensive areas of intertidal sand and mudflats as well as saltmarsh

1.13.3 Conservation advice

117 Advice on operations and Management measures can be found within: Natural England & the Countryside Council for Wales' advice given under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994, The Dee Estuary Marine Site (January 2010)^{xl}.

118 Interest feature 1, Criterion 5: Conservation objective for the internationally important wetland regularly supporting 20,000 or more waterbirds

119 The conservation objective for the "internationally important wetland regularly supporting 20,000 or more waterbirds" feature of The Dee Estuary Ramsar Site is to maintain the feature in a favourable condition, as defined below:

120 The interest feature "internationally important wetland regularly supporting 20,000 or more waterbirds will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- ▲ the 5-year peak mean population size for the wintering waterbird assemblage is no less than 120,726 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- ▲ the relative proportions of waders and wildfowl comprising the wintering waterbird assemblage is maintained;

- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- the extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained;
- the extent and spatial distribution of saltmarsh vegetation less than 10 cm in height is maintained;
- the extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained;
- the extent and height of the shingle spit at Point of Ayr is maintained;
- the abundance of waterbird prey species are maintained at levels sufficient to support the population size in (i);
- greater than 25% cover of both seed bearing plants and soft leaved herbs and grasses is maintained during winter across the saltmarsh;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around roosting sites, loafing and feeding areas; and
- aggregations of roosting, loafing or feeding waterbirds are not subject to significant disturbance.

121 Interest feature 2, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more redshank of the eastern Atlantic population on passage

122 The conservation objective for the “passage redshank” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:

123 The interest feature “passage redshank” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the passage redshank population is no less than 8,795 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- the abundance and dispersion of redshank prey species⁶ are maintained at levels sufficient to support the population size in (i);

- the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of roosting or feeding redshank are not subject to significant disturbance.
- 124 Interest feature 3, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering shelduck of the North-western European population
- 125 The conservation objective for the “wintering shelduck” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 126 The interest feature “wintering shelduck” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering shelduck population is no less than 7,725 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the abundance and dispersion of shelduck prey species are maintained at levels sufficient to support the population size in (i);
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of loafing or feeding shelduck are not subject to significant disturbance.
- 127 Interest feature 4, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering teal of the Northwestern European population
- 128 The conservation objective for the “wintering teal” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:

- 129 The interest feature “wintering teal” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering teal population is no less than 5,251 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained;
 - greater than 25% cover of seed bearing plants is maintained during winter across the saltmarsh;
 - the extent of standing water pools or ‘flashes’ in the saltmarsh is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of loafing or feeding teal are not subject to significant disturbance.
- 130 Interest feature 5, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering pintail of the Northwestern Europe population
- 131 The conservation objective for the “wintering pintail” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 132 The interest feature “wintering pintail” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering pintail population is no less than 5,407 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained;

- the abundance and dispersion of pintail prey species is maintained at levels required to support the population size in (i);
 - greater than 25% cover of soft leaved herbs and grasses is maintained during winter across the saltmarsh;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around loafing areas, and feeding areas; and
 - aggregations of loafing or feeding pintail are not subject to significant disturbance.
- 133 Interest feature 6, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering oystercatcher of the Europe and North-western Africa population
- 134 The conservation objective for the “wintering oystercatcher” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 135 The interest feature “wintering oystercatcher” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering oystercatcher population is no less than 22,677 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the abundance and dispersion of oystercatcher prey species are maintained at levels sufficient to support the population size in (i);
 - the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
 - the extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained;
 - the extent and height of the shingle spit at Point of Ayr is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and

- aggregations of roosting or feeding oystercatcher are not subject to significant disturbance.
- 136 Interest feature 7, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering grey plover of the Eastern Atlantic population
- 137 The conservation objective for the “wintering grey plover” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 138 The interest feature “wintering grey plover” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering grey plover population is no less than 1,643 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - The abundance and dispersion of grey plover prey species are maintained at levels sufficient to support the population size in (i);
 - the extent and spatial distribution of saltmarsh vegetation less than 10 cm in height is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of roosting or feeding grey plover are not subject to significant disturbance.
- 139 Interest feature 8, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering knot of the Northwestern Canada to North-western Europe population
- 140 The conservation objective for the “wintering knot” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:

141 The interest feature “wintering knot” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering knot population is no less than 12,394 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- The abundance and dispersion of knot prey species are maintained at levels sufficient to support the population size in (i);
- the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- aggregations of roosting or feeding knot are not subject to significant disturbance.

142 Interest feature 9, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering dunlin of the Northern Siberia, Europe and Northern Africa population

143 The conservation objective for the “wintering dunlin” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:

144 The interest feature “wintering dunlin” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering dunlin population is no less than 27,769 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- The abundance and dispersion of dunlin prey species are maintained at levels sufficient to support the population size in (i);

- ▲ the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
- ▲ existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- ▲ aggregations of roosting or feeding dunlin are not subject to significant disturbance.
- 145 Interest feature 10, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering black-tailed godwit of the Icelandic population
- 146 The conservation objective for the “wintering black-tailed godwit” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 147 The interest feature “wintering black-tailed godwit” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ▲ the 5-year peak mean population size for the wintering black-tailed godwit population is no less than 1,747 individuals [i.e. the 5-year mean peak between 1994/95- 1998/99];
- ▲ the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- ▲ The abundance and dispersion of black-tailed godwit prey species are maintained at levels sufficient to support the population size in (i);
- ▲ the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
- ▲ existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- ▲ aggregations of roosting and feeding black-tailed godwit are not subject to significant disturbance.
- 148 Interest feature 11, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering bar-tailed godwit of the Western Palearctic population

- 149 The conservation objective for the “wintering bar-tailed godwit” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 150 The interest feature “wintering bar-tailed godwit” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering bar-tailed godwit population is no less than 1,150 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
 - the extent and spatial distribution of vegetation less than 10cm in height across the saltmarsh is maintained;
 - existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
 - aggregations of bar-tailed godwit roosting or feeding on the intertidal flats or saltmarsh are not subject to significant disturbance.
- 151 Interest feature 12, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering curlew of the European population
- 152 The conservation objective for the “wintering curlew” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:
- 153 The interest feature “wintering curlew” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- the 5-year peak mean population size for the wintering curlew population is no less than 3,899 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
 - the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;

- the abundance and dispersion of curlew prey species are maintained at levels sufficient to support the population size in (i);
- the extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- aggregations of roosting or feeding curlew are not subject to significant disturbance.

154 Interest feature 13, Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more wintering redshank of the Eastern Atlantic population

155 The conservation objective for the “wintering redshank” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:

156 The interest feature “wintering redshank” will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering redshank population is no less than 5,293 individuals [i.e. the 5-year mean peak between 1994/95-1998/99];
- the extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained;
- the abundance and dispersion of redshank prey species are maintained at levels sufficient to support the population size in (i);
- the extent and spatial distribution of saltmarsh vegetation less than 10 cm is maintained;
- existing unrestricted bird sightlines of at least 200m are maintained in every direction around both roosting sites and feeding areas; and
- aggregations of roosting or feeding redshank are not subject to significant disturbance.

1.14 Ribble and Alt Estuaries (UK) SPA

157 The Ribble and Alt Estuaries SPA is a site of ornithological importance on the boundary between England and Wales on the north-west coast of Britain. The site covers an area of approximately 124 km² (Figure 14). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Ribble and Alt Estuaries SPA Citation (dated August 2014)^{xli}; and
- ▲ The Ribble and Alt Estuaries SPA Data Form (dated December 2015)^{xlii}.

^{xlii} <http://jncc.gov.uk/jncc-assets/SPA-N2K/UK9005103.pdf>

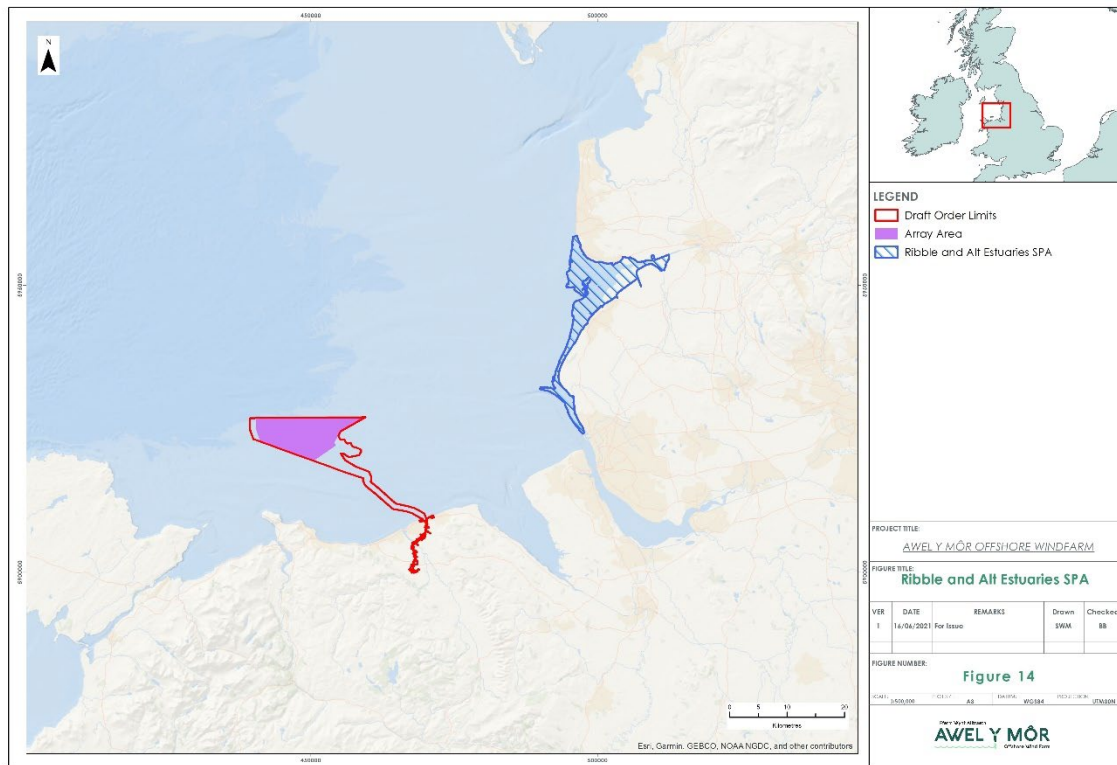


Figure 14: Location of the Ribble and Alt Estuaries (UK) SPA in relation to AyM.

1.14.1 Qualifying features

158 The Ribble and Alt Estuaries (UK) SPA is designated for the following qualifying features:

- A017 Cormorant (*Phalacrocorax carbo*)*;
- A037 Bewick's swan (*Cygnus columbianus bewickii*);
- A038 Whooper swan (*Cygnus cygnus*);
- A040 Pink-footed goose (*Anser brachyrhynchus*);
- A048 Common shelduck (*Tadorna tadorna*);
- A050 Eurasian wigeon (*Anas penelope*);
- A052 Eurasian teal (*Anas crecca*);
- A054 Northern pintail (*Anas acuta*);
- A062 Scaup (*Aythya marila*)*;
- A065 Common scoter (*Melanitta nigra*)*;
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A137 Ringed plover (*Charadrius hiaticula*);
- A140 European golden plover (*Pluvialis apricaria*);

- A141 Grey plover (*Pluvialis squatarola*);
- A142 Lapwing (*Vanellus vanellus*)*;
- A143 Knot (*Calidris canutus*);
- A144 Sanderling (*Calidris alba*);
- A149 Dunlin (*Calidris alpina alpina*);
- A151 Ruff (*Philomachus pugnax*);
- A156 Black-tailed godwit (*Limosa limosa islandica*);
- A157 Bar-tailed godwit (*Limosa lapponica*);
- A158 Whimbrel (*Numenius phaeopus*)*;
- A160 Eurasian curlew (*Numenius arquata*)*;
- A162 Common redshank (*Tringa totanus*);
- A183 Lesser black-backed gull (*Larus fuscus*);
- A193 Common tern (*Sterna hirundo*);
- Waterbird assemblage; and
- Seabird assemblage.
- *Species that are only recognised as part of the waterbird assemblage and not as individual species

1.14.2 The characteristics of the European site

159 The site consists of extensive areas of sand and mudflats and, particularly in the Ribble, large areas of saltmarsh. The intertidal flats are rich in invertebrates on which waders and some wildfowl feed. The highest densities of feeding birds are on the muddier substrates of the Ribble, though sandy shores throughout are also used. Saltmarshes and coastal grazing marshes support high densities of wildfowl and these, together with intertidal sand and mudflats throughout, are used as high tide roosts. The site supports internationally important populations of waterbirds in winter, including swans, geese, ducks and waders. It is also of major importance during migration periods, especially for wader populations moving along the west coast of Britain. The larger expanses of saltmarsh and areas of coastal grazing marsh support breeding birds, including large concentrations of gulls and terns. These seabirds feed both offshore and inland, outside the SPA. Several species of waterfowl (notably Pink-footed Goose, *Anser brachyrhynchus*) utilise feeding areas on agricultural land outside the SPA boundary.

1.14.3 Conservation advice

160 Advice on operations and Management measures can be found within:

- ▲ The Site Improvement Plan (dated October 2014)^{xliii};
- ▲ The Conservation Objectives (dated February 2019)^{xliv}.

161 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;

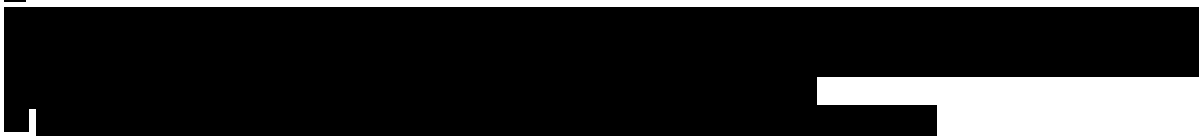
- ▲ Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;
 - The extent and distribution of the habitats of the qualifying features;
 - The structure and function 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.

162 Feature targets are described in the Supplementary Advice for the Ribble and Alt Estuaries SPA^{xlv}.

1.15 Ribble and Alt Estuaries (UK) Ramsar

163 A large area, including two estuaries, extensive sand and mudflats, saltmarsh and dunes. The tidal flats and saltmarsh support internationally important populations of wintering waterbirds (Figure 15). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ The Ribble and Atl Estuaries Information Sheet on Ramsar Wetlands (dated May 2005)^{xlvi}.



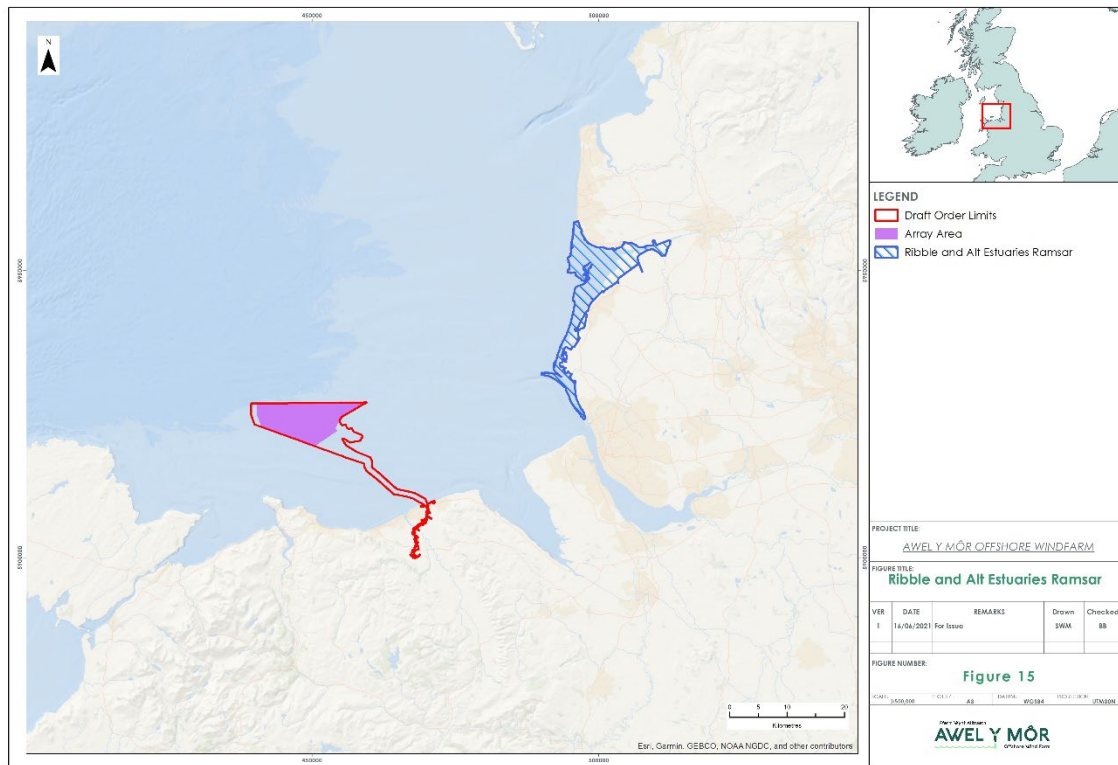


Figure 15: Location of the Ribble and Alt Estuaries Ramsar site in relation to AyM.

1.15.1 Qualifying features

164 The Ribble and Alt Estuaries (UK) Ramsar is designated for the following qualifying features:

- A037 Bewick's swan (*Cygnus columbianus bewickii*);
- A038 Whooper swan (*Cygnus cygnus*);
- A040 Pink-footed goose (*Anser brachyrhynchus*);
- A048 Common shelduck (*Tadorna tadorna*);
- A050 Eurasian wigeon (*Anas penelope*);
- A052 Eurasian teal (*Anas crecca*);
- A054 Northern pintail (*Anas acuta*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A137 Ringed plover (*Charadrius hiaticula*);
- A141 Grey plover (*Pluvialis squatarola*);
- A143 Knot (*Calidris canutus*);
- A144 Sanderling (*Calidris alba*);
- A149 Dunlin (*Calidris alpina alpina*);

- A156 Black-tailed godwit (*Limosa limosa islandica*);
- A157 Bar-tailed godwit (*Limosa lapponica*);
- A162 Common redshank (*Tringa totanus*); and
- A183 Lesser black-backed gull (*Larus fuscus*).

1.15.2 The characteristics of the European site

165 The Ribble and Alt Estuaries contain extensive areas of intertidal sand and mudflats. These are backed by, on the Ribble, one of the most extensive areas of grazed saltmarsh in Britain and, along the Sefton Coast, the largest calcareous dune complex in north-western England. The intertidal flats support internationally important populations of waterfowl which feed on a rich invertebrate fauna and Enteromorpha beds.

1.15.3 Conservation advice

166 The objective of this site is to maintain or restore the favourable conservation condition of the features listed for this site. Details regarding the features considered and the Ramsar criteria applied can be found in The Ribble and Alt Estuaries Information Sheet on Ramsar Wetlands (dated May 2005).

1.16 Morecambe Bay and Duddon Estuary (UK) SPA

167 The Morecambe Bay and Duddon Estuary SPA is situated along the coast of northern Lancashire and southern Cumbria and includes the second largest embayment in Britain, after the Wash in Norfolk (Figure 16). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;
- The Morecambe Bay and Duddon Estuary SPA Citation (dated August 2014)^{xlvii}; and
- The Morecambe Bay and Duddon Estuary SPA Data Form (dated December 2015)^{xlviii}.

^{xlviii} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020326.pdf>

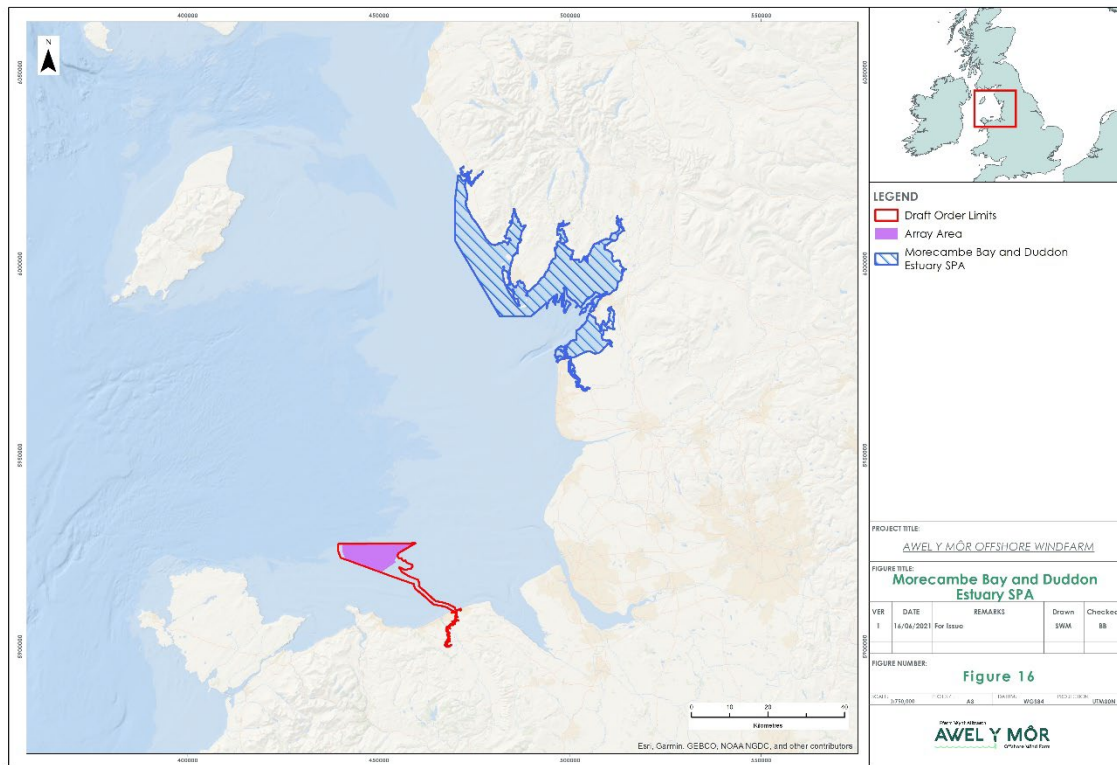


Figure 16: Location of The Morecambe Bay and Duddon Estuary (UK) SPA in relation to AyM.

1.16.1 Qualifying features

168 The Morecambe Bay and Duddon Estuary (UK) SPA is designated for the following qualifying features:

- A026 Little egret (*Egretta garzetta*);
- A038 Whooper swan (*Cygnus cygnus*);
- A040 Pink-footed goose (*Anser brachyrhynchus*);
- A048 Common shelduck (*Tadorna tadorna*);
- A054 Northern pintail (*Anas acuta*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A137 Ringed plover (*Charadrius hiaticula*);
- A140 European golden plover (*Pluvialis apricaria*);
- A141 Grey plover (*Pluvialis squatarola*);
- A143 Knot (*Calidris canutus*);
- A144 Sanderling (*Calidris alba*);
- A149 Dunlin (*Calidris alpina alpina*);
- A151 Ruff (*Philomachus pugnax*);

- A156 Black-tailed godwit (*Limosa limosa islandica*);
- A157 Bar-tailed godwit (*Limosa lapponica*);
- A160 Eurasian curlew (*Numenius arquata*);
- A162 Common redshank (*Tringa totanus*);
- A169 Ruddy turnstone (*Arenaria interpres*);
- A176 Mediterranean gull (*Larus melanocephalus*);
- A179 Black headed gull (*Larus ridibundus*)*;
- A183 Lesser black-backed gull (*Larus fuscus*);
- A184 Herring gull (*Larus argentatus*);
- A187 Greater black-backed gull (*Larus marinus*)*;
- A191 Sandwich tern (*Sterna sandvicensis*);
- A193 Common tern (*Sterna hirundo*);
- A194 Arctic Tern (*Sterna paradisaea*)*;
- A195 Little tern (*Sterna albifrons*);
- Waterbird assemblage; and
- Seabird assemblage.
- *Species that are only recognised as part of the seabird assemblage and not as individual species

1.16.2 The characteristics of the European site

169 The boundary of the SPA is formed by the amalgamation of two existing SPAs (Morecambe Bay SPA and Duddon Estuary SPA), and the addition of a marine foraging area for terns. The protected site comprises areas for breeding seabirds, foraging breeding seabirds, non-breeding seabirds and waterbirds utilising a range of habitats. The original features of the two SPAs are retained, with the addition of newly qualifying species. There are currently 27 features including two assemblages; in the breeding season the area regularly supports nearly 62,000 individual sea birds and in the winter it regularly supports over 210,000 individual waterfowl (Liley et al., 2015).

1.16.3 Conservation advice

170 Advice on operations and Management measures can be found within:

- The Site Improvement Plan (dated November 2014)^{xlix}; and
- The Conservation Objectives (dated February 2019)^l.



171 The site's conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified (the "Qualifying features" listed above).

▲ The objectives are to 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 feature;s and
- The distribution of the qualifying features within the site.

172 The feature targets are described in the Supplementary Advice for Morecambe Bay and Duddon Estuary SPAⁱⁱ.

1.17 Morecambe Bay and Duddon Estuary (UK) Ramsar

173 A range of grazed and ungrazed saltmarsh habitats occur around the edge of the estuary, especially the sheltered inner section. The site is the most important in Cumbria for sand-dune communities including large areas of calcareous dunes at Sandscale and Haverigg Haws and contrasting acid dunes on North Walney (Figure 17). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ The Duddon Estuary Information Sheet on Ramsar Wetlands (dated March 1998)ⁱⁱⁱ.



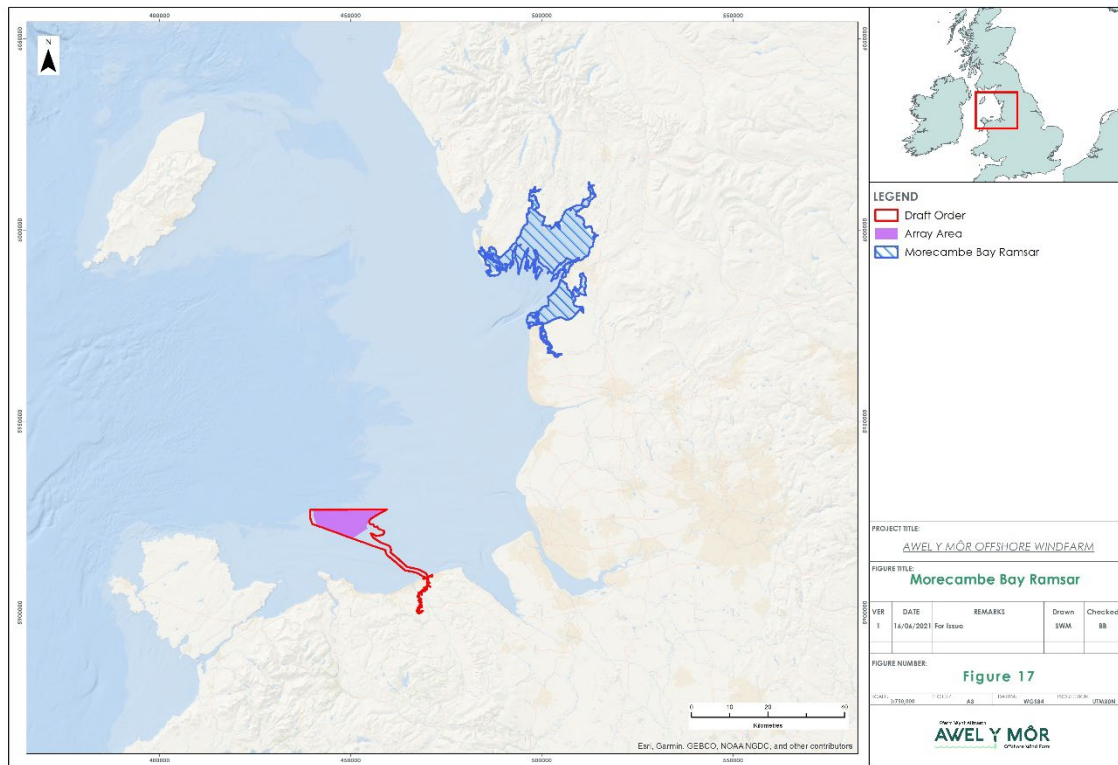


Figure 17: Location of The Morecambe Bay and Duddon Estuary Ramsar site in relation to AyM.

1.17.1 Qualifying features

174 The Morecambe Bay and Duddon Estuary (UK) Ramsar is designated for the following qualifying features:

- A005 Great Crested Grebe (*Podiceps cristatus*);
- A017 Cormorant (*Phalacrocorax carbo*);
- A040 Pink-footed goose (*Anser brachyrhynchus*);
- A048 Common shelduck (*Tadorna tadorna*);
- A050 Eurasian wigeon (*Anas penelope*);
- A063 Eider (*Somateria mollissima*);
- A067 Goldeneye (*Bucephala clangula*);
- A069 Red-breasted merganser (*Mergus serrator*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A137 Ringed plover (*Charadrius hiaticula*);
- A140 European golden plover (*Pluvialis apricaria*);
- A141 Grey plover (*Pluvialis squatarola*);
- A142 Lapwing (*Vanellus vanellus*);

- ▲ A143 Knot (*Calidris canutus*);
- ▲ A144 Sanderling (*Calidris alba*);
- ▲ A149 Dunlin (*Calidris alpina alpina*);
- ▲ A157 Bar-tailed godwit (*Limosa lapponica*);
- ▲ A160 Eurasian curlew (*Numenius arquata*);
- ▲ A162 Common redshank (*Tringa totanus*);
- ▲ A169 Ruddy turnstone (*Arenaria interpres*);
- ▲ A183 Lesser black-backed gull (*Larus fuscus*);
- ▲ A184 Herring gull (*Larus argentatus*);
- ▲ A187 Greater black-backed gull (*Larus marinus*); and
- ▲ A191 Sandwich tern (*Sterna sandvicensis*).

1.17.2 The characteristics of the European site

175 The majority of the site consists of intertidal sand and mudflats. These support invertebrate populations important for the large numbers of overwintering wildfowl and waders on the site. Extensive areas of saltmarsh occur around the outer edge of the site, especially in the more sheltered inner third of the estuary and around North Walney. There is considerable variation in the saltmarsh communities depending mainly on the intensity of grazing and degree of saltwater inundation. The estuary is one of the most important sites in Cumbria for sand dune communities, including areas of calcareous dunes at Sandscale and Haverigg Haws, and contrasting acid dunes at North Walney. A full range of dune types is present, from fore-dunes based on highly mobile sand dominated by *Ammophila arenaria*, to more fixed yellow and grey dunes and dune grasslands.

1.17.3 Conservation advice

176 The objective of this site is to maintain or restore the favourable conservation condition of the features listed for this site. Details regarding the features considered and the Ramsar criteria applied can be found in The Duddon Estuary Information Sheet on Ramsar Wetlands (dated March 1998).

1.18 Liverpool Bay/ Bae Lerpwl (UK) SPA

177 The Liverpool Bay/ Bae Lerpwl SPA is a site of ornithological importance in the east of the Irish Sea, bordering the coastlines of north-west England and north Wales, and running as a broad arc from Morecambe Bay to the east coast of Anglesey. The site covers an area of approximately 2,528 km². (Figure 18). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ Liverpool Bay/ Bae Lerpwl SPA Citation (dated August 2018)^{liii}; and
- ▲ Liverpool Bay/ Bae Lerpwl SPA Data Form (dated November 2011)^{liv}.

^{liv} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020294.pdf>

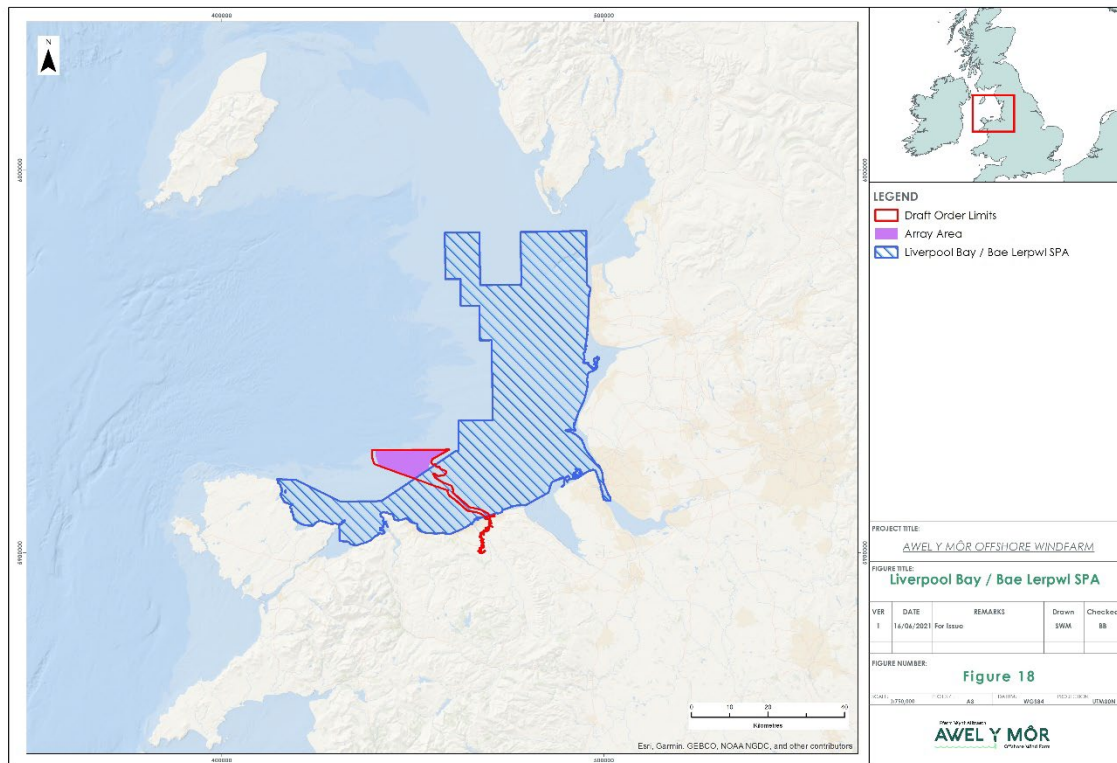


Figure 18: Location of The Liverpool Bay/ Bae Lerpwl (UK) SPA in relation to AyM.

1.18.1 Qualifying features

178 The Liverpool Bay/ Bae Lerpwl (UK) SPA is designated for the following qualifying features:

- A001 Red-throated diver (*Gavia stellata*);
- A017 Cormorant (*Phalacrocorax carbo*)*;
- A065 Common scoter (*Melanitta nigra*);
- A069 Red-breasted merganser (*Mergus serrator*)*;
- A193 Common tern (*Sterna hirundo*);
- A195 Little tern (*Sternula albifrons*);
- A117 Little gull (*Hydrocoleus minutus*); and
- Waterbird assemblage.
- *Species that are only recognised as part of the waterbird assemblage and not as individual species.

1.18.2 The characteristics of the European site

179 The seabed of the SPA consists of a wide range of mobile sediments. Large areas of muddy sand stretch from Rossall Point to the Ribble Estuary, and sand predominates in the remaining areas, with a concentrated area of gravelly sand off the Mersey Estuary and a number of prominent sandbanks off the English and Welsh coasts. The tidal currents throughout the SPA are generally weak, which combined with a relatively large tidal range facilitates the deposition of sediments

1.18.3 Conservation advice

180 Advice on operations and Management measures can be found within:

- ▲ The Site Improvement Plan (dated November 2014)^{lv};
- ▲ Liverpool Bay/ Bae Lerpwl SPA Departmental Brief (March 2016)^{lvi}; and
- ▲ The Conservation Objectives (dated February 2019)^{lvii}.

181 The Conservation Objectives for the site are found in the Liverpool Bay / Bae Lerpwl Special Protection Area (Advice under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010 (as amended) (dated October 2012)^{lviii} are as follows:

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

- ▲ Subject to natural change, maintain or enhance the red-throated diver population and its supporting habitats in favourable condition.

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

[REDACTED]

- 184 The conservation objective for Liverpool Bay/ Bae Lerpwl SPA Interest feature 2: Internationally important non-breeding population of common scoter (*Melanitta nigra*):
- 185 The interest feature common scoter will be considered to be in favourable condition only when both of the following two conditions are met:
 - 186 The size of the red-throated diver population is at, or shows only non-significant fluctuation around the mean population at the time of designation of the SPA to account for natural change; and
 - 187 The extent of the supporting habitat within the site is maintained.
- 188 The conservation objective for Liverpool Bay/ Bae Lerpwl SPA Interest feature 3: Non-breeding assemblage of over 20,000 waterbirds:
- 189 The interest feature waterbird assemblage will be considered to be in favourable condition only when both of the following two conditions are met:
 - 190 The size of the waterbird assemblage population shows only non-significant fluctuation around the mean at the time of designation to allow for natural change; and
 - 191 The extent of the waterbird assemblage supporting habitat within the site is maintained.

188 There were no conservation objectives available for the other designated features of this SPA.



1.19 Anglesey Terns/ Morwenoliaid Ynys Mon (UK) SPA

189 The Anglesey Terns/ Morewenoliaid Ynys Mon SPA is a site of ornithological importance that extends around most of the east, north and west coasts of Anglesey, generally from the mean high water mark out to between 10 and 20 km from the shore. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ Anglesey Terns/ Morwenoliaid Ynys Mon SPA Data Form (dated January 2017)^{lix}.

^{lix} <http://jncc.gov.uk/jncc-assets/SPA-N2K/UK9013061.pdf>

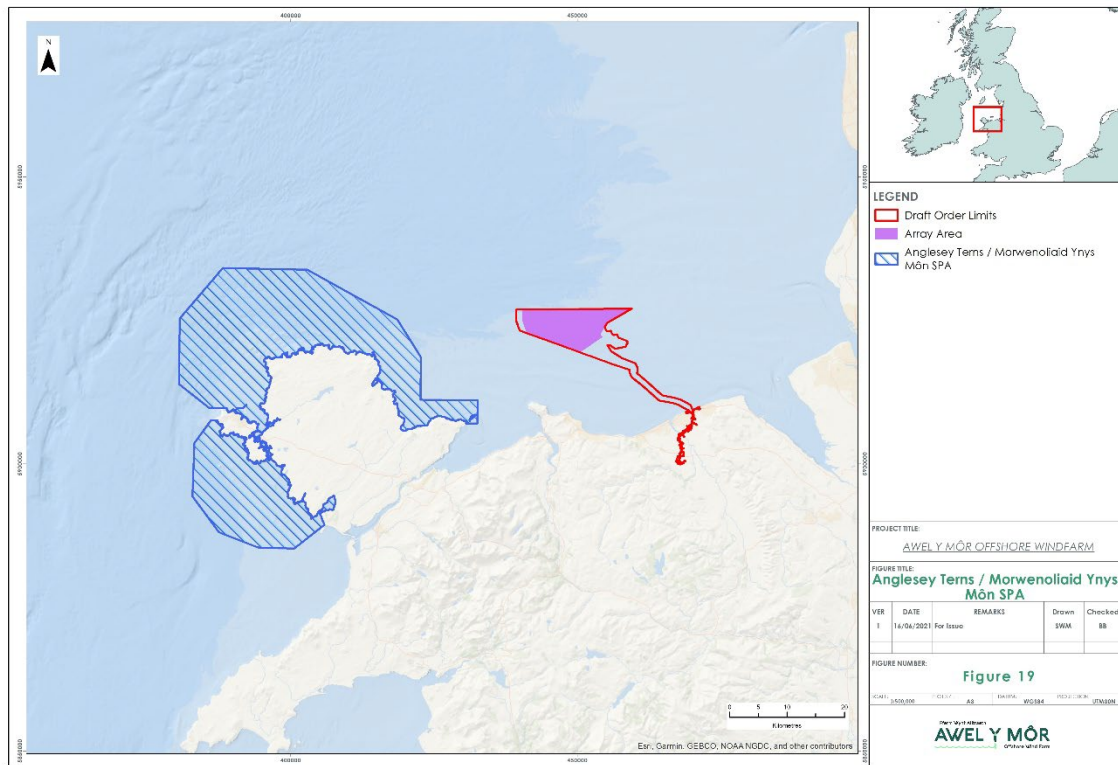


Figure 19: Location of The Anglesey Terns/ Morewenoliaid Ynys Mon (UK) SPA in relation to AyM.

1.19.1 Qualifying features

190 The Anglesey Terns/ Morwenoliaid Ynys Mon (UK) SPA is designated for the following qualifying features:

- A191 Sandwich Tern (*Sterna sandcivensis*);
- A192 Roseate Tern (*Sterna dougallii*);
- A193 Common Tern (*Sterna hirundo*); and
- A194 Arctic Tern (*Sterna paradisaea*).

1.19.2 The characteristics of the European site

191 The colonies of the four species of tern for which the SPA is classified are situated at three different sites: Ynys Feurig, Cemlyn Bay and The Skerries. Ynys Feurig is a series of small islets off the west coast of Anglesey which are joined to the Anglesey mainland at mid to low tide. The Skerries is a group of sparsely vegetated rocky islets, approximately 17ha in extent lying 3 km off the north western coast of Anglesey. The other colony which makes up this SPA is at Cemlyn Bay on the north coast of Anglesey, which comprises a saline lagoon separated from the sea by a shingle ridge.

1.19.3 Conservation advice

192 Advice on operations and Management measures can be found within:

- ▲ The Conservation Objectives (dated February 2019)^{ix}.

193 Conservation Objective for Feature 1-4: Breeding population of Terns:

- ▲ Feature 1: Arctic Tern *Sterna paradisae*
- ▲ Feature 2: Common Tern *Sterna hirundo*
- ▲ Feature 3: Roseate Tern *Sterna dougallii*
- ▲ Feature 4: Sandwich Tern *Sterna sandvicensis*

194 Vision for features 1-4

195 The vision for these features is for them to be in a favourable conservation status, where all the following conditions are satisfied:

- ▲ The number of breeding terns within the SPA is stable or increasing;
- ▲ The number of chicks successfully fledged in the SPA and beyond is sufficient to help sustain the population;
- ▲ The range and distribution of terns within the SPA and beyond is not constrained or hindered;
- ▲ The extent of supporting habitats used by terns is stable or increasing;
- ▲ Supporting habitats are of sufficient quality to support the requirements of terns;

- There are appropriate and sufficient food sources for terns within access of the SPA; and
- Actions or events likely to impinge on the sustainability of the population are under control.
-
-

1.20 Bowland Fells (UK) SPA

196 The Bowland Fells SPA is contiguous with the Bowland Fells SSSI. It is an outlier of the Pennine Range encompassing the main upland block within the area of Lancashire known as the Forest of Bowland (Figure 20). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;
- The Bowland Fells SPA and pSPA Citation (dated July 2018)^{lxi}; and

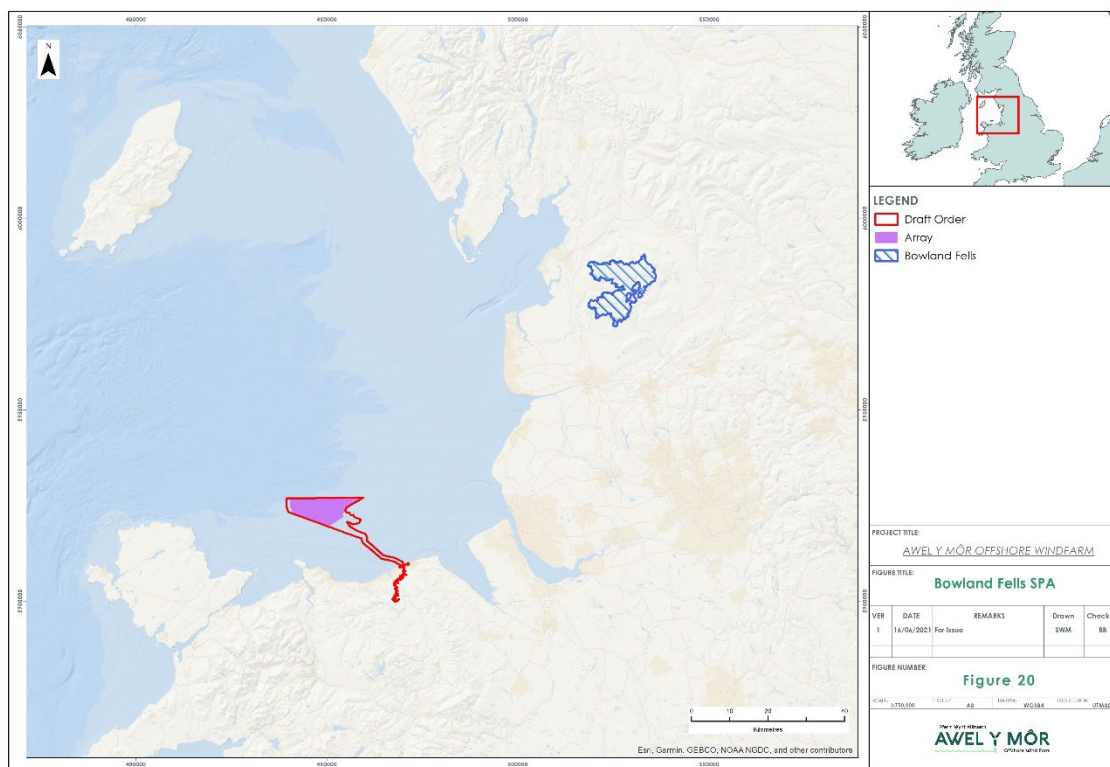


Figure 20: Location of The Bowland Fells (UK) SPA in relation to AyM.

1.20.1 Qualifying features

197 The Bowland Fells (UK) SPA is designated for the following qualifying features:

- A082 Hen Harrier (*Circus cyaneus*);
- A098 Merlin (*Falco columbarius*); and
- A183 Lesser black-backed gull (*Larus fuscus*) (proposed new interest).

1.20.2 The characteristics of the European site

198 The Bowland Fells SPA is contiguous with the Bowland Fells SSSI. It is an outlier of the Pennine Range encompassing the main upland block within the area of Lancashire known as the Forest of Bowland. The extensive upland fells support the largest expanse of heather moorland in Lancashire. Dry upland heath dominated by heather and bilberry is found on the steeper slopes and valleys, while the extensive peat soils are characterised by blanket bog vegetation with Sphagnum moss, cotton-grasses and heather and including rare plants such as bog rosemary. These provide habitat for a diverse upland breeding bird community, most notably scarce birds of prey such as hen harrier, merlin and peregrine, wading birds such as curlew and small upland passerine birds such as wheatear and ring ouzel. Areas of acid oak and birch woodland are also present in some areas, notably on the northern side of the Fells, where they are important for their rich assemblage of mosses, and birds such as pied flycatcher. The Fells also support one of England's largest breeding colonies of lesser black-backed gulls.

1.20.3 Conservation advice

199 Advice on operations and Management measures can be found within:

- ▲ The Site Improvement Plan (dated November 2014)^{lxii};
- ▲ Bowland Fells SPA Supplementary Advice (March 2019)^{lxiii}; and
- ▲ The Conservation Objectives (dated July 2018)^{lxiv}.
- ▲ 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.

1.21 Bowland Fells (UK) pSPA

200 The Bowland Fells SPA site is also treated as 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 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). The details for this pSPA site are therefore considered to be the same as for the SPA above.

1.22 Lambay Island (IE) SPA

201 Lambay Island lies approximately 4 km off the north Co. Dublin coastline and is separated from it by a channel of 10-13 m in depth (Figure 21). East of Lambay Island the water deepens rapidly into the Irish Sea basin. Lambay Island SPA holds an internationally important seabird colony, three seabird species with breeding populations of international importance and a further six have populations with national importance. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Lambay Island SPA Site Synopsis (dated December 2011)^{lxv}; and
- ▲ The Lambay Island SPA Data Form (dated December 2015)^{lxvi}.

^{lxvi} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9005151.pdf>

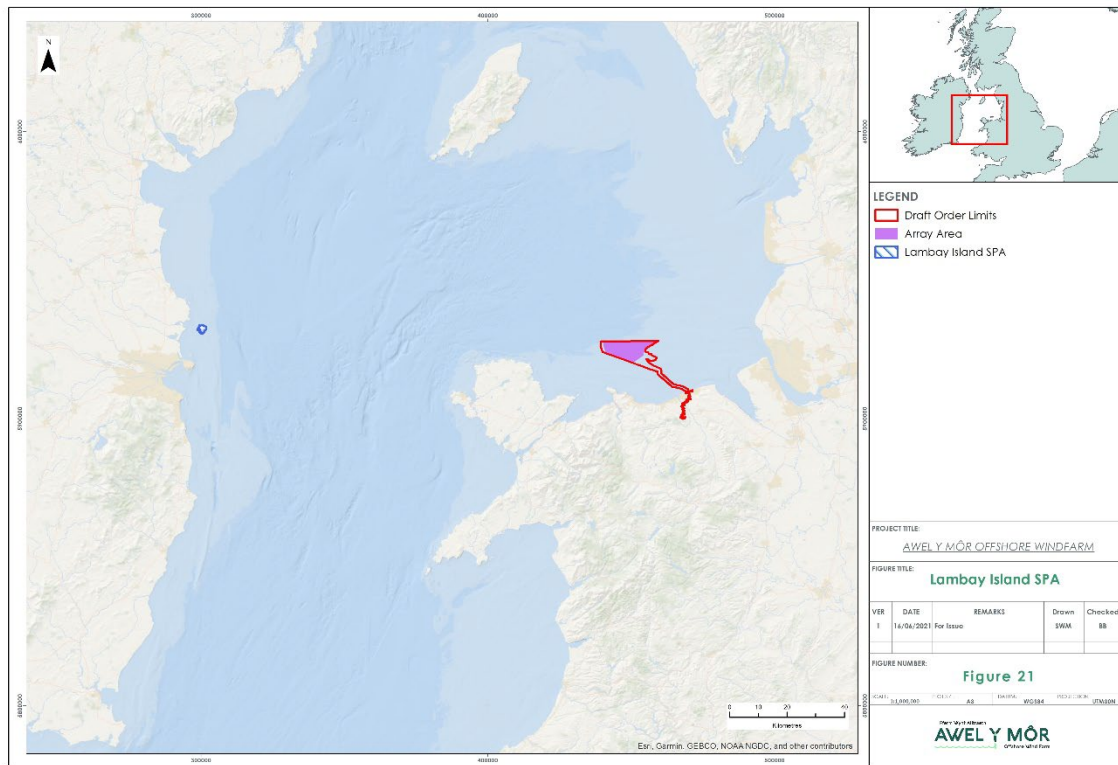


Figure 21: Location of The Lambay Island (IE) SPA in relation to AyM.

1.22.1 Qualifying features

202 The Lambay Island (IE) SPA is designated for the following qualifying features:

- A009 Fulmar (*Fulmarus glacialis*);
- A017 Cormorant (*Phalacrocorax carbo*);
- A018 Shag (*Phalacrocorax aristotelis*);
- A043 Greylag Goose (*Anser anser*);
- A183 Lesser Black-backed Gull (*Larus fuscus*);
- A184 Herring Gull (*Larus argentatus*);
- A188 Kittiwake (*Rissa tridactyla*);
- A199 Guillemot (*Uria aalge*);
- A200 Razorbill (*Alca torda*); and
- A204 Puffin (*Fratercula arctica*).

1.22.2 The characteristics of the European site

203 The site is a SPA under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Cormorant, Shag, Greylag Goose, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin. The site is also of special conservation interest for holding and assemblage of over 20,000 breeding seabirds.

1.22.3 Conservation advice

204 Advice on operations and Management measures can be found within:

- ▲ Lambay Island SPA Conservation Objectives Supporting Document (May 2013)^{lxvii}; and
- ▲ The Conservation Objectives (dated March 2021)^{lxviii}.

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

1.23 Ailsa Craig (UK) SPA

206 Ailsa Craig SPA is an island rising to 338 metres, situated in the outer part of the Firth of Clyde (Figure 22). Cliffs up to 100 metres encircle the island and provide nesting sites for a variety of seabirds, notably one of the largest Northern gannet colonies in the world. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Ailsa Craig SPA Ciation (dated December 2011)^{lxix}; and
- ▲ The Ailsa Craig SPA Data Form (dated December 2015)^{lxx}.

lxvii



lxix <https://apps.snh.gov.uk/sitelink-api/v1/sites/8463/documents/16>

lxx <http://jncc.defra.gov.uk/pdf/SPA/UK9003091.pdf>

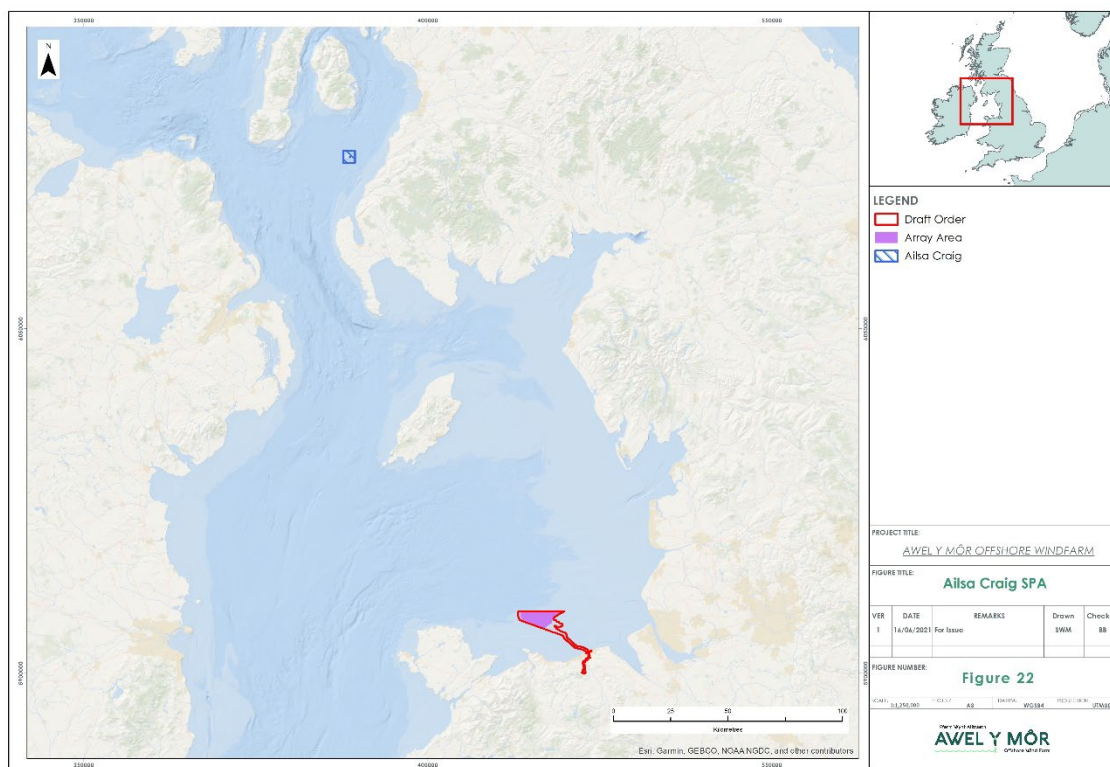


Figure 22: Location of The Ailsa Craig (UK) SAC in relation to AyM.

1.23.1 Qualifying features

207 The Ailsa Craig (UK) SPA is designated for the following qualifying features:

- Gannet (*Morus bassanus*);
- A183 Lesser Black-backed Gull (*Larus fuscus*);
- A188 Kittiwake (*Rissa tridactyla*)*;
- A184 Herring gull (*Larus argentatus*)*;
- A199 Guillemot (*Uria aalge*)*; and
- Seabird assemblage.
- *Species that are only recognised as part of the seabird assemblage and not as individual species

1.23.2 The characteristics of the European site

208 Ailsa Craig SPA regularly supports populations of European importance of several migratory species; Northern gannet (*Morus bassanus*, 23,000 pairs 8.7% of the world biogeographic population) and lesser black-backed gull (*Larus fuscus*, 1,800 pairs, 1.4% of the total *L.f. greallsi* biogeographic population). Ailsa Craig SPA also regularly supports in excess of 65,000 seabirds including nationally important populations of the following species: common guillemot (*Uria aalge*, 3,350 pairs, 0.5% of the GB population), black-legged kittiwake (*Rissa tridactyla*, 3,100 pairs, 0.6% of the GB population).

1.23.3 Conservation advice

209 Advice on operations and Management measures can be found within the Conservation Objectives (dated February 2019)^{lxxi}. The Conservation Objectives for the site are as follows:

- To avoid deterioration of the habitats of the qualifying species 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; and
 - No significant disturbance of the species.

1.24 Ireland's Eye (IE) SPA

210 Ireland's Eye is an uninhabited island located about 1.5 km north of Howth in Co. Dublin. The site encompasses Ireland's Eye, Rowan Rocks, Thulla, Thulla Rocks, Carrageen Bay and a seaward extension of 200 m in the west and 500 m to the north and east. The island has an area of c. 24 ha above the high tide mark (Figure 23). Key literature sources, including relevant project literature, are as follows:

^{lxxi} <https://apps.snh.gov.uk/sitelink-api/v1/sites/8463/documents/29>

- ES Volume 2, Chapter 4;
- The Ireland's Eye SPA Site Synopsis (dated December 2014)^{lxxii}; and
- The Ireland's Eye SPA Data Form (dated September 2018)^{lxxiii}.

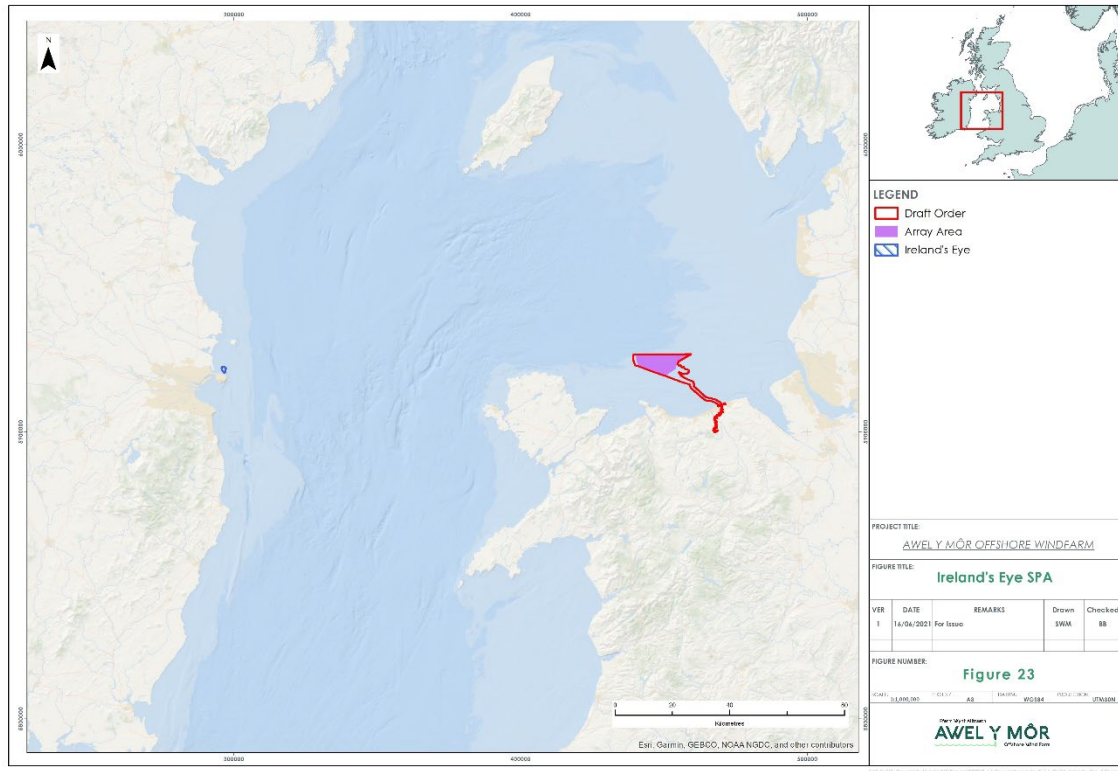


Figure 23: Location of The Ireland's Eye (IE) SPA in relation to AyM.

1.24.1 Qualifying features

211 The Ireland's Eye (IE) SPA is designated for the following qualifying features:

- A017 Cormorant (*Phalacrocorax carbo*);
- A184 Herring Gull (*Larus argentatus*);
- A188 Kittiwake (*Rissa tridactyla*);
- A199 Guillemot (*Uria aalge*); and
- A200 Razorbill (*Alca torda*).



1.24.2 The characteristics of the European site

212 Ireland's Eye has important populations of breeding seabirds. In 1999 the following species were recorded: Fulmar (70 pairs), Gannet (147 pairs), Cormorant (306 pairs), Shag (32 pairs), Lesser Black-backed Gull (1 pair), Great Black-backed Gull (90 pairs), Herring Gull (246 pairs), Kittiwake (941 pairs), Guillemot (1,468 pairs) and Razorbill (350 pairs) and Puffin (4 pairs). In 2001 an incomplete census recorded Gannet (202 pairs), Cormorant (438 pairs), Kittiwake (1,024 pairs), Guillemot (1,975 pairs) and Razorbill (460 pairs). A Gannet survey by the National Parks and Wildlife Service in 2004 recorded 285 pairs. Black Guillemot may also breed, with 15 individuals recorded in 1998. The Cormorant, Herring Gull, Kittiwake, Guillemot and Razorbill populations are of national importance

1.24.3 Conservation advice

213 Advice on operations and Management measures can be found within:

- The Ireland's Eye SPA Management plan 2018- 2022 (dated 2017)^{lxxiv}; and
- The Conservation Objectives (dated March 2021)^{lxxv}.

1.25 Objective: to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. Howth Head Coast (IE) SPA

214 Howth Head is a rocky headland situated on the northern side of Dublin Bay (Figure 24). The marine area to a distance of 500 m from the cliff base is included within the site. The site is a SPA under the E.U. Birds Directive, of special conservation interest for Kittiwake. Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;



- The Howth Head Coast SPA Site Synopsis (dated December 2011)^{lxxvi}; and
- The Howth Head Coast SPA Data Form (dated October 2020)^{lxxvii}.

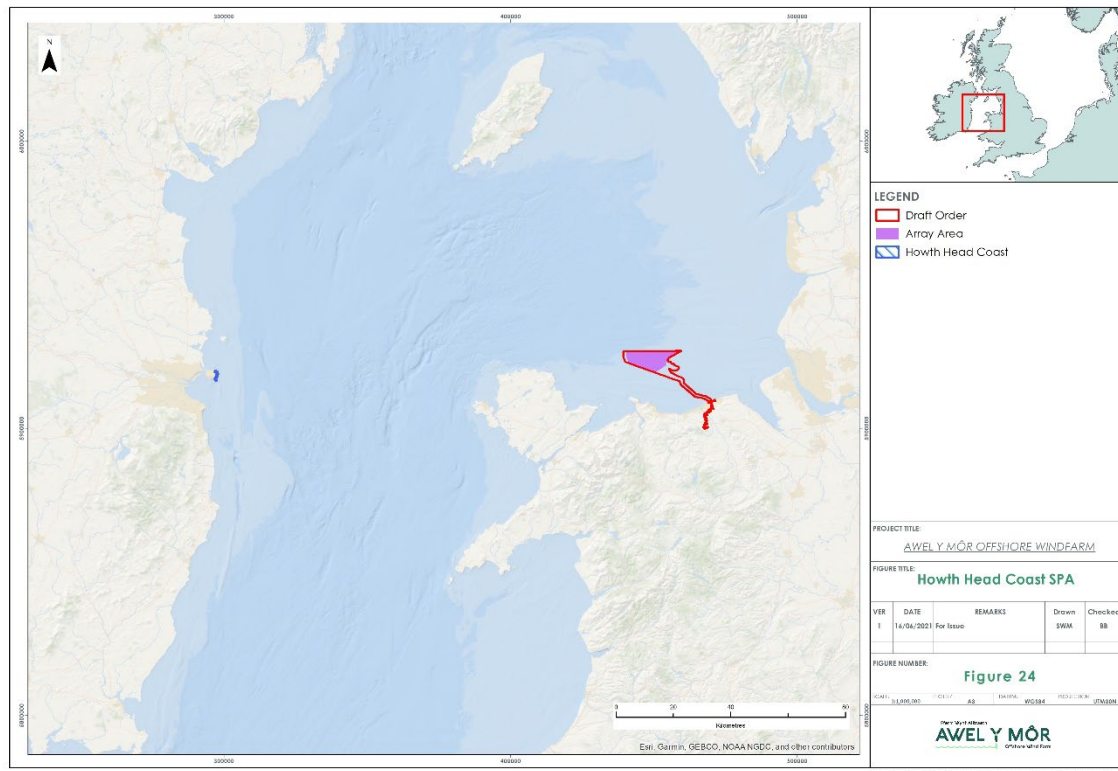


Figure 24: Location of The Howth Head Coast (IE) SPA in relation to AyM.

1.25.1 Qualifying features

215 The Howth Head Coast (IE) SPA is designated for the following qualifying features:

- A188 Kittiwake (*Rissa tridactyla*).

1.25.2 The characteristics of the European site

216 Howth Head Coast SPA is of high ornithological importance as it supports a nationally important population of Kittiwake. A census in 1999 recorded the following species: Fulmar (33 pairs), Shag (12 pairs), Herring Gull (17 pairs), Great Black-backed Gull (5 pairs), Kittiwake (2,269 pairs), Guillemot (663 pairs) and Razorbill (279 pairs). In addition, 39 individual Black Guillemot were counted within the site in May 1998. It is also a traditional nesting site for Peregrine Falcon, a species that is listed on Annex I of the E.U. Birds Directive.

1.25.3 Conservation advice

217 Advice on operations and Management measures can be found within the Conservation Objectives (dated March 2021)^{lxxviii}.

1.26 Objective: to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. Wicklow Head (IE) SPA

218 Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is situated approximately 3 km south of Wicklow town (Figure 25). The marine area to a distance of 500 m from the base of the cliffs is included in the site. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Wicklow Head SPA Site Synopsis (dated April 2012)^{lxxix}; and
- ▲ The Wicklow Head SPA Data Form (dated October 2020)^{lxxx}.

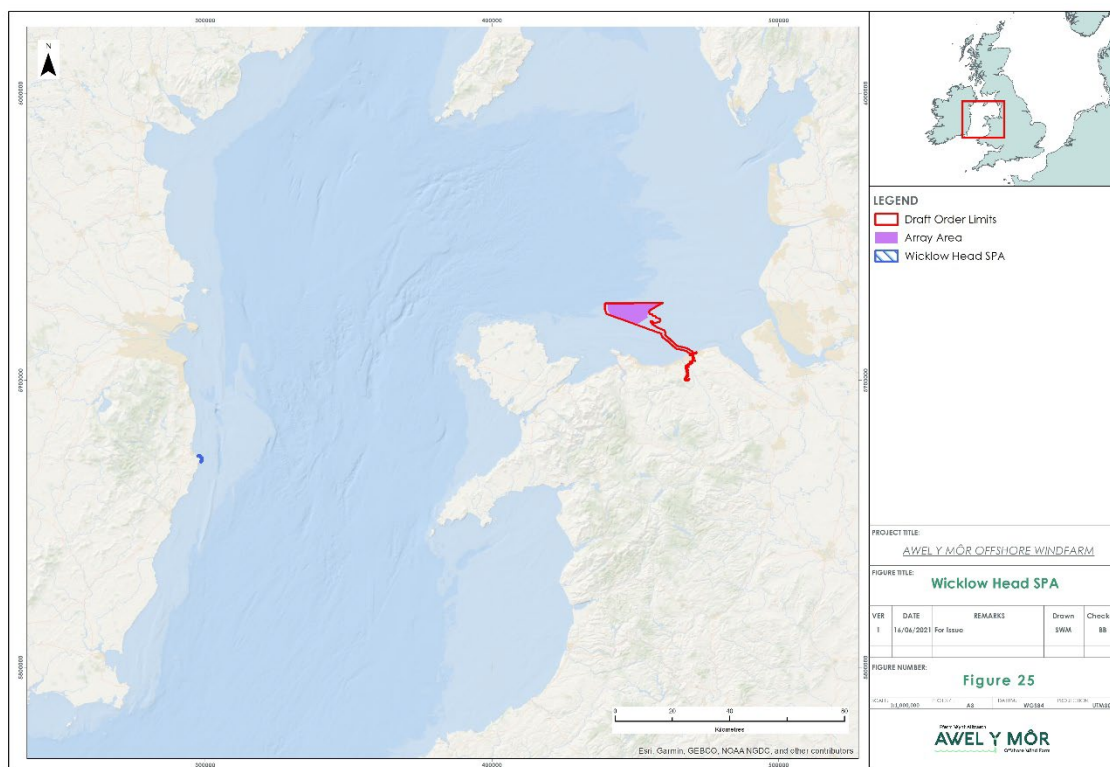


Figure 25: Location of The Wicklow Head (IE) SPA in relation to AyM.

1.26.1 Qualifying features

219 The Wicklow Head (IE) SPA is designated for the following qualifying features:

- ▲ A188 Kittiwake (*Rissa tridactyla*).

1.26.2 The characteristics of the European site

220 A survey in 2002 recorded a nationally important population of breeding Kittiwake (956 pairs) and other breeding seabirds including Fulmar (62 pairs), Shag (11 pairs), Herring Gull (20 pairs), Guillemot (281 pairs) and Razorbill (125 pairs). A survey of Black Guillemot in April 1998 recorded 70 individual birds within the SPA. The site also supports a pair of breeding Peregrine. Ravens nest annually on the cliffs, and the heath supports such species as Stonechat, Whitethroat and Linnet.

1.26.3 Conservation advice

- 221 Advice on operations and Management measures can be found within the Conservation Objectives (dated March 2021)^{lxxxi}.
- 222 Objective: to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

1.27 Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island (UK) SPA

- 223 The protected area here is made up of the island of Bardsey (Ynys Enlli) and part of the tip of the Llyn Peninsula, together with two smaller islands, the Gwylans (Figure 26). Key literature sources, including relevant project literature, are as follows:
- ▲ ES Volume 2, Chapter 4;
 - ▲ The Aberdaron Coast and Bardsey Island SPA Ciation^{lxxxii}; and
 - ▲ The Aberdaron Coast and Bardsey Island SPA Data Form (dated January 2016)^{lxxxiii}.

^{lxxxiii} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9013121.pdf>

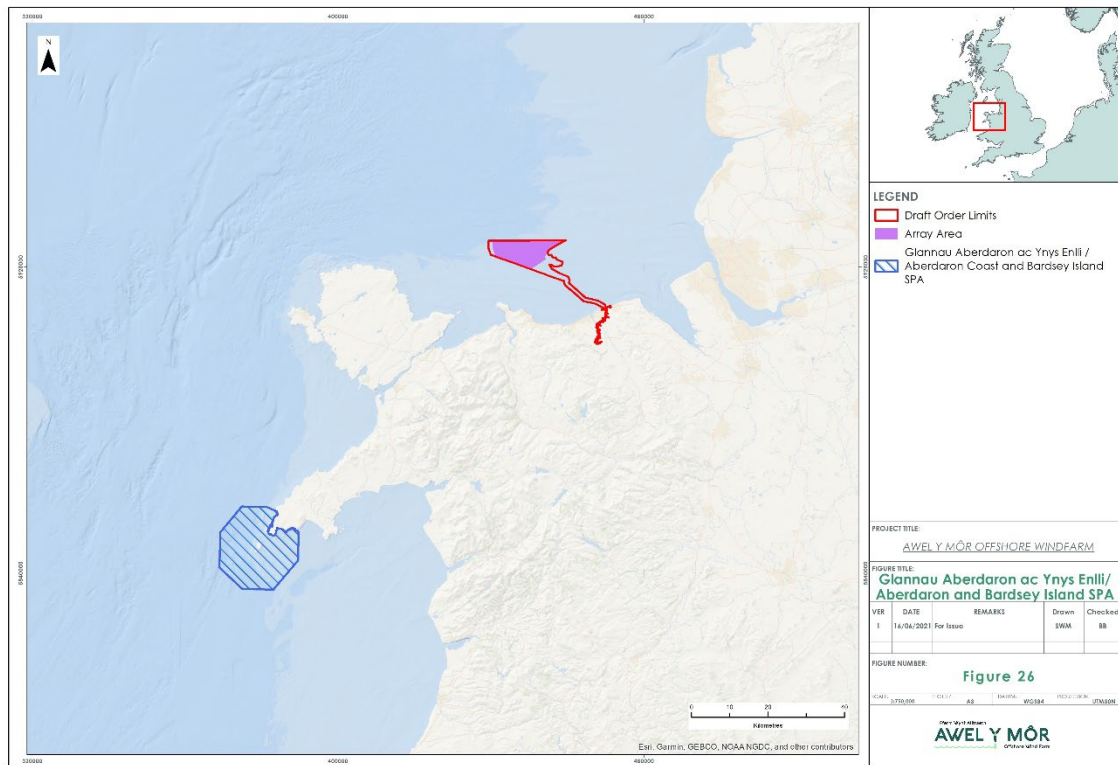


Figure 26: Location of The Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island (UK) SPA in relation to AyM.

1.27.1 Qualifying features

224 The Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island (UK) SPA is designated for the following qualifying features:

- A013 Manx shearwater (*puffinus puffinus*); and
- A346 Chough (*Pyrrhocorax pyrrhocorax*).

1.27.2 The characteristics of the European site

- 225 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. Bardsey supports over 2% of the UK breeding population of Manx shearwaters. 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.

1.27.3 Conservation advice

- 226 Advice on operations and Management measures can be found within the Core Management Plan (including Conservation Objectives) for Glannau Aberdaron and Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA (including part of Clogwyni Pen Llyn/ Llyn Seacliffs SAC and Pen Llyn A'R Sarnau SAC These sites are underpinned by Glannau Aberdaron SSSI, Ynys Enlli SSSI and Ynysoedd Y Gwyllanod SSSI) (dated March 2008)^{lxxxiv};
- 227 Conservation Objective for Feature 1: Internationally important population (1% or more of the Great Britain population) of breeding and non-breeding season chough *Pyrhocorax pyrrhocorax*:
- 228 Vision for feature 1: Chough
- 229 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;

^{lxxxiv}

- 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; and
- The factors affecting the feature are under control.

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

231 Vision for feature 2: Manx shearwater

232 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; and
- All factors affecting the achievement of these conditions are under control.

1.28 Copeland Islands (UK) SPA

233 The Copeland Islands site comprises three islands (Copeland Island, referred to as Big Copeland, together with Light House Island and Mew Island), together with associated islets, off the north-east County Down coast and close to the entrance to Belfast Lough (Figure 27). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Copeland Islands SPA Citation^{lxxxv}; and
- ▲ The Copeland Islands SPA Data Form (dated December 2015)^{lxxxvi}.

^{lxxxv}<https://www.daera-ni.gov.uk/sites/default/files/publications/dae/Copeland%20Island%20SPA%20Citation%20documents%20and%20map.pdf>

^{lxxxvi} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020291.pdf>

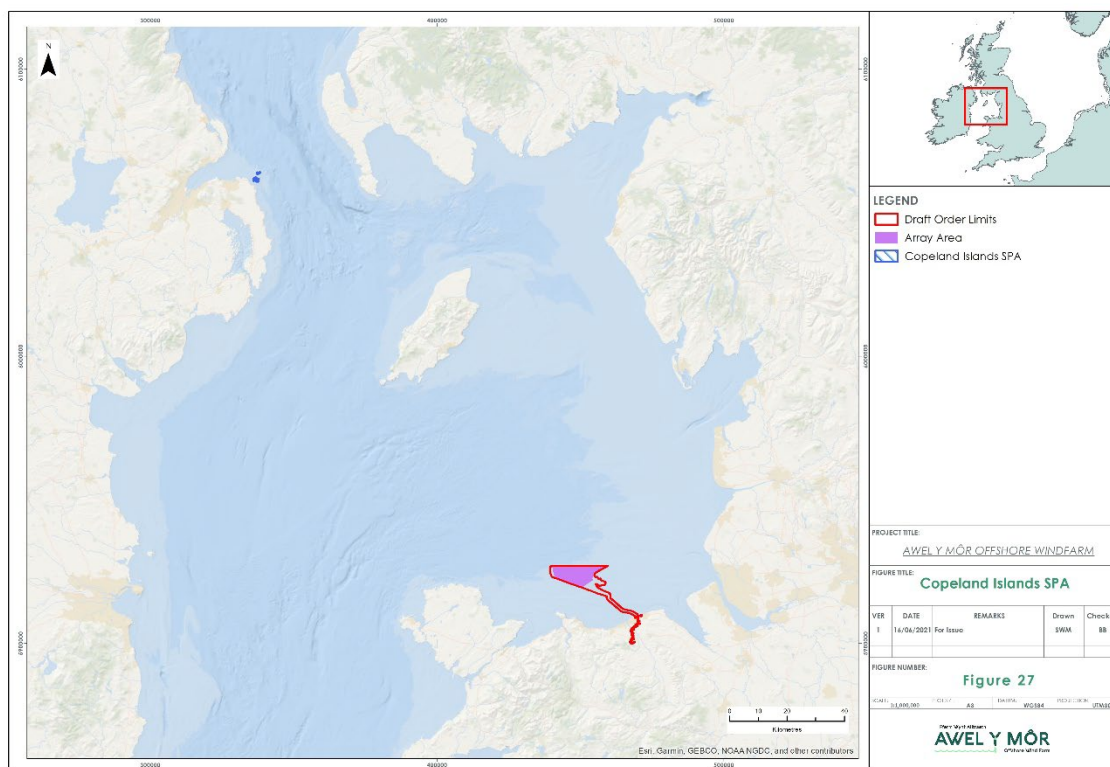


Figure 27: Location of The Copeland Islands (UK) SAC in relation to AyM.

1.28.1 Qualifying features

234 The Copeland Islands (UK) SPA is designated for the following qualifying features:

- A013 Manx shearwater (*Puffinus puffinus*); and
- A194 Arctic Tern (*Sterna paradisaea*).

1.28.2 The characteristics of the European site

235 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.

1.28.3 Conservation advice

236 Advice on operations and Management measures can be found within the Conservation Objectives (dated February 2015)^{lxxxvii}.

237 The Conservation Objectives for the site are:

- To maintain each feature in favourable condition.

238 The SPA selection feature objectives are as follows:

- 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; and
 - Structure, function and supporting processes of habitats supporting the species.

239 For each feature there are a number of component objectives which are outlined below:

- 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;

^{lxxxvii} <https://www.daera-ni.gov.uk/sites/default/files/publications/doe/copeland-islands-SPA-conservation-objectives-2015.pdf>

- ▲ Habitat extent – to maintain or enhance the area of natural and semi-natural habitat used or potentially usable by Feature bird species, (breeding areas 201.20ha) subject to natural processes; and
- ▲ Habitat extent – maintain the extent of main habitat components subject to natural processes.

1.29 Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro (UK) SPA

240 Skomer, Skokholm and the Seas off Pembrokeshire SPA is located off the extreme south-west tip of Pembrokeshire in south-west Wales. This SPA extends beyond the 12 nm boundary, lying partly in Welsh territorial waters and partly in UK offshore waters. (Figure 28). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA citation ^{lxxxviii}; and
- ▲ The Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA Data Form (dated January 2017) ^{lxxxix}.

^{lxxxix} <https://jncc.gov.uk/jncc-assets/SPA-N2K/uk9014051.pdf>

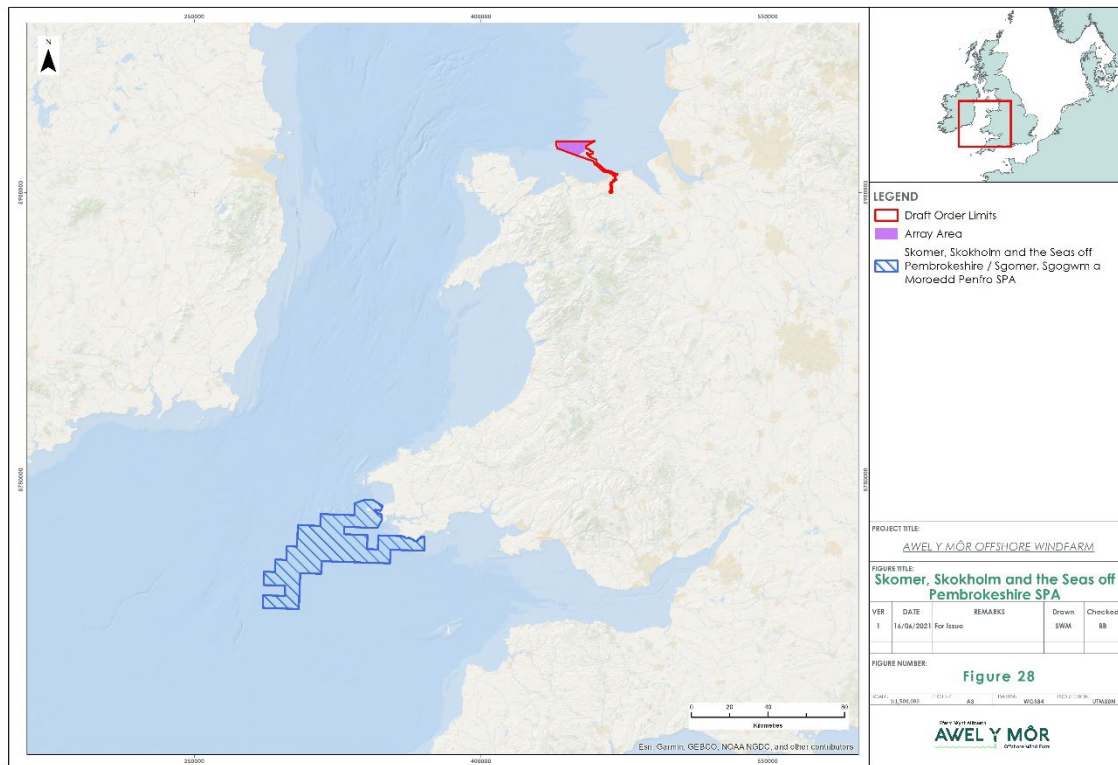


Figure 28: Location of The Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro (UK) SPA in relation to AyM.

1.29.1 Qualifying features

241 The Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA is designated for the following qualifying features:

- A013 Manx shearwater (*Puffinus puffinus*);
- A014 Storm Petrel (*Hydrobates pelagicus*);
- A183 Lesser black-backed gull (*Larus fuscus*);
- A188 Kittiwake (*Rissa tridactyla*)*;
- A199 Guillemot (*Uria aalge*)*;
- A200 Razorbill (*Alca torda*)*;
- A204 Puffin (*Fratercula arctica*);
- A222 Short-eared owl (*Asio flammeus*);
- A346 Chough (*Pyrrhocorax pyrrhocorax*); and
- Breeding Seabird Assemblage.

- ★ *Species that are only recognised as part of the assemblage and not as individual species

1.29.2 The characteristics of the European site

242 The islands of Skomer and Skokholm support the largest concentration of breeding seabirds in England and Wales. They hold the largest breeding colony of Manx shearwater in the world (considered to be 316,000 pairs), one of the largest colonies of lesser black-backed gull in Britain (currently over 10,000 apparently occupied sites), as well as being important Welsh breeding sites for other seabird populations, such as razorbill, black-legged kittiwake, Atlantic puffin and common guillemot, supporting a breeding seabird assemblage of over 394,000 birds.

1.29.3 Conservation advice

243 Advice on operations and Management measures can be found within:

- ★ The Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA Departmental Brief (June 2015)^{xc}; and
- ★ The Core Management Plan including conservation objectives for Skomer and Skokholm SPA (Special Protection Area) (dated April 2008)^{xc}.

244 Conservation Objective for Feature 1: Chough *Pyrrhocorax pyrrhocorax*:

245 Vision for feature 1

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

- ★ The Skomer breeding population will be at least 3 pairs;
- ★ The Skokholm breeding population will be at least 1 pair;
- ★ The SPA breeding population will be 4 pairs, (this currently represents around 5% of the Pembrokeshire chough population and 1.2% of the GB population);
- ★ Breeding success will be 1.5 chicks/pair;



- Sufficient suitable habitat will be present to support the populations; and
- The factors affecting the feature are under control.

247 Conservation Objective for Feature 2: Short-eared owl *Asio flammeus*:

248 Vision for feature 2

249 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 will be at least 6 pairs;
- Breeding success will be at least 1 chicks/pair;
- Sufficient suitable habitat will be present to support the populations; and
- The factors affecting the feature are under control.

250 Conservation Objective for Feature 3: Storm petrel *Hydrobates pelagicus*:

251 Vision for feature 3

252 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 of storm petrel will be at least 3,500 pairs within the SPA;
- Sufficient suitable nesting sites will be present to support at least the current populations; and
- The factors affecting the feature are under control.
-

253 Conservation Objective for Feature 4: Lesser black-backed gull *Larus fuscus*:

254 Vision for feature 4

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

- During the breeding season the population of lesser black-backed gull will be at least 20,300 pairs within the SPA. This represents around 16.4% of the current breeding Western European/Mediterranean/western African population;
- Breeding success will be at least 0.4 chicks/pair;
- Sufficient suitable nesting sites will be present to support at least the current populations; and
- The factors affecting the feature are under control.

256 Conservation Objective for Feature 5: Manx shearwater *Puffinus puffinus*:

257 Vision for feature 5

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

- During the breeding season the population of Manx shearwater will be at least 150,000 pairs within the SPA (this represents around half of the current breeding population);
- Breeding success will be at least 0.5 chicks per egg laid; and
- The factors affecting the feature are under control.

259 Conservation Objective for Feature 6: Puffin *Fratercula arctica*:

260 Vision for feature 6

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

- During the breeding season the population of puffins will be at least 9,500 pairs within the SPA, (this represents at least 1.1% of the current breeding population);
- Breeding success will be 0.7 chicks/pair; and
- The factors affecting the feature are under control.

262 Conservation Objective for Feature 7: Assemblage qualification: A seabird assemblage of international importance:

263 Vision for feature 7

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

- Each of the component species of the seabird assemblage will be in favourable condition for the assemblage as a whole to achieve Favourable Condition; and
- During the breeding season the SPA will regularly support at least 67,000 individuals seabirds of the following species, most of which also qualify independently as SPA features:
 - Razorbill *Alca torda*;
 - Guillemot *Uria aalge*;
 - Kittiwake *Rissa tridactyla*;
 - Puffin *Fratercula arctica*;
 - Lesser black-backed gull *Larus fuscus*;
 - Manx shearwater *Puffinus puffinus*; and
 - Storm petrel *Hydrobates pelagicus*.

1.30 Rathlin Island (UK) SPA

265 Rathlin Island is a large inhabited marine island situated some 4 km from the north Antrim coast of Northern Ireland. The length of the coastline is approximately 30 km (Figure 29). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;
- The Rathlin Island SPA Citation^{xcii}; and
- The Rathlin Island SPA Data Form (dated January 2017)^{xciii}.

^{xcii}<https://www.daera-ni.gov.uk/sites/default/files/publications/doe/Rathlin%20SPA%20Citation%20document%20and%20map.pdf>

^{xciii} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020011.pdf>

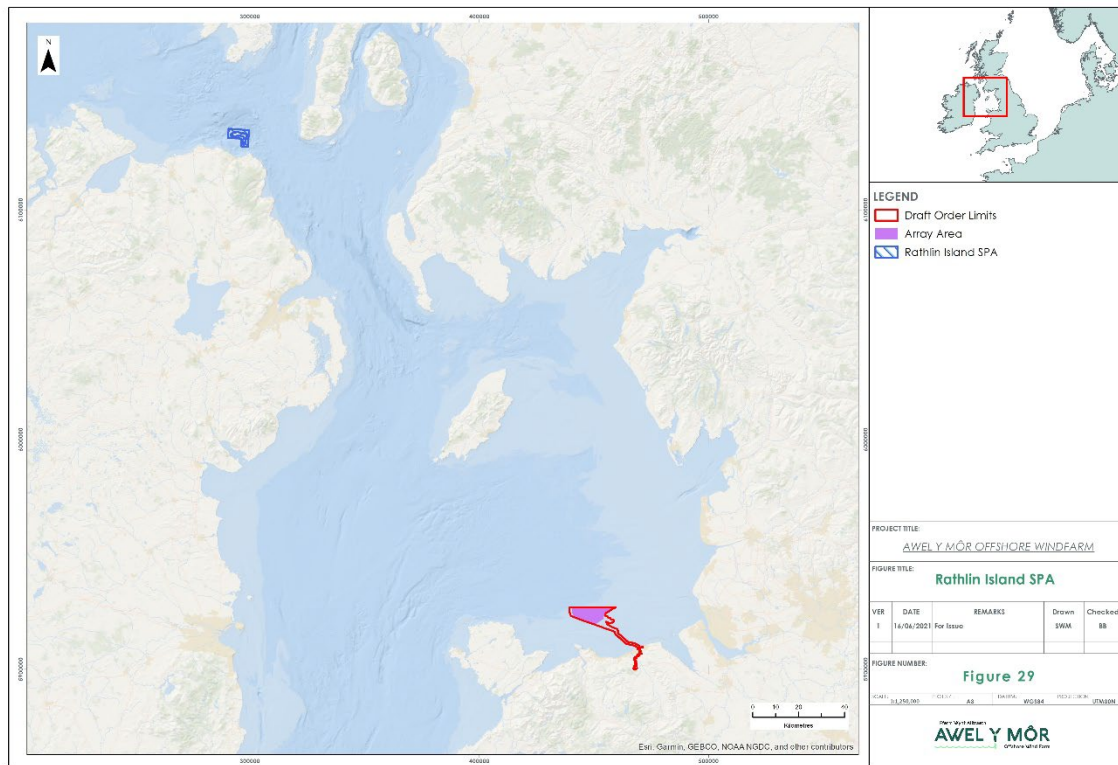


Figure 29: Location of The Raithlin Island (UK) SPA in relation to AyM.

1.30.1 Qualifying features

266 The Rathlin Island (UK) SPA

267 is designated for the following qualifying features:

- A009 Fulmar (*Fulmarus glacialis*)*;
- A103 Peregrine Falcon (*Falco peregrinus*);
- A183 Lesser black-backed gull (*Larus fuscus*)*;
- A184 Herring gull (*Larus argentatus*)*;
- A188 Kittiwake (*Rissa tridactyla*);
- A199 Guillemot (*Uria aalge*);
- A200 Razorbill (*Alca torda*);
- A204 Puffin (*Fratercula arctica*)*; and
- A182 Common Gull (*Larus canus*)*;
- Seabird assemblage.
- *Species that are only recognised as part of the seabird assemblage and not as individual species

1.30.2 The characteristics of the European site

268 The site supports internationally important breeding numbers of the following migratory species: Razorbill (*Alea torda*), Guillemot (*Uria aalge*) and Kittiwake (*Rissa tridactyla*). The most recent complete seabird census was carried out in 1985 and the following numbers of individuals of the above species were recorded: Razorbill 8,922 (4.8% International population, 17.8% of the Irish population) and Guillemot 41,887 (3.4%, 41.8%). A total of 6,822 pairs of Kittiwake were also recorded representing 1.2% of the international population and 15.1 % of the Irish population. The site also regularly supports over 20,000 breeding seabirds. The 1985 census indicated an assemblage of approximately 66,000 breeding birds on Rathlin Island.

1.30.3 Conservation advice

269 Advice on operations and Management measures can be found within the Conservation Objectives (dated February 2015)^{xciv}.

270 The Conservation Objectives for the site are:

- To maintain each feature in favourable condition.

271 The SPA selection feature objectives are as follows:

- 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; and
 - Structure, function and supporting processes of habitats supporting the species.

^{xciv} <https://www.daera-ni.gov.uk/sites/default/files/publications/doe/rathlin-spa-conservation-objectives-2015.pdf>

272 For each feature there are a number of component objectives which are outlined below:

- Peregrine falcon breeding – 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 contribution to the breeding seabird assemblage; and
- 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.

1.31 Saltee Islands (IE) SPA

273 The Saltee Islands SPA is situated some 4-5 km off the coast of south Co. Wexford and comprises the two islands, Great Saltee and Little Saltee, and the surrounding seas both between them and to a distance of 500 m from them (Figure 30). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Saltee Islands SPA Site Synopsis (dated December 2014)^{xcv}; and
- ▲ The Saltee Islands SPA Data Form (dated September 2018)^{xcvi}.



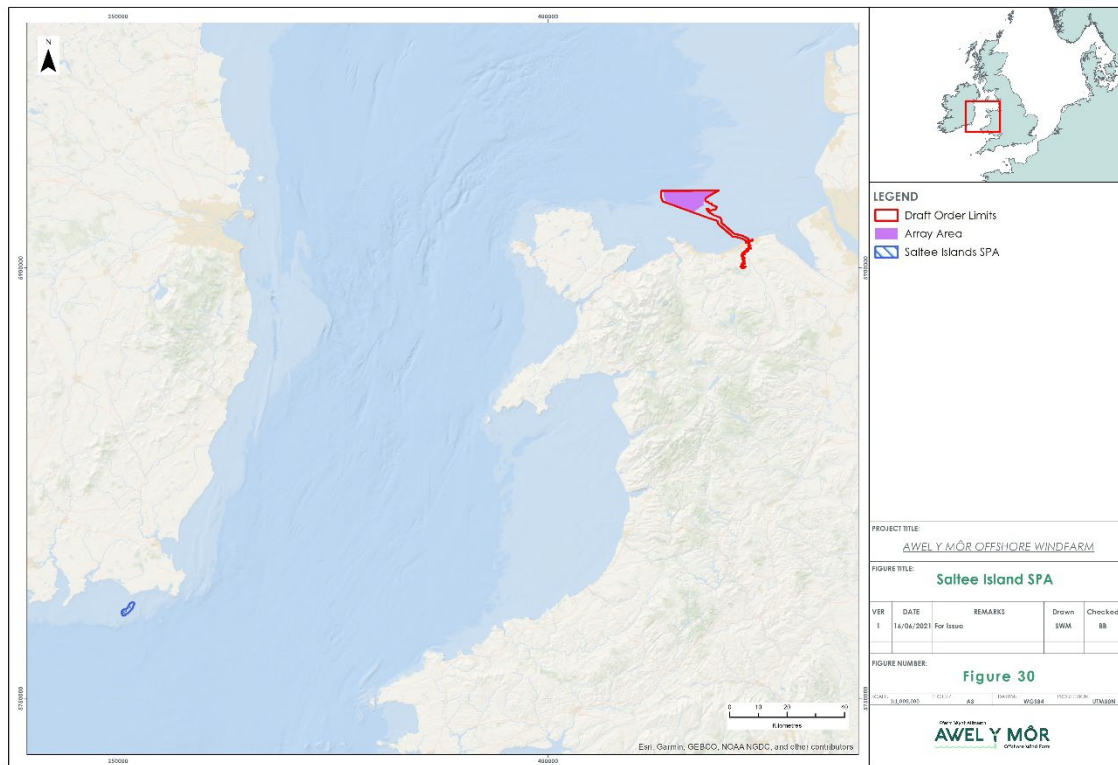


Figure 30: Location of The Saltee Islands (IE) SPA in relation to AyM.

1.31.1 Qualifying features

274 The Saltee Islands (IE) SPA is designated for the following qualifying features:

- A009 Fulmar (*Fulmarus glacialis*);
- A017 Cormorant (*Phalacrocorax carbo*);
- A018 Shag (*Phalacrocorax aristotelis*);
- A183 Lesser Black-backed Gull (*Larus fuscus*);
- A184 Herring Gull (*Larus argentatus*);
- A188 Kittiwake (*Rissa tridactyla*);
- A199 Guillemot (*Uria aalge*);
- A016 Gannet (*Morus bassanus*);
- A200 Razorbill (*Alca torda*); and
- A204 Puffin (*Fratercula arctica*).

1.31.2 The characteristics of the European site

275 The site is of special conservation interest for the following species: Fulmar, Gannet, Cormorant, Shag, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin. The site is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds. The nationally important Gannet colony on Great Saltee has been well documented since its establishment in the 1920s and 2,446 pairs were present in 2004. The following species have populations of national importance: Fulmar, Cormorant, Shag, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin. An estimated 250 pairs of Manx Shearwater occur on these islands. Peregrine Falcon breeds (1-2 pairs) and Chough (1 pair) occurs at the eastern edge of its Irish range.

1.31.3 Conservation advice

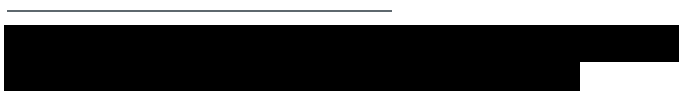
276 Advice on operations and Management measures can be found within the Conservation Objectives (dated October 2011)^{xvii}.

277 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;
- 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.

278 To maintain the favourable conservation condition of kittiwake, lesser black-backed gull and puffin in the Saltee Islands SPA, which is defined by the following list of attributes and targets:

- No significant decline in breeding population abundance: apparently occupied nests (AONs);
- No significant decline in productivity rate;
- No significant decline in distribution: breeding colonies;



- No significant decline in prey biomass available;
- No significant increase in barriers to connectivity; and
- No significant increase in disturbance at the breeding site.

279 Additionally puffin is defined by the following list of attributes and targets:

- No significant increase in disturbance at marine areas immediately adjacent to the colony; and
- Absent or under control occurrence of mammalian predators.

1.32 Wexford Harbour and Slobs (IE) SPA

280 Wexford Harbour is the lowermost part of the estuary of the River Slaney, a major river that drains much of the south-east region (Figure 31). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;
- The Wexford Harbour and Slobs SPA Site Synopsis (dated August 2014)^{xcviii}; and
- The Wexford Harbour and Slobs SPA Data Form (dated September 2018)^{xcix}.

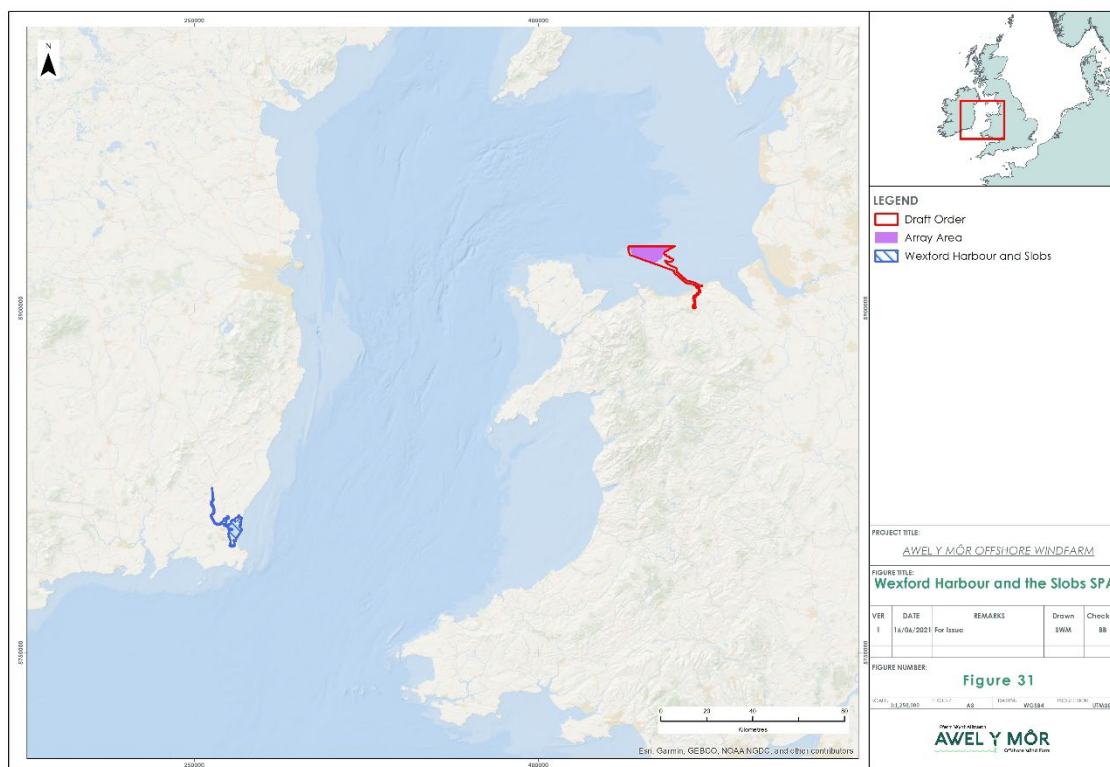


Figure 31: Location of The Wexford Harbour and Slob (IE) SPA in relation to AyM.

1.32.1 Qualifying features

281 The Wexford Harbour and Slob (IE) SPA is designated for the following qualifying features:

- A004 Little Grebe (*Tachybaptus ruficollis*);
- A005 Great Crested Grebe (*Podiceps cristatus*);
- A017 Cormorant (*Phalacrocorax carbo*);
- A028 Grey Heron (*Ardea cinerea*);
- A037 Bewick's swan (*Cygnus columbianus bewickii*);
- A038 Whooper swan (*Cygnus cygnus*);
- A048 Common shelduck (*Tadorna tadorna*);
- A050 Eurasian wigeon (*Anas penelope*);
- A052 Eurasian teal (*Anas crecca*);
- A053 Mallard (*Anas platyrhynchos*);
- A054 Northern pintail (*Anas acuta*);
- A062 Scaup (*Aythya marila*);
- A067 Goldeneye (*Bucephala clangula*);

- A069 Red-breasted merganser (*Mergus serrator*);
- A082 Hen Harrier (*Circus cyaneus*);
- A125 Coot (*Fulica atra*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A140 European golden plover (*Pluvialis apricaria*);
- A141 Grey plover (*Pluvialis squatarola*);
- A142 Lapwing (*Vanellus vanellus*);
- A143 Knot (*Calidris canutus*);
- A144 Sanderling (*Calidris alba*);
- A149 Dunlin (*Calidris alpina alpina*);
- A156 Black-tailed godwit (*Limosa limosa islandica*);
- A157 Bar-tailed godwit (*Limosa lapponica*);
- A160 Eurasian curlew (*Numenius arquata*);
- A162 Common redshank (*Tringa totanus*);
- A179 Black headed gull (*Larus ridibundus*);
- A183 Lesser black-backed gull (*Larus fuscus*);
- A195 Little tern (*Sternula albifrons*);
- A395 White-fronted Goose (*Anser albifrons flavirostris*); and
- A674 Light-bellied brent goose (*Branta bernicla*).

1.32.2 The characteristics of the European site

282 The combination of estuarine habitats, including shallow waters for grebes, diving duck and seaduck, and the farmland of the polders, which include freshwater drainage channels, provides optimum feeding and roost areas for a wide range of species. Of particular importance is that it is one of the two most important sites in the world for Greenland White-fronted Goose. The site also has internationally important populations of Mute Swan, Light-bellied Brent Goose, Bartailed Godwit and Black-tailed Godwit. There are at least a further 26 species of wintering waterbirds which occur in numbers of national importance.

1.32.3 Conservation advice

283 Advice on operations and Management measures can be found within the Conservation Objectives (dated March 2012)^c.



284 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;
- The natural range of the species is neither being reduced nor its likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

285 To maintain the favourable conservation condition of lesser black-backed gull in Wexford Harbour and Slobbs SPA, which is defined by the following list of attributes and targets:

- Long term population trend stable or increasing; and
- There should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation.

1.33 Helvick Head to Ballyquin (IE) SPA

286 Helvick Head to Ballyquin SPA is a linear site situated on the south-west coast of Co. Waterford. The high water mark forms the seaward boundary, except around Helvick Head where the adjacent sea area to a distance of 500 m from the cliff base is included (Figure 32). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4;
- The Helvick Head to Ballyquin SPA Site Synopsis (dated January 2015)^{ci}; and
- The Helvick Head to Ballyquin SPA Data Form (dated October 2020)^{cii}.



Figure 32: Location of The Helvick Head to Ballyquin (IE) SPA in relation to AyM.

1.33.1 Qualifying features

287 The Helvick Head to Ballyquin (IE) SPA is designated for the following qualifying features:

- A103 Peregrine Falcon (*Falco peregrinus*);
- A017 Cormorant (*Phalacrocorax carbo*);
- A184 Herring gull (*Larus argentatus*);
- A188 Kittiwake (*Rissa tridactyla*); and
- A346 Chough (*Pyrhocorax pyrrhocorax*).

1.33.2 The characteristics of the European site

288 The site is of special conservation interest for the following species: Chough, Peregrine, Cormorant, Herring Gull and Kittiwake. The site supports a nationally important population of breeding Chough as the low heath and agricultural farmland on the cliff tops provides good foraging habitat for this species. The site is also of importance for its Peregrine, Cormorant, Herring Gull and Kittiwake populations.

1.33.3 Conservation advice

289 Advice on operations and Management measures can be found within the Conservation Objectives (dated March 2021)^{ciii}.

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

1.34 Grassholm (UK) SPA

291 This is a small island about 18 km west of the mainland coast of south-west Wales (Figure 33). It is home to large colonies of breeding seabirds, particularly gannets. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Core Management Plan including conservation objectives for Grassholm SPA (dated April 2008).^{civ}; and
- ▲ The Grassholm (UK) SPA Data Form (dated October 2020)^{cv}.

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^{cv} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9014041.pdf>

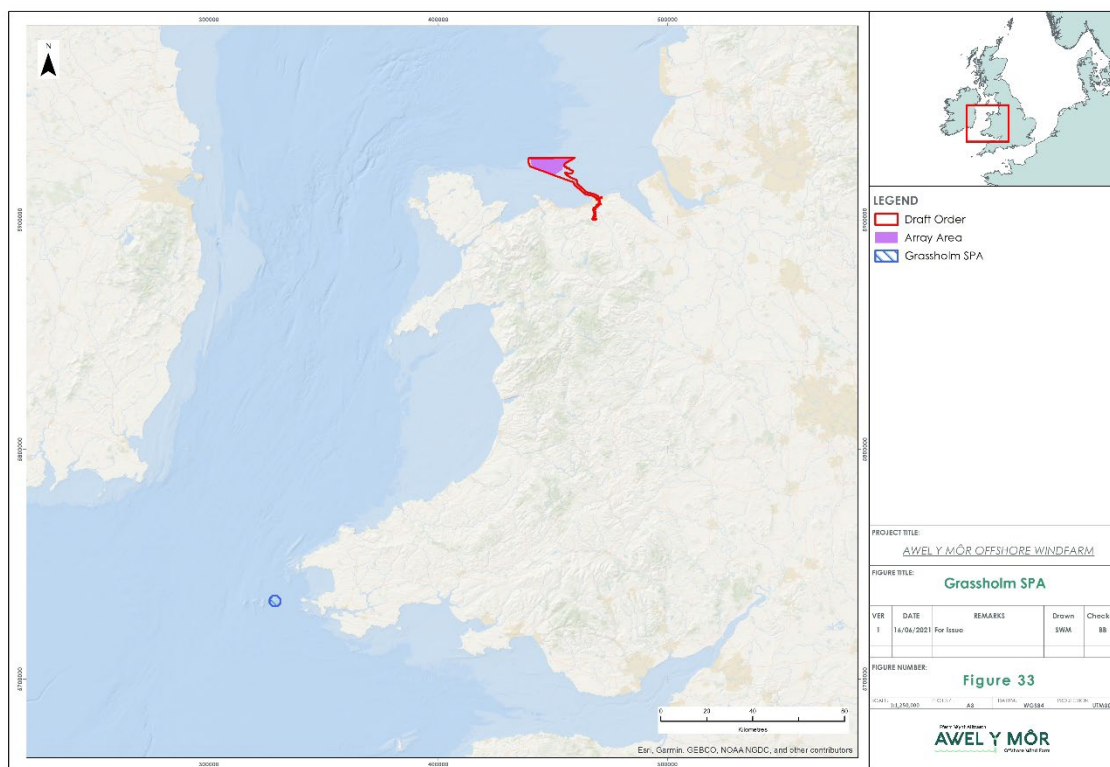


Figure 33: Location of The Grassholm (UK) SPA in relation to AyM.

1.34.1 Qualifying features

292 The Grassholm (UK) SPA is designated for the following qualifying features:

- ▲ Gannet (*Morus bassanus*).

1.34.2 The characteristics of the European site

293 The island has limited terrestrial vegetation owing to the effects of the large number of breeding seabirds and the influence of salt spray and exposure, and its foreshore and sublittoral habitats are amongst the most wave and tide-exposed in Britain. From January to October Grassholm island supports the third largest breeding population of the north Atlantic gannet (*Morus bassanus*) in the world.

1.34.3 Conservation advice

294 Advice on operations and Management measures can be found within:

- ▲ The Core Management Plan including conservation objectives for Grassholm SPA^{cv}; and
- ▲ The Grassholm potential SPA citation^{cvii}.

295 Conservation Objective for Feature 1: Gannet:

296 Vision for Gannet

297 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; and
- ▲ There will be no decline in this population significantly greater than any decline in the North Atlantic population as a whole.

1.35 Ynys Seiriol/ Puffin Island (UK) SPA

298 Ynys Seiriol / Puffin Island is located just off the eastern tip of the Isle of Anglesey in North Wales (Figure 34). The site is of special conservation interest for the following species: breeding cormorant. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Core Management Plan including conservation objectives for Ynys Seiriol/ Puffin Island SPA (dated March 2008).^{cviii}; and
- ▲ Ynys Seiriol/ Puffin Island SPA Data Form (dated November 2011)^{cix}.

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^{cix} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020285.pdf>

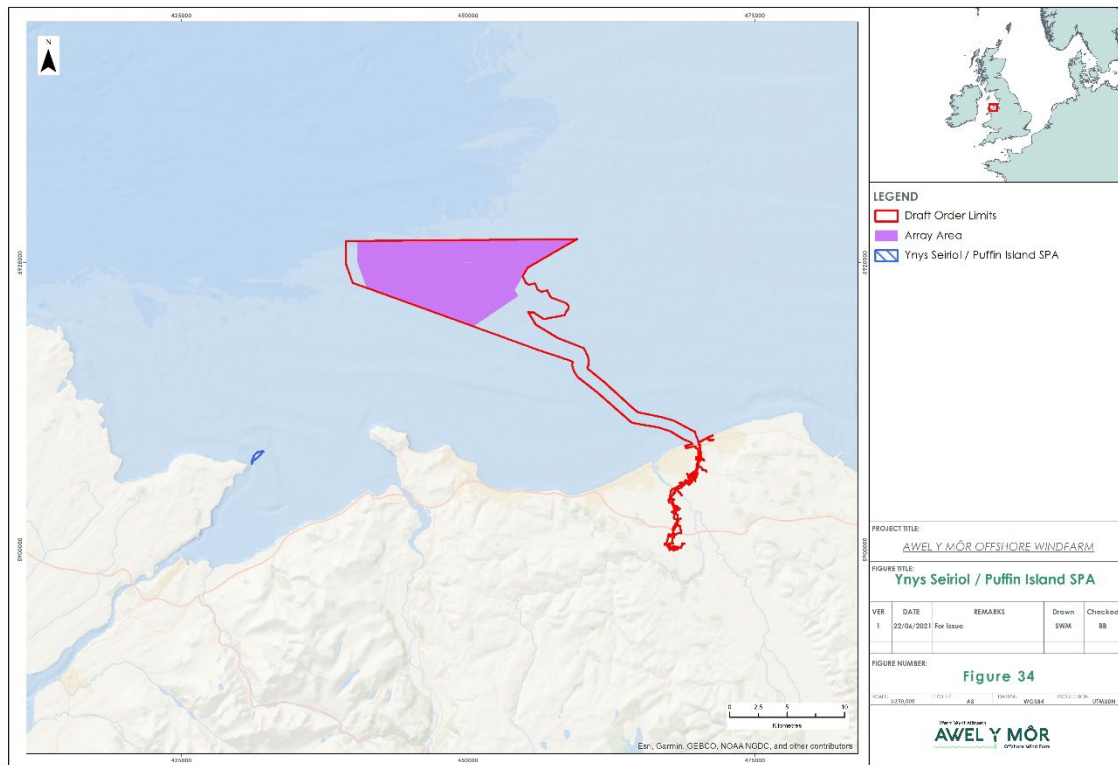


Figure 34: Location of Ynys Seiriol/ Puffin Island (UK) SPA in relation to AyM.

1.35.1 Qualifying features

299 Ynys Seiriol/ Puffin Island (UK) SPA is designated for the following qualifying features:

- ▲ A017 Cormorant (*Phalacrocorax carbo*).

1.35.2 The characteristics of the European site

- 300 The site is of importance for its breeding population of cormorant, which feed in the surrounding waters outside of the SPA. The island is also of interest for other nesting seabirds breeding both on its sea-cliffs and open grassland areas. These include the four auks (puffin, guillemot, black guillemot and razorbill), together with shag, fulmar, kittiwake, eider duck, herring gull, greater black-backed gull and lesser black-backed gull. The breeding puffin population, which formerly numbered several thousand pairs, has declined significantly to currently number less than a hundred pairs. However, old records suggest substantial population fluctuations in the past. Conservation advice
- 301 Advice on operations and Management measures can be found within the Core Management Plan including conservation objectives for Ynys Seiriol/ Puffin Island SPA (dated March 2008).^{CX}.
- 302 Conservation Objective for Feature 1: Breeding population of cormorant *Phalacrocorax carbo*:
- 303 Vision for feature 1
- 304 The conservation objective for the Cormorant is to achieve and maintain favourable conservation status, in which all the following conditions are satisfied:
- The number of breeding cormorants within the SPA are stable or increasing;
 - The abundance and distribution of prey species are sufficient to support this number of breeding pairs and for successful breeding; and
 - The management and control of activities or operations likely to adversely affect the Cormorants, is appropriate for maintaining the feature in favourable condition and is secure in the long term.

1.36 Traeth Lafan/ Lavan Sands, Conway Bay (UK) SPA

305 Traeth Lafan/ Lavan Sands is located in Conwy Bay lying between Bangor and Llanfairfechan in north-west Wales (Figure 35). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4;
- ▲ The Core Management Plan including conservation objectives for Traeth Lafan/ Lavan Sands, Conway Bay SPA (incorporating a section of Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC; refer also to the Regulation 33 Advice documents) (dated March 2008)^{cxii}; and
- ▲ The Tareth Lafan SPA Data Form (dated December 2015)^{cxii}.

^{cxii} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9013031.pdf>

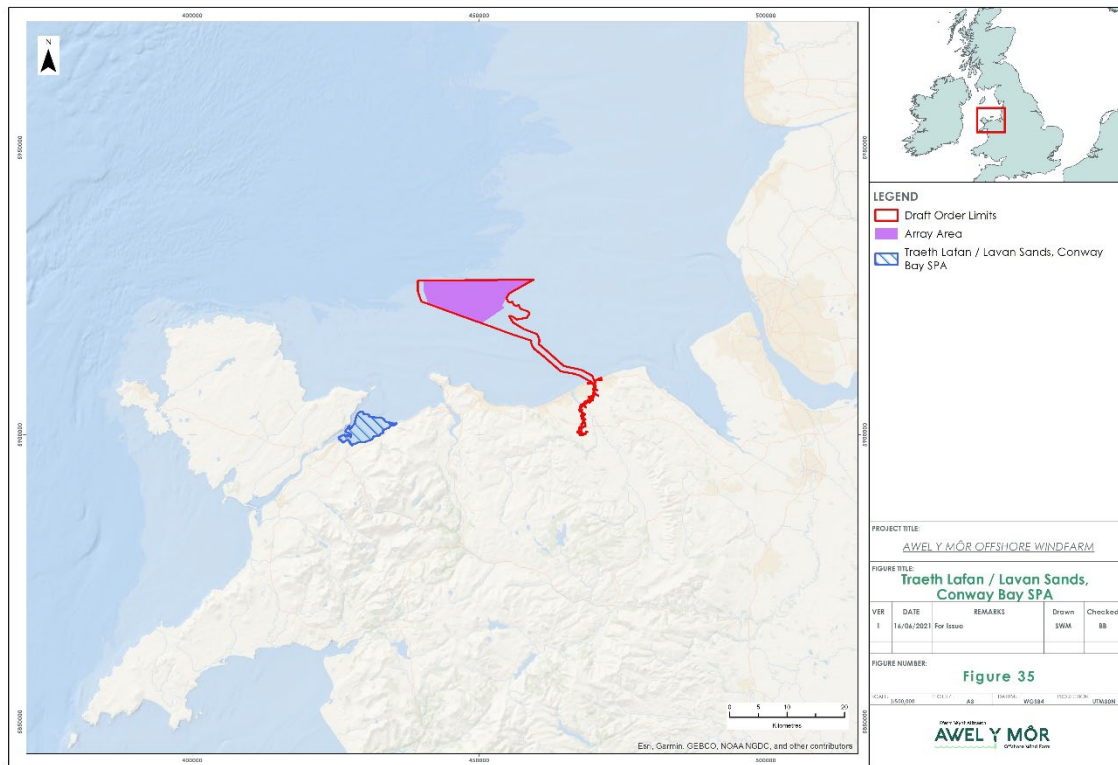


Figure 35: Location of The Traeth Lafan (UK) SPA in relation to AyM.

1.36.1 Qualifying features

306 The Traeth Lafan (UK) SPA is designated for the following qualifying features:

- A005 Great Crested Grebe (*Podiceps cristatus*);
- A069 Red-breasted Merganser (*Mergus serrator*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A160 Curlew (*Numenius arquata*); and
- A162 Redshank (*Tringa totanus*).

1.36.2 The characteristics of the European site

307 This large area of intertidal sand- and mud-flats lies at the eastern edge of the Menai Strait. The area has a range of exposures and a diversity of conditions, enhanced by freshwater streams that flow across the flats. The site is of importance for wintering waterbirds, especially Oystercatcher (*Haematopus ostralegus*) and Curlew (*Numenius arquata*). In conditions of severe winter weather, Traeth Lafan acts as a refuge area for Oystercatchers displaced from the Dee Estuary. The site is also an important moulting roost for Great Crested Grebe (*Podiceps cristatus*) in late summer/ early autumn.

1.36.3 Conservation advice

308 Advice on operations and Management measures can be found within the Core Management Plan including conservation objectives for Traeth Lafan/ Lavan Sands, Conway Bay SPA (incorporating a section of Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC; refer also to the Regulation 33 Advice documents) (dated March 2008)^{cxiii}.

309 Conservation Objective for Feature 1: Oystercatcher (*Haematopus ostralegus*):

310 Vision for feature 1

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

- The 5-year mean peak of the number of wintering oystercatchers is at least 4,000;
- The abundance and distribution of cockles of 15mm or larger and other suitable food are maintained at levels sufficient to support the population with a 5-year mean peak of 4,000 individuals;
- Oystercatchers are not disturbed in ways that prevent them spending enough time feeding for survival;
- Roost sites, including high tide roost sites, remain suitable for oystercatchers to roost undisturbed; and

- ▲ The management and control of activities or operations likely to adversely affect the oystercatchers, is appropriate for maintaining the feature in favourable condition and is secure in the long term.

312 All other bird features of this SPA are yet to have conservation objectives complete.



1.37 The Dyfi (UK) SPA

313 The Dyfi Estuary is located on the west coast of Wales on the boundary between Ceredigion, Gwynedd and Powys (Figure 36). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ The Dyfi SPA Data Form (dated March 2019)^{cxiv}.

^{cxiv} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020284.pdf>

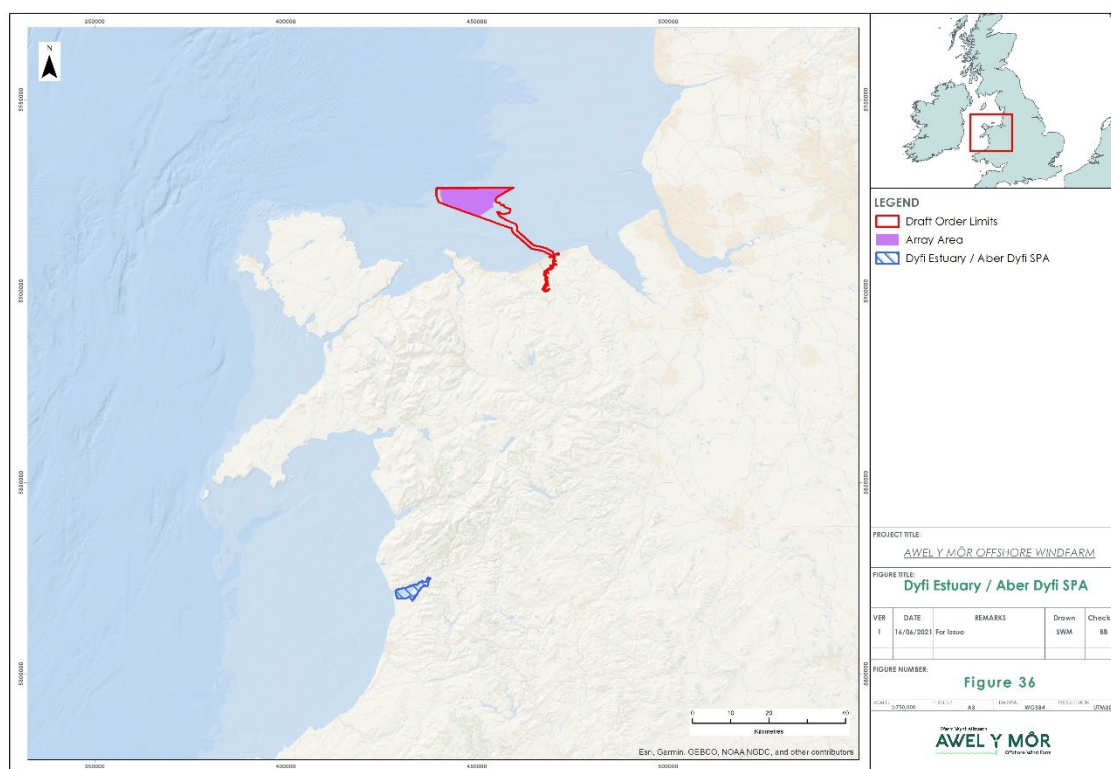


Figure 36: Location of The Dyfi (UK) SPA in relation to AyM.

1.37.1 Qualifying features

314 The The Dyfi (UK) SPA is designated for the following qualifying features:

- ▲ A395 White-fronted Goose (*Anser albifrons flavirostris*)

1.37.2 The characteristics of the European site

315 The SPA comprises the estuary, with adjoining saltmarsh, marshy grassland and improved grassland. The site is of importance as a traditional wintering area for Greenland White-fronted Goose (*Anser albifrons flavirostris*) – the most southerly regularly used area for this population in the UK. The geese use the saltmarsh and grasslands for feeding and roost on the sandbanks and mud-flats.

1.37.3 Conservation advice

- 316 Advice on operations and Management measures can be found within the Core Management Plan (including Conservation Objectives) (dated April 2008)^{cxv}.
- 317 Conservation Objective for Feature 1: Greenland white-fronted goose *Anser albifrons flavirostris*:
- 318 Vision for Feature 1
- ▲ The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: The Dyfi wintering population attains national importance level (ie. 1% of the national (UK) population), annually;
 - ▲ Winter mortality levels are <1% annually;
 - ▲ Juvenile/ sub-adult birds comprise >5% of the wintering population annually; and
 - ▲ All site-specific factors affecting the achievement of these conditions (e.g. avoidable disturbance), are under control.

1.38 Burry Inlet (UK) SPA

- 319 Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales (Figure 37). The Inlet regularly supports large numbers of overwintering wildfowl and waders that feed in the saltmarshes and on the intertidal areas. Key literature sources, including relevant project literature, are as follows:
- ▲ ES Volume 2, Chapter 4; and
 - ▲ The Burry Inlet SPA Data Form (dated January 2016)^{cxvi}.

^{cxvi} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9015011.pdf>

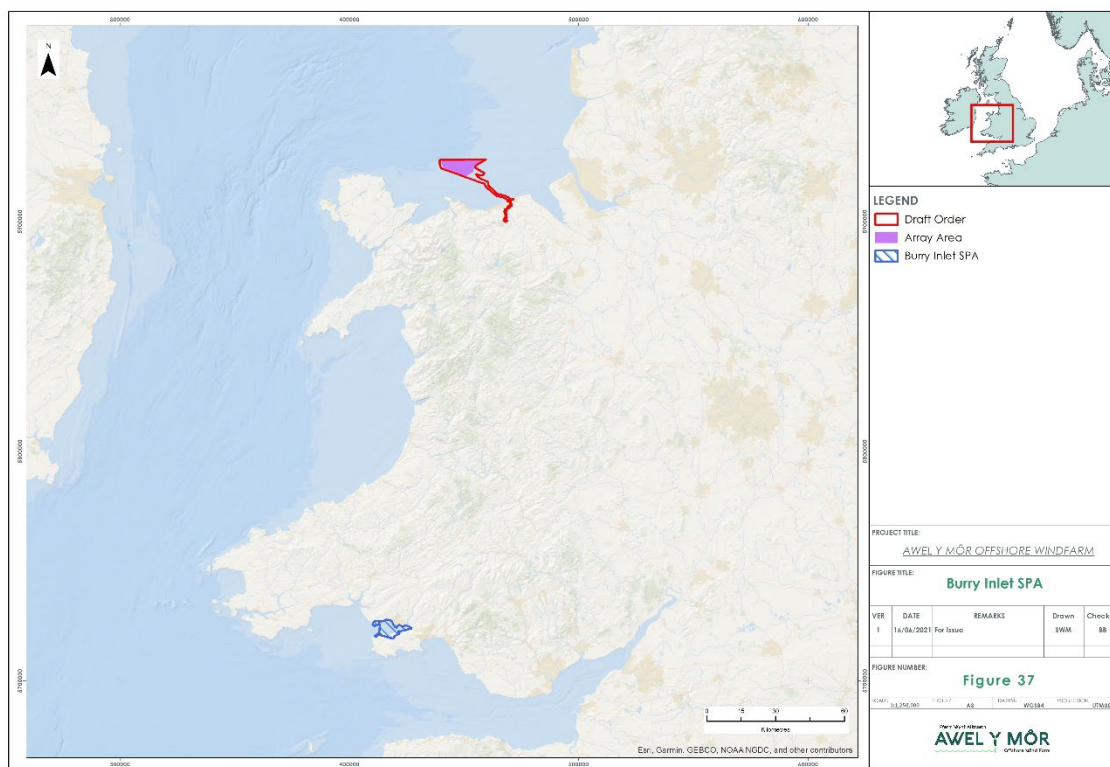


Figure 37: Location of The Burry Inlet (UK) SPA in relation to AyM.

1.38.1 Qualifying features

320 The Burry Inlet (UK) SPA is designated for the following qualifying features:

- A048 Common shelduck (*Tadorna tadorna*);
- A050 Eurasian wigeon (*Anas penelope*);
- A052 Eurasian teal (*Anas crecca*);
- A054 Northern pintail (*Anas acuta*);
- A056 Shoveler (*Anas clypeata*);
- A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- A141 Grey plover (*Pluvialis squatarola*);
- A143 Knot (*Calidris canutus*);
- A149 Dunlin (*Calidris alpina alpina*);
- A160 Eurasian curlew (*Numenius arquata*);
- A162 Common redshank (*Tringa totanus*);
- A169 Ruddy turnstone (*Arenaria interpres*); and
- Waterbird assemblage.

1.38.2 The characteristics of the European site

- 321 Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes extensive areas of intertidal sand and mud flats, together with large sand dune systems at the mouth of the estuary. The site contains the largest continuous area of saltmarsh in Wales (2,200 ha). The Burry Inlet regularly supports large numbers of wildfowl and waders.

1.38.3 Conservation advice

- 322 Advice on operations and Management measures can be found within the Advice provided by the countryside council for Wales in fulfilment of regulation 33 of the conservation (natural habitats, &c.) regulations 1994 (Carmarthen Bay and Estuaries/ Bae Caerfyrddin ac Aberoedd European Marine Site comprising: Carmarthen Bay and Estuaries/Bae Caerfyrddin ac Aberoedd Special Area of Conservation Carmarthen Bay/ Bae Caerfyrddin SPA Burry Inlet Protection Area & Ramsar Site) ^{cxvii}.
- 323 To achieve favourable conservation status all the following, subject to natural processes, need to be fulfilled and maintained in the long-term. If these objectives are not met restoration measures will be needed to achieve favourable conservation status:
- The numbers of all SPA bird species are stable or increasing;
 - The abundance and distribution of suitable prey are sufficient and appropriate to support the numbers of all SPA bird species;
 - All SPA birds are allowed to inhabit their feeding grounds and resting areas with minimum disturbance, and are allowed to move unhindered between them;
 - All states of the Conservation Objectives for the supporting habitats and species, subject to natural processes, are fulfilled and maintained in the long-term; and
 - The management and control of activities or operations likely to be of significant effect to the oystercatchers, is appropriate for maintaining the feature at FCS and is secure in the long-term.

cxvii



1.39 Burry Inlet (UK) Ramsar

324 Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales (Figure 38). The Inlet regularly supports large numbers of overwintering wildfowl and waders that feed in the saltmarshes and on the intertidal areas. Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ The Burry Inlet Information Sheet on Ramsar Wetlands (dated July 1992)^{cxviii}.

Figure 38: Location of The Burry Inlet (UK) Ramsar in relation to AyM.

1.39.1 Qualifying features

325 The Burry Inlet (UK) Ramsar is designated for the following qualifying features:

- ▲ A054 Northern pintail (*Anas acuta*);
- ▲ A130 Eurasian oystercatcher (*Haematopus ostralegus*);
- ▲ A143 Knot (*Calidris canutus*);
- ▲ A162 Common redshank (*Tringa totanus*); and
- ▲ Waterbird assemblage.

1.39.2 The characteristics of the European site

326 Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes extensive areas of intertidal sand and mud flats, together with large sand dune systems at the mouth of the estuary. The site contains the largest continuous area of saltmarsh in Wales (2,200 ha). The Burry Inlet regularly supports large numbers of wildfowl and waders.

^{cxviii} <https://jncc.gov.uk/jncc-assets/RIS/UK14001.pdf>

1.39.3 Conservation advice

327 The objective of this site is to maintain or restore the favourable conservation condition of the features listed for this site. Details regarding the features considered and the Ramsar criteria applied can be found in The Burry Inlet Information Sheet on Ramsar Wetlands (dated July 1992).

1.40 Severn Estuary (UK) SPA

328 The Severn Estuary is the largest example of a coastal plain estuary in the United Kingdom and one of the largest estuaries in Europe (Figure 38). Key literature sources, including relevant project literature, are as follows:

- ▲ ES Volume 2, Chapter 4; and
- ▲ The Severn Estuary SPA Data Form (dated December 2015)^{cxix}.

^{cxix} <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9015022.pdf>

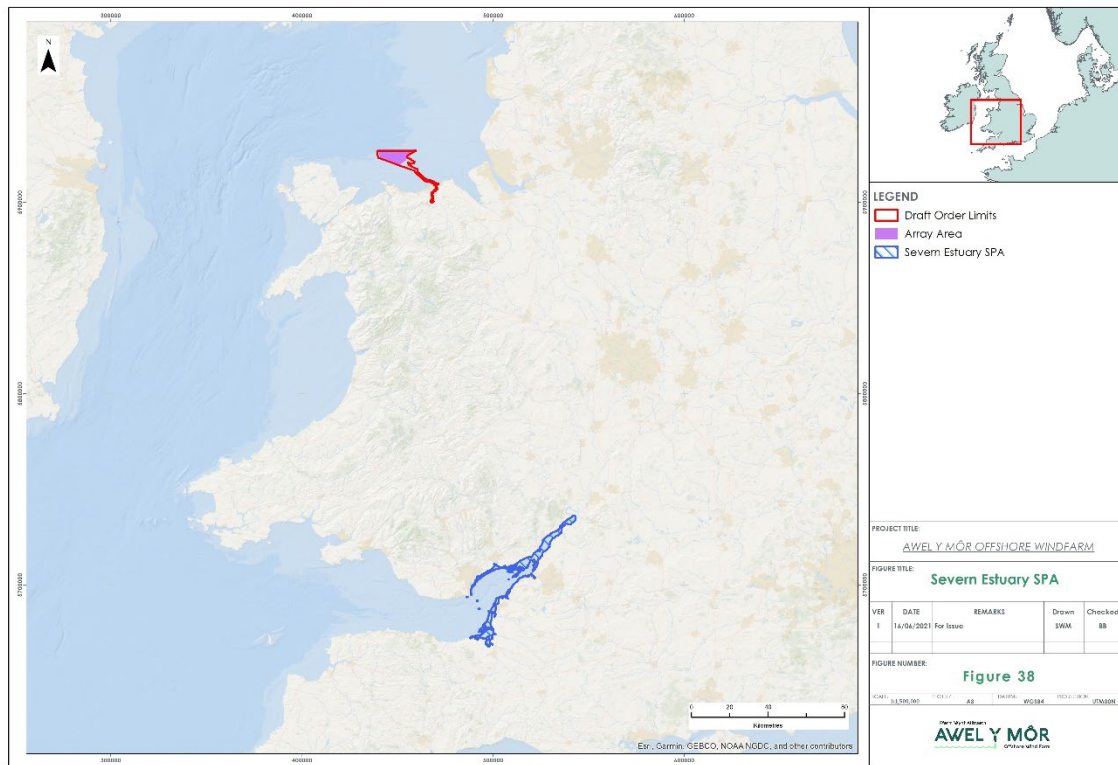


Figure 39: Location of The Severn Estuary (UK) SPA in relation to AyM.

1.40.1 Qualifying features

329 The Severn Estuary (UK) SPA is designated for the following qualifying features:

- A037 Bewick's swan (*Cygnus columbianus bewickii*);
- A048 Common shelduck (*Tadorna tadorna*);
- A051 Gadwall (*Mareca strepera*);
- A149 Dunlin (*Calidris alpina alpina*);
- A162 Common redshank (*Tringa totanus*);
- A395 White-fronted Goose (*Anser albifrons flavirostris*); and
- Waterbird assemblage.

1.40.2 The characteristics of the European site

330 The overall area of the European and International conservation designations is 73,715.4 ha of which roughly two thirds is composed of subtidal habitats (stable sandbanks and shifting sediments of gravel, sand and mud) and one third is composed of intertidal habitats (tide washed mud and sand, saltmarshes and rocky shores).

1.40.3 Conservation advice

331 Advice on operations and Management measures can be found within:

- The Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended for the Severn Estuary/ Môr Hafren European Marine Site comprising: the Severn Estuary/ Môr Hafren SAC, the Severn Estuary SPA, and the Severn Estuary/ Môr Hafren Ramsar Site (dated June 2009^{CXX}).

332 SPA Interest feature 1: Internationally important population of regularly occurring Annex 1 species: Bewick's swan:

333 The conservation objective is to maintain the Bewick's swan population and its supporting habitats in favourable condition, as defined below.

334 The interest feature Bewick's swan will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the Bewick's swan population is no less than 289 individuals (ie the 5-year peak mean between 1988/9 - 1992/3);
- the extent of saltmarsh at the Dumbles is maintained;
- the extent of intertidal mudflats and sandflats at Frampton Sands, Waveridge Sands and the Noose is maintained;
- the extent of vegetation with an effective field size of >6 ha and with unrestricted bird sightlines > 500m at feeding, roosting and refuge sites are maintained;

CXX



- greater than 25% cover of suitable soft leaved herbs and grasses in winter season throughout the transitional saltmarsh at the Dumbles is maintained; and
 - aggregations of Bewick's swan at feeding, roosting and refuge sites are not subject to significant disturbance.
- 335 SPA interest feature 2: Internationally important population of regularly occurring migratory species: wintering European white-fronted goose:
- 336 The conservation objective is to maintain the European white-fronted goose population and its supporting habitats in favourable condition, as defined below.
- 337 The interest feature European white-fronted goose will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
 - the 5-year peak mean population size for the wintering European white fronted goose population is no less than 3,002 individuals (ie the 5-year peak mean between 1988/9-1992/3);
 - the extent of saltmarsh at the Dumbles is maintained;
 - the extent of intertidal mudflats and sandflats at Frampton Sands, Waveridge Sands and the Noose is maintained;
 - greater than 25% cover of suitable soft-leaved herbs and grasses is maintained during the winter on saltmarsh areas;
 - unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; and
 - aggregations of European white-fronted goose at feeding or roosting sites are not subject to significant disturbance.
- 338 SPA interest feature 3: Internationally important population of regularly occurring migratory species: wintering dunlin:
- 339 The conservation objective is to maintain the dunlin population and its supporting habitats in favourable condition, as defined below.
- 340 The interest feature dunlin will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the wintering dunlin population is no less than 41,683 individuals (i.e. the 5-year peak mean between 1988/9 - 1992/3);
- the extent of saltmarsh and associated strandlines is maintained;
- the extent of intertidal mudflats and sandflats is maintained;
- the extent of hard substrate habitats is maintained;
- the extent of vegetation with a sward height of <10cm is maintained throughout the saltmarsh;
- the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained;
- the abundance and macro-distribution of suitable invertebrates in hard substrate habitats is maintained;
- unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; and
- aggregations of dunlin at feeding or roosting sites are not subject to significant disturbance.

341 SPA interest feature 4: Internationally important population of regularly occurring migratory species: wintering redshank:

342 The conservation objective is to maintain the redshank population and its supporting habitats in favourable condition, as defined below.

343 The interest feature redshank will be considered to be in favourable condition when, subject to natural processes each of the following conditions are met:

- the 5-year peak mean population size for the wintering redshank population is no less than 2,013 individuals (ie the 5-year peak mean between 1988/9 - 1992/3);
- the extent of saltmarsh and associated strandlines is maintained;
- the extent of intertidal mudflats and sandflats is maintained;
- the extent of hard substrate habitats is maintained;
- the extent of vegetation with a sward height of <10cm throughout the saltmarsh is maintained;
- the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained;
- the abundance and macro-distribution of suitable invertebrates in hard substrate habitats is maintained;

- ▲ unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; and
 ▲ aggregations of redshank at feeding or roosting sites are not subject to significant disturbance.
- 344 SPA interest feature 5: Internationally important population of regularly occurring migratory species: wintering shelduck:
- 345 The conservation objective is to maintain the shelduck population and its supporting habitats in favourable condition, as defined below.
- 346 The interest feature shelduck will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ▲ the 5-year peak mean population size for the wintering shelduck population is no less than 2,892 individuals (ie the 5-year peak mean between 1988/9 - 1992/3);
 - ▲ the extent of saltmarsh is maintained;
 - ▲ the extent of intertidal mudflats and sandflats is maintained;
 - ▲ the extent of hard substrate habitats is maintained;
 - ▲ the abundance and macro-distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained;
 - ▲ unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; and
 - ▲ aggregations of shelduck at feeding or roosting sites are not subject to significant disturbance.
- 347 SPA interest feature 6: Internationally important population of regularly occurring migratory species: wintering gadwall:
- 348 The conservation objective is to maintain the gadwall population and its supporting habitats in favourable condition, as defined below.
- 349 The interest feature gadwall will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:
- ▲ the 5-year peak mean population size for the wintering gadwall population is no less than 330 (ie the 5-year peak mean between 1988/9 - 1992/3);
 - ▲ the extent of intertidal mudflats and sandflats is maintained;

- unrestricted bird sightlines of >200m at feeding and roosting sites are maintained; and
- aggregations of gadwall at feeding or roosting sites are not subject to significant disturbance.

350 SPA interest feature 7: Internationally important assemblage of waterfowl:

351 The conservation objective is to maintain the waterfowl assemblage and its supporting habitats in favourable condition, as defined below.

352 The interest feature waterfowl assemblage will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- the 5-year peak mean population size for the waterfowl assemblage is no less than 68,026 individuals (ie the 5-year peak mean between 1988/9 - 1992/3);
- the extent of saltmarsh and their associated strandlines is maintained;
- the extent of intertidal mudflats and sandflats is maintained;
- the extent of hard substrate habitats is maintained;
- extent of vegetation of <10cm throughout the saltmarsh is maintained;
- the abundance and macroscale distribution of suitable invertebrates in intertidal mudflats and sandflats is maintained;
- the abundance and macroscale distribution of suitable invertebrates in hard substrate habitats is maintained;
- greater than 25% cover of suitable soft leaved herbs and grasses during the winter on saltmarsh areas is maintained;
- unrestricted bird sightlines of >500m at feeding and roosting sites are maintained; and
- waterfowl aggregations at feeding or roosting sites are not subject to significant disturbance.

1.41 Severn Estuary (UK) Ramsar

353 The Severn Estuary is the largest example of a coastal plain estuary in the United Kingdom and one of the largest estuaries in Europe (Figure 40). Key literature sources, including relevant project literature, are as follows:

- ES Volume 2, Chapter 4; and
- Severn Estuary Information Sheet on Ramsar Wetlands (dated July 1995))^{cxxi}.

Figure 40: Location of The Severn Estuary (UK) Ramsar in relation to AyM.

1.41.1 Qualifying features

354 The Severn Estuary (UK) Ramsar is designated for the following qualifying features:

- A037 Bewick's swan (*Cygnus columbianus bewickii*);
- A048 Common shelduck (*Tadorna tadorna*);
- A051 Gadwall (*Mareca strepera*).
- A149 Dunlin (*Calidris alpina alpina*);
- A162 Common redshank (*Tringa totanus*);
- A395 White-fronted Goose (*Anser albifrons flavirostris*);
- A054 Northern pintail (*Anas acuta*);
- A052 Eurasian teal (*Anas crecca*);
- A137 Ringed plover (*Charadrius hiaticula*); and
- Waterbird assemblage.

1.41.2 The characteristics of the European site

355 The estuary's classic funnel shape, unique in Britain, is a factor causing the Severn to have the second-largest tidal range in the world (after the Bay of Fundy, Canada). This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide swept sand and rock. The species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders.

356 A further consequence of the large tidal range is the extensive intertidal zone, one of the largest in the UK, comprising mudflats, sand banks, shingle, and rocky platforms.

^{cxxi} <https://jncc.gov.uk/jncc-assets/RIS/UK11081.pdf>

357 Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass *Zostera* occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent.

1.41.3 Conservation advice

358 Advice on operations and Management measures can be found within:

- ▲ The Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended for the Severn Estuary/ Môr Hafren European Marine Site comprising: the Severn Estuary/ Môr Hafren SAC, the Severn Estuary SPA, and the Severn Estuary/ Môr Hafren Ramsar Site (dated June 2009^{Cxxii}).

359 Ramsar interest feature 3: Internationally important populations of waterfowl: Bewick's swan:

- ▲ The conservation objective for the "Bewick's swan" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "Bewick's swan" feature.

360 Ramsar interest feature 4: Internationally important populations of waterfowl: European white-fronted goose:

- ▲ The conservation objective for the "European white-fronted goose" feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA "wintering European white-fronted goose" feature.

361 Ramsar interest feature 5: Internationally important populations of waterfowl: dunlin:

- The conservation objective for the “dunlin” feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA “wintering dunlin” feature.

362 Ramsar interest feature 6: Internationally important populations of waterfowl: redshank:

- The conservation objective for the “redshank” feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA “wintering redshank” feature.

363 Ramsar interest feature 7: Internationally important populations of waterfowl: shelduck:

- The conservation objective for the “shelduck” feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA “wintering shelduck” feature.

364 Ramsar interest feature 8: Internationally important populations of waterfowl: gadwall:

- The conservation objective for the “gadwall” feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA “wintering gadwall” feature.

365 Ramsar interest feature 9: Internationally important assemblage of waterfowl:

- The conservation objective for the “internationally important assemblage of waterfowl” feature of the Severn Estuary Ramsar Site is to maintain the feature in favourable condition, as defined by the conservation objective for the SPA “internationally important assemblage of waterfowl” feature.



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