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**PROPOSED CHANGES TO
GLANNAU ABERDARON AC YNYS ENLLI / ABERDARON COAST AND BARDSEY
ISLAND SPECIAL PROTECTION AREA (SPA)**

Advice to the Welsh Government

NATURAL RESOURCES WALES

October 2013

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1. Introduction and background

This document contains Natural Resources Wales advice to the Welsh Government regarding proposals to amend the basis on which the Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island Special Protection Area (SPA) is classified under the EC Birds Directive. There are two main elements to this advice, which are based on separate areas of work being conducted by the UK nature conservation agencies concerning revisions to the UK SPA network:

- (i) To give effect to the findings of the '2001 SPA review' (Stroud *et al.* 2001). The 2001 review indicates that changes are required to the list of species for which the site is considered to qualify as an SPA, including specifically to reflect the importance of the site for its non-breeding population of chough *Pyrrhocorax pyrrhocorax*. The 2001 review itself does not recommend any boundary changes.
- (ii) To give effect to the findings of ongoing work by the UK to meet obligations under the Birds Directive to identify the most suitable territories in the sea. The proposal is to extend the boundary of the SPA to include adjacent sea areas that are used by Manx shearwaters *Puffinus puffinus* from within the existing SPA for behaviours that are directly linked to their use of the breeding site.

1.1 The legal framework

The EU Birds Directive (2009/147/EEC¹) provides a legislative framework for the protection, management and control of naturally occurring wild birds of EU Member States.

Article 4 of the Birds Directive requires Member States to classify the 'most suitable territories in number and size' as special protection areas for the conservation of species listed in Annex I to the Directive, and to take similar measures for 'regularly occurring migratory species'. The classification of SPAs is to take into account the species' protection requirements in the geographical sea and land area where the Directive applies. According to case law of the European Court of Justice, the selection of areas as SPAs and the determination of their boundaries should not take account of social or economic considerations, but reflect only ornithological information.

SPAs in Wales are classified by the Welsh Ministers under section 2 of the European Communities Act 1972.² Once classified, SPAs become 'European sites' or 'European marine sites' under the Conservation of Habitats and Species Regulations 2010 (as amended), and are subject to the provisions of those Regulations and Articles 6(2) to 6(4) of the Habitats and Species Directive.³ According to Welsh Government policy, potential SPAs (that is proposed SPAs that are the subject of consultation prior to a decision on whether to formally classify them) should have the same degree of protection as classified SPAs.

Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA was classified in 1992 by the then UK Secretary of State for the Environment for its breeding populations of Chough, *Pyrrhocorax pyrrhocorax* and Manx shearwater *Puffinus puffinus*.

¹ Formerly 79/409/EEC

² This is a general provision empowering ministers to give effect to obligations arising from EU legislation.

³ 92/43/EEC

1.2 The 2001 SPA review

All SPAs in the UK are classified on the basis that they support populations of one or more named species of birds, or an assemblage of birds, that are considered of European importance.

The 2001 SPA review was carried out by the Joint Nature Conservation Committee (JNCC), English Nature (now Natural England), Scottish Natural Heritage and Countryside Council for Wales (now Natural Resources Wales) and published in 2001 (Stroud *et al.* 2001). Its overall aim was to establish a consistent basis for the identification of the UK's suite of terrestrial SPAs, based on data from the mid 1990's. One of the main outputs of the review was a series of 'site accounts' for 243 individual SPAs in the UK, setting out the basis on which each site is considered to qualify as an SPA under the Birds Directive. These site accounts were derived using the best available ornithological data available at the time, generally covering the period 1991/1992 to 1995/1996, unless there were compelling reasons to use earlier or later data. These were the most current data available at the start of the review. The recommendations in the review are based on application of the 1999 SPA selection guidelines, which are published by JNCC on behalf of the UK statutory conservation agencies and relevant government departments. Please see SPA selection guidelines – The Birds Directive report on the JNCC website.

Most of the sites included in the 2001 review were already classified as SPAs. In many cases the site accounts in the 2001 review identify different species as qualifying interests to those listed on extant SPA citations. In these cases, the intended function of the 2001 SPA review is to provide the basis for reclassification of the sites.

Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA was included in the 2001 review. The basis on which Natural Resources Wales considers the site to qualify as an SPA under the Birds Directive has changed since the SPA was originally classified in 1992, and one of the purposes of this document is to recommend reclassification of the SPA to reflect the recommendations in the 2001 review.

1.3 Marine extensions to seabird breeding colony SPAs

Although the UK's suite of SPAs currently includes appropriate areas of terrestrial habitat for seabird interests, the requirement now is to identify more fully the most suitable territories, taking into account the species' protection requirements at sea, noting that the UK's obligations to identify SPAs applies equally to the UK's land and sea area.

The 2001 review did not consider marine SPAs, other than in relation to coastal and estuarine sites designated on the basis of their breeding seabird and wintering waterbird interests. Accordingly, the JNCC, on behalf of the UK conservation agencies, is considering the requirements of four types of marine SPAs:

1. Marine extensions to existing seabird breeding colonies on the coast
2. Inshore aggregations of non-breeding waterbirds
3. Offshore seabird aggregations
4. Other types of marine SPA

Part of this work has been completed and part is still ongoing. More information about this work can be found on the JNCC website under UK Marine SPAs.

Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA is in part a seabird breeding colony SPA for Manx shearwater. The proposed marine extension presented in this document relates only to item 1 above.

2. The extant Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey SPA

The SPA was classified in 1992 by the then Secretary of State of the Environment to include an area of coast at the tip of the Llŷn peninsula, the whole of Ynys Enlli/Bardsey Island and Ynysoedd y Gwylanod/Gwylan Islands. The seaward boundary of the SPA is the mean low water mark.

The species listed as qualifying features of the existing SPA are the breeding populations of the following species, which meet Stage 1.1 or Stage 1.2 of the 1999 SPA selection guidelines (area is used regularly by at least 1% of the GB or relevant biogeographic region population):

Chough *Pyrhcorax pyrrhcorax*
Manx shearwater *Puffinus puffinus*

The current SPA citation, map and copy of the 'Natura 2000 standard data form'⁴ are given in Appendix 1.

3. Proposed changes arising from the 2001 review

Table 1 below compares the basis of the extant SPA (according to the current citation) with the site account published in the 2001 SPA review. It is proposed that the 2001 SPA review site account be formally adopted as the basis for the SPA classification.

There are no proposed changes to the landward boundary of the SPA arising from the 2001 SPA review (but see proposed marine extension described in section 4 below).

Table 1 Comparison of the extant Glannau Aberdaron and Ynys Enlli / Aberdaron Coast and Bardsey SPA with the 2001 SPA review site account

Species	Relevant article of Birds Directive⁵	Existing SPA (classified 1992; details listed on citation)	2001 SPA review site account
Chough <i>Pyrhcorax pyrrhcorax</i> (breeding)	4.1	14 pairs, representing 5% of the British breeding population	12 pairs, representing at least 3.5% of the GB breeding population (count, as at late 1990s)
Chough <i>Pyrhcorax pyrrhcorax</i> (non breeding)	4.1	Not listed	24 individuals ⁶ representing at least 3.5% of the non breeding population in GB (RSPB)

⁴ This is the standard form in which information on Natura 2000 sites (SPAs and SAC) is provided to the European Commission. The data forms for all UK SPAs and SAC are published on the JNCC website.

⁵ Article 4.1: species listed in Annex I of the Birds Directive. Article 4.2: regularly occurring migratory species and waterbird assemblages.

⁶ Note that the 2001 SPA review gives a figure of 24 pairs rather than individuals. This is an error in that report.

Manx shearwater <i>Puffinus puffinus</i> (breeding)	4.2	About 4,300 pairs, 2% of the British breeding population	6,930 pairs, representing at least 2.6% of the breeding population (count, as at 1996)
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The proposal is that the qualifying features of the SPA should be as follows, in accordance with the site account in the 2001 SPA review:

- Breeding population of Chough *Pyrhocorax pyrrhocorax* (stage 1.1 of the UK SPA selection guidelines)
- Breeding population of Manx shearwater *Puffinus puffinus* (stage 1.2 of the UK SPA selection guidelines)
- Non-breeding population of Chough *Pyrhocorax pyrrhocorax* (stage 1.1 of the UK SPA selection guidelines)

4. Proposed marine extension

4.1 Rationale

Seabirds breeding in colonies on land use marine waters immediately adjacent to the colony for a number of essential activities, such as preening, bathing, displaying, and other maintenance behaviours (Tasker & Leaper 1993, Reid & Webb 2005). Targeted surveys (McSorley *et al.* 2003) demonstrate significant use and clear ecological dependence by certain seabird species on these waters. Marine extensions to existing seabird breeding colony SPAs would recognise this essential aspect of the birds' ecological requirements thereby supporting the seabird colonies and ensuring compliance with the requirement in Article 4 of the Birds Directive to classify as SPAs the 'most suitable territories'.

Given that the essential activities mentioned above are not site specific and may occur over broad areas, JNCC has endorsed generic guidance on how far extensions should be made into the marine environment, depending on which breeding species are present (McSorley *et al.* 2003, Reid & Webb 2005, McSorley *et al.* 2008). The guidance includes the following recommendations:

- colony SPAs for which Atlantic puffin, common guillemot, or razorbill are qualifying features be extended by seaward by 1 km;
- colony SPAs for which Northern gannet or Northern fulmar are qualifying features be extended seaward by 2 km;
- colony SPAs for which Manx shearwater is a qualifying feature be extended by at least 4 km, and further where site specific data supports this. At this site, due to there being site specific survey (McSorley *et al.* 2008), JNCC recommend a seaward extension of 9 km.
- marine SPA extensions are not appropriate for the following qualifying features: great cormorant, skuas, gulls, black-throated diver, great crested grebe, Slavonian grebe, common scoter, red-necked phalarope; and
- further work is still ongoing to determine if there is a case for any additional SPA protection for tern species, European shag and red-throated diver.

4.2 The proposed marine extension

Of the species for which seaward extensions are recommended, a breeding population of Manx shearwater is the relevant qualifying interest of Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA.

The marine extension that is being proposed is limited to areas on which the Manx shearwaters are ecologically dependent, in this case for 'active behaviours' such as preening, bathing and displaying. Prior to dusk during the breeding season, adult shearwaters assemble in flocks or 'rafts' on the sea surface between 1 and 10 km from the colony shore. The rafts can consist of several thousand individuals. When darkness falls, these 'rafting' birds fly to their burrows to feed their chicks, regurgitating partly digested fish (Brooke 1990). The proposed extension encompasses this important rafting area.

The proposed marine extension area does not necessarily need to include specific numbers of birds that meet the SPA selection thresholds, as it is an extension from the existing SPA on land, which already hosts qualifying numbers of Manx shearwater (McSorley *et al.* 2008, McSorley *et al.* 2003).

In the summer of 2005, JNCC and Countryside Council for Wales (now Natural Resources Wales) undertook fieldwork on Bardsey Island to ascertain the rafting area utilised by Manx shearwaters. The methodology involved tagging individual breeding birds which were then tracked using radio-telemetry, to determine the location of rafting birds and to assess how regularly rafts were used (McSorley *et al.* 2008).

The results of the study at Bardsey and two other sites, Skomer and Rum, indicate that rafting behaviour was engaged in at least twice during the study by 40-98% of tagged birds. As the results show minimum frequencies, it was deemed reasonable to conclude that most tagged birds regularly engaged in rafting behaviour. Given the numbers of birds observed to be involved in rafting (tens of thousands in some cases), (Brooke 1990), it is reasonable to consider that most breeding birds attend rafts before coming ashore, on at least some, if not all, occasions. Consequently the waters around colonies used for rafting are considered to be an essential resource for breeding Manx shearwaters, on which the species is ecologically dependent. Extension of existing Manx shearwater colony SPAs into the marine environment is therefore considered appropriate (McSorley *et al.* 2008).

The boundaries drawn around the island encapsulated 95% of the total estimated rafting population. Rejection of the final 5% (95-100%) of locations was deemed sensible, as inclusion of these locations within a possible seaward extension would have included very large areas of sea that were not used to a significant degree by rafting birds. Analysis indicated that there was little difference in the spatial extent of the 90% and 95% kernel cores. On this basis, and using a precautionary approach, the area enclosed by the 95% core was chosen to define the area of significant use by rafting birds.

On the basis of the analysis described above, it is recommended that Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA be extended by a 9km radius measured from the existing SPA boundary around Bardsey Island only (i.e. mean low water mark on the island). It is not currently proposed to include any additional land areas within the SPA, other than a small number of very small rock outcrops or islets that lie within the 9 km radius, It would not be practical to exclude these tiny areas from the extended SPA. Where the proposed extension abuts land areas which are not already

within the SPA (i.e. the Welsh mainland), the proposed landward boundary is mean low water mark.

Figure 1 shows the extent of the interest feature as defined by a 9km radius. It also shows a proposed boundary for the SPA to encompass that 9km radius. When defining boundaries for marine sites it is usually necessary to strike a balance between following the extent of the interest feature, and keeping the boundary relatively simple (without too many 'turning points'). The proposed seaward boundary in Figure 1 has been determined using the following previously agreed principles: that it should be as simple as possible, and be placed along lines of latitude or longitude or as diagonal lines between two points where this provides a more easily identified or more practical boundary (Johnston *et al.* 2004). A larger scale definitive map will be prepared should the site go forward for consultation.

Table 2 provides the proposed coordinates of the recommended seaward boundary extensions (McSorley *et al.* 2008).

Figure1. Map of the Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA showing the recommended extent of the marine component of the interest feature, and a possible SPA boundary (McSorley *et al.* 2008)

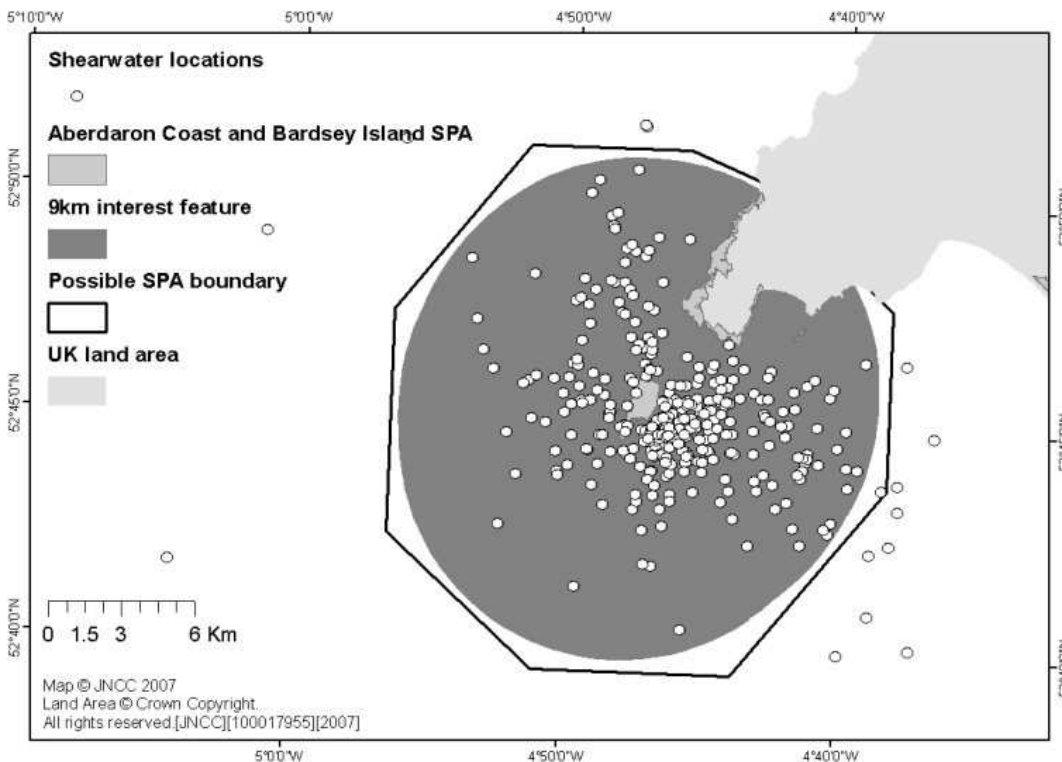


Table 2. Coordinates of proposed new boundary for the Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA (given in degrees, minutes and decimal minutes (to two decimal places) of latitude and longitude

Longitude	Latitude
-4°51.68'	52°51.16'
-4°45.83'	52°51.16'
-4°43.06'	52°50.47'
-4°38.28'	52°47.71'
-4°38.28'	52°43.76'
-4°43.80'	52°39.54'
-4°51.04'	52°39.54'
-4°56.47'	52°42.47'
-4°56.47'	52°47.42'

The seabed, water column and surface are included in the proposed extension.

The area of the existing SPA is 509.47 ha and the area of the proposed marine extension is approximately 33,432.95 ha, giving a total area of the extended SPA of approximately 33,942.42 ha. This area figure for the existing site is taken from the original, hand drawn, legal map and may change slightly following capture onto an up-to-date digital base map. This does not mean the existing site boundary will have changed on the ground in any way and it will continue to follow the original features, although where it follows a water mark, e.g. Mean Low Water Mark, this is liable to change due to natural coastal processes. The area figure of the proposed extension is calculated by taking the area of the whole new SPA minus the area of the existing SPA. As the area of existing SPA site may change slightly due to reasons outlined above, the area figure of the proposed extension may also change slightly.

Just over half of the proposed marine extension lies within the Pen Llŷn a'r Sarnau Special Area of Conservation (SAC), designated by the National Assembly for Wales in December 2004 under the 1992 EC Habitats and Species Directive (92/43/EEC). Approximately 14,500 ha of the proposed marine extension lie in waters not currently subject to any Natura 2000 designation.

5. References

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- MCSORLEY, C.A., DEAN, B.J., WEBB, A. & REID, J.B. 2003. Seabird use of waters adjacent to colonies: Implications for seaward extensions to existing seabird breeding colony SPAs. JNCC Report, No. 329

MCSORLEY, C.A., WILSON L.J., DUNN, T.E., GRAY, C., DEAN, B.J., WEBB, A. & REID, J. B. 2008. **Manx shearwater *Puffinus puffinus* evening rafting behaviour around colonies on Skomer, Rum and Bardsey: its spatial extent and implications for recommending seaward boundary extensions to existing colony Special Protection Areas in the UK.** JNCC Report No. 406.

REID, J.B. AND WEBB, A. 2005. **Marine Natura 2000 – Recommendations for the extension of existing seabird (colony) Special Protection Areas into the marine environment.** JNCC Committee paper 05 P14B.

RSPB (2009) **Chough Special Protection Areas in Wales: A report to the Countryside Council of Wales.** RSPB, May 2009.

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TASKER, M.L. & LEAPER, G.M. 1993. **Protecting marine birds in the United Kingdom: A review of the United Kingdom's international commitments, and recommendations for action.** Unpubl. JNCC Report, Peterborough.

Appendix 1: Citation, map and Natura 2000 standard data form for extant Glannau Aberdaron and Ynys Enlli / Aberdaron Coast and Bardsey Island SPA

Citation

EC Directive 79/409 on the Conservation of wild Birds special
Protection Area

GLANNAU ABERDARON AND) YNYS ENLLI (GWYNEDD)
(ABERDARON COAST AND BARDSEY ISLAND)

An area of rocky coastline with many crags, screes and low cliffs supporting coastal heath and grassland. This site includes the coast at the tip of the Lleyn peninsula, together with Bardsey Island and two smaller islands, the Gwylans. The boundaries of the proposed SPA. follow those of the following three SSSIs: Ynys Enlli(Bardsey Island), Ynsoedd Y Gwylanod (Gwylan Islands) and Glannau Aberdaron.

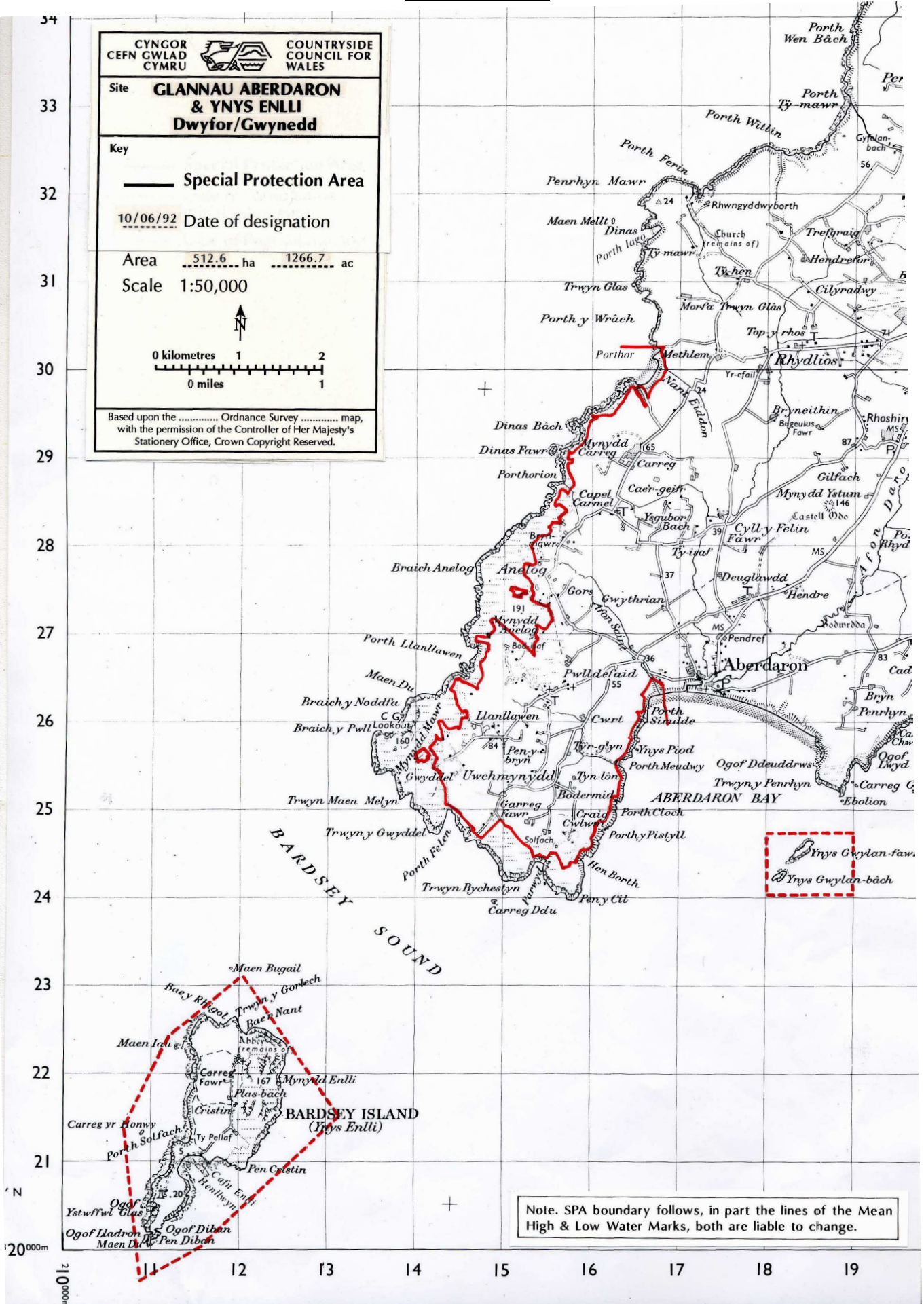
The site qualifies under Article 4.1 by supporting a breeding population of 14 pairs of chough Pyrrhocorax pyrrhocorax, representing 5% of the British population.

It also qualifies under Article 4.2 by supporting about 4.300 pairs of manx shearwater Puffinus puffinus 2% of the British breeding population.

Also notable are breeding populations of cormorant Phalacrocorax carbo, shag P. aristotelis. peregrine Falco peregrinus, herring gull Larus argenatus and puffin Fratercula arctica.

SPA 1312A
Updated Citation
HTR April 1992

Appendix 1: Map



Appendix 1: Natura 2000 Standard Data Form

UK SPA data form

**NATURA 2000
STANDARD DATA FORM**

FOR SPECIAL PROTECTION AREAS (SPA)
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)
AND
FOR SPECIAL AREAS OF CONSERVATION (SAC)

1. Site identification:

1.1 Type 1.2 Site code
1.3 Compilation date 1.4 Update

1.5 Relationship with other Natura 2000 sites

U	K	0	0	1	3	1	1	7
U	K	0	0	3	0	2	7	1

1.6 Respondent(s)

1.7 Site name

1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199206
date site designated as SAC	

2. Site location:

2.1 Site centre location

longitude	latitude
04 44 34 W	52 48 34 N

2.2 Site area (ha) 2.3 Site length (km)

2.5 Administrative region

NUTS code	Region name	% cover
UK913	Gwynedd	100.38%

2.6 Biogeographic region

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alpine	Atlantic	Boreal	Continental	Macaronesia	Mediterranean

3. Ecological information:

3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Migratory		Population	Conservation	Isolation	Global	
			Breed	Winter					Stage
A013	<i>Puffinus puffinus</i>		6930 P			B		C	
A346	<i>Pyrrhocorax pyrrhocorax</i>		12 P			B		B	

4. Site description:

4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	30.0
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	3.0
Shingle. Sea cliffs. Islets	15.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	28.0
Dry grassland. Steppes	15.0
Humid grassland. Mesophile grassland	2.8
Alpine and sub-alpine grassland	
Improved grassland	5.0
Other arable land	1.0
Broad-leaved deciduous woodland	0.1
Coniferous woodland	
Mixed woodland	

Habitat classes	% cover
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	0.1
Total habitat cover	100%

4.1 Other site characteristics

<p>Soil & geology: Acidic, Basalt, Clay, Igneous, Metamorphic, Peat, Sedimentary</p> <p>Geomorphology & landscape: Cliffs, Coastal, Craggs/ledges, Hilly, Intertidal rock, Intertidal sediments (including sandflat/mudflat), Island, Lowland, Open coast (including bay), Slope</p>
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4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC)	
During the breeding season the area regularly supports:	
<i>Pyrhocorax pyrrhocorax</i>	3.5% of the GB breeding population Count, as at late 1990s

ARTICLE 4.2 QUALIFICATION (79/409/EEC)	
During the breeding season the area regularly supports:	
<i>Puffinus puffinus</i>	3.2% of the population in Great Britain Count, as at 1996

4.3 Vulnerability

<p>Heavy levels of sheep grazing physically damage burrows of Manx shearwater; management plans to reduce livestock numbers are being considered. Invasion of bracken into coastal grassland is reducing feeding areas; methods to control bracken invasion are being considered. Parts of the area experience heavy recreational pressure from walkers and their dogs which disturb feeding chough, although this is not thought to be significant at present.</p>

5. Site protection status and relation with CORINE biotopes:

5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	35.5
UK04 (SSSI/ASSI)	100.4

Appendix 2: Supplementary information

1. AREA FIGURES ON MAPS

For the reasons outlined below, the area figure on the public consultation maps produced by Natural Resources Wales showing the proposed marine extension to the SPA, will show a slightly different area figure for the existing site compared to the existing SPA hand drawn map.

(i) In the mid 1980's, the original SPA maps were hand drawn on small scale base maps and were captured digitally at a later date when GIS technology was adopted by Country Agencies. The data have subsequently undergone a Positional Accuracy Improvement Update by Ordnance Survey (OS), a programme carried out across the UK, in addition to being transposed from OS Landline, the largest available mapping scale available at the time, to OS Master Map. This series of changes has introduced slight changes to the area figure.

(ii) In line with standard practice, the maps of potential site extensions in proposals submitted to Welsh Government are provided at a small scale and area figures quoted are approximate only. Following approval to proceed to public consultation phase, Natural Resources Wales prepares definitive maps, captured at the largest scale of mapping available. The minor difference in site area figures is due to the more accurate area figure calculation produced by mapping at a larger scale.

2. MINOR CORRECTIONS TO DIGITAL DATA

During an internal quality assurance exercise, two minor digitising errors were discovered in the existing site boundary.

(i) The rocky outcrop of Maen Bugail had been interpreted as located within the SPA site, whilst the original, legal map shows the small islet outside the red stippled line that encompassed that part of the existing SPA. It has been removed from the existing, digital, SPA boundary on MapInfo.

(ii) Around the northern coast of Ynys Gwylan-fawr, very small rocky outcrops had been excluded from the existing SPA boundary on MapInfo. These small outcrops are within the red stippled line indicating the site on the original map, and should have been included in the existing SPA boundary on MapInfo. The digital data is now corrected. The area figure for the total existing SPA site has changed from 512.6 ha on the old hardcopy map to 509.47ha after the correction. This figure incorporates all the other minor reasons for change outlined above.