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Conservation Objectives Series

Beara Peninsula SPA 004155

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
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Local Government and Heritage

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Introduction

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

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

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

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

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

Notes/Guidelines:

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

Qualifying Interests

**** indicates a priority habitat under the Habitats Directive***

004155	Beara Peninsula SPA
A009	Fulmar *Fulmarus glacialis*
A346	Chough *Pyrrhocorax pyrrhocorax*

Please note that this SPA overlaps with Kenmare River SAC (002158). See Map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	2012
Title :	Chough productivity survey 2012, nest location and NPWS farm plan report
Author :	O'Keeffe, D.
Series :	Unpublished Report
Year :	2019
Title :	The status of Ireland's breeding seabirds: birds directive article 12 reporting 2013 – 2018
Author :	Cummins, S., Lauder, C., Lauder, A. & Tierney, T. D.
Series :	Irish Wildlife Manual No. 114
Year :	2021
Title :	Estimated foraging ranges of the breeding seabirds of Ireland's marine Special Protected Area network
Author :	Power, A., McDonnell, P. & Tierney, T.D.
Series :	NPWS Report
Year :	2022
Title :	Status and distribution of chough in Ireland: results of the 2021 survey (in prep)
Author :	Colhoun, K., Collin, J., Rooney, E., Keogh, N.P., Lauder, A, & Cummins, S.
Series :	Irish Wildlife Manual

Other References

Year :	1911
Title :	The fulmar petrel breeding in Ireland
Author :	Ussher, R.J.
Series :	The Irish Naturalist, 20(9), pp.149-152
Year :	1983
Title :	The chough in Britain and Ireland
Author :	Bullock, I., Drewett, D. & Mickleburg, S.
Series :	British Birds 76, 377–401
Year :	1991
Title :	The status of seabirds in Britain and Ireland
Author :	Lloyd, C., Tasker, M.L. and Partridge, K.
Series :	Poyser Monographs Volume: 50
Year :	1992
Title :	The second international chough survey in Ireland, 1992
Author :	Berrow, S.D., Mackie, K.L., O'Sullivan, O., Shepherd, K.B., Mellon, C., & Coveney, J.A.
Series :	Irish Birds, 5: 1-10
Year :	1995
Title :	Seabird monitoring handbook for Britain and Ireland: a compilation of methods for survey and monitoring of breeding seabirds
Author :	Walsh, P.M., Halley, D.J., Harris, M.P., Del Nevo, A., Sim, I.M.W. and Tasker, M.L.
Series :	JNCC / RSPB / ITE / Seabird Group, Peterborough ISBN 1 873701 73 X

Year :	1999
Title :	Diet of the northern fulmar *Fulmarus glacialis*: reliance on commercial fisheries?
Author :	Phillips, R.A., Petersen, M.K., Lilliendahl, K., Solmundsson, J., Hamer, K.C., Camphuysen, C.J. and Zonfrillo, B.
Series:	Marine Biology, 135 (1), pp.159-170
Year:	2003
Title :	The status and distribution of choughs *Pyrrhocorax pyrrhocorax* in the Republic of Ireland 2002/03
Author :	Gray, N., Thomas, G., Trewby, M. & Newton, S.F.
Series :	Irish Birds, 7, 147-156.
Year :	2004
Title :	Seabird populations of Britain and Ireland
Author :	Mitchell, P.I., Newton, S.F., Ratcliffe, N. and Dunn, T.E.
Series :	Poyser Monographs Volume: 74
Year :	2005
Title :	Choughs *Pyrrhocorax pyrrhocorax* breeding in Wales select foraging habitat at different spatial scales
Author :	Whitehead, S, Johnstone, I. & Wilson, J.
Series :	Bird Study, 52:2, 193-203, DOI: 10.1080/00063650509461391
Year :	2005
Title :	Generic guidelines for seaward extensions to existing breeding northern fulmar *Fulmarus glacialis* colony Special Protection Areas
Author :	McSorley, C.A., Webb, A., Dean, B.J. and Reid J.B.
Series :	JNCC Report No. 358
Year :	2006
Title :	The breeding season foraging behaviour of choughs *Pyrrhocorax pyrrhocorax* in three Irish chough important bird areas
Author :	Trewby, M., Gray, N., Cummins, S., Thomas, G. & Newton, S.
Series :	Unpublished BirdWatch Ireland Report, Kilcoole, Wicklow
Year :	2006
Title :	Cork bird report 1996-2004
Author :	Cronin, C.; Barton, C.; Hussey, H; Carmody, M.
Series :	Cork Bird Report Editorial Team
Year :	2006
Title :	Status, trends and attendance patterns of the northern fulmar *Fulmarus glacialis* in Nunavut, Canada
Author :	Gaston, A.J., Mallory, M.L., Gilchrist, H.G. and O'Donovan, K.
Series :	Arctic, pp.165-178
Year :	2011
Title :	Aspects of the feeding ecology and breeding biology of the red-billed chough (*Pyrrhocorax pyrrhocorax*) in Ireland
Author :	Boylan, M.
Series :	PhD Thesis, National University of Ireland, Cork.
Year :	2018
Title :	Breeding status of red-billed choughs *Pyrrhocorax pyrrhocorax* in the UK and Isle of Man in 2014
Author :	Hayhow, D.B., Johnstone, I., Moore, A.S., Mucklow, C., Stratford, A., Šúr, M. & Eaton, M.A.
Series :	Bird Study, DOI: 10.1080/00063657.2018.1541162

Year :	2019
Title :	Adverse effects of routine bovine health treatments containing triclabendazole and synthetic pyrethroids on the abundance of dipteran larvae in bovine faeces
Author :	Gilbert, G., MacGillivray, F.S., Robertson, H.L. & Jonsson, N.N.
Series :	Nature Scientific Reports 9, 4315
Year :	2019
Title :	Desk-based revision of seabird foraging ranges used for HRA screening
Author :	Woodward, I., Thaxter, C. B., Owen, E. & Cook, A. S. C. P.
Series :	BTO Research Report No. 724.
Year :	2020
Title :	Dursey Island cable car. Dursey Island post-breeding chough survey report. Final.
Author :	EirEco Environmental Consultants
Series :	Published Ecological Assessment Report
Year :	2021
Title :	Seabird Population Trends and Causes of Change: 1986–2019 Report
Author :	Joint Nature Conservation Committee, Peterborough
Series:	JNCC Seabird Population Trends and Causes of Change Series

Spatial data sources

Year :	2022
Title :	National Seabird Subsites
GIS Operations :	Dataset clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For:	Map 3

Conservation Objectives for : Beara Peninsula SPA [004155]

A009 Fulmar *Fulmarus glacialis*

To maintain the favourable conservation condition of fulmar in Beara Peninsula SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Breeding population size	Number of Apparently Occupied Sites (AOS)	No significant decline	Fulmar, first recorded as a breeding bird in Ireland in 1911, increased to over 30,000 pairs by 2018 (Ussher, 1911; Cummins et al., 2019). An increase in food discarded by commercial fishing has been suggested as a contributing factor to the growth in numbers and distribution of this species in the North Atlantic (JNCC, 2021). The attribute 'Apparently Occupied Sites' is based on standard survey methods (see Walsh et al., 1995). Day-to-day variability in counts is considered relatively high for this species (Gaston et al., 2006) and multiple counts during the survey period is advised. In 2016, Dursey Island held a nationally important breeding population (487 AOS) and accounts for over 75% of the SPA's total population. The Dursey Island population was estimated to be 271 AOS in 1986 and 575 AOS in 2000 (Lloyd et al., 1991; Mitchell et al., 2004)
Productivity rate	Number of fledged young per AOS	Sufficient to maintain population	A lack of comprehensive Irish data precludes the identification of a minimum productivity rate for this relatively long-lived species at this site and indeed for fulmar at the national level. Walsh et al. (1995) sets out two methods to estimate the productivity rate for this species
Distribution: Extent of AOS within the colony	Numbers of AOS occurring in each subsite of the island	No significant change in coverage	Typically, fulmar nest near the tops of grassy cliffs on relatively wide ledges (Mitchell et al., 2004). As per the 2000 survey, the breeding abundance and distribution of the Dursey Island colony was not evenly dispersed around the island (see map 3). This indicates relative differences in the extent and/or quality of nesting resources across the island
Prey biomass available	Kilogrammes	No significant decline	The colonisation of Ireland and Britain by fulmar over the last two centuries has been largely attributed to their close association with fisheries, but contemporary dietary studies indicate they also feed on a wide variety of prey including sandeels, crustaceans and squid (Philips et al., 1999). Based on several studies, Woodward et al. (2019) provides estimates (i.e. overall mean; mean of maximum distances across all studies; and maximum distance recorded) of fulmar foraging ranges from the nest site during the breeding season, which are 135; 542; and 2,736km respectively (see Power et al., 2021)
Disturbance at the breeding site	Level of impact	Disturbance occurs at levels that do not significantly impact on fulmar at the breeding site	Typically, fulmar nest near the top of grassy cliffs on relatively wide ledges (Mitchell et al., 2004)
Disturbance at marine areas immediately adjacent to the colony	Level of impact	Disturbance occurs at levels that do not significantly impact on breeding fulmar	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies for non site-specific maintenance behaviours (e.g. courtship, bathing, preening). Work carried out in the UK found that the highest densities of fulmar performing these behaviours occurred within 2km of the breeding colony (McSorley et al., 2005)

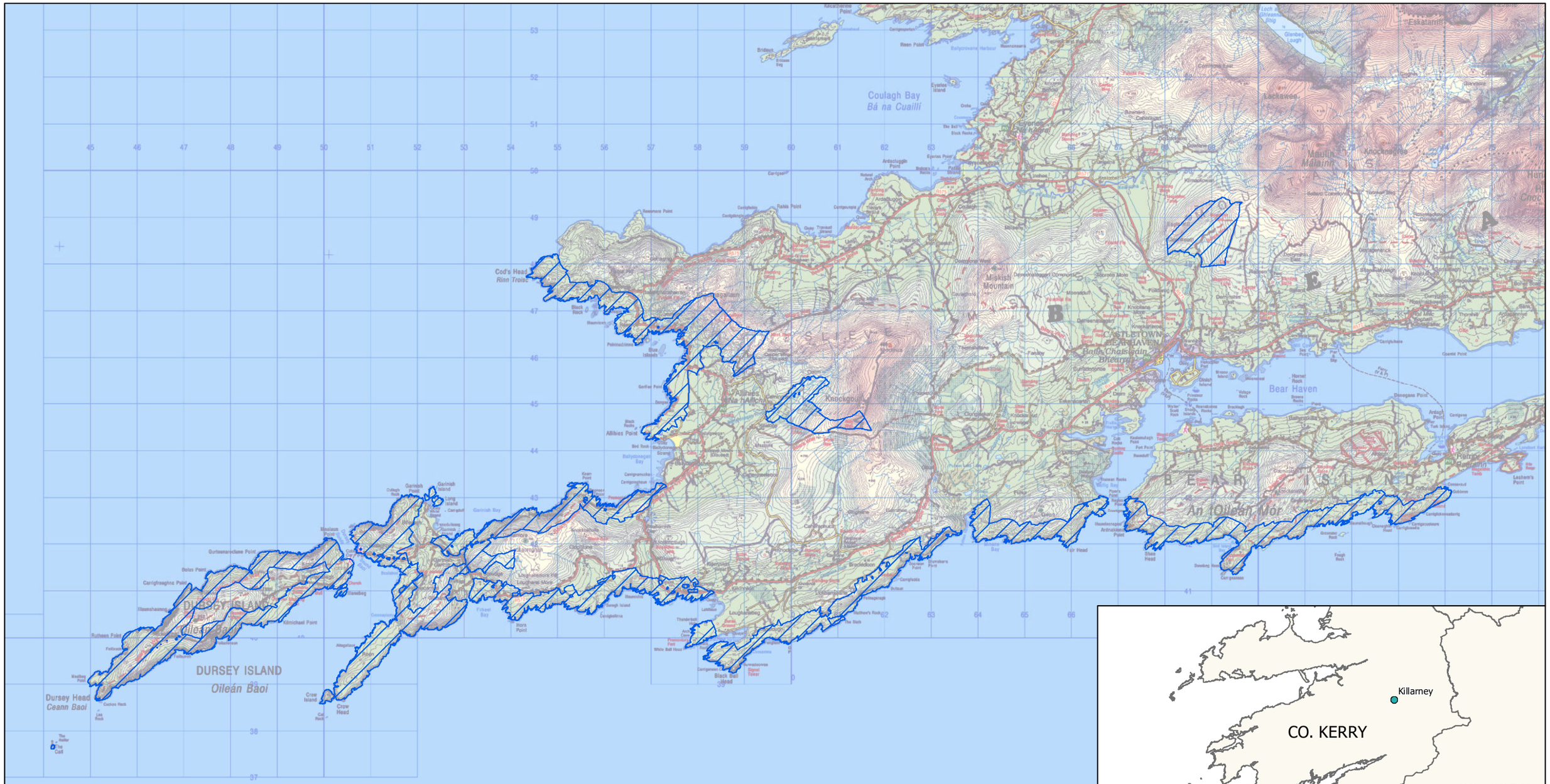
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabirds, particularly during the breeding season, require regular access to marine waters ecologically connected to the colony in order to forage as well as to engage in other maintenance behaviours. As above, the highest densities of fulmar undertaking non site-specific maintenance behaviours occurred within 2km of the breeding colony (McSorley et al., 2005). During the breeding season, fulmar regularly forage over pelagic waters up to 2,736km away from the colony (Woodward et al., 2019)

A346 Chough *Pyrrhocorax pyrrhocorax*

To maintain the favourable conservation condition of chough in Beara Peninsula SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population size	Number of confirmed and probable breeding pairs	Maintain numbers at or above 35 confirmed and probable breeding pairs	The attribute 'confirmed' and 'probable' breeding pairs is based on standard survey methods (see Hayhow et al., 2018; Colhoun et al., in prep) and an update of the approaches taken by the national surveys of 1992 (Berrow et al., 1993) and 2002/03 (Gray et al., 2003). Using this approach for this site, the estimated breeding population was 28 pairs in 1992, and 35 pairs in 2002/03 (applying 2021 survey criteria to 2002/03 records, this figure is revised to 30 pairs), and 47 pairs in 2021
Population trend	Percentage change	Population trend maintained or increasing	The breeding component of the population, as opposed to non-breeding flock birds, is considered more reliable in indicating population change (Trewby et al., 2006). Using available data from the 1992 (Berrow et al., 1993), 2002/03 (Gray et al., 2003) and 2021 (Colhoun et al., in prep) national surveys, the population trend for the site is stable and/or increasing in the short (i.e 2002-2021) and longer term (1992-2021) based on assessments of the numbers of known confirmed and probable breeding pairs for the site
Productivity rate	Number of fledged young per confirmed pair	Sufficient to maintain population	Most of the population nest along coastal cliffs or in sea caves. In most instances, due to the inaccessible nature of nesting locations, estimates of breeding productivity and success are based on numbers of fledged young seen with adults post-fledging, unless records are for man-made/artificial sites e.g. cattle sheds, old buildings and castles etc. Though some studies have provided estimates of productivity and/or success (e.g. Berrow et al., 1993; Gray et al., 2003; Boylan 2011; O'Keeffe 2012; Trewby et al., 2006), at present, there is a lack of representative Irish data to determine a more quantitative target for breeding productivity
Foraging habitat: quality and quantity	Hectares	Maintain sufficent quality and quantity of coastal grassland and other relevant habitats to support the population of chough at the level of breeding pairs referred to in the attributes above	Studies in Ireland (e.g. Trewby et al., 2006), Wales (e.g. Whitehead et al., 2005) and elsewhere have shown that breeding chough spend most of their time foraging near nest sites during the breeding season (April-June inclusive). Grazed habitats with short swards of <5cm are preferred and areas of bare ground, where soils are easier to probe e.g. paths, along with earth banks and stone banks. Thus, sufficient foraging habitat within 350m of the coastline, along coastal sites where chough are known to breed, is essential to support breeding pairs. This is also true of inland cliff and mountainous breeding sites
Food availability: prey biomass	Quantity per unit area	Maintain adequate levels of prey biomass (including preferred invertebrate prey items such as leatherjackets, dung beetles etc.)	The chough feeds largely on invertebrates, at or near the soil surface (e.g. ants, spiders, worms, insect larvae such as crane fly larvae) where prey items are more accessible. The dosing of livestock with veterinary parasiticide treatments (including anthelmintics) has knock-on consequences with respect to invertebrate density in grasslands on which chough depend as a foraging habitat (Gilbert et al., 2019)

Distribution of roosting sites	Spatial distribution	The distribution of preferred roosts is maintained	Flocks of up to 42 individuals have been recorded in the month of September at Dursey Island on the Beara Peninsula (Trewby et al., 2006). Similar post-breeding totals (max of 78 birds, 4 Sep 1998) for the island are detailed in the Cork Bird Report (1996 -2004), though a more recent survey in 2019 recorded fewer individuals (a max of 15 birds in October) during non-breeding surveys (EirEco, 2020). Peak attendance at roost sites is usually in late summer and early autumn, post-breeding. Known roost sites for this SPA include Dursey Sound (max of 17 recorded in 2003/04) which is adjacent to suitable foraging habitat (i.e. maritime grassland) and the Copper Mines at Allihes (peak of 37 birds in October 2003)
Disturbance	Level of impact	Disturbance occurs at levels that does not significantly impact upon chough in the SPA	A determination of the significance of an activity should consider the following: frequency, duration, intensity of activity, temporal availability and location (e.g. if access to preferred food resources is restricted, and for how long) and site fidelity (e.g. pairs to nest sites during breeding, or flocks to roost sites at other times), weather (e.g. prolonged cold spells) and predation/competition. Trewby et al. (2006) found that coastal breeding pairs spend up to 80% of their time within 350m of the nest site. Impacts are likely to be highest near nest sites (particularly on coastal cliffs where available foraging habitats are likely more limited in terms of total area/extent) and at roost sites. The impact of any significant disturbance on the SPA's population will ultimately be manifested in targets relating to population demographics (i.e. population size/ population trends/ breeding productivity) and distribution



Legend

Beara Peninsula SPA 004155

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Department of Housing, Local Government and Heritage

MAP 1:
BEARA PENINSULA SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION

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

SITE CODE:
SPA 004155; version 3
CO. CORK

0 1 2 4 Kilometres

N

Date: October 2022

Kenmare River SAC 002158

Beara Peninsula SPA 004155

Legend

- Beara Peninsula SPA 004155
- Kenmare River SAC 002158

Ordnance Survey Ireland 2018

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MAP 2:
BEARA PENINSULA SPA
CONSERVATION OBJECTIVES
OVERLAPPING SITE

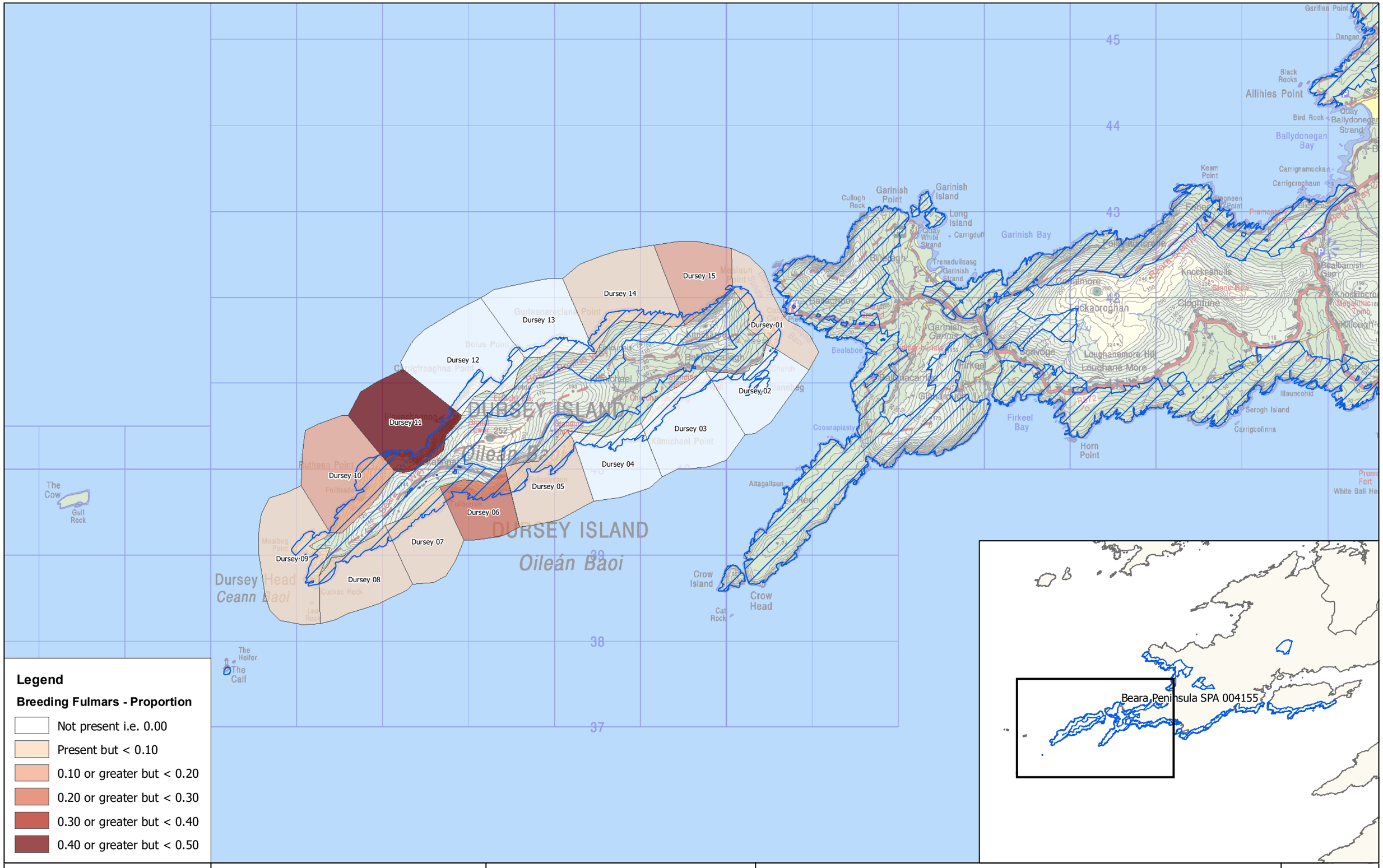
Map to be read in conjunction with the NPWS Conservation Objectives Document

SITE CODE:
SPA 004155; version 3
CO. CORK

0 2 4 8 Kilometres

N

Date: October 2022



Legend

Breeding Fulmars - Proportion

- Not present i.e. 0.00
- Present but < 0.10
- 0.10 or greater but < 0.20
- 0.20 or greater but < 0.30
- 0.30 or greater but < 0.40
- 0.40 or greater but < 0.50

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MAP 3:
BEARA PENINSULA SPA
CONSERVATION OBJECTIVES
PROPORTION OF BREEDING FULMAR SITES ACROSS DURSEY ISLAND

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

SITE CODE:
SPA 004155; version 3
CO. CORK

0 0.5 1 2 Kilometres

N

Date: October 2022