

National Parks and Wildlife Service

Conservation Objectives Series

Keeragh Islands SPA 004118



NPWS

An tSeirbhís Páirceanna
Náisiúnta agus Fiadhúlra
National Parks and Wildlife
Service

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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*

004118 Keeragh Islands SPA

A017 Cormorant *Phalacrocorax carbo*

Please note that this SPA adjoins with Seas off Wexford SPA (004237). See map 2. The conservation objectives for this site should be used in conjunction with those for the adjoining site(s) 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 :	2007
Title :	Seabird Productivity at East and South coast colonies in Ireland in 2007: Site accounts
Author :	Trewby, M.; Burt E.; Newton, S.
Series :	Unpublished report to NPWS
Year :	2021
Title :	Estimated foraging ranges of the breeding seabirds of Ireland's marine special protected area network
Author :	Power, A.; McDonnell, P.; Tierney, T.D.
Series :	Published NPWS report
Year :	2023
Title :	Monitoring of breeding seabird populations on Great Saltee 2023
Author :	Tierney T.D.; Murray, T.; Cummins, S.; Doyle, H.; Walsh, A.
Series :	Unpublished NPWS report
Year :	2025
Title :	Survey of breeding Cormorant populations on the Keeragh Islands SPA in 2024
Author :	Lusby, J.; Kavanagh, L.
Series :	BirdWatch Ireland Report to NPWS

Other References

Year :	1991
Title :	The status of seabirds in Britain and Ireland
Author :	Lloyd, C.; Tasker, M.L.; Partridge, K.
Series :	Poyser Monographs Volume: 50
Year :	1995
Title :	Seabird monitoring handbook for Britain and Ireland: a compilation of methods for survey and monitoring of breeding seabirds
Author :	Walsh, P.; Halley, D.J.; Harris, M.P.; del Nevo, A.; Sim, I.M.W.; Tasker, M.L.
Series :	JNCC, Peterborough
Year :	1998
Title :	Flexible foraging techniques in breeding cormorants <i>Phalacrocorax carbo</i> and shags <i>Phalacrocorax aristotelis</i> : benthic or pelagic feeding?
Author :	Grémillet, D.; Argentin, G.; Schulte, B.; Culik, B.M.
Series :	Ibis, 140(1), pp.113-119
Year :	2003
Title :	Implications for seaward extensions to existing breeding seabird colony Special Protection Areas
Author :	McSorley, C.A.; Dean, B.J.; Webb, A.; Reid J.B.
Series :	JNCC Report No. 329
Year :	2004
Title :	Seabird populations of Britain and Ireland
Author :	Mitchell, P.I.; Newton, S.F.; Ratcliffe, N.; Dunn, T.E.
Series :	Poyser, London

Year : 2005

Title : Breeding performance and timing of breeding of inland and coastal breeding Cormorants *Phalacrocorax carbo* in England and Wales

Author : Newson, S.E.; Hughes, B.; Hearn, R.; Bregnballe, T.

Series : Bird Study, 52:1, 10-17, DOI: 10.1080/00063650509461369

Year : 2011

Title : A preliminary assessment of the potential impacts of Cormorant (*Phalacrocorax carbo*) predation on Salmonids in four selected river systems

Author : Tierney, N.; Lusby, J.; Lauder, A.

Series : Report Commissioned by Inland Fisheries Ireland and funded by the Salmon Conservation Fund

Year : 2015

Title : The breeding status of Great Cormorant (*Phalacrocorax carbo carbo*) in Co. Wexford

Author : Murray, T.; Cabot, D.

Series : Irish Naturalists' Journal 34(2): 89-94

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 : Great Cormorant (*Phalacrocorax carbo*), version 1.0. In Birds of the World (S. M. Billerman, Editor)

Author : Hatch, J.J.; Brown, K.M.; Hogan, G.G.; Morris, R.D.; Orta, J.; Garcia, E.F.J.; Jutglar, F.; Kirwan, G.M.; Boesman, P.F.D.

Series : Cornell Lab of Ornithology, Ithaca, NY, USA

Year : 2021

Title : Definition of Favourable Conservation Status for Great Cormorant, *Phalacrocorax carbo*

Author : Newson, S.E.; Austin, G.

Series : Natural England, pp.25. ISBN: 978-1-78354-723-4

Year : 2023

Title : Seabirds Count: a census of breeding seabirds in Britain and Ireland (2015-2021)

Author : Burnell, D.; Perkins, A.J.; Newton, S.F.; Bolton, M.; Tierney, T.D.; Dunn, T.E.

Series : Lynx Nature Books, Barcelona

Year : 2024

Title : Great Cormorant (*Phalacrocorax carbo*)

Author : JNCC

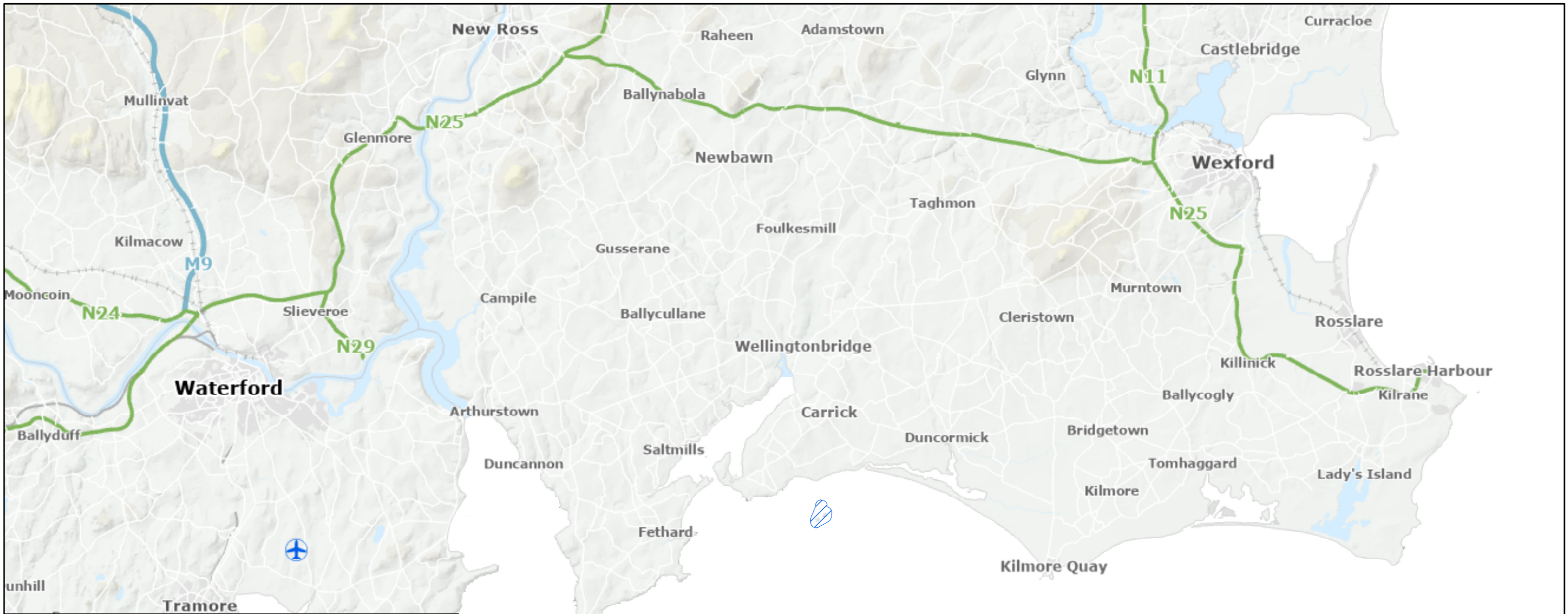
Series : <https://jncc.gov.uk/our-work/great-cormorant-phalacrocorax-carbo/>

A017 Cormorant *Phalacrocorax carbo*


To restore the Favourable conservation condition of Cormorant in Keeragh Islands SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Breeding population size	Number of Apparently Occupied Nests (AON)	Long term SPA population trend is stable or increasing	Cormorant are thought to have colonised the Keeragh Islands in the late 1960s (Murray and Cabot, 2015). The breeding population on these islands ranged between 154 - 239 pairs between 1984 - 1991 (Lloyd et al., 1991; Murray and Cabot, 2015). An estimated 200 pairs were recorded in 2000 (Mitchell et al., 2004). The population was surveyed near annually between 2008 - 2023 and ranged between 129 - 242 pairs (Burnell et al., 2023; Murray and Cabot, 2015; NPWS internal files). The most recent population estimate in 2024 was 157 pairs (Lusby and Kavanagh, 2025). Murray and Cabot (2015) suggest that there is likely movement and redistribution of breeding birds between this SPA and Saltee Islands SPA. In 2023 the combined estimate for both these SPAs was 313 AON, down circa 3% from 2022 and down 29% from the 2015 estimate (Tierney et al., 2023). The national Cormorant population estimate increased by 4% between surveys in 1986 - 1988 and 2015 - 2021 (Burnell et al., 2023)
Productivity rate	Number of fledged young per breeding pair	Sufficient to maintain a stable or increasing population	There was no productivity data available for this species in this SPA. Trewby et al. (2007) reported that the average productivity on Lambay Island SPA was 1.05 (± 0.11 SE) chicks fledged per AON in 2007 (69 pairs across three subplots). Further monitoring and research work is required in order to identify a minimum productivity rate for this species at this site and at the national level. In addition to the nominate Atlantic subspecies <i>P. c. carbo</i> which breeds in Ireland, the United Kingdom also holds the continental race <i>P. c. sinensis</i> , largely breeding at inland sites in England, and differences in productivity rates and overall population trends between these two subspecies have been noted (Newson and Austin, 2021; Newson et al., 2005; Burnell et al., 2023). Cormorant colonies in the UK fledged approximately 1.84 chicks per nest per year between 1989 and 2019 (JNCC, 2024)
Distribution: extent of available nesting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable nesting sites throughout the SPA to maintain a stable or increasing population	Distribution encapsulates the number of locations and area of potentially suitable nesting habitat for the breeding population and its availability for use. The suitability and availability of habitat across the SPA may vary through time. This will affect the spatio-temporal patterns of use of the habitats by Cormorant. Typically, coastal Cormorant colonies are located on flat or rocky islets or sea stack tops, less often on cliffs (Walsh et al., 1995). Historically, Cormorant have been subjected to widespread persecution in Britain and Ireland due to their large size and piscivorous diet (Burnell et al., 2023), this may have influenced the breeding distribution of this species in certain areas. The site is comprised of two low-lying islets, Keeragh Mór and Keeragh Beg, Cormorant have bred on both. Between 2008 and 2016 the majority or all Cormorant nested on Keeragh Mór. From 2017 the majority of birds nested on Keeragh Beg. Since 2021, Cormorant have only been found on Keeragh Beg

Forage spatial distribution, extent, abundance and availability	Location, hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	Cormorant diet consists predominantly of small benthic and pelagic fish captured by pursuit diving, typically over shallow (<10m) freshwater, estuarine, and marine environments (Grémillet et al., 1998; Hatch et al., 2020). Based on analysis of 255 diet samples from five sites across Ireland, Tierney et al. (2011) noted Ballan Wrasse <i>Labrus bergylta</i> to be the most important forage species in terms of frequency, followed by Perch <i>Perca fluviatilis</i> and Roach <i>Rutilus rutilus</i> with less frequent records of salmonids and European Eel <i>Anguilla anguilla</i> . Across all sites, 61% of the identifiable prey items were marine species. Woodward et al. (2019) reviewed the foraging ranges of seabird species and provide estimates (i.e. overall mean; mean of maximum distances across all studies; and maximum distance recorded) of Cormorant foraging ranges from the nest site during the breeding season, which are 7km, 26km, and 35km respectively (see Power et al., 2021)
Disturbance at the breeding site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on birds at the breeding site	Disturbance events at the nest site/breeding colony level can result in a reduction of overall productivity and even lead to the abandonment of the breeding colony. The impact of any significant disturbance (direct or indirect) to the breeding population will ultimately affect the achievement of targets for population size and/or spatial distribution. Disturbance contributes to increased energetic expenditure, which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing, and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Disturbance at areas ecologically connected to the colony	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on breeding population	Cormorant can make extensive use of the waters adjacent to their breeding colonies for non site-specific maintenance behaviours (e.g. courtship, bathing, preening) as defined in McSorley et al. (2003). Additionally, this species may engage in maintenance behaviours outside of the breeding colony. Cormorant, after long periods in the water, may stand in areas away from the colony and engage in a behaviour known as wing-spreading. The main purpose of this behaviour is to dry plumage (Hatch et al., 2020) and may occur on sandbanks and small rocks and islets
Barriers to connectivity	Number, location, shape, and area (ha)	Barriers do not significantly impact the population's access to the SPA or other ecologically important sites outside the SPA	Breeding Cormorant may require regular and efficient access to waters ecologically connected to the colony in order to forage as well as to engage in other maintenance behaviours. Based on several studies, Woodward et al. (2019) provide estimates (i.e. overall mean; mean of maximum distances across all studies; and maximum distance recorded) of Cormorant foraging ranges from the nest site during the breeding season, which are 7km, 26km, and 35km respectively (see Power et al., 2021)



Legend

 Keeragh Islands SPA 004118




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**MAP 1:
KEERAGH ISLANDS SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION**

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

**SITE CODE:
SPA 004118; version 3
CO. WEXFORD**

0 1.25 2.5 5 Kilometres

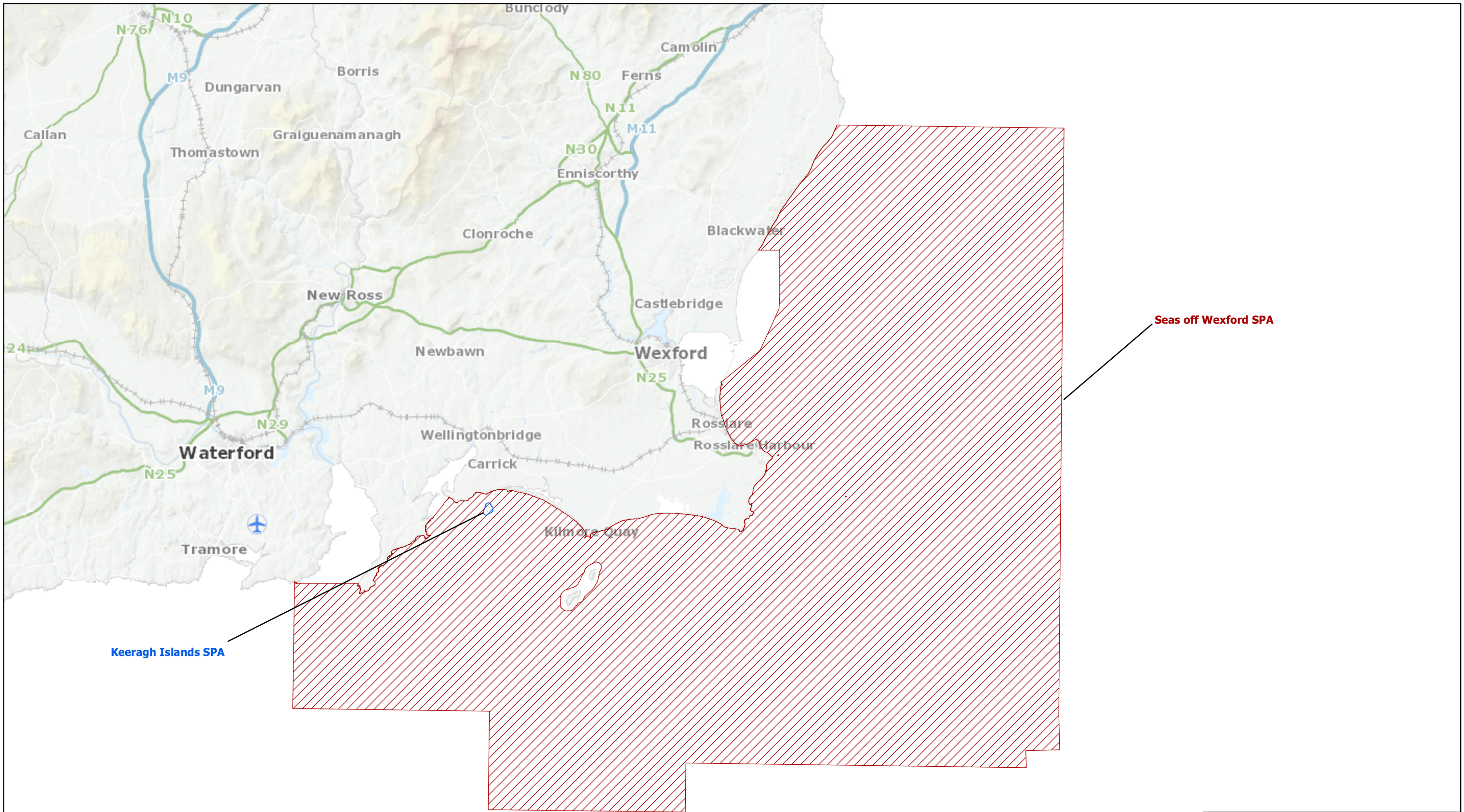


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**Map version 1
Date: July 2024**



Legend

-  Keeragh Islands SPA 004118
-  Seas off Wexford SPA 004237




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**MAP 2:
 KEERAGH ISLANDS SPA
 CONSERVATION OBJECTIVES
 OVERLAPPING AND ADJACENT SITES**

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

**SITE CODE:
 SPA 004118; version 3
 CO. WEXFORD**

0 3.75 7.5 15 Kilometres



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**Map version 1
 Date: July 2024**