# **National Parks and Wildlife Service**

# **Conservation Objectives Series**

# Lough Derg (Donegal) SPA 004057



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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.

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# Qualifying Interests

\* indicates a priority habitat under the Habitats Directive

| 004057 | Lough Derg (Donegal) SPA              |
|--------|---------------------------------------|
| A183   | Lesser Black-backed Gull Larus fuscus |
| A184   | Herring Gull Larus argentatus         |

Please note that this SPA overlaps with River Finn SAC (002301). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.

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### 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

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#### **Other References**

**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: 2010

Title: How Representative is the Current Monitoring of Breeding Seabirds in the UK?

Author: Cook, A.S.C.P.; Robinson, R.A.

Series: BTO Research Report No. 573

Year: 2014

Title: The Lesser Black-backed Gull Larus fuscus in England: how to resolve a conservation

conundrum

Author: Ross-Smith, V.H.; Robinson, R.A.; Banks, A.N.; Frayling, T.D.; Gibson, C.C.; Clark, J.A.

Series: Seabird, 27 (October), pp.41-61

**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: Lesser Black-backed Gull (Larus fuscus), version 1.0. In Birds of the World (J. del Hoyo, A.

Elliott, J. Sargatal, D. A. Christie, and E. de Juana, Editors)

Author: Burger, J.; Gochfeld, M.; Kirwan, G. M.; Christie, D. A.; de Juana, E

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

Year: 2020

Title: Herring Gull (Larus argentatus), version 1.0. In Birds of the World (S. M. Billerman, Editor)

Author: Weseloh, D. V.; Hebert, C. E.; Mallory, M. L.; Poole, A. F.; Ellis, J. C.; Pyle, P.; Patten, M. A.

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

Year: 2021

Title: GPS tracking reveals landfill closures induce higher foraging effort and habitat switching in

gulls

Author: Langley, L.P.; Bearhop, S.; Burton, N.H.; Banks, A.N.; Frayling, T.; Thaxter, C.B.; Clewley,

G.D.; Scragg, E.; Votier, S.C.

**Series :** Movement Ecology, 9, pp.1-13

**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

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## Conservation Objectives for : Lough Derg (Donegal) SPA [004057]

#### A183 Lesser Black-backed Gull *Larus fuscus*

# To restore the Favourable conservation condition of Lesser Black-backed Gull in Lough Derg (Donegal) SPA, which is defined by the following list of attributes and targets:

| Attribute   | Measure                                      | Target   | Notes   |
|---|--|--|---|
| Breeding<br>population size   | Number of Apparently<br>Occupied Nests (AON) | Long term SPA population trend is stable or increasing   | A large colony of nesting gulls was discovered on Inishgoosk Island in Lough Derg, Co. Donegal in 1977 (NPWS internal files). A survey in 1999 estimated a population of 500 pairs of Lesser Black backed Gull at the site which was the largest colon in Ireland at the time (Mitchell et al., 2004). However, breeding Lesser Black-backed Gull have not been recorded at this site in subsequent surveys. It has been speculated that the breeding gull population on the lake moved away after the closure of a nearby landfill in Donegal town. Gulls (Laridae) forage regularly at landfills around the world (Weseloh et al., 2020). Local populations car become dependent on food on landfill and rubbish dumps and are vulnerable to improved waste disposal management or landfill closures (Langley et al., 2021). The natural-nesting (i.e. non-urban) Lesser Black-backed Gull population in Ireland has increased by 163% between national surveys in 1998 - 2002 and 2015 - 2021 (Burnell et al., 2023) |
| Productivity rate   | Number of fledged<br>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 mean productivity of Lesser Black-backed Gull from Lambay Island SPA was 1.66 (± 0.14 SE) chicks fledged per pair in 2007 (18 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. Ross-Smith et al. (2014) summarise Lesser Black-backed Gull productivity in some UK colonies, and colonies with productivity rates above 1.0 had increasing population trends  |
| Distribution:<br>extent of available<br>nesting options<br>within the SPA | Numbers and spatial distribution             | Sufficient availability of<br>suitable nesting sites<br>throughout the SPA to<br>maintain a stable or<br>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. Lesser Black-backed Gull nests colonially, often with other gull species offshore islands and coastal cliffs (Mitchell et al., 2004). Lesser Black-backed Gull historically nested on Inishgoosk Island in this SPA  |
| Forage spatial<br>distribution,<br>extent, abundance<br>and availability  | Location, hectares, and forage biomass       | Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target         | The diet of Lesser Black-backed Gull is diverse and opportunistic. This species can forage over both terrestrial and aquatic habitats. Frequent prey item include small fish, aquatic invertebrates, bird's egg and chicks, trawler discards, rodents, and berries (Burger et al., 2020). Based on several studies, Woodward et al. (2019) provide estimates of foraging ranges from the nest site during the breeding season (i.e. overall mean, mean of maximum distances across all studies, and maximudistance recorded) for Lesser Black-backed Gull, which are 43km, 127km, and 533km respectively (see Power et al., 2021)   |

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| 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<br>areas ecologically<br>connected to the<br>colony | Intensity, frequency,<br>timing and duration | Disturbance occurs at<br>levels that do not<br>significantly impact on<br>breeding population   | Inland breeding gulls may use freshwater and terrestrial habitats ecologically connected to the colony in order to forage as well as to engage in other maintenance behaviours (e.g. courtship, bathing, preening) as defined in McSorley et al. (2003). Additionally, some species may engage in maintenance behaviours outside of the breeding colony but not in the water  |
| Barriers to connectivity   | Number, location,<br>shape, and area (ha)    | Barriers do not significantly<br>impact the population's<br>access to the SPA or other<br>ecologically important sites<br>outside the SPA | Inland breeding gulls require regular and efficient access to freshwater and terrestrial habitats 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 of foraging ranges from the nest site during the breeding season (i.e. overall mean, mean of maximum distances across all studies, and maximum distance recorded) for Lesser Black-backed Gull, which are 43km, 127km, and 533km respectively (see Power et al., 2021)   |

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### Conservation Objectives for: Lough Derg (Donegal) SPA [004057]

### A184 Herring Gull *Larus argentatus*

To restore the Favourable conservation condition of Herring Gull in Lough Derg (Donegal) SPA, which is defined by the following list of attributes and targets:

| Attribute   | Measure                                      | Target   | Notes   |
|---|--|--|---|
| Breeding<br>population size   | Number of Apparently<br>Occupied Nests (AON) | Long term SPA population trend is stable or increasing   | A large colony of nesting gulls was discovered on Inishgoosk Island in Lough Derg, Co. Donegal in 1977 (NPWS internal files). A survey in 1999 estimated a population of 100 pairs of Herring Gull at the site (Mitchell et al., 2004). However, breeding Herring Gull have not been recorded at this site in subsequent surveys. It has been speculated that the breeding gull population on the lake moved away after the closure of a nearby landfill in Donegal town. Gulls (Laridae) forage regularly at landfills around the world (Weseloh et al., 2020). Local populations can become dependent on food on landfill and rubbish dumps and are vulnerable to improved waste disposal management or landfill closures (Langley et al., 2021). The natural-nesting (i.e. non-urban) Herring Gull population in Ireland has increased by 94% between national surveys in 1998 - 2002 and 2015 - 2021 (Burnell et al., 2023) |
| Productivity rate   | Number of fledged<br>young per breeding pair | Sufficient to maintain a stable or increasing population   | There was no productivity data available for this species in this SPA. Cook and Robinson (2010) undertook Population Viability Analyses (PVA) of a selection of breeding populations in the UK. Over their study period, Herring Gull productivity at monitored nests was 0.75. Were this level to be maintained, Herring Gull populations would decline by 60% over 25 years. For the population to stabilise, breeding success would have to increase t 1.3 - 1.5 chicks per nest per year. A lack of comprehensive Irish data precludes the identificatio of a minimum productivity rate for this species at the site and at the national level  |
| Distribution:<br>extent of available<br>nesting options<br>within the SPA | Numbers and spatial distribution             | Sufficient availability of<br>suitable nesting sites<br>throughout the SPA to<br>maintain a stable or<br>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 areas may vary through time. This will affect the spatiotemporal patterns of use of the habitats by Herring Gull. Typically, coastal Herring Gull colonies are located along rocky coastlines with cliffs, islets and offshore islands (Mitchell et al., 2004). Herring Gull historically nested on Inishgoosk island in this SPA  |
| 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         | Herring Gull is a generalist and opportunistic feeder and can forage over both terrestrial and aquatic habitats. Its diet includes fish, fish offal, bivalves, gastropods, crustaceans, squid, insects, other seabirds, small land birds, small mammals, terrestrial insects, earthworms, berries, carrion, and a wide variety of human refuse (Weseloh et al., 2020). Woodward et al. (2019) reviewed the foraging ranges of seabird species from over 300 studies including: direct tracking of birds; estimates based on flight speeds and time activity; survey observations; and speculative estimates. Woodward et al. (2019) provide estimates (i.e. overall mean, mean of maximum distances across all studies, and maximum distance recorded) of Herring Gull foraging ranges from the nest site during the breeding season, which are 15km, 59km, and 92km respectively (see Power et al., 2021)                      |

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| Disturbance at the breeding site                                   | Intensity, frequency, timing and duration    | Disturbance occurs at<br>levels that do not<br>significantly impact on<br>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<br>areas ecologically<br>connected to the<br>colony | Intensity, frequency,<br>timing and duration | Disturbance occurs at<br>levels that do not<br>significantly impact on<br>breeding population   | Inland breeding gulls may use freshwater and terrestrial habitats ecologically connected to the colony in order to forage as well as to engage in other maintenance behaviours (e.g. courtship, bathing, preening) as defined in McSorley et al. (2003)  |
| Barriers to connectivity   | Number, location,<br>shape, and area (ha)    | Barriers do not significantly<br>impact the population's<br>access to the SPA or other<br>ecologically important sites<br>outside the SPA | access to freshwater and terrestrial habitats ecologically connected to the colony in order to   |

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