

National Parks and Wildlife Service

Conservation Objectives Series

Lough Arrow SPA 004050



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*

004050	Lough Arrow SPA
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A004	Little Grebe <i>Tachybaptus ruficollis</i>
A061	Tufted Duck <i>Aythya fuligula</i>
A999	Wetlands

Please note that this SPA overlaps with Lough Arrow SAC (001673) and is adjacent to Unshin River SAC (001898). See map 2. The conservation objectives for this site should be used in conjunction with those for the adjacent and overlapping sites 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 : 2013
Title : A review of the SPA network of sites in the Republic of Ireland
Author : NPWS
Series : Published Report

Other References

Year : 1995
Title : Impacts of hunting disturbance on waterbirds - a review
Author : Madsen, J.; Fox, A.D.
Series : Wildlife Biology 1(4):193-207

Year : 2009
Title : A review of Ireland's waterbirds, with emphasis on wintering migrants and reference to H5N1 avian influenza
Author : Crowe, O.; Wilson, J.; Aznar, I.; More, S.J.
Series : Irish Veterinary Journal, 62, 1-12

Year : 2019
Title : Report under the Article 12 of the Birds Directive Period 2013-2018
Author : EEA
Series : European Environment Agency. European Topic Centre on Biological Diversity. Pp 1-9

Year : 2020
Title : Little Grebe (*Tachybaptus ruficollis*), version 1.0. In Birds of the World (del Hoyo J., Elliott A., Sargatal J., Christie D.A., de Juana E., Editors)
Author : Llimona, F.; del Hoyo, J.; Christie, D.A.; Jutglar, F.; Garcia, E.F.J.; Kirwan, G.M.
Series : Cornell Lab of Ornithology, Ithaca, NY, USA

Year : 2022
Title : Irish wetland bird survey: I-WeBS national and site trends report 1994/95 – 2019/20
Author : Kennedy, J.; Burke, B.; Fitzgerald, N.; Kelly, S.B.A.; Walsh, A.J.; Lewis, L.J.
Series : https://birdwatchireland.ie/app/uploads/2022/04/iwebs_trends_report.html

Conservation Objectives for : Lough Arrow SPA [004050]

A004 Little Grebe *Tachybaptus ruficollis*

To restore the Favourable conservation condition of Little Grebe at Lough Arrow SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Winter population trend	Percentage change in number of individuals	Long term winter population trend is stable or increasing	The national population of wintering Little Grebe in Ireland has increased by 38% from 1994/95 to 2019/20, as monitored via the Irish Wetland Bird Survey (I-WeBS; Kennedy et al., 2022). During the baseline assessments to inform SPA designation, 185 Little Grebe were estimated to be using this SPA (5 year mean of peak counts for baseline period 2001/02 - 2005/06; see NPWS, 2013). The most recent available data recorded a population of 30 Little Grebe using Lough Arrow SPA (4 year mean of peak counts from I-WeBS monitoring for the period 2011/12 - 2014/15). This represents an estimated population decrease of 84% since the baseline period, in contrast to the national trend
Winter spatial distribution	Hectares, time and intensity of use	Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target	Distribution encapsulates the number of locations and area of potentially suitable habitat for the wintering population and its availability for use. The suitability and availability of habitat areas are likely to vary throughout the season, for example, due to variation in land management practices or the abundance of resources available (due to natural variation and other factors). This will affect the spatio-temporal patterns of use of the habitats by the wintering population
Disturbance at wintering site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution	The impact of any significant disturbance (direct or indirect) to the wintering population will ultimately affect the achievement of targets for population trend and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of winter mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends (see, for example, Madsen and Fox, 1995). 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 trend and spatial distribution
Barriers to connectivity and site use	Number, location, shape and hectares	Barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA	Barriers limiting the population's access to this SPA or ecologically important sites outside the SPA will ultimately affect the achievement of targets for population trend and/or spatial distribution. Factors such as the number, location, shape and area of potential barriers must be taken into account to determine their potential impact
Forage spatial distribution, extent and abundance	Location, hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	Little Grebe are a diving waterbird, diving to depths of approximately 1m, occasionally 2m (Llimona et al., 2020), and feed predominantly on animal material, including a range of invertebrates (particularly insect larvae), small fish and molluscs (Crowe et al., 2009). Key foraging habitat reflects that of prey species and includes sheltered waters such as ponds, edges of lakes and slow flowing rivers and canals, particularly where the water is richly vegetated with dense plant material, as well as estuaries, lagoons and sheltered coasts

Roost spatial distribution and extent	Location and hectares of roosting habitat	Sufficient number of locations, area and availability of suitable roosting habitat to support the population target	When roosting overnight, the species uses a range of waterbodies, as noted for foraging habitat. Roosting is a critical ecological requirement for the wintering population. A lack of sufficient and suitable roosting habitats can result in increased mortality risk, whether indirectly (e.g. via increased energy expenditure travelling to/from roost sites) or directly (e.g. via increased predation risk), or reduction in site use; this would ultimately affect the achievement of targets for population trend and/or spatial distribution
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Conservation Objectives for : Lough Arrow SPA [004050]

A061 Tufted Duck *Aythya fuligula*

To restore the Favourable conservation condition of Tufted Duck at Lough Arrow SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Winter population trend	Percentage change in number of individuals	Long term winter population trend is stable or increasing	The national population of wintering Tufted Duck in Ireland has declined by 18% from 1994/95 to 2019/20, as monitored via the Irish Wetland Bird Survey (I-WeBS; Kennedy et al., 2022). During the baseline assessments to inform SPA designation, 467 Tufted Duck were estimated to be using this SPA (5 year mean of peak counts for baseline period 2001/02 - 2005/06; see NPWS, 2013). The most recent available data recorded a population of 244 Tufted Duck using Lough Arrow SPA (4 year mean of peak counts from I-WeBS monitoring for the period 2011/12 - 2014/15). This represents an estimated population decline of 48% since the baseline period, significantly greater than the national trend
Winter spatial distribution	Hectares, time and intensity of use	Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target	Distribution encapsulates the number of locations and area of potentially suitable habitat for the wintering population and its availability for use. The suitability and availability of habitat areas are likely to vary throughout the season, for example, due to variation in land management practices or the abundance of resources available (due to natural variation and other factors). This will affect the spatio-temporal patterns of use of the habitats by the wintering population
Disturbance at wintering site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution	The impact of any significant disturbance (direct or indirect) to the wintering population will ultimately affect the achievement of targets for population trend and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of winter mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends (see, for example, Madsen and Fox, 1995). 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 trend and spatial distribution
Barriers to connectivity and site use	Number, location, shape and hectares	Barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA	Barriers limiting the population's access to this SPA or ecologically important sites outside the SPA will ultimately affect the achievement of targets for population trend and/or spatial distribution. Factors such as the number, location, shape and area of potential barriers must be taken into account to determine their potential impact
Forage spatial distribution, extent and abundance	Location, hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	This species is omnivorous and forages primarily in open freshwater or brackish waterbodies. Molluscs are the main food source, and hence the species prefers shallow areas (to c.15m depth). The species also consumes fish, insects, amphibians and various plant materials (leaves, shoots, tubers, seeds). Tufted Duck feed primarily by diving, but to a lesser extent will also feed at the surface of waterbodies, wade in shallows, and forage onshore (e.g. for cereal grain). Utilised habitats include lakes, rivers, ponds, reservoirs, marshes, estuaries, lagoons, and (less so) coastal areas. In winter, individual Tufted Duck can forage alone or as part of large aggregations

Roost spatial distribution and extent	Location and hectares of roosting habitat	Sufficient number of locations, area and availability of suitable roosting habitat to support the population target	When roosting overnight, the species uses a range of waterbodies, as noted for foraging habitat. Roosting is a critical ecological requirement for the wintering population. Daytime roosting is also a common behaviour, where birds minimise activity levels to conserve energy, while benefitting from the vigilance of other flock members. A lack of sufficient and suitable roosting habitats can result in increased mortality risk, whether indirectly (e.g. via increased energy expenditure travelling to/from roost sites) or directly (e.g. via increased predation risk), or reduction in site use; this would ultimately affect the achievement of targets for population trend and/or spatial distribution
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Conservation Objectives for : Lough Arrow SPA [004050]

A999


Wetlands

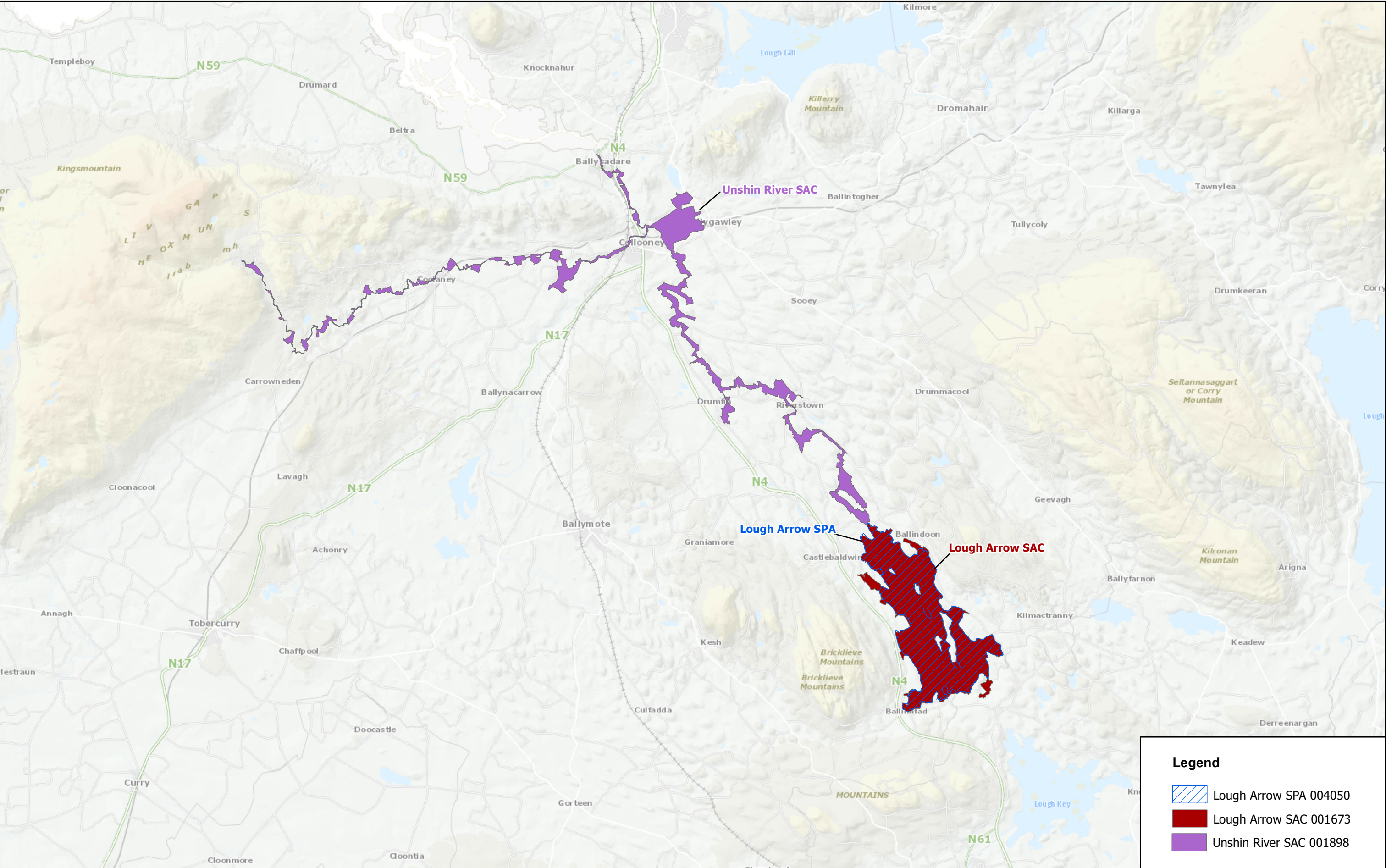
To maintain the Favourable conservation condition of Wetland habitats in Lough Arrow SPA as a resource for the regularly-occurring migratory waterbirds that utilise these areas. This is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Wetland habitat area	Hectares	No significant loss to wetland habitat within the SPA, other than that occurring from natural patterns of variation	Any significant loss to the wetland habitat within the SPA would likely negatively impact the regularly-occurring migratory waterbirds that utilise this wetland habitat. Such loss of wetland habitat would likely reduce the diversity and abundance of waterbird species that the wetland can support. This, in turn, could negatively impact the Conservation Objectives for waterbird species listed as Special Conservation Interests in the SPA or other regularly-occurring migratory waterbird species
Wetland habitat quality and functioning	Quality and function of the wetland habitat	No significant impact on the quality or functioning of the wetland habitat within the SPA, other than that occurring from natural patterns of variation	Any significant impact on the quality, functioning and accessibility of the wetland habitat within the SPA would likely negatively impact the regularly-occurring migratory waterbirds that utilise this wetland habitat. Impacts on wetland quality, functioning and accessibility would likely reduce the diversity and abundance of waterbird species that the wetland can support. This, in turn, could negatively impact the Conservation Objectives for waterbird species listed as Special Conservation Interests in the SPA or other regularly-occurring migratory waterbird species





Legend


 Lough Arrow SPA 004050



Legend

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 Lough Arrow SAC 001673

 Unshin River SAC 001898