



Ramsar Information Sheet

Published on 7 March 2023

Update version, previously published on : 11 June 1996

Ireland Lough Gara



Designation date	7 June 1996
Site number	852
Coordinates	53°56'17"N 08°27'03"W
Area	1 742,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Lough Gara is a small lake (1196ha) located on the Co. Sligo/Roscommon border south-west of the Curlew Mountains and between the towns of Boyle and Ballaghaderreen. Most of the lake is in Co. Sligo, but two sections in the south and north-east lie within Co. Roscommon. It is a shallow lake with a mean depth of 4m and a maximum depth 17.4m, which overlies Carboniferous limestones and shales and Devonian sandstone. The water is alkaline and mesotrophic. The main inflowing river is the River Lung while the main outflow is the Boyle River. The Boyle River drains the lake from the northeast into the River Shannon. There are two main sections to the lake, a larger northern basin and a smaller southern basin, joined by a narrow channel. The shoreline is convoluted and has receded substantially from its original level due to various drainage schemes since the mid-19th century. The lake is fringed by numerous habitats such as reedbeds, freshwater marsh, lowland wet grassland and scrub. The site includes several low-lying islands which are drumlins formed at the end of the last ice age. The site has a high number of crannógs or man-made ancient habitations on its shores. They were discovered in 1952 when drainage works lowered the lake level.

Lough Gara is designated as a EU Natura 2000 site (Special Protection Area) due to the presence of wintering Whooper Swan (*Cygnus cygnus*) and Greenland White-fronted Goose (*Anser albifrons flavirostris*). According to the IWeBS data (from the period 2006/07 to 2015/16) the Whooper Swan population at the site exceeds the international threshold for the species. A number of other wintering waterbirds are regularly recorded at the site, some at nationally important numbers (Mute Swan and Tufted Duck).

Directly adjacent to the southern end of the lake is Callow Bog Special Area of Conservation (SAC). Callow Bog is of considerable conservation significance as it consists of a raised bog, a rare habitat in the E.U. and one that has become increasingly scarce and under threat in Ireland. Its semi-natural lake margins (those of Lough Gara) and its northerly location add to its overall conservation value. The Lung River and several smaller streams flow through Callow Bog SAC and into Lough Gara.

Lough Gara supports a strong coarse fishery (e.g. pike, rudd, roach) and is used for recreation (e.g. kayaking, rowing, swimming, sailing).

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	National Parks and Wildlife Service, Department of Housing, Local Government and Heritage
Postal address	National Parks and Wildlife Service, 90 North King Street, Smithfield, Dublin, Ireland D07 N7CV

National Ramsar Administrative Authority

Institution/agency	National Parks and Wildlife Service, Department of Housing, Local Government and Heritage
Postal address	National Parks and Wildlife Service, 90 North King Street, Smithfield, Dublin, Ireland D07 N7CV

2.1.2 - Period of collection of data and information used to compile the RIS

From year

To year

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Unofficial name (optional)

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes No

(Update) B. Changes to Site area No change to area

(Update) For secretariat only: This update is an extension

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<2 file(s) uploaded>

Former maps

Boundaries description

The boundary of Lough Gara Ramsar site was delineated as the same boundary as the original Special Protection Area in 1995. This Ramsar site is contained within the boundaries of the EU Birds Directive (2009/147/EC) Special Protection Area for Lough Gara. Details of the SPA can be found on the NPWS website at: <https://www.npws.ie/protected-sites>. Within this area a number of GIS data layers were used to define the Ramsar habitats within the site. These included:

- CORINE (Co-Ordinated Information on the Environment) land cover data sets (2012).
- Bing Maps Aerial - © Harris Corp, Earthstar Geographics LLC © 2017 Intermap Earthstar Geographics SIO © 2017 Microsoft Corporation.
- Environmental Protection Agency of Ireland Rivers and Lakes layers data layers.
- NPWS data (Site-Specific Conservation Objectives)

The mapped layers were inspected by a site visit to confirm the presence of the habitats. Habitat areas were subsequently estimated by reference to the available imagery and layers and should be considered representative but approximate.

2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Marine Ecoregions of the World (MEOW)	Atlantic
EU biogeographic regionalization	Atlantic

Other biogeographic regionalisation scheme

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

Lough Gara is a medium sized shallow lake with an indented shore line and is dissected by band of a land. The land separates the larger and deeper northern part of the site from the shallower and smaller part of the lake to the south. The two waterbodies are connected by a channel with associated wetland habitats. Several streams and rivers enter the lake including the River Lung. The main river exiting the lake is the River Boyle which eventually joins the River Shannon. The lake, river and groundwater bodies which are all part of the Lough Gara Ramsar site provide many key hydrological services including flood protection (water storage during high rainfall events allowing slow downstream release) and water storage (surface and groundwater) which can buffer the effects of drought. The ability of surface and groundwaters to store water is important for many reasons including provision of drinking water, maintaining wetland habitat and it can influence local climate regulation. Lough Gara is important for seasonal water retention for wetlands and has a major hydrological influence in the context of maintaining wetland systems within the site. The adjacent raised bog with connected river water bodies will be another important factor in terms of water storage within this wetland system.

Other ecosystem services provided

Freshwater systems such as Lough Gara have a key role in: the decomposition and cycling of nutrients (through aquatic plants and algae), carbon sequestration (through wetland plant communities), erosion prevention (where bankside and riparian vegetation remains in place and are important for soil retention), maintaining populations and habitats (e.g. plant communities, birds, invertebrates, mammals all associated with and reliant upon wetland habitats) and pollination (associated with wet grassland and other wetland habitats with flowering plants).

Other reasons

The site is important for recreation, angling and for its archaeological history with the presence of many crannógs.

Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

Rare (high conservation concern) wintering bird species are defined as:
 Regularly occurring species (occurring in at least 3 out of 10 seasons of monitoring or 30% of seasons; based on I-Webs data from 2006/07 to 2015/16) and that are:
 - Red Listed in Ireland's national Red List (Birds of Conservation Concern in Ireland (BoCCI) published by Colhoun and Cummins (2013)
 - Classified as VU in IUCN Global and/or European regional list
 - Listed in Annex I of the European Union Birds Directive

Criterion 3 : Biological diversity

Justification

Lough Gara is of significance as a lake with a wide variety of habitats that support a diverse aquatic flora and fauna. The lake contains numerous islands, and is fringed by many different habitats such as Reedbeds, Freshwater Marsh, Unimproved Grassland, Improved Grassland, Lowland wet grassland and Scrub. Lough Gara is designated as a EU Natura 2000 site (Special Protection Area) due to the presence of the Whooper Swan (*Cygnus cygnus*) and the Greenland White-fronted Goose (*Anser albifrons flavirostris*).

Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

The open water and associated wetland habitats at this site are important for feeding and roosting waterbirds. These wetland habitats remain largely ice free over the winter providing a key feeding resource for wintering bird populations. The grasslands next to the lake are also important for roosting and feeding.

Criterion 6 : >1% waterbird population

Optional text box to provide further information

According to the I-WeBS data (2005-2015) the Whooper Swan population (289 birds) at the site exceeds the international threshold for the species (1.2% of international population).

3.2 - Plant species whose presence relates to the international importance of the site

<no data available>

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Birds																	
CHORDATA/AVES	<i>Anas clypeata</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	2011-2015			<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	National (BoCCI) classification, part of wintering assemblage
CHORDATA/AVES	<i>Anas crecca</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	87	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Part of wintering assemblage, maintaining biodiversity.
CHORDATA/AVES	<i>Anas penelope</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	227	2011-2015			<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	National (BoCCI) classification, part of wintering assemblage
CHORDATA/AVES	<i>Anser albifrons flavirostris</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52	2011-2015	0.2		<input type="checkbox"/>	<input type="checkbox"/>	Listed on Annex I (Birds Directive), Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Annex I listing, part of wintering assemblage
CHORDATA/AVES	<i>Aythya ferina</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14	2011-2015		VU	<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013), and Vulnerable classification IUCN Global & Europe)	National (BoCCI) and IUCN classifications, part of wintering assemblage.
CHORDATA/AVES	<i>Aythya fuligula</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	439			LC	<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	National (BoCCI) classification, part of wintering assemblage
CHORDATA/AVES	<i>Bucephala clangula</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	National (BoCCI) classification, part of wintering assemblage.
CHORDATA/AVES	<i>Cygnus columbianus bewickii</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Annex I Birds Directive	Occasional use reported.
CHORDATA/AVES	<i>Cygnus cygnus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	289	2011-2015	1.1	LC	<input type="checkbox"/>	<input type="checkbox"/>	Listed on Annex I (Birds Directive), Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Annex I listing, international numbers (Icelandic population), part of wintering population.
CHORDATA/AVES	<i>Cygnus olor</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	102	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Part of wintering assemblage, maintaining biodiversity.
CHORDATA/AVES	<i>Gallinago gallinago</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Part of wintering assemblage, maintaining biodiversity.
CHORDATA/AVES	<i>Numenius arquata</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	48	2011-2015		NT	<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013), and Vulnerable classification IUCN Europe region)	National (BoCCI) and IUCN classifications, part of wintering assemblage.
CHORDATA/AVES	<i>Phalacrocorax carbo</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Part of wintering assemblage, maintaining biodiversity.
CHORDATA/AVES	<i>Podiceps cristatus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Part of wintering assemblage, maintaining biodiversity.
CHORDATA/AVES	<i>Tachybaptus ruficollis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	2011-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Amber-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013)	Part of wintering assemblage, maintaining biodiversity.
CHORDATA/AVES	<i>Vanellus vanellus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	93	2011-2015		NT	<input type="checkbox"/>	<input type="checkbox"/>	Red-listed in Birds of Conservation Concern in Ireland (Colhoun and Cummins 2013), and Vulnerable classification IUCN Europe region)	National (BoCCI) and IUCN classifications, part of wintering assemblage.

1) Percentage of the total biogeographic population at the site

Wintering bird species listed under 3.3 have been selected based on an assessment of Irish Wetland Bird Survey data from the period 2006/07 to 2015/16. Lough Gara is a Special Protection Area (SPA) for birds, however not all species listed for the SPA may be listed under 3.3 (or vice versa) as the SPA designation is based on other data and criteria.

The site is designated as an EU Natura 2000 site (Special Protection Area) due to the presence of the Whooper Swan (*Cygnus cygnus*) and the Greenland White-fronted Goose (*Anser albifrons flavirostris*). These are Annex I and migratory species.

I-WeBS data (from the period 2006/07 to 2015/16) shows the Annex I Whooper Swan use the site in internationally important numbers and shows regular use of the site by Greenland White-fronted Goose. Almost 50% of the Greenland White-fronted Goose population winter in Ireland, and most of these on the Wexford Slob in the southeast. The population is of high conservation concern because it has declined by more than 30% over the past ten years, attributed to the continuing decline in annual recruitment, while perhaps climate-related changes and increased competition for nest sites with the expanding population of breeding Canada Geese (*Branta canadensis*) throughout the "white-fronts" breeding range, are also factors (NPWS 2011). I-WeBS data for the site also recorded nationally important numbers of the Annex I Bewick Swan (*Cygnus columbianus bewickii*). Following a long-term increase, this species began undergoing rapid declines in its wintering population and is now listed as Endangered by IUCN. The EU population for this species is listed as Threatened (EUNIS). Other species recorded at nationally important numbers at the site were the Mute Swan (*Cygnus color*) and the Tufted Duck (*Aythya fuligula*). Other wintering birds include Teal (*Anas crecca*), Wigeon (*Anas penelope*), Shoveler (*Anas clypeata*), Common pochard (*Aythya ferina*), Common Goldeneye duck (*Bucephala clangula*), Coot (*Fulica atra*), Snipe (*Gallinago gallinago*), Curlew (*Numenius arquata*) and Northern Lapwing (*Vanellus vanellus*). Lapwing a consistent visitor at the site, is 'Near Threatened' within Europe and Vulnerable globally on the IUCN red list. Eunis lists the EU population of this species as Threatened. Curlew is under going rapid decline throughout Europe and according to IUCN is Vulnerable within Europe and Near Threatened globally. The species is regularly recorded at the site. The EU population of Wigeon is Threatened (Eunis). The Eurasian Coot is Near Threatened in Europe (IUCN). According to IUCN the Pochard (*A. ferina*) is Vulnerable, the EU population is Threatened (EUNIS). The EU population of the Shoveler, an intermittent visitor to the site, is Depleted (Eunis) and Snipe is Declining (Eunis).

Great crested grebe, Mute Swan and Tufted Duck are know to breed at this site (Hunt et al, 2013). Other resident breeding waterbirds are also likely to be present.

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

This site is dominated by Lough Gara, a permanent freshwater lake. The lake is formed into two sections, a larger upper basin and a smaller lower basin, which are connected by a small channel. It is a shallow lake with a maximum recorded depth of 16 meters. The shoreline is convoluted and there are several low lying islands which are drumlins from the last ice age. The lake is fringed with wet grassland and reed swamp habitat with scrub developing on drier ground. The smaller southern lake basin is shallower than the northern basin and is dominated by reed swamp. The reed swamp is dominated by Common Reed (*Phragmites australis*) and Bottle Sedge (*Carex rostrata*), with occasional Bulrush (*Typha latifolia*). In the southernmost part of the lake, clumps of Common Club-rush (*Scirpus lacustris*) are particularly abundant. The shoreline has receded substantially from its original level, due to various drainage schemes carried out since the mid-19th century. There is a considerable raised bog habitat (Callow Bog SAC) surrounding the southern lakeshore. Ancient man-made islands called crannógs are present on the shoreline. The site is important for wintering migratory waterbirds and also provides habitat for otter (*Lutra lutra*). The lake margin habitats are also used by resident populations of breeding waterbirds (e.g. mallard, coot, little grebe). The surrounding land use is predominantly agriculture. Some land is intensively managed while other areas are unimproved and only used for low density summer grazing. There does not seem to be a threat from agricultural pollution. Scrub has developed on some of the unmanaged fields, especially on the western side of the site.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Lakes and pools >> O: Permanent freshwater lakes	Lakes	1	1615	Representative
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools	Marsh/reed beds	3	12	Representative
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils	Wet grassland	2	115	

(ECD) Habitat connectivity

Small areas of freshwater marsh and reed beds form a fringe around the main waterbody of the lake.

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Anas platyrhynchos</i>				
CHORDATA/MAMMALIA	<i>Lutra lutra</i>				

Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
MOLLUSCA/BIVALVIA	<i>Dreissena polymorpha</i>	Actual (major impacts)	unknown

Optional text box to provide further information

IWebs data (from the period 2006/07 to 2015/16) shows mallard to use the site regularly in numbers approaching national importance. Mallard are also know to breed at this site (Hunt et al, 2013)

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfb: Marine west coast (Mild with no dry season, warm summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

River Boyle/ Boyle / Shannon
 River Boyle_010 sub basin, Boyle_SC_020 sub catchment, Upper Shannon Catchment (Water Framework Directive; EPA maps.ie).

4.4.3 - Soil

Mineral

(Update) Changes at RIS update No change Increase Decrease Unknown

Organic

(Update) Changes at RIS update No change Increase Decrease Unknown

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

There are a number of soils associated with this site. The dominant soil on the eastern shore of the site, which includes the islands is grey brown podzolics with inter-drumlin peat and peaty gleys. The grey brown podzolics of the drumlin originated in mostly limestone glacial till. The north of the lake is also shored by brown podzolics with associated acid brown earths and gleys. These however have their origins in sandstone based glacial till. The dominant soils of the south and west of the site are gleys with associated grey brown podzolics. A significant area of peat interrupts these soils.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from precipitation	<input type="checkbox"/>	No change
Water inputs from groundwater	<input type="checkbox"/>	No change
Water inputs from surface water	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

(ECD) Stratification and mixing regime

4.4.5 - Sediment regime

Sediment regime unknown

(ECD) Water turbidity and colour

(ECD) Light - reaching wetland

(ECD) Water temperature

4.4.6 - Water pH

Alkaline (pH>7.4)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

Please provide further information on pH (optional):

pH 8.29

4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

(ECD) Dissolved gases in water

Dissolved Oxygen 93.64%

4.4.8 - Dissolved or suspended nutrients in water

Unknown

Please provide further information on dissolved or suspended nutrients (optional):

Nitrate (as N) 0.12mg/L; Nitrite (as N) 0.00mg/L
ortho-Phosphate (as P) - unspecified 0.01mg/L
Silica (as Si) 0.82mg/L

(ECD) Water conductivity 356.38µS

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ii) significantly different

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

The area surrounding the lake is generally used for agriculture. Some land is intensively managed while other areas are unimproved and only used for low density summer grazing. There does not seem to be a threat from agricultural pollution. Scrub has developed on some of the unmanaged fields, especially on the western side of the site.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Wetland non-food products	Other	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Erosion protection	Soil, sediment and nutrient retention	Low
Pollution control and detoxification	Water purification/waste treatment or dilution	Low
Climate regulation	Local climate regulation/buffering of change	Medium
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium
Hazard reduction	Flood control, flood storage	Low
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Low

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Water sports and activities	Medium
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Aesthetic and sense of place values	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Low
Scientific and educational	Long-term monitoring site	Low

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	Medium
Soil formation	Accumulation of organic matter	Medium
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium
Nutrient cycling	Carbon storage/sequestration	Medium

Within the site:

Outside the site:

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

Description if applicable

There is evidence of early farmers in and around lough Gara. A total of 360 crannógs have been recorded from the lake and many of the Islands within the lake are in fact crannógs. A wet meadow with a small knoll, slightly drier than the surrounding meadow and overgrown with grasses and some willow is the most northerly of a group of four crannógs in the site. Many of the crannógs recorded appear to have been created from stone and appear as low cairns or circular stoney islands.

The area has been used for agriculture since the first farmers. Pasture and meadow would have been the dominant land use with cattle and sheep reared. Fishing has also occurred in the lake in past times and continues today.

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

National Parks & Wildlife Service (NPWS), Department of Housing, Local Government and Heritage
 Department of Communications, Climate Action and Environment.
 Sligo County Council.
 Westmeath County Council.
 Environmental Protection Agency (EPA),
 Inland Fisheries Ireland.

Provide the name and/or title of the person or people with responsibility for the wetland:

Maurice Eakin

Postal address:

National Parks and Wildlife Service, Department of Housing, Local Government and Heritage
 90 North King Street,
 Smithfield, Dublin,
 Ireland
 D07 N7CV

E-mail address:

maurice.eakin@housing.gov.ie

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Wood and pulp plantations	Medium impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Low impact	Low impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Medium impact	High impact	<input checked="" type="checkbox"/>	increase	<input type="checkbox"/>	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	Low impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	unknown

5.2.2 - Legal conservation status

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Lough Gara Special Protection Area Site Code: 004048	https://www.npws.ie/protected-sites/spa/004048	whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Lough Gara	http://datazone.birdlife.org/site/factsheet/lough-gara-iba-ireland	whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Land conversion controls	Implemented

Human Activities

Measures	Status
Regulation/management of wastes	Partially implemented
Fisheries management/regulation	Implemented
Livestock management/exclusion (excluding fisheries)	Implemented
Harvest controls/poaching enforcement	Implemented
Research	Implemented
Regulation/management of recreational activities	Implemented

Other:

The Lough Gara Ramsar site lies within the Lough Gara SPA. Under European and national legislation Ireland must maintain at favourable conservation status areas designated as Special Areas of Conservation and/or Special Protection Areas. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites. Conservation objectives of this site have been set for the SPA; these can be accessed at <https://www.npws.ie>. They are in summary:

- To maintain the species for which the SPA has been selected at favourable conservation status i.e. Whooper Swan and Greenland White-fronted Goose.

Legislation in the Republic of Ireland affords protection to bird species outside of designated sites e.g. all wild bird species are afforded protection by The Wildlife Act 1976.

Waterfowl shooting is under license only, managed by the National Parks & Wildlife Service.

A River Basin District plan details effective measures for improved water management.

The coarse fishery is managed and developed by Inland Fisheries Ireland.

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Water quality	Implemented
Animal species (please specify)	Implemented
Plant species	Implemented
Birds	Implemented

Under the Water Framework Directive water quality of the lake is monitored at regular intervals by the EPA and/or local authority. As a EU Natura 2000 site, it is required under Article 12 of the EU Birds Directives, that the status and trends of the conservation objectives within the site are monitored and reported on every 6 years. The site is regularly inspected by the National Parks and Wildlife Service Conservation Rangers for the area. Lough Gara is routinely surveyed as part of I-WeBS, which provides comprehensive counts of the waterbird species using the site during the winter months.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Colhoun, K. and Cummins, S. 2013. Birds of conservation concern in Ireland 2014-2019. Irish Birds 9: 523-544

Hunt, J., Heffernan, M.L., McLoughlin, D., Benson, C. & Huxley, C. (2013) The breeding status of Common Scoter, *Melanitta nigra* in Ireland, 2012. Irish Wildlife Manuals, No. 66. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland.

Kelly, F.L., Connor, L., Delanty, K., McLoone P., Coyne, J., Morrissey, E., Corcoran, W., Cierpial, D., Matson, R., Gordon, P., O' Briain R., Rocks, K., Walsh, L., O' Reilly, S., O' Callaghan, R., Cooney, R. and Timbs, D. (2016) Fish Stock Survey of Lough Gara, September 2015. National Research Survey Programme, Inland Fisheries Ireland, 3044 Lake Drive, Citywest Business Campus, Dublin 24.

Kingston, N. (2012) Checklist of protected & rare species in Ireland. Unpublished National Parks & Wildlife Service Report.

NPWS (2016) Conservation objectives for Lough Gara SPA [004048]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2015) Lough Gara SPA [004048]. Natura 2000 Form. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2014) Site Synopsis for Lough Gara SPA [004048]. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

O Connor, Á. (2015) Habitats Directive Annex I lake habitats: a working interpretation for the purposes of site-specific conservation objectives and Article 17 reporting. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland.

IUCN 2014. IUCN Red List of Threatened Species. Version 2014.2. . Downloaded on June 2017.

Inland fisheries Ireland: <http://www.fisheriesireland.ie/>

BirdwatchIreland.ie

<http://www.ramsar.org>

The Irish Wetland Bird Survey (I-WeBS).

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Lough Gara (National Parks and Wildlife Service, 4/7/2017)



Lough Gara (National Parks and Wildlife Service, 4/7/2017)



Lough Gara (National Parks and Wildlife Service, 4/7/2017)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation