ISSN 2009-4086

National Parks and Wildlife Service

Conservation Objectives Series

Lough Gash Turlough SAC 000051

An Roinn
Cultúir, Oidhreachta agus Gaeltachta
Department of
Culture, Heritage and the Gaeltacht

National Parks and Wildlife Service,
Department of Culture, Heritage and the Gaeltacht,

7 Ely Place, Dublin 2, Ireland.

Web: www.npws.ie
E-mail: nature.conservation@ahg.gov.ie

Citation:

NPWS (2017) Conservation Objectives: Lough Gash Turlough SAC 000051. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

Series Editor: Rebecca Jeffrey
ISSN 2009-4086

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***

000051	Lough Gash Turlough SAC
3180	Turloughs*
3270	Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	1992
Title :	Turloughs over 10ha - Vegetation survey and evaluation
Author :	Goodwillie, R.N.
Series :	Unpublished report to NPWS
Year :	2006
Title :	A survey of rare/threatened and scarce vascular plants in County Clare
Author :	Roden, C.M.; Conaghan, J.; Fuller, J.; Reynolds, S.
Series :	Unpublished report to NPWS
Year :	2016
Title :	Ireland Red List No. 10: Vascular Plants
Author :	Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
Series :	Ireland Red Lists series, NPWS
Year :	2017
Title :	Conservation objectives supporting document: Turloughs* and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation
Author :	O Connor, Á.
Series :	Conservation objectives supporting document

Other References

Year :	1986
Title :	A study of the geology, hydrology and geomorphology of turloughs
Author :	Coxon, C.
Series :	Unpublished Ph.D. Thesis, Trinity College Dublin
Year :	1995
Title :	Additions to the Irish range of *Rorippa islandica* (Oeder ex Murray) Borbas
Author :	Goodwillie, R.
Series :	Irish Naturalists' Journal, 25(2): 57-59
Year :	1999
Title :	*Alopecurus aequalis* Sobol., new to Clare (H9) and S.E. Galway (H15)
Author :	Goodwillie, R.
Series :	Irish Naturalists' Journal, 26(7/8): 286-287
Year :	2003
Title :	Wetlands of Ireland: Distribution, ecology, uses and economic value
Author :	Otte, M.L. (ed.)
Series :	University College Dublin Press, Dublin

Spatial data sources

Year :	2017
Title :	Goodwillie (1992) Turloughs over 10 hectares: Vegetation survey and evaluation
GIS Operations :	Goodwillie map scanned and georectified. Turlough as outlined on map digitised. New turlough dataset clipped to SAC Boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	3180 and 3270 (maps 2 and 3)
Year :	derived 2017
Title :	A survey of rare/threatened plants in County Clare
GIS Operations :	Dataset created from spatial reference contained in report
Used For :	3270 (map 3)

Conservation Objectives for : Lough Gash Turlough SAC [000051]

3180 Turloughs

To maintain the favourable conservation condition of Turloughs* in Lough Gash Turlough SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable at c.22ha or increasing, subject to natural processes. See map 2	Based on the approximate area of 21.9ha for Lough Gash turlough from Goodwillie (1992). See map 2 for extent. Note that Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation (3270) is considered to be a community within the turlough habitat. See O Connor (2017) for information on all attributes and targets. See Coxon (1986), Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Lough Gash
Habitat distribution	Occurrence	No decline, subject to natural processes	See map 2
Hydrological regime	Various	Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat	Hydrological regime is sub-divided into more detailed attributes (groundwater contribution, flood duration, frequency, area and depth, and permanently flooded/wet areas) and targets in O Connor (2017). Goodwillie (1992) stated groundwater enters mainly from rocks at the southern end and there are two overground inflows. Goodwillie (1999) stated Lough Gash is flooded for a long period each summer and generally has water into early August
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	Goodwillie (1992) recorded very soft, thick marl deposits at Lough Gash
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain/restore nutrient status appropriate to soil types and vegetation communities	Lough Gash is considered to be enriched owing to a waste water discharge
Physical structure: bare ground	Presence	Maintain sufficient wet bare ground, as appropriate	See O Connor (2017) for further details on this and all attributes
Chemical processes: calcium carbonate deposition and concentration	Calcium carbonate deposition rate/soil concentration	Maintain appropriate calcium carbonate deposition rate and concentration in soil	Goodwillie (1992) noted significant marl deposition at Lough Gash
Water quality	Various	Maintain/restore appropriate water quality to support the natural structure and functioning of the habitat	Water quality is sub-divided into more detailed attributes (nutrients, colour, phytoplankton and epiphyton biomass) and targets in O Connor (2017). As noted above, Lough Gash is considered to be enriched owing to a waste water discharge. A target of mesotrophic, i.e. ≤20µg/l total phosphorus (TP), is considered appropriate
Active peat formation	Flood duration	Maintain active peat formation, where appropriate	There is no information on peat formation at Lough Gash
Vegetation composition: area of vegetation communities	Hectares	Maintain area of sensitive and high conservation value vegetation communities/units	See Goodwillie (1992) for information on vegetation communities at Lough Gash. See also Goodwillie (1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006)
Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the site	See Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Lough Gash

Vegetation structure: sward height	Centimetres	Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough	See Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Lough Gash
Typical species	Presence	Maintain typical species within and across the turlough	Typical species is sub-divided into more detailed attributes (terrestrial, wetland and aquatic plants, invertebrates and birds) and targets in O Connor (2017). Species of note at Lough Gash include northern yellow-cress (*Rorippa islandica*), red goosefoot (*Chenopodium rubrum*) and the Near Threatened (Wyse Jackson et al., 2016) orange foxtail (*Alopecurus aequalis*), all of which are part of Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation (3270). See Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Lough Gash. See also the conservation objective for habitat 3270 in this volume
Fringing habitats: area	Hectares	Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations	See O Connor (2017) for further details on this and all attributes
Vegetation structure: turlough woodland	Species diversity and woodland structure	Maintain appropriate turlough woodland diversity and structure	See O Connor (2017) for further details on this and all attributes

3270 Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation

To maintain the favourable conservation condition of Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation in Lough Gash Turlough SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Roden et al. (2006) state that orange foxtail (*Alopecurus aequalis*) was found in two locations at Lough Gash over approximately 1ha of ground. Goodwillie (1992) mapped 5.8ha of wet annuals at Lough Gash. See map 3. See O Connor (2017) for information on all attributes and targets. See Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation in Lough Gash Turlough SAC
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 3	See also Goodwillie (1992) and Roden et al. (2006)
Hydrological regime	Various	Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat	Hydrological regime is sub-divided into more detailed attributes (groundwater contribution, flood duration, frequency, area and depth, and permanently flooded/wet areas) and targets in O Connor (2017). Goodwillie (1992) stated groundwater enters mainly from rocks at the southern end and there are two overground inflows. Goodwillie (1999) stated Lough Gash is flooded for a long period each summer and generally has water into early August
Soil type	Hectares	Maintain area and extent of soil types necessary to support the habitat	Goodwillie (1992) recorded very soft, thick marl deposits at Lough Gash
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain/restore nutrient status appropriate to soil types and vegetation communities	Lough Gash is considered to be enriched owing to a waste water discharge
Physical structure: bare ground	Presence	Maintain sufficient wet bare ground, as appropriate	Bare ground results from late recession of floodwaters at Lough Gash
Chemical processes: calcium carbonate deposition and concentration	Calcium carbonate deposition rate/soil concentration	Maintain appropriate calcium carbonate deposition rate and concentration in soil	Goodwillie (1992) noted significant marl deposition at Lough Gash
Water quality	Various	Maintain/restore appropriate water quality to support the natural structure and functioning of the habitat	Water quality is sub-divided into more detailed attributes (nutrients, colour, phytoplankton and epiphyton biomass) and targets in O Connor (2017). As noted above, Lough Gash is considered to be enriched owing to a waste water discharge. A target of mesotrophic, i.e. ≤20µg/l total phosphorus (TP), is considered appropriate
Vegetation composition: area of vegetation communities	Hectares	Maintain area of sensitive and high conservation value vegetation communities/units	See Goodwillie (1992) for information on vegetation communities at Lough Gash. See also Goodwillie (1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006)
Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the site	See Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Lough Gash

Typical species: plants	Presence	Maintain typical species	Species of note at Lough Gash include northern yellow-cress (*Rorippa islandica*), red goosefoot (*Chenopodium rubrum*) and the Near Threatened (Wyse Jackson et al., 2016) orange foxtail (*Alopecurus aequalis*). See Goodwillie (1992, 1995, 1999, 2003 in Otte, 2003) and Roden et al. (2006) for information on Lough Gash
Fringing habitats: area	Hectares	Maintain marginal fringing habitats that support the structure and functions and typical species of habitat 3270	See O Connor (2017) for further details on this and all attributes

Lough Gash

BOHERAROAN

Kilnasoolagh Pk

Avondale

NEWMARKET

Newmarket on Fergus

Cleann Cora

Ballycar Rd

Goodwood Estat

Limerick Rd

Bótheraroan

Boheraroan

R472

M18

SAC 000051

Newmarket on Fergus

CO. CLARE

Hurler's Cross

Legend

Lough Gash Turlough SAC 000051

An Roinn Cultúir, Oidhreachta agus Gaeltachta
Department of Culture, Heritage and the Gaeltacht

MAP 1:
LOUGH GASH TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

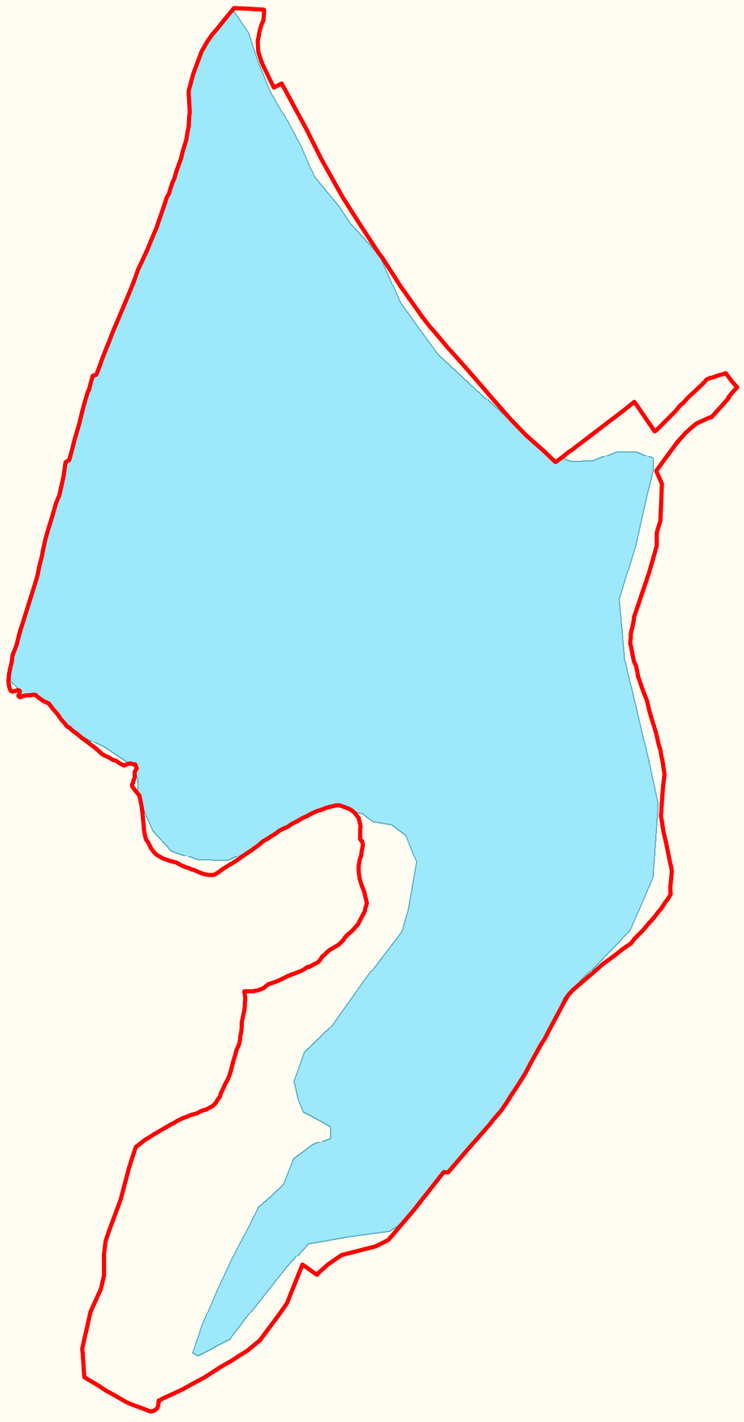
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000051; version 3. CO. CLARE

0 50 100 150 200 Meters

N

Map Version 1
Date: Aug 2017



Legend

- Lough Gash Turlough SAC 000051
- 3180 Turlough
- OSi Discovery Series County Boundary

An Roinn
Cultúir, Oidhreachta agus Gaeltachta
Department of
Culture, Heritage and the Gaeltacht

MAP 2:
LOUGH GASH TURLOUGH SAC
CONSERVATION OBJECTIVES
TURLOUGH

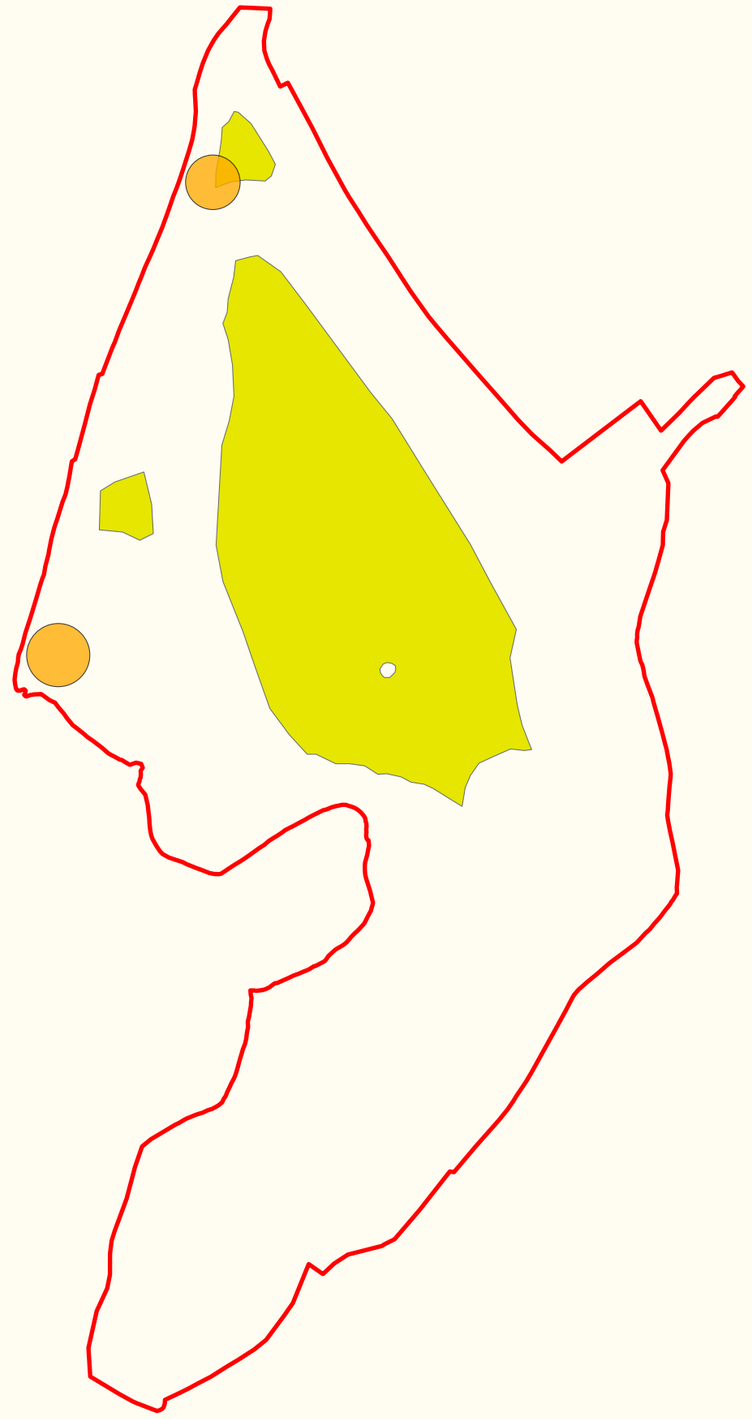
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000051; version 3. CO. CLARE

0 50 100 150 200 Meters

N

Map Version 1
Date: Aug 2017



Legend

Data Source

- 3270 Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation, Roden *et al.* (2006)
- 3270 Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation, Goodwillie (1992)
- Lough Gash Turlough SAC 000051
- OSi Discovery Series County Boundary

An Roinn
Cultúir, Oidhreachta agus Gaeltachta
Department of
Culture, Heritage and the Gaeltacht

MAP 3:
LOUGH GASH TURLOUGH SAC
CONSERVATION OBJECTIVES
RIVERS WITH MUDDY BANKS
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000051; version 3. CO. CLARE

0 50 100 150 200 Meters

Map Version 1
Date: Aug 2017