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Conservation Objectives Series

Cahermore Turlough SAC 002294

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
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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***

002294	Cahermore Turlough SAC

3180	Turloughs*

Supporting documents, relevant reports & publications

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

NPWS Documents

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 :	1997
Title :	An Investigation of the Flooding Problems in the Gort–Ardrahan Area of South Galway. Ecology Baseline Study. Vols I and II.
Author :	Southern Water Global and Jennings O'Donovan and Partners (eds)
Series :	The Office of Public Works, Dublin
Year :	2005
Title :	Guidance on the Pressures and Impacts on Groundwater Dependent Terrestrial Ecosystems. Risk Assessment Sheet GWDTERA2a - Turloughs
Author :	Working Group on Groundwater (Turlough sub-committee)
Series :	Water Framework Directive Pressures and Impact Assessment Methodology - Guidance Document No. GW9
Year :	2005
Title :	An investigation of the plant, carabid, and staphylinid communities of turloughs in southeast Galway/north Clare, Ireland
Author :	Regan, E.C.
Series :	Unpublished Ph.D. Thesis, National University of Ireland, Galway
Year :	2009
Title :	Teagasc EPA soil and subsoils mapping project-final report. Volume II
Author :	Fealy, R. M.; Green, S.; Loftus, M.; Meehan, R.; Radford, T.; Cronin, C.; Bulfin, M.
Series :	Teagasc, Dublin
Year :	2014
Title :	Interim classification, harmonisation and generalisation of county soil maps of Ireland. Irish soil information system final technical report 1
Author :	Jones, R.J.A.; Hannam, J.A.; Palmer, R.C.; Truckell, I.G.; Creamer, R.E.; McDonald, E.
Series :	Report for the EPA prepared by Teagasc and Cranfield University
Year :	2018
Title :	Irish Vegetation Classification: Technical Progress Report No. 4
Author :	Perrin, P.
Series :	Report submitted to National Biodiversity Data Centre

Spatial data sources

Year :	2020
Title :	Goodwillie et al. (1997) Land vegetation in the Gort lowlands
GIS Operations :	Goodwillie et al. 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 (map 2)

Conservation Objectives for : Cahermore Turlough SAC [002294]

3180 Turloughs*

To restore the favourable conservation condition of Turloughs in Cahermore 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	Cahermore Turlough SAC was studied by Goodwillie et al. (1997) as part of the Gort Flood Relief Scheme, and by Regan (2005). The turlough area in the SAC has been calculated as 45.4ha based on Goodwillie et al. (1997). See map 2 for known extent. See O Connor (2017) for information on all attributes and targets
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). The hydrology of Cahermore Turlough was studied as part of the Gort Flood Relief Scheme (SWG and Jennings O'Donovan and Partners, 1997). The hydrology of Cahermore Turlough is described as being at the dry end of the spectrum, with no standing water in summer except for a few small ponds dug for cattle. A number of collapse features occur, including at least one functioning swallow-hole. The turlough appears to flood largely from the southern side. Cahermore is part of a series of lakes and turloughs in the region, of which the nearest is Caherglassaun Turlough
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	The Teagasc/EPA soils map by Fealy et al. (2009) classifies the soils surrounding the central flooded turlough basin as lacustrine. Beyond this, to the north-west is mostly shallow, well-drained, basic mineral soil over calcareous rock, with the east and south mostly characterised by deep, well-drained, basic mineral soil over limestone tills. A small area of poorly drained, basic mineral soil over limestone tills occurs west of the centre of the turlough. Jones et al. (2014) classified the soils in the main turlough area as predominantly well-drained, fine loamy soil over limestone bedrock, with the southwestern half of the SAC, away from the main area of flooding, classified as well-drained, fine loamy drift with limestones
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain nutrient status appropriate to soil types and vegetation communities	
Physical structure: bare ground	Presence	Maintain sufficient wet bare ground, as appropriate	
Chemical processes: calcium carbonate deposition and concentration	Calcium carbonate deposition rate/soil concentration	Maintain appropriate calcium carbonate deposition rate and concentration in soil	
Active peat formation	Flood duration	Maintain active peat formation	

Water quality	Various	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). See also The European Communities Environmental Objectives (Surface Waters) (Amendment) Regulations 2019. According to the Working Group on Groundwater (Turlough sub-committee) (2005), Cahermore Turlough is classed as having a medium trophic sensitivity (i.e. mesotrophic), but its natural trophic sensitivity is high (i.e. oligotrophic). Therefore to be in favourable condition, Cahermore Turlough has targets of ≤20µg/l for total phosphorus and should maintain trace/absent epiphyton as algal mats (<2% cover)
Vegetation composition: area of vegetation communities	Hectares	Maintain area of sensitive and high conservation value vegetation communities/units	Regan (2005) recorded three plots at Cahermore Turlough. The data were run through the ERICA Tool Version 4.0 (Perrin, 2018) to identify the Irish Vegetation Classification community they most closely matched. All plots were assigned to the GL2A *Agrostis stolonifera - Ranunculus repens* community. Goodwillie et al. (1997) describe other communities at the site including two wetland communities, one with *Ranunculus peltatus* and *Lemna minor* and the other with *Polygonum amphibium, Glyceria fluitans, Myosotis scorpioides* and *Eleocharis palustris*. Two scrub woodland types, one on limestone pavement with *Prunus spinosa, Rosa spinosissima, Juniperus communis* and *Cotoneaster microphyllus*, and the other at the northern edges of the turlough with *Crataegus monogyna, Rhamnus cathartica, Prunus spinosa* and *Euonymus europaeus*
Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the turlough	Although Goodwillie et al. (1997) indicates that the turlough does not have a great diversity of vegetation, some vegetation zonation occurs. At the lowest level, pools dug into the drift had a varied flora, some with *Ranunculus peltatus* and *Lemna minor*, others with *Polygonum amphibium, Glyceria fluitans, Myosotis scorpioides* and *Eleocharis palustris*. Grassland covered most of the turlough, with *Agrostis stolonifera, Poa trivialis, P. pratensis, Festuca rubra* and *Elymus repens* the main constituents. Higher up, two areas of largely scrub-covered limestone pavement occurred. Species included *Prunus spinosa, Rosa spinosissima, Juniperus communis* and the non-native species *Cotoneaster microphyllus*. A larger area of scrub in the northern part consisted of *Crataegus monogyna, Rhamnus cathartica, Prunus spinosa* and *Euonymus europaeus*. There was some *Cynosurus cristatus* grassland on the fringes
Vegetation structure: sward height	Centimetres	Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough	Goodwillie et al. (1997) notes that grazing by sheep occurred in one of the areas of limestone pavement which was largely scrub-covered. Regan (2005) described the turlough as grazed by sheep and cattle
Typical species	Presence	Maintain typical species within 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). Goodwillie et al. (1997) list *Rhamnus cathartica* as present in the turlough woodland. The importance of Cahermore Turlough for wintering waterbirds, including whooper swan, Bewick's swan and golden plover, all of which are listed on Annex I of the Birds Directive, has also been noted
Fringing habitats: area	Hectares	Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations	

Vegetation structure: turlough woodland	Species diversity and woodland structure	Maintain appropriate turlough woodland diversity and structure	Goodwillie et al. (1997) describes the amount and quality of the developing woodland as a special feature of this turlough. This is clearly visible in recent aerial imagery of the site. The large area of woodland/scrub in the northern part of the turlough has *Rhamnus cathartica*, with *Crataegus monogyna, Prunus spinosa* and *Euonymus europaeus* also present. Further areas of scrub over limestone pavement include *Juniperus communis, Prunus spinosa* and *Rosa spinosissima*

KEELOGE

POLLDONOGHOE

CAHERMORE

110Kv

Ballinderreen

Kilchreest

Newtownlynch

Burren

Kinvara

CO. GALWAY

Bealaclugga

Cahermore Turlough SAC

Peterswell

CO. CLARE

Gort

Boston

Legend

Cahermore Turlough SAC 002294

An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta
Department of Housing, Local Government and Heritage

MAP 1:
CAHERMORE TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

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

SITE CODE:
SAC 002294; version 3.01. CO. GALWAY

0 50 100 150 200 Metres

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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Níl sna teorainneacha ar na léarscáileanna ach nod garshuiomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh OSI-NMA-014. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann

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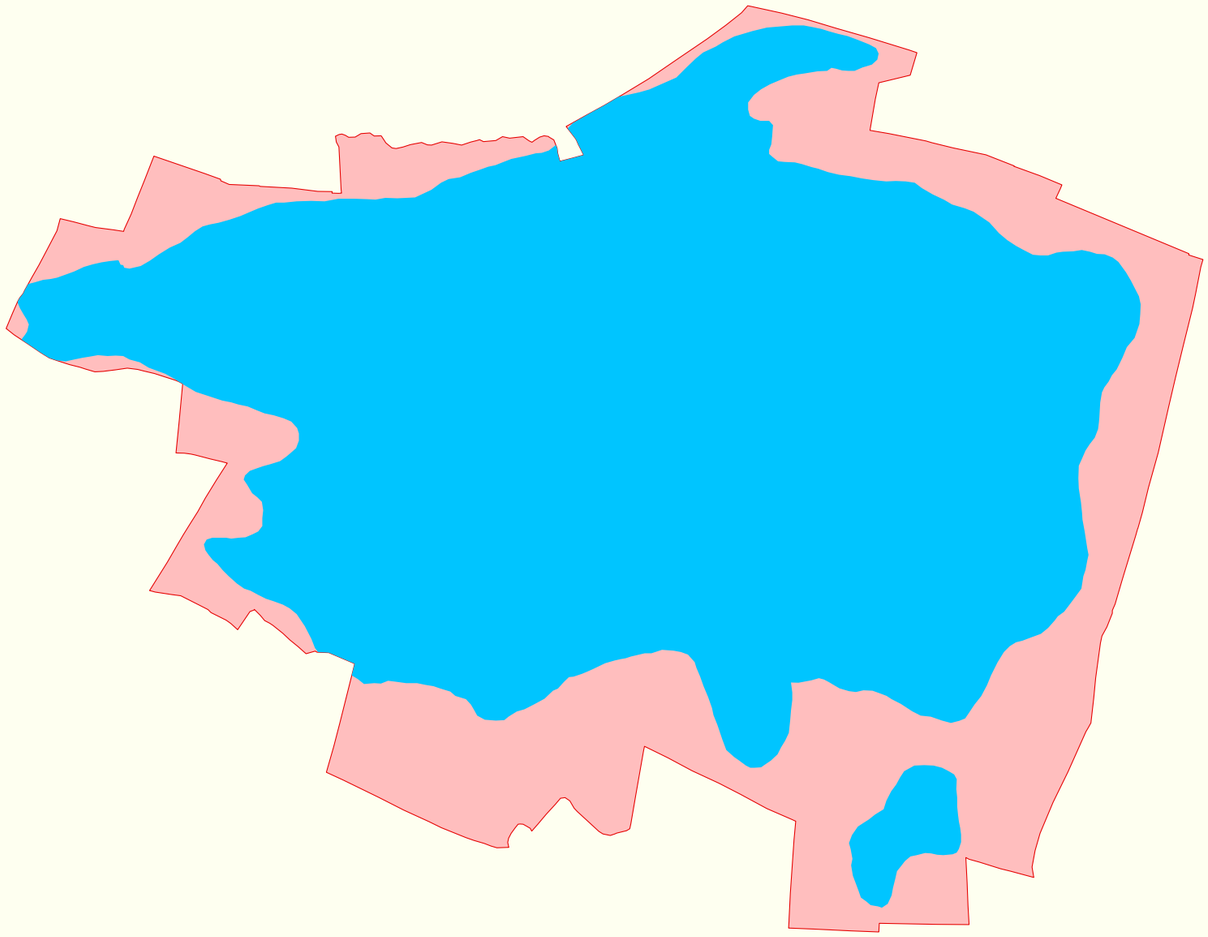
Map Version 1
Date: November 2020



Legend

- 3180 Turloughs*
- Cahermore Turlough SAC 0002294

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Department of Housing, Local Government and Heritage

MAP 2:
CAHERMORE TURLOUGH SAC 002294
CONSERVATION OBJECTIVES
TURLOUGHS

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

SITE CODE:
SAC 002294; version 3.01. CO. GALWAY

0 50 100 150 200 Metres

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Map Version 1
Date: November 2020