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Conservation Objectives Series

Kiltiernan Turlough SAC 001285

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

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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***

001285	Kiltiernan 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 :	1992
Title :	Turloughs over 10ha - Vegetation survey and evaluation
Author :	Goodwillie, R.N.
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 List 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
Year :	2019
Title :	The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments
Author :	NPWS
Series :	Conservation assessments

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 :	1992
Title :	A review of the scarce and threatened Coleoptera of Great Britain. Part 1. UK. Nature Conservation: 3
Author :	Hyman, P. S.; Parsons, M. S.
Series :	Joint Nature Conservation Committee, Peterborough, UK
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 :	2005
Title :	Further records of carabid beetles from turloughs
Author :	Regan, E.C.
Series :	Irish Naturalists' Journal, 28(2): 59–61
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)

3180 Turloughs*

To restore the favourable conservation condition of Turloughs in Kiltiernan 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	Kiltiernan Turlough SAC has been well studied (Coxon, 1986; Goodwillie, 1992; Goodwillie et al., 1997; Regan, 2005a, 2005b). The turlough area in the SAC has been calculated as 15.5ha based on Goodwillie at al. (1997). See map 2 for known extent. Goodwillie (1992) ranked this turlough as of local ecological importance. 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 this turlough is well studied (Coxon, 1986; Goodwillie, 1992; SWG and Jennings O'Donovan and Partners, 1997). According to NPWS internal files, Kiltiernan Turlough comprises a relatively dry turlough with a limited, though regular, flood in winter; its flattish basin having about eight further depressions which are joined in times of high water. Goodwillie (1992) described this as a dry turlough which had undergone recent drainage
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) classified most of the soil in Kiltiernan Turlough as basic, deep, well-drained mineral soil over limestone tills. Smaller areas of basic, shallow, well-drained mineral soil over calcareous rock was also identified. Jones et al. (2014) classified all the soils in the vicinity of the turlough as fine, well-drained, loamy soil over limestone bedrock. NPWS internal files note the absence of peat accumulation at this turlough
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	There was no indication from the soil maps of Fealy et al. (2009) or Jones et al. (2014) of any peat formation at Kiltiernan Turlough, and NPWS internal files specifically noted the absence of peat accumulation here
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. Kiltiernan Turlough is considered to be naturally mesotrophic and a highly sensitive receptor requiring mesotrophic water quality (good ecological status) (Working Group on Groundwater, 2005; Internal NPWS files). A target of ≤20µg/l total phosphorus may be sufficient to support the natural structure and functioning of the turlough habitat at Kiltiernan

Vegetation composition: area of vegetation communities	Hectares	Maintain area of sensitive and high conservation value vegetation communities/units	Regan (2005a) recorded three plots at Kiltiernan 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. NPWS internal files listed this as the main community, with species-rich grassland occurring in the western half of the site, limestone grassland on rocky outcrops near the road to the east, and narrow fringes of scrub with *Rhamnus cathartica* and the rare *Frangula alnus* along each side of the basin. The grassland in the main depressions of this site were modified by trampling and overgrazing, with the main species being *Galium boreale* and *Potentilla reptans*. Hollows in this vegetation contained *Carex nigra* and *Polygonum amphibium*
Vegetation composition: vegetation zonation	Distribution	Maintain/restore vegetation zonation/mosaic characteristic of the turlough	
Vegetation structure: sward height	Centimetres	Maintain/restore sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough	NPWS internal files note that the site was grazed, particularly in the eastern half, and that the grassland in the main depressions of the basin had been modified by trampling and overgrazing
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). *Viola persicifolia* and *Frangula alnus* have been recorded at Kiltiernan Turlough (NPWS internal files). *Viola persicifolia* is listed as Near Threatened in Wyse Jackson et al. (2016). Regan (2005b) recorded the rare carabid *Chlaenius nigricomis* at this site, a British Red Data Book nationally scarce species (Hyman and Parsons, 1992). Kiltiernan Turlough is also important for wintering wildfowl, and NPWS internal files list Bewick's swan, lapwing, golden plover, pochard, teal, wigeon and tufted duck as being recorded at the site
Fringing habitats: area	Hectares	Maintain/restore marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations	
Vegetation structure: turlough woodland	Species diversity and woodland structure	Maintain/restore appropriate turlough woodland diversity and structure	NPWS internal files note the occurrence of narrow fringes of scrub along each side of the turlough basin, with the scrub being predominantly *Prunus spinosa*, but with some *Rhamnus cathartica* and *Frangula alnus* also present

KILTIERNAN EAST

110kV

M18

KILTIERNAN WEST

KEAMSELLAGH EAST

Killeeneenmore

Craughwell

CO. GALWAY

Ballinderreen

Kiltiernan Turlough SAC

Newtownlynch

Burren

Kinvara

Bealaclugga

CO. CLARE

Peterswell

Legend

Kiltiernan Turlough SAC 001285

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

MAP 1:
KILTIERNAN TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

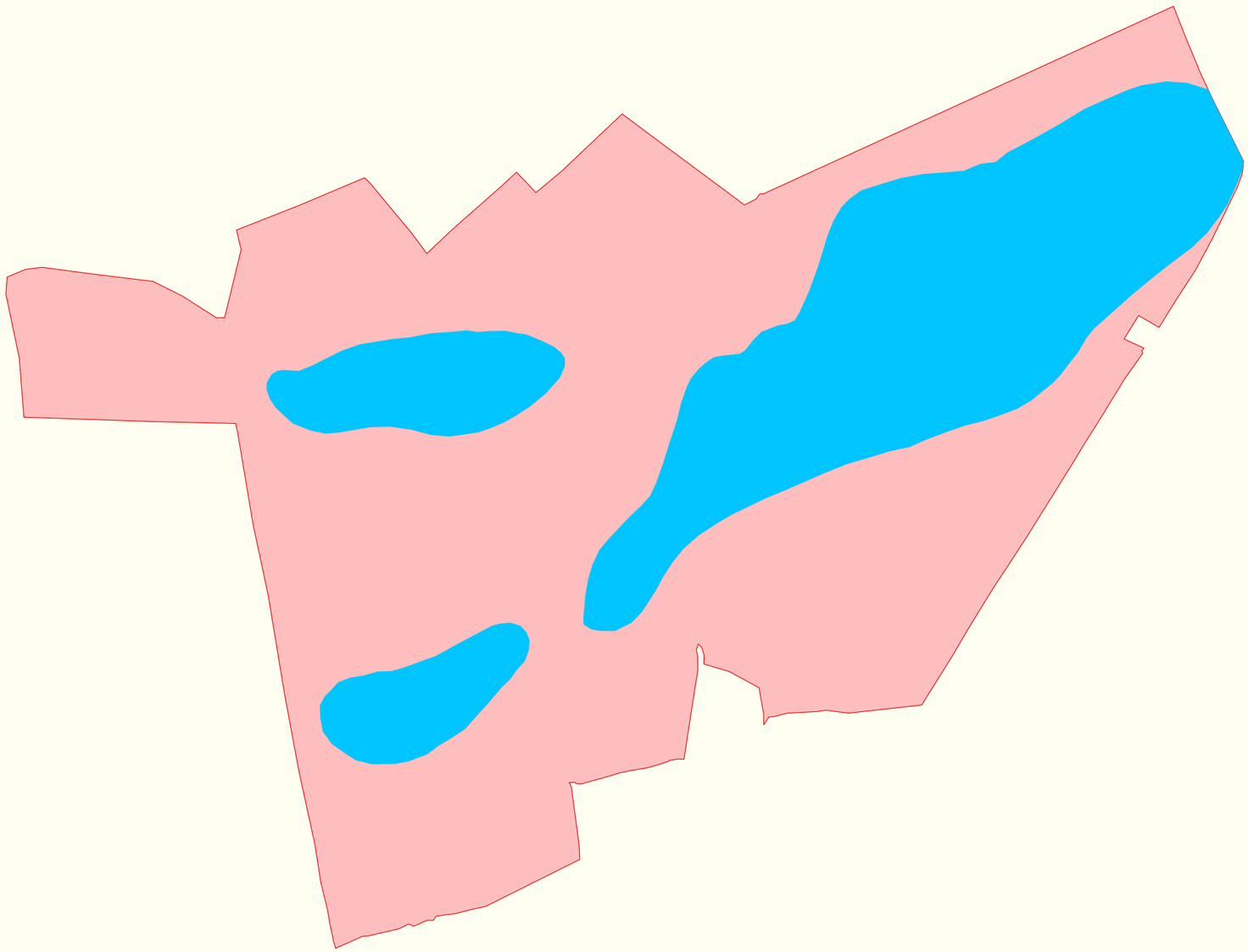
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 001285; version 3. CO. GALWAY

0 50 100 150 200 Metres

N

Map Version 1
Date: November 2020



Legend

- 3180 Turloughs*
- Kiltiernan Turlough SAC 001285

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Department of Housing, Local Government and Heritage

MAP 2:
KILTIERNAN TURLOUGH SAC
CONSERVATION OBJECTIVES
TURLOUGHS

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

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0 50 100 150 200 Metres

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Map Version 1
Date: November 2020