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Conservation Objectives Series

Coolcam Turlough SAC 000218

An Roinn
Cultúir, Oidhreachta agus Gaeltachta

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Culture, Heritage and the Gaeltacht

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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***

000218	Coolcam 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 :	2015
Title :	Turlough hydrology, ecology and conservation (Part 1)
Author :	Waldren, S. (ed.)
Series :	Unpublished report to NPWS
Year :	2015
Title :	Turlough hydrology, ecology and conservation (Part 2)
Author :	Waldren, S. (ed.)
Series :	Unpublished report to 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

Spatial data sources

Year :	2015
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 (map 2)

3180 Turloughs

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

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable at c.56ha or increasing, subject to natural processes	Based on the approximate area of 56ha for Coolcam turlough from Waldren (2015), of which 55.5ha lies within the boundary of Coolcam Turlough SAC. Coolcam was one of 22 Trinity College Dublin (TCD) turlough project study sites (Waldren, 2015). It was also studied by Goodwillie (1992). Neither of these studies surveyed the north-west of the SAC, so the figure of 56ha may underestimate the area of the habitat. See map 2 for the recorded extent (based on Waldren, 2015). Coolcam turlough was assessed as being in inadequate conservation condition (Waldren, 2015). See also Coxon (1986) for information on Coolcam turlough. 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 distribution, flood duration, frequency, area and depth, and permanently flooded/wet areas) and targets in O Connor (2017). Coolcam turlough has basins separated by a narrow esker; the smaller Coolcam Lough dries out in summer, the larger seems to retain water throughout the year (Waldren, 2015). The hydrological data suggest that this turlough experiences one significant flooding event per annum and has become wetter over time (Waldren, 2015). Coolcam turlough is hydrologically linked with Croaghill turlough (SAC 000255) (Waldren, 2015)
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	Coolcam soils are moderately alkaline and mineral, with an alluvial mineral soil type covering almost 95% of the turlough area (Waldren, 2015)
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain/restore nutrient status appropriate to soil types and vegetation communities	Waldren (2015) found mean total nitrogen (TN) at Coolcam of 4,983mg/kg TN and total phosphorus (TP) of 245mg/kg TP
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	Soils were moderately alkaline at Coolcam, with a percentage calcium carbonate content of 4.78% (Waldren, 2015)
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). Waldren (2015) recorded mean TP of 34µg/l and mean chlorophyll *a* of 18µg/l. Owing to the dominance of mineral alluvial soils at Coolcam, ≤20µg/l TP may be sufficient to restore favourable condition. It is likely, however, that Coolcam naturally had 10µg/l TP, so further nutrient reductions may be required to restore more oligotrophic communities, e.g. marl lake/pond
Active peat formation	Flood duration	Maintain active peat formation, where appropriate	No peat soils were recorded at Coolcam (Waldren, 2015)

Vegetation composition: area of vegetation communities	Hectares	Maintain area of sensitive and high conservation value vegetation communities/units	See Goodwillie (1992) and Waldren (2015) for information on vegetation communities at Coolcam
Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the site	See Goodwillie (1992) and Waldren (2015) for information on vegetation at Coolcam
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) and Waldren (2015) for information on vegetation at Coolcam
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). See Goodwillie (1992) and Waldren (2015) for information on plant and aquatic invertebrate species at Coolcam
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

Pollynoon
Brierfort
Lettera
Pollnacreeve
Coolcam
Coolcam Lough
Kildaree
Graveyard
Cartro
West
B327
105
93
92
87
85
86
83
81

CO. MAYO
CO. ROSCOMMON
CO. GALWAY
SAC 000218
Ballymoe
Dunmore

Legend

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MAP 1:
COOLCAM TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

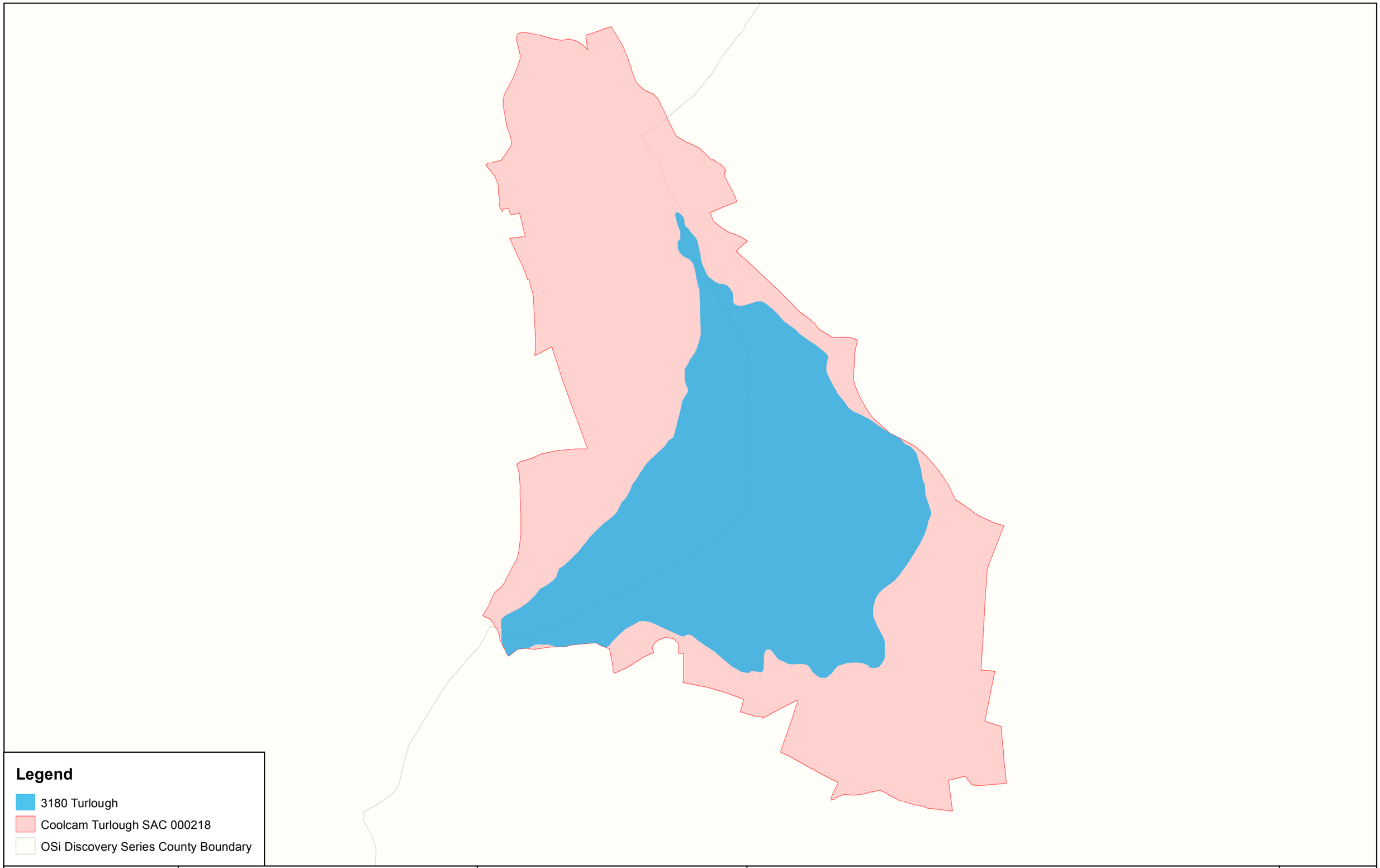
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000218; version 3.01.
CO. ROSCOMMON / CO. GALWAY

0 0.1 0.2 0.3 0.4 0.5 km

N

Map Version 1
Date: Aug 2017



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MAP 2:
COOLCAM TURLOUGH SAC
CONSERVATION OBJECTIVES
TURLOUGH

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

SITE CODE:
SAC 000218; version 3.01.
CO. ROSCOMMON / CO. GALWAY

0 100 200 300 400 500 Meters

N

Map Version 1
Date: Aug 2017