

National Parks and Wildlife Service

Conservation Objectives Series

Mullygollan Turlough SAC 000612



An Roinn
Cultúir, Oidhreachta agus Gaeltachta

Department of
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*

000612 Mullygollan Turlough SAC

3180 TurloughsE

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
<hr/>	
Year :	2009
Title :	Irish Red List No. 1 - Water beetles
Author :	Foster, G.N.; Nelson, B.H.; O Connor, Á.
Series :	Ireland Red List No. 1
<hr/>	
Year :	2017
Title :	Conservation objectives supporting document: Turloughs* and Rivers with muddy banks with Chenopodium 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
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Year :	1991
Title :	Further records of aquatic Coleoptera from Ireland
Author :	Bilton, D.T.; Lott, D.A.
Series :	The Irish Naturalists' Journal, 23(10): 389-397
<hr/>	
Year :	1992
Title :	A classification and evaluation of Irish water beetle assemblages
Author :	Foster, G.N.; Nelson, B.H.; Bilton, D.T.; Lott, D.A.; Merrit, R.; Weyl, R.S.; Eyre, M.D.
Series :	Aquatic Conservation: Marine and Freshwater Ecosystems, 2(2): 185-208

Spatial data sources

Year : 2016

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)

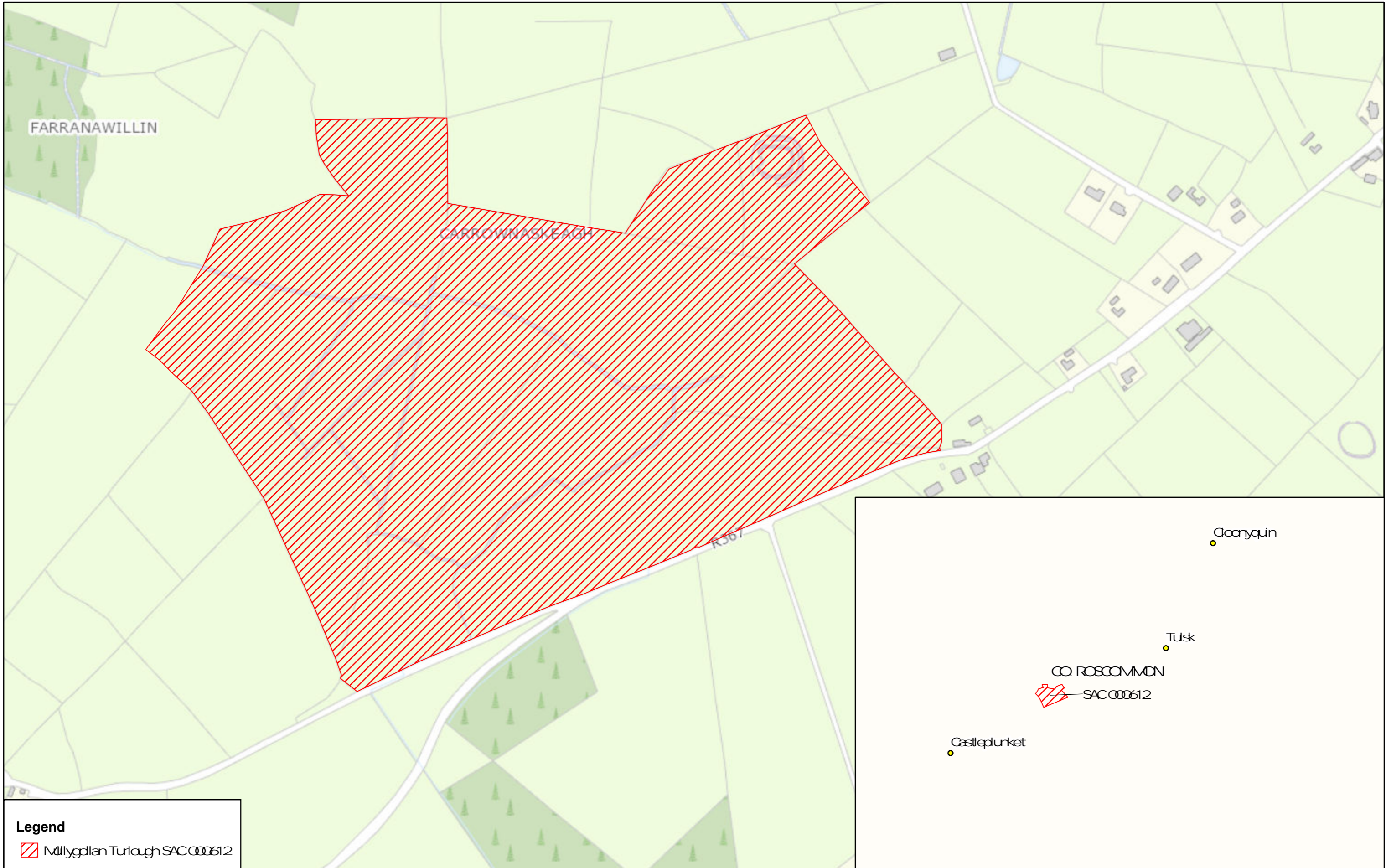
Conservation Objectives for : Mullygollan Turlough SAC [000612]

3180 Turloughs

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


Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable at c.30ha or increasing, subject to natural processes. See map 2	Approximate area of 29.8ha for Mullygollan turlough based on Goodwillie (1992). See map 2 for extent. Goodwillie (1992) described Mullygollan turlough as a basin, bordered by a rock outcrop to the north, sloping, drift-covered fields to the south and a small valley to the west. The eastern half has different levels, and the centre and west are flatter and peat covered. See also Coxon (1986). See O Connor (2017) for information on all attributes and targets
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat occurs throughout Mullygollan Turlough SAC. See map 2
Hydrological regime	Various	Maintain/restore 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). A stream enters Mullygollan turlough from the west and flows through a system of drains before reaching the east centre where there are several ponds and a swallow hole (Goodwillie, 1992). There are additional sinkholes with subsidence in the eastern part (Goodwillie, 1992). The occurrence of water sedge (<i>Carex aquatilis</i>) at Mullygollan turlough suggests unusual hydrological conditions (Goodwillie, 1992). The impact of the extensive network of internal drains on the typical species and vegetation communities requires further investigation
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	Coxon (1986) recorded silty clay in Mullygollan turlough. Bedrock was at 30cm below in the south-west (Coxon, 1986). There is peat on clay in the centre and this sticky clay can also be seen around the ponds (Goodwillie, 1992). Bedrock outcrops to the north and there is loose rock scattered on the eastern half (Goodwillie, 1992)
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain nutrient status appropriate to soil types and vegetation communities	See O Connor (2017) for further details on this and all attributes
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	Marl does not appear to be a feature at Mullygollan turlough
Water quality	Various	Maintain 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). An interim target of $\leq 20\mu\text{g/l}$ total phosphorus (TP) is suggested for Mullygollan turlough; however, it may be necessary to achieve a target of $\leq 10\mu\text{g/l}$ TP to maintain favourable condition
Active peat formation	Flood duration	Maintain active peat formation	Goodwillie (1992) found areas of deep peat at Mullygollan turlough and stated that peat-cutting at the site had ceased
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 Mullygollan turlough. The turlough had high vegetation diversity, linked to the contrasting wet and dry areas

Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the site	See Goodwillie (1992) for information on vegetation at Mullygollan turlough, which includes central peaty communities and more typical turlough vegetation around the edges
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) for information on vegetation at Mullygollan turlough. Cattle were widespread, poaching occurred near the swallow holes, and the central wet area was not grazed (Goodwillie, 1992). The pool areas were used by cattle for drinking. Severe grazing pressure at one side had resulted in the largest area of the Dry weed community (5A) of any site studied by Goodwillie (1992)
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) for information on plant species at Mullygollan turlough, which included water sedge (<i>Carex aquatilis</i>), a northern species requiring winter flooding and found only, during the turlough study, at Mullygollan turlough on deep peat. For information on water beetles see Bilton and Lott (1991) and Foster et al. (1992). Only three of the more-widespread turlough water beetle species were recorded at Mullygollan turlough: <i>Agabus nebulosus</i> , <i>Helophorus minutus</i> and <i>Ochthebius minimus</i> , none of which are listed as threatened by Foster et al. (2009)
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



Legend

 Mullygolan Turlough SAC 000612



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MAP 1:
MULLYGOLAN TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

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

SITE CODE:
SAC 000612; version 3. CO. ROSCOMMON

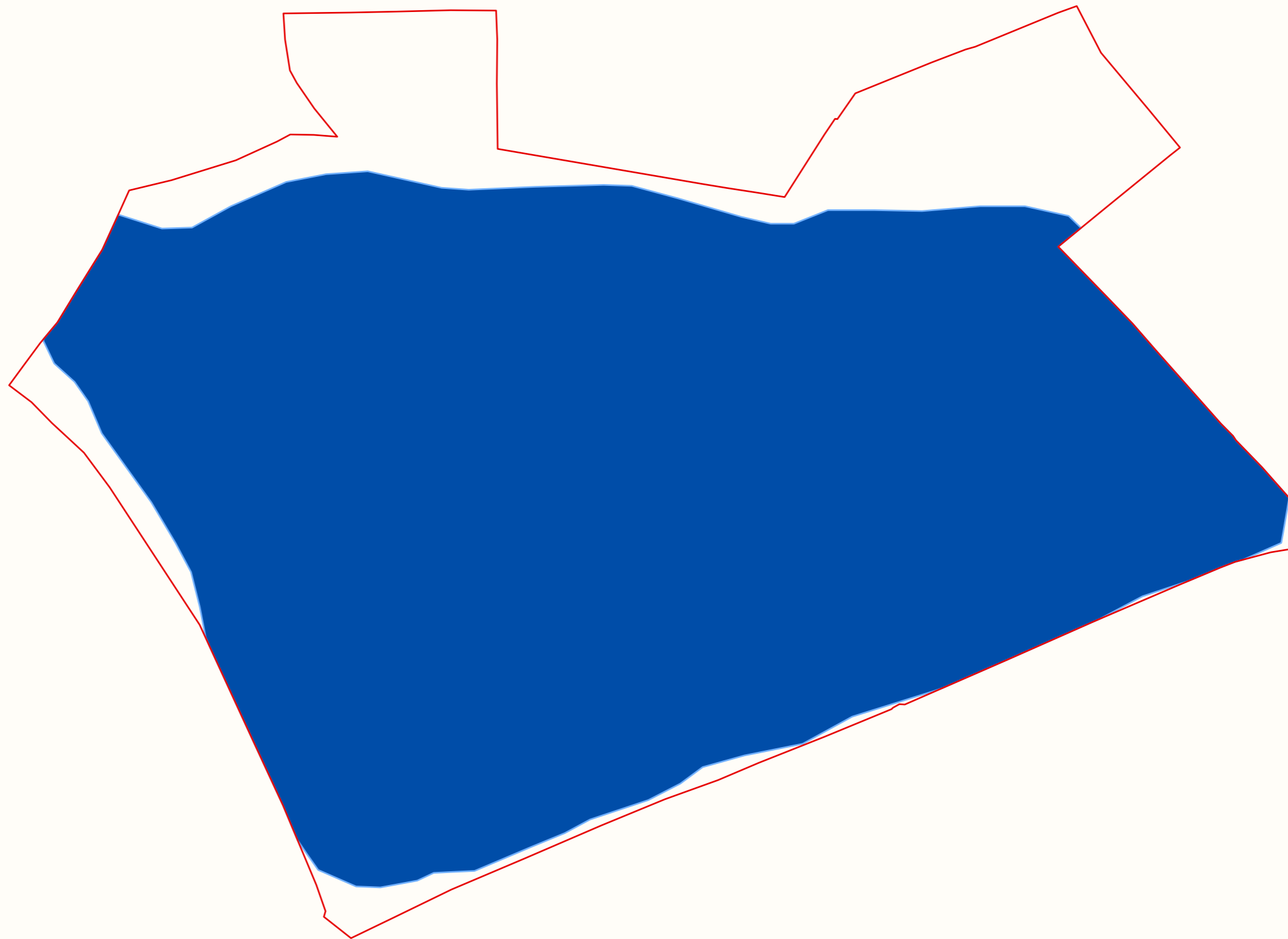
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Map Version 1
Date: Nov 2017



Legend

- OSi Discovery Series County Boundary
- 3180 Turloughs
- Mullygollan Turlough SAC 000612



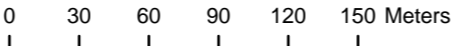
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**MAP 2:
MULLYGOLLAN TURLOUGH SAC
CONSERVATION OBJECTIVES
TURLOUGHs**

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

**SITE CODE:
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0 30 60 90 120 150 Meters



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**Map Version 1
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