

National Parks and Wildlife Service

Conservation Objectives Series

Fortwilliam Turlough SAC 000448



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*

000448 Fortwilliam 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
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
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
Year :	1988
Title :	A survey of aquatic Coleoptera in central Ireland and the Burren
Author :	Bilton, D.T.
Series :	Bulletin of the Irish Biogeographical Society, 11: 77-94
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 : 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 (map 2)

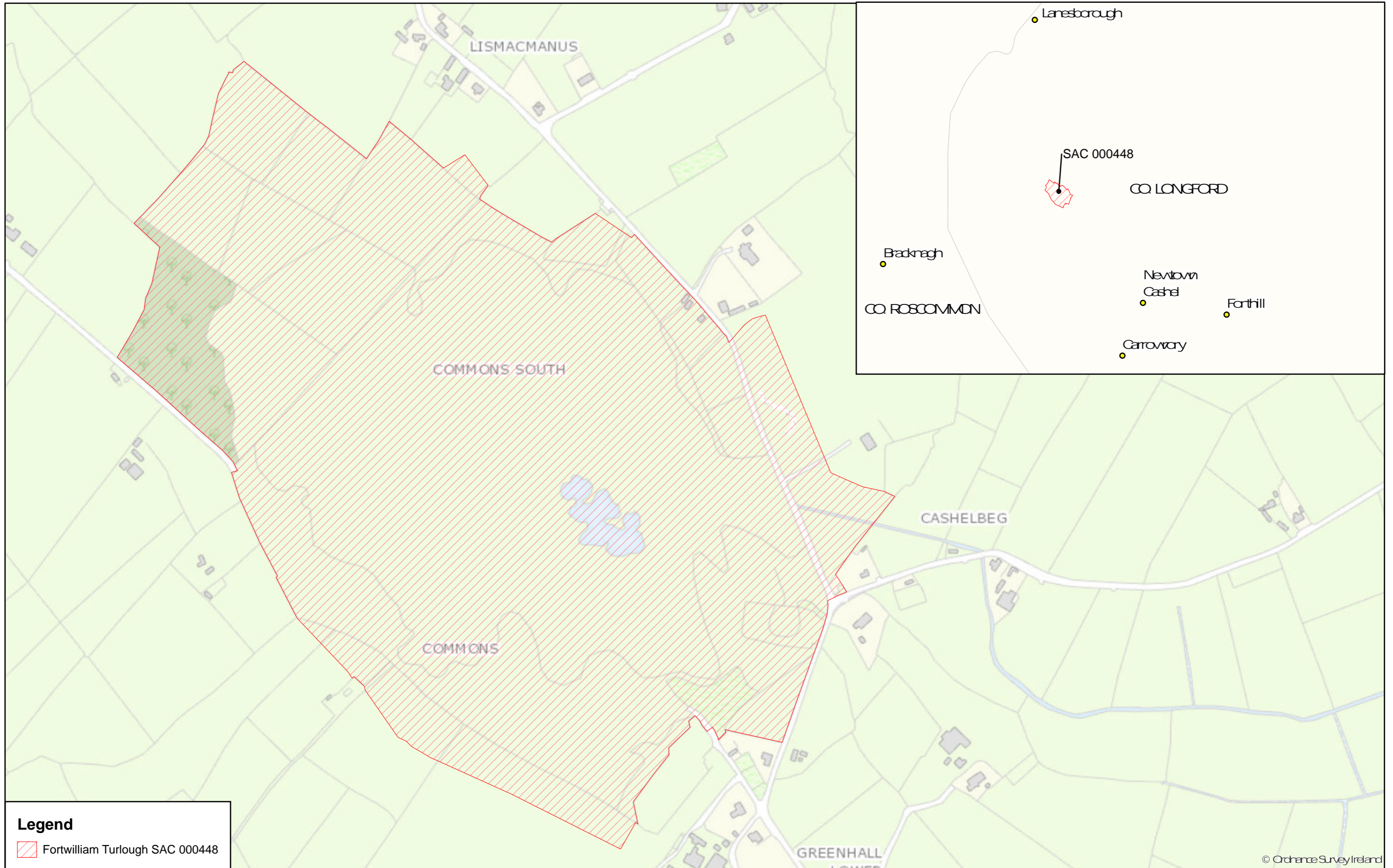
Conservation Objectives for : Fortwilliam Turlough SAC [000448]

3180 Turloughs


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


Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable at c.42ha or increasing, subject to natural processes. See map 2	Approximate area of 41.5ha for Fortwilliam turlough in Fortwilliam Turlough SAC based on Goodwillie (1992). Goodwillie (1992) stated "The floor of the oval basin is at two levels, a lower central area with several lakes and ponds and a higher surrounding level of till with scattered rocks extending north-westwards into flat fields and woodland". See also Coxon (1986). See map 2 for recorded extent. See O Connor (2017) for information on all attributes and targets
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat occurs throughout this small SAC. 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) recorded swallow holes on the eastern and northern edges of Fortwilliam turlough and stated that the vegetation at the south end of the lake indicates the occurrence of two seepages, linked by the reedbed. The lower central basin of Fortwilliam turlough has several lakes and ponds (Goodwillie, 1992). Coxon (1986) recorded an excavated area to the south-west
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	At Fortwilliam turlough, Goodwillie (1992) found peat over marl or pure marl in the lower central area and sandy till in the surrounding higher basin. There is a small amount of outcropping limestone in the north-east and scattered limestone boulders
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain nutrient status appropriate to soil types and vegetation communities	Nitrogen and phosphorus soil concentrations are likely to be naturally low at Fortwilliam turlough, particularly in marl and peat soils
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) recorded abundant marl precipitation at Fortwilliam turlough, particularly in the flat, lower areas, and noted that marl excavation may have occurred
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). The oligotrophic vegetation at Fortwilliam turlough indicates a requirement for high status/oligotrophic water quality
Active peat formation	Flood duration	Maintain active peat formation	At Fortwilliam turlough, Goodwillie (1992) found peat over marl in the flat, lower areas. Peat formation may also be associated with other fen and heath communities
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 Fortwilliam turlough, which included significant areas of Sedge heath (3B), <i>Potentilla reptans</i> (species-poor) (5B) and Marl pond (9C), relatively significant areas of Tall herb (3A) and Dry woodland (2W), with a total of 13 communities
Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the site	See Goodwillie (1992) for information on vegetation at Fortwilliam turlough

Vegetation structure: sward height	Centimetres	Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough	Goodwillie (1992) stated that Fortwilliam turlough was grazed by cattle and sheep without significant damage to the vegetation
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 Fortwilliam turlough. Characteristic turlough water beetles recorded at Fortwilliam include the Near Threatened species: <i>Agabus labiatus</i> , <i>Dytiscus circumcinctus</i> and <i>Graptodytes bilineatus</i> ; also <i>Agabus nebulosus</i> , <i>Helophorus minutus</i> , <i>Hygrotus impressopunctatus</i> , <i>Laccobius colon</i> , <i>Laccophilus minutus</i> and <i>Rhantus frontalis</i> (Bilton, 1988; Foster et al., 1992, 2009; Irish water beetle database)
Fringing habitats: area	Hectares	Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations	Goodwillie (1992) noted a small limestone outcrop at the south of Fortwilliam turlough with burnet-saxifrage (<i>Pimpinella saxifraga</i>) and harebell (<i>Campanula rotundifolia</i>), and fields to the east with tall fescue (<i>Festuca arundinacea</i>), common bird's-foot trefoil (<i>Lotus corniculatus</i>) and creeping cinquefoil (<i>Potentilla reptans</i>)
Vegetation structure: turlough woodland	Species diversity and woodland structure	Maintain appropriate turlough woodland diversity and structure	Goodwillie (1992) recorded turlough woodland at the north-western corner of Fortwilliam turlough, with blackthorn (<i>Prunus spinosa</i>), hawthorn (<i>Crataegus monogyna</i>) scrub, ash (<i>Fraxinus excelsior</i>) and elder (<i>Sambucus nigra</i>)



Legend

 Fortwilliam Turlough SAC 000448

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**MAP 1:
FORTWILLIAM TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION**


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

**SITE CODE:
SAC 000448; version 3.01. CO. LONGFORD**

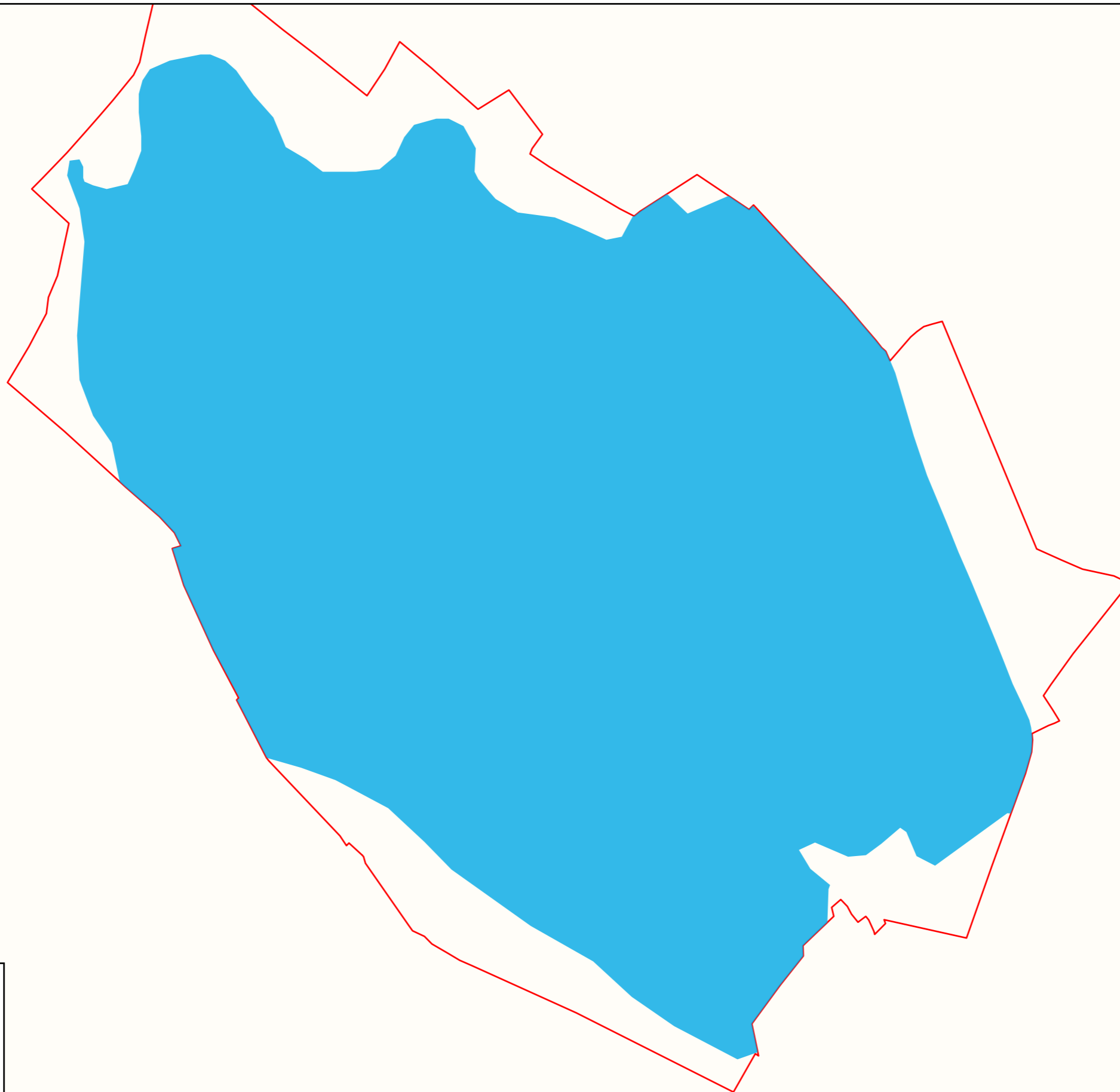
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**Map Version 1
Date: Dec 2017**

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Legend

- 3180 Turlough
- Fortwilliam Turlough SAC 000448
- OSi Discovery Series County Boundary

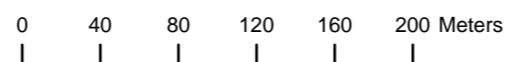


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**MAP 2:
FORTWILLIAM TURLOUGH SAC
CONSERVATION OBJECTIVES
TURLOUGH**

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

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**Map Version 1
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