

National Parks and Wildlife Service

Conservation Objectives Series

The Loughans SAC 000407



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreacht
Department of Housing,
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*

000407 The Loughans 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
<hr/>	
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
<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
<hr/>	
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

Spatial data sources

Year : 2020

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)

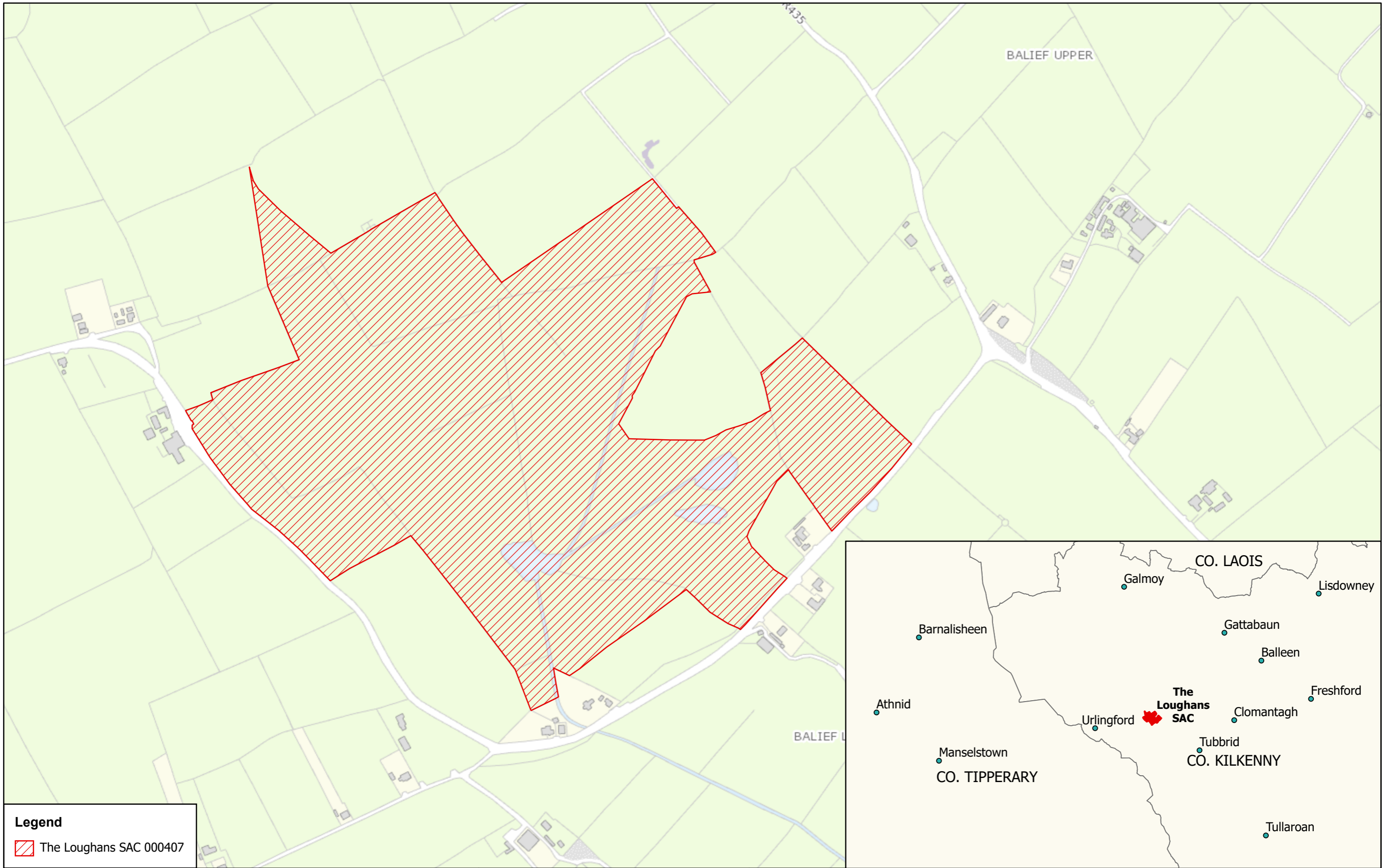
Conservation Objectives for : The Loughans SAC [000407]

3180 Turloughs*


To restore the favourable conservation condition of Turloughs in The Loughans 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	The Loughans turlough was studied by Coxon (1986) and Goodwillie (1992). The turlough area in the SAC has been calculated as 21.4ha based on Goodwillie (1992). See map 2 for known extent. Goodwillie (1992) categorised the Loughans turlough as being of national 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/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). The hydrology of the Loughans turlough was studied by Coxon (1986) and Goodwillie (1992). Coxon (1986) recorded that the turlough had suffered from significant drainage. However, Goodwillie (1992) found that it continued to flood for long periods each year, despite a drain cut into the southern end and an excavated swallow hole in the north-west. In summer the Loughans turlough retains a permanent central pond and there are several subsidiary wet hollows at the eastern end. A swallow hole was recorded in the north-west of the turlough (Goodwillie, 1992)
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	Much of the Loughans turlough basin is lined by marl deposits, with approximately 0.6m of white marl over stony drift (Goodwillie, 1992). However, Goodwillie (1992) also reported a cone of blocky marl of 4m depth in one area, probably indicating local subsidence. While drift was in evidence around the turlough, there were no boulders within the basin. Peat was largely absent, although the vegetation indicated a slight accumulation in the south-eastern end of the turlough (Goodwillie, 1992). For further information on soil type in the Loughans turlough see Coxon (1986) and Goodwillie (1992)
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain/restore 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	The areas of marl reported for the Loughans turlough by Goodwillie (1992) will have a high calcium carbonate content
Active peat formation	Flood duration	Maintain active peat formation	Peat is largely absent, although the vegetation indicates a slight accumulation in the south-eastern end of the turlough according to Goodwillie (1992)

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), the Loughans is naturally highly sensitive to enrichment (but is currently enriched). A target of $\leq 20\mu\text{g/l}$ total phosphorus may be sufficient to support the natural structure and functioning of the turlough habitat at the Loughans
Vegetation composition: area of vegetation communities	Hectares	Restore area of sensitive and high conservation value vegetation communities/units	The vegetation of the Loughans turlough is fairly diverse in 1992 Goodwillie (1992). The species-rich <i>Potentilla reptans</i> community (4B) was the most abundant community, occurring over large areas of the turlough floor. The second most abundant community, generally found just above 4B was sedge heath (3B) with <i>Carex flacca</i> , <i>Succisa pratensis</i> and <i>Potentilla erecta</i> (Goodwillie, 1992). See Goodwillie (1992) for further information on vegetation communities in the Loughans turlough
Vegetation composition: vegetation zonation	Distribution	Maintain/restore vegetation zonation/mosaic characteristic of the turlough	When surveyed by Goodwillie (1992), the Loughans turlough had small areas of limestone grassland (2C) and areas that had been modified through fertilisation to poor grassland (2B). The two dominant communities in the turlough were sedge heath (3B) (4.7ha) found just above species-rich <i>Potentilla reptans</i> (4B) (8.8ha). At the lower levels of the turlough, the <i>Polygonum amphibium</i> community (7A) was common. At its base were some wet annuals (8B) and several temporary ponds (9A). <i>Potamogeton natans</i> , <i>Ranunculus aquatilis</i> and <i>R. trichophyllus</i> were the main species on the muddy floor. See Goodwillie (1992) for further information on vegetation communities in the Loughans turlough
Vegetation structure: sward height	Centimetres	Maintain/restore sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough	According to Goodwillie (1992), the majority of the Loughans turlough basin was grazed by cattle with some areas cut for hay
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). Three notable vascular plant species have been recorded within the Loughans turlough: <i>Anacamptis morio</i> , which occurs on the limestone grassland on the edge of the turlough, <i>Epipactis palustris</i> and <i>Rorippa islandica</i> (NPWS internal files). <i>Anacamptis morio</i> is listed as Vulnerable in Wyse Jackson et al. (2016), <i>Epipactis palustris</i> and <i>Rorippa islandica</i> are both listed as Least Concern. A number of locally notable plant species have also been recorded, including <i>Chenopodium rubrum</i> , <i>Thalictrum flavum</i> and <i>Trifolium medium</i> (NPWS internal files)
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	No turlough scrub or woodland was recorded for the Loughans turlough by Goodwillie (1992), but there are hedgerows within the turlough that would provide some woodland structure and species diversity



Legend

 The Loughans SAC 000407



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**MAP 1:
THE LOUGHANS SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION**

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

**SITE CODE:
SAC 000407; version 3.01. CO. KILKENNY**

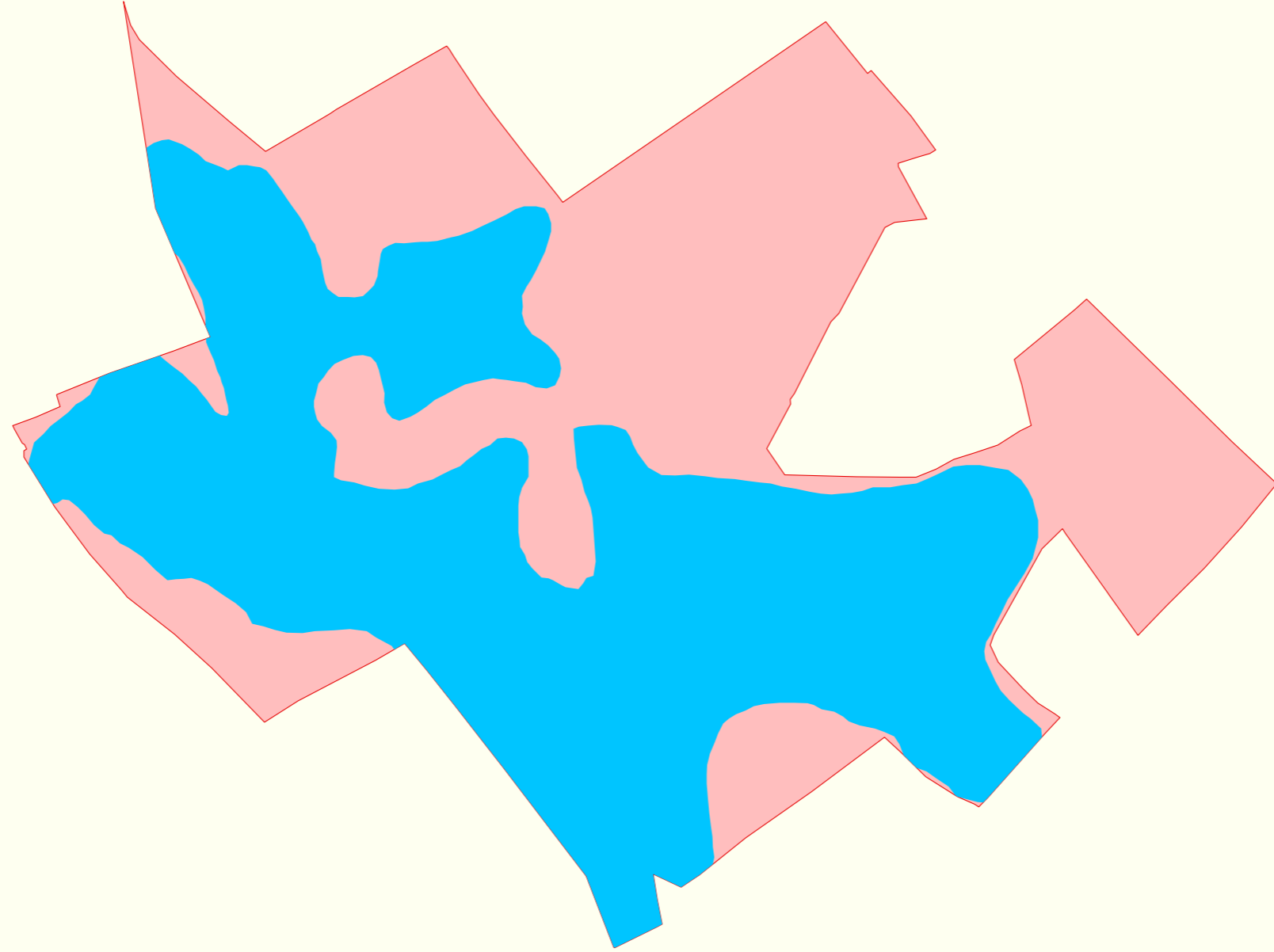
0 50 100 150 200 Metres

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Map Version 1
Date: November 2020



Legend

- 3180 Turloughs*
- The Loughans SAC 000407

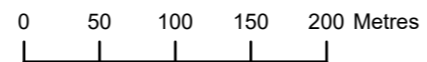


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**MAP 2:
THE LOUGHANS SAC
CONSERVATION OBJECTIVES
TURLOUGHS**

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

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**Map Version 1
Date: November 2020**