

# Roman Walls Lough Special Area of Conservation

## Evidence Pack

First published August 2022, revised June 2024

Natural England Technical Information Note TIN202

# Roman Walls Lough Special Area of Conservation – Evidence Pack

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## Project details

This report should be cited as: WOOD, A., WAKE, H. and MCKENDRICK-SMITH, K. 2024. Roman Walls Lough Special Area of Conservation – Evidence Pack Third Edition. *Natural England Technical Information Note TIN202*.

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## Keywords

Natural England, Nutrient Neutrality, Strategic Solutions, Roman Walls Lough SAC

## Further information

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## Contents

Site Details.....	5
1. Reasons for European Designation.....	5
2. Nutrient Pressure and Water Quality.....	5
3. Additional Information.....	6
Appendix.....	8
List of abbreviations.....	10

# 1. Site Details

## From the Roman Wall Loughs SAC citation:

Roman Wall Loughs comprises three natural eutrophic (nutrient-rich) lakes; Crag, Broomlee and Greenlee Loughs. Together the loughs contain 11 species of pondweed *Potamogeton* including *P. lucens*, *P. pusillus*, and *P. obtusifolius*. *P. gramineus* occurs in all three loughs in an unusual association with stoneworts *Chara spp.* The nationally rare autumnal waterstarwort *Callitriche hermaphroditica* occurs in Crag Lough. Shoreweed *Littorella uniflora* grows in Broomlee and Greenlee Loughs, and greater bladderwort *Utricularia vulgaris* in the latter.

# 2. Reasons for European Designation

The Special Area for Conservation (SAC) is designated for the following features:

- H3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*

Links to Conservation Advice:

- [Conservation Objectives](#)
- [Conservation Objectives Supplementary Advice](#)

# 3. Nutrient Pressure and Water Quality

Nutrient pressure(s) for which the site is unfavourable:

- Phosphorus

In the Conservation Objectives Supporting Advice for Roman Wall Loughs it **states 'restore total phosphate levels to a maximum annual mean concentration to 20 micrograms/litre'**.

Water Quality data is reported against the relevant Site of Special Scientific Interest (SSSI) units within the SAC.

The condition of the waterbody and the habitats which support the designated features is in part dependent on the water quality within them. Where excessive nutrients are present in a system this can lead to the occurrence of eutrophication, impacting on aquatic macrophyte flora and changes in water chemistry.

Recent water quality monitoring data shows Crag Lough, Broomlee Lough and Greenlee Lough are exceeding the targets for Total Phosphorus. Any nutrients entering the catchment upstream of the locations which are exceeding their nutrient targets, will make

their way downstream and have the potential to further add to the current exceedance. Therefore, the whole upstream catchment for all three of the loughs is included within the catchment map.

**Table 1 – Site attribute with water quality targets**

Unit name	SSSI Unit	Monitoring point ID	WQ Target TP (ug/l)	WQ Monitoring Data <sup>1</sup> TP (ug/l)	Compliance with target - – Pass/Fail and % reduction needed to achieve the WQ Target
<b>Crag Lough</b>	1	Crag Lough ID – NE – 43200223	20	49	FAIL 59% reduction needed
<b>Broomlee Lough</b>	3	Broomlee Lough – ID – NE-43200222	20	24	FAIL 17% reduction needed
<b>Greenlee Lough</b>	5	Greenlee Lough – ID – NE43200024	20	53	FAIL 62% reduction needed

## 4. Additional Information

The Roman Wall Loughs SAC is legally underpinned by the Roman Wall Loughs SSSI.

Interest features for the SSSI include:

- Basin fen (lowland)
- Blanket bog and valley bog (upland)
- Mesotrophic lakes

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<sup>1</sup> Water Quality Monitoring data from EA WIMS database. Orthophosphate (OP) is a reasonable approximation to Soluble Reaction Phosphorus (SRP). Following the rivers common standards monitoring guidance the mean of 3 years of data used where available.

- Subalpine dwarf-shrub heath
- Transition mire, ladder fen and quaking bog (upland)
- Valley fen (lowland)

# Appendix

## Component SSSIs of Roman Walls Loughs SAC

Map of component SSSIs of Roman Walls Loughs SAC

### Catchment Area Update (2024)

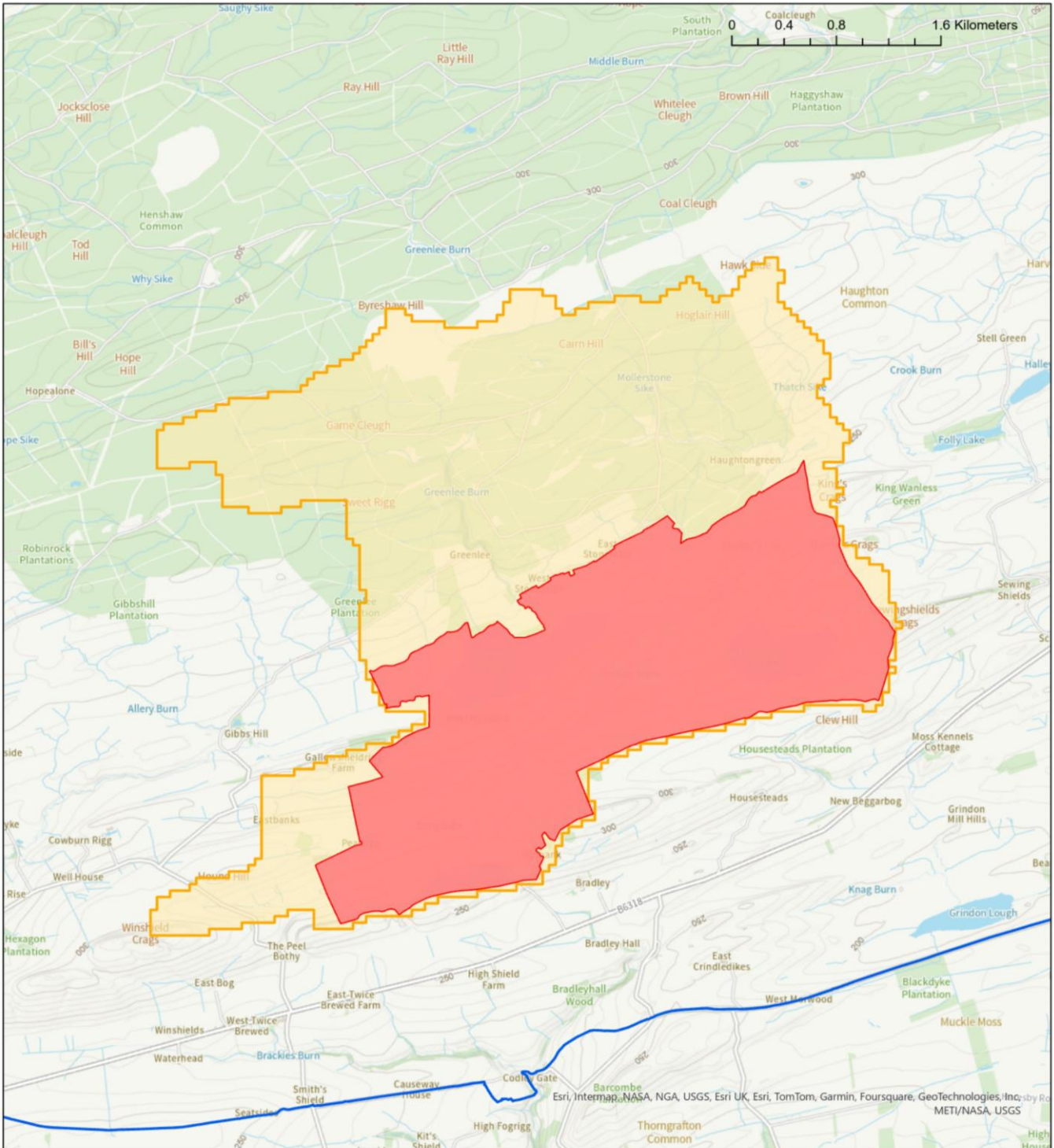
Natural England has undertaken a review of all the Nutrient Neutrality catchment areas. This review has considered updated surface water catchment data and evidence held by both Natural England and the Environment Agency. Consideration has also been given to data and evidence provided by other parties such as Local Planning Authorities. The information below summarises changes.

This catchment remains unchanged following review.

### Publishing of catchment area data

The Geographic Information Systems (GIS) data is available on [Defra Data Services Platform](#).





## Area where Natural England’s Nutrient Neutrality advice applies for Roman Walls Loughs SAC

European protected sites requiring nutrient neutrality strategic solutions

- ▬ National Parks
- ▬ Component SSSIs of impacted designated site
- ▬ Surface water catchment area of relevant designated site due to nutrient pollution

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# List of abbreviations

**OP** – Orthophosphate

**SAC** – Special for Area Conservation

**SRP** – Soluble Reaction Phosphorus

**SSSI** – Site of Special Scientific Interest

**WQ** – Water Quality

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Catalogue code: TIN202

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