



Scottish Natural Heritage
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GARTMORN DAM
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 678

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Purpose



This is a public statement prepared by SNH for owners and occupiers of the SSSI. It outlines the reasons it is designated as an SSSI and provides guidance on how its special natural features should be conserved or enhanced. This Statement does not affect or form part of the statutory notification and does not remove the need to apply for consent for operations requiring consent.

We welcome your views on this statement.

Description of the site

Gartmorn Dam Site of Special Scientific Interest (SSSI) lies in lowland central Clackmannanshire 2.5km north of Alloa. Most of the site is a reservoir which was created in 1713 to provide water power to fuel Alloa's industrial development and as such is the largest area of open water in the Clackmannan district.

This site was selected as an SSSI for its eutrophic open water and open water transition fen habitats. It is the only large eutrophic loch in Clackmannanshire.

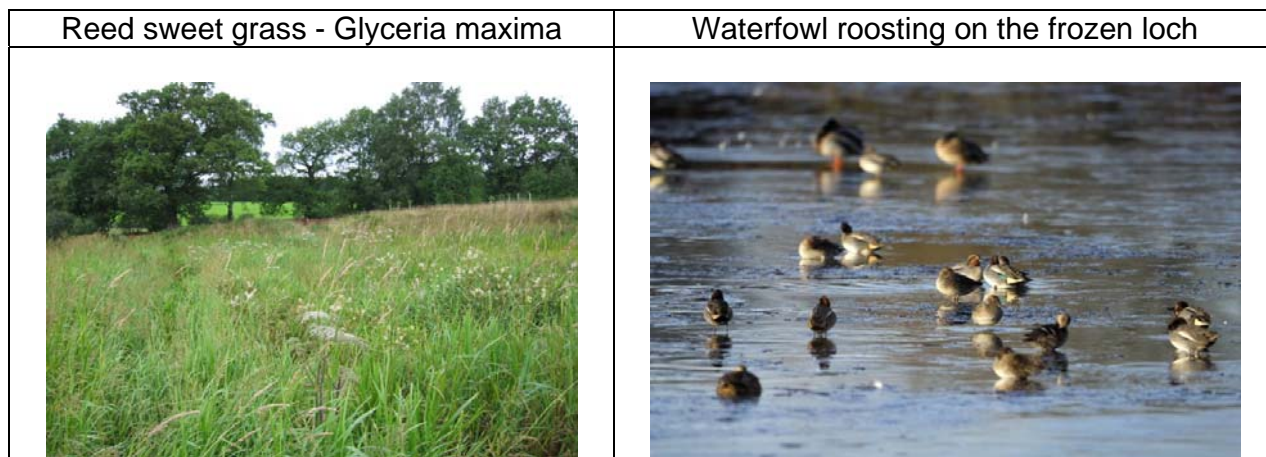
The reservoir is a typical nutrient rich lowland loch, with characteristic submerged plants, and marginal vegetation and reed swamp. The adjacent loch side is surrounded by areas of broadleaved woodland with agricultural fields in the surrounding catchment.

The loch supports a wide variety of submerged or floating plants, in particular an unusually large number of pondweeds *Potamogeton* occur, including one nationally scarce species, slender-leaved pondweed. Other locally uncommon aquatic plants that occur include spiked water-milfoil, water purslane, and autumn water starwort.

The open water transition fens comprise a variety of fen types often dominated by single species such as reed, reed sweet grass and common spike-rush. Trifid bur-marigold, a scarce species in Clackmannanshire occurs locally.

Although not notified for its wintering waterfowl, the proximity of the site to the internationally important bird populations of the Forth estuary makes Gartmorn Dam a suitable place to rest and feed for a number of wintering species particularly during severe weather on the estuary. Species include whooper swan, mute swan, greylag goose, mallard, teal, wigeon, tufted duck, pochard and goldeneye; as well as migrant waders in autumn. Although numbers of waterfowl have declined in recent years, nevertheless, Gartmorn Dam remains of significant regional importance for its wintering waterfowl.

Part of the site has been declared as a Local Nature reserve, and part is a Country Park managed by Clackmannanshire Council.



Current condition of the natural features

At the time of condition monitoring in 2004 the loch was considered to be in favourable condition but at high risk to further eutrophication.

The open water transition fen was monitored in 2010 and was considered to be in favourable condition.

A summary of the latest site monitoring information is given below:

Natural features of Gartmorn Dam SSSI	Feature condition (date monitored)
Eutrophic loch ¹	Favourable maintained (June 2004)
Open water transition fen	Favourable maintained (August 2010)

Past and present management

Gartmorn Dam reservoir was created in 1713 to provide water power to fuel Alloa's industrial development. The main flow of water into the reservoir was via a lade running from the River Black Devon, but this no longer functions. Up until 2004 the reservoir was used as a public water supply for part of Alloa and as such was the oldest impounded body in Scotland used as a public water supply.

In recent years, there have been increasing concerns that Gartmorn Dam is becoming over-enriched with nutrients entering the reservoir from the surrounding catchment, and that this is having a detrimental effect on the aquatic plant interest. The nutrient rich water at Gartmorn Dam is one of the main reasons why the site supports a high diversity of aquatic plants, however, over-enrichment can have a negative impact by allowing a small range of species to dominate.

A survey in 1993 found a slight drop in the diversity of the aquatic plants, in addition two plants (Canadian pondweed and spiked water milfoil) had become highly dominant.

An increase in nutrients has also been implicated as the cause of algal blooms that occur at Gartmorn Dam. These blooms have a detrimental effect on the aquatic plants by reducing light penetration into the water, and may also affect fish and other aquatic animals through the reduction of oxygen levels and the release of toxins.

¹ This feature was previously monitored as "mesotrophic loch" in 2004. However, it is best described as "eutrophic loch". The 2004 assessment is compatible with the new terminology.

Since the 1970s, Gartmorn Dam has increased in popularity as a site for recreational use by the public, and in 1982 was designated as a Country Park. Visitors participate in a range of informal activities like walking, cycling, horse-riding and bird watching. A path around the reservoir provides for public access and forms part of a strategic network of paths linking key settlements in Clackmannanshire. A visitor centre opened in 1996 provides information, interpretive displays and toilets, with adjacent car parking.

In 1980, part of the SSSI was designated a Local Nature Reserve and bye-laws came into operation to provide added protection for the more sensitive areas of the reservoir.

A trout fishery has been in operation for over 20 years with angling managed on a permit basis. The fishing season extends from 1 April to 4 October and includes fishing from the banks or from a boat hired from the fishery. Fishermen are excluded from parts of the reservoir to avoid disturbance to breeding waterfowl. Two areas are completely closed to anglers while in an additional area, only bank fishing is allowed.

The reservoir is stocked annually under licence from Marine Scotland. Prior to 1999 stocking was solely with brown trout. More recently stocking has included rainbow trout to help improve the angling and viability of the fishery. SNH is consulted over these licences and has made the point that it would be desirable to revert back to a brown trout only fishery as there appears to have been a trend toward increasing stocking rates which could adversely affect the nutrient status of the reservoir. We have also stated our concern over bio-security measures (especially Signal Crayfish) brought in with fish taken from supplying fish farms.

Since the designation of the Country Park the local authority have operated a Ranger Service with responsibility for managing the site and welcoming visitors on certain days. The management of the visitor centre and the trout fishery was also the responsibility of the local authority up until 1999 when this was handed over to a charitable trust, Clackmannanshire Leisure. The site can therefore be seen as jointly managed between the Ranger Service and Clackmannanshire Leisure.

Objectives for Management (and key factors influencing the condition of natural features)

To maintain or improve the diversity of aquatic plants, primarily by maintaining or improving water quality of Gartmorn Dam and its associated wetlands by:

- Examining catchment management and sources of nutrients both point sources and diffuse sources with a view to development of an action plan.
- Liaising with Clackmannan Council over management by occasionally cutting back of shoreline trees and bushes in areas with a more botanically diverse swamp vegetation, and more important aquatic communities.

We wish to work with the owners to protect the site and to maintain and where necessary enhance its features of special interest. SNH aims to carry out site survey, monitoring and research as appropriate to increase our knowledge and understanding of the site, its natural features and the effectiveness of management.

Other factors affecting the natural features of the site

- Clackmannan Council has a wider role in promoting enjoyment and understanding of Gartmorn Dam as part of Gartmorn Dam Country Park and Local Nature Reserve. This is an important role in managing visitor pressure.
- Management of the Reservoir as a trout fishery.

Date last reviewed: 11 March 2011