



Scottish Natural Heritage

LOCHS OF TINGWALL AND ASTA
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 1086

Northern Isles Area
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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.

Natural features of Lochs of Tingwall and Asta SSSI	Condition of feature (date monitored)
Mesotrophic Loch	Unfavourable Recovering (August 2004)

Description of the site

Lochs of Tingwall and Asta Site of Special Scientific Interest (SSSI) is located in the Tingwall valley in the central mainland of Shetland. It covers the two connected lochs of Tingwall and Asta, the Holm of Setter and small areas of wet grassland and tall herb vegetation.

The lochs are naturally mesotrophic, i.e. moderately nutrient rich. Such lochs typically support a wide range of aquatic plants: nutrient levels promote plant growth but do not encourage a small number of the most vigorous species to dominate. The Lochs of Tingwall and Asta are botanically two of the richest lochs in Shetland with nine species of pondweeds and four species of stonewort amongst the species recorded. Pondweeds are perennial, herbaceous plants with creeping underground stems called rhizomes. The leaves are either submerged or floating. They occur mostly in freshwater. Stoneworts are a unique form of green algae. They have a very complex structure which resembles many underwater higher plants, with each stem and leaf made of single large cells. As they absorb most of their nutrients through the surface of the plants rather than through a root system, they are particularly sensitive to the quality of the water around them. They are therefore good indicators of water quality, especially in relation to nutrient pollution from nitrates and phosphates. Pondweeds and stoneworts form an important part of the aquatic ecosystem: they are a food source for wildfowl and provide shelter from predators for small invertebrates and fish.

The lochs are particularly important for supporting Shetland pondweed. Several other nationally scarce plants occur in the lochs, including slender-leaved pondweed, flat-stalked pondweed and lesser bearded stonewort. The most important plant communities occur in water less than 2.5 metres deep. In the Loch of Tingwall this covers around 20% of the northern basin while the southern basin shelves steeply and has no extensive shallows. The Loch of Asta exceeds 2.5 metres depth only in a small area towards the northern end. The loch margin vegetation within the SSSI is typical of the semi-natural vegetation that would have grown on richer soils around many of Shetland's lochs but has been much reduced by agricultural improvement.

The lochs of Tingwall and Asta are also among the most important sites in Shetland for wintering and migrant wildfowl that feed on the abundant pondweed.

The condition of the site was assessed in August 2004. It was considered in unfavourable condition, recovering because Shetland pondweed was absent although water quality, vegetation composition and habitat extent were suitable for its occurrence.

Past and present management

There is little evidence of any physical intervention in the lochs other than the construction of a small concrete jetty on the Loch of Tingwall. The burn linking the two lochs has evidently been canalised at some time and this could have affected water levels in the Loch of Tingwall.

Both lochs are popular with anglers and are occasionally stocked with brown trout. Commercial eel fishing took place for a short period in the Loch of Tingwall during the mid 1980s. The Loch of Asta is also regularly used for model yachting. The Asta Model Yacht Club has carried out minor engineering works to improve access along the loch shore and remove rocks from the shallows where these cause a hazard to their boats.

The land at the northern end of the site may have been grazed in the past but remained stock-free at least from renotification until 1998. It is now used for grazing tups during winter and otherwise kept ungrazed. Grazing pressure is light and should ensure that the botanical interest is maintained. The Holm of Setter is also ungrazed under normal circumstances, although sheep may gain access if the loch freezes. The southern area of land forms part of Asta Golf Course and is no longer grazed although vegetation is occasionally cut.

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

We wish to work with the owners and occupiers 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 and its natural features.

1. To maintain and, where possible, enhance the plant communities of the lochs and margins

Retain a light or no grazing regime on the loch side and avoid cutting margin vegetation within the golf course to preserve species diversity.

2. To ensure the continued presence of nationally scarce species in both lochs

Maintain the condition and extent of suitable aquatic habitat. Continue monitoring populations and searching for Shetland pondweed, of which the last confirmed record from the site dates from 2008 in Loch of Asta.

3. To maintain the water quality of the lochs by preventing nutrient enrichment

Plant diversity in the lochs is vulnerable to changes in the nutrient balance. Diffuse run-off from agriculture and domestic effluent in the catchment area can affect nutrient levels in loch waters. The Loch of Tingwall is particularly sensitive to nutrient inputs because it has only a small catchment and has a very slow water turnover. The Loch of Asta may be less so as it is smaller and shallower with a larger catchment and a much higher flushing rate.

In order to impact on water quality, nutrient management measures need to be implemented at the catchment level. Local planning policies prohibit further inputs from new housing into the lochs. Prevent agricultural run-offs into the lochs by following good agricultural practice when applying fertiliser and manure. Retain areas of unimproved vegetation around the loch margins to act as a buffer zone.

Other factors affecting the natural features of the site

Recreation: The site is used for angling and model yachting. These activities may disturb wildfowl but are unlikely to affect the botanical interest of the SSSI. Asta Golf Course is adjacent to the site. At least some of the marginal vegetation is cut and trampled and application of fertilisers on the greens could contribute to nutrient enrichment of the lochs.

Date last reviewed: 17 March 2011