Scottish Natural Heritage

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MOCHRUM LOCHS
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 1171

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 Mochrum Lochs SSSI	Condition of feature	Other relevant designations
Blanket Bog	Unfavourable, no change (December 2006)	SAC
Oligotrophic loch	Unfavourable, declining (July 2004)	
Cormorant *Phalacrocorax carbo*	Favourable, maintained (May 2000)	

Features of overlapping Natura sites that are not notified as SSSI natural features	Condition of feature	SPA or SAC
Depressions on peat substrates	Unfavourable, no change (December 2006)	SAC

Description of the site

Mochrum Lochs Site of Special Scientific Interest (SSSI) lies 7.5km southwest of Kirkcowan and is composed of three lochs, Castle Loch, Mochrum Loch and Black Loch, together with the surrounding open moorland and bog. The area of blanket bog lies between Castle Loch, Black Loch and Mochrum Loch and is the best example of its kind in Wigtownshire, showing a range of vegetation types. The lochs are also the best examples of lowland oligotrophic waters in Wigtownshire.

The bog has extensive carpets of peat-forming bog mosses, *Sphagnum*, with bog

rosemary and bog myrtle also present. The centre of the bog has a large area with hummocks and hollows. Drier areas of the bog are dominated by purple moor grass, hare's-tail cottongrass and cross-leaved heath. Mochrum Lochs also hosts the largest inland breeding colony of cormorants in Great Britain and, together with the surrounding habitats, provides one of the richest areas for breeding birds in Wigtownshire.

Mochrum Lochs Special Area of Conservation (SAC) is coincident with the central part of the SSSI, occupying 39% of the land area. It is designated for its blanket bog and peat depressions. Mochrum Loch is the main source of the Malzie Burn, part of the River Bladnoch SAC, which is designated for its Atlantic salmon interest.

Blanket bog with purple moor grass	Deer tracks on blanket bog
	

Past and present management

The owners and occupiers manage the land for stock grazing, consisting mainly of sheep with a few cattle in the more accessible areas, contained by drystone dykes and fences. Muirburning has been carried out over most of the drier parts of the site.

There has been limited drainage across most of the area, but the edges of the bog on Gargrie Moor have been more intensively drained. During the past 30-40 years, ground to the south and west has been planted with conifers, some of which have now been permanently removed.

Other land management activities include low levels of fishing on the lochs.

Monitoring undertaken between 2000 and 2006 found that the blanket bog features were unfavourable with no change; the cormorant population feature was in favourable condition, while the oligotrophic loch was in unfavourable condition and declining in quality, partially due to the presence of the invasive water plant, New Zealand pygmyweed.

In the first cycle Site Condition Monitoring (SCM) assessment, the condition of the blanket bog was recorded as favourable, maintained. The attributes and targets used in assessing condition have since been changed, however, and the targets specified are more rigorous than those which were applied previously. Consequently, although this feature is now assessed as being in unfavourable condition it does not automatically indicate that the blanket bog has deteriorated markedly since the previous assessment. At almost all the locations where blanket bog was assessed, the feature failed to meet all relevant targets. This was largely due to a combination of the

high frequency of drains across the site, generally high levels of grazing of dwarf shrubs, and trampling impacts such as *Sphagnum* uprooting/breakage and exposure of bare peat.

At the time of survey of the oligotrophic loch feature, a significant blue-green algal bloom was in progress, which perhaps appeared worse due to wind-driven accumulation near the eastern shore; but *Potamogeton crispus* and *Lemna minor* were also present, both species normally associated with water bodies of higher nutrient status. These factors suggest that water quality is an issue and that a fuller assessment of the condition of this loch is needed.

Part of the SSSI is under an SNH management agreement, which supports an agreed grazing regime.

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 and monitor the effectiveness of the management agreement.

The EU Habitats and Birds Directives oblige Government to avoid the deterioration of natural habitats and the habitats of species in SACs and SPAs, as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of these Directives. The objectives below have been assessed against these requirements. All authorities proposing to carry out, or permit to be carried out, operations likely to have a significant effect on the European interests of this SSSI must assess those operations against the relevant Natura conservation objectives (which are listed on our website through the SNHi-SiteLink facility).

1. **To maintain the extent and condition of the bog habitats**
   Lightly grazing the site with stock assists in maintaining the moss in a tree-free condition. Trees not only actively remove water from bogs, they can also shade out the more typical bog plants such as bog rosemary. Grazing and infrequent burning would minimise any tree growth on the moss. Grazing should continue in order to reduce the likelihood of tree/scrub invasion. The intensity of grazing should remain at the current level, as increases could adversely affect the amount of heather on the moss.

   Burning on a long rotation, in the drier areas, should be continued, to provide suitable nesting habitat for wading birds and diversity in vegetation structure, as well as to prevent tree and scrub invasion. Burning should not take place on areas of deep peat, as this would kill sensitive bog mosses.

2. **To maintain the wetness and water quality of the bog habitats**
   The continued formation of peat depends upon the active growth of *Sphagnum*. For this to proceed, the water table needs to be at, or very close to, the surface for

most of the year. While drainage is somewhat limited across most of the area, the edges of the bog on Gargrie Moor and the Moor of Drumwalt adjacent to the lochs have been more intensively drained. The cessation of maintenance or the active blocking of drainage ditches on the peatland would assist in maintaining a high water table.

The water within the site should not be too rich in nutrients, otherwise this would favour more vigorous but less interesting plants. This could also affect the oxygen levels in the water, resulting in adverse effects on the aquatic invertebrates. Any discharges and run-off from adjacent land should be low in nutrients.

3. **To maintain the abundance of cormorants and the diversity of breeding birds**
The breeding bird interest is likely to be adversely affected by any increases in access to the shores of the islands within the lochs during the breeding season. The expansion of feral Canada goose populations may also affect the success of breeding water birds, as they tend to aggressively exclude other nesting birds. A high population of large pike is also likely to cause problems of predation of young waterfowl. Stocking of the lochs with additional fish is likely to reduce the abundance of invertebrate food, required by young waterfowl up to around two weeks old. The impacts of predators, including pike, and disruption by nesting Canada geese should be monitored and action taken if necessary.

4. **To maintain quality of freshwater habitat**
The presence of New Zealand pygmyweed poses a threat to the quality and biodiversity of the loch, through light limitation, oxygen depletion, changes in pH, or a combination of these factors. This can lead to loss of native plant species and associated wildlife. This plant grows submerged in sheltered waters up to three metres deep or as an emergent on damp ground. It can form dense, virtually pure stands. The pygmyweed needs to be controlled either through chemical means, smothering or a combination of the two, and a monitoring system established to ascertain the effectiveness of the control measures.

Date last reviewed: 4 June 2010