Scottish Natural Heritage
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BISHOP HILL
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 209

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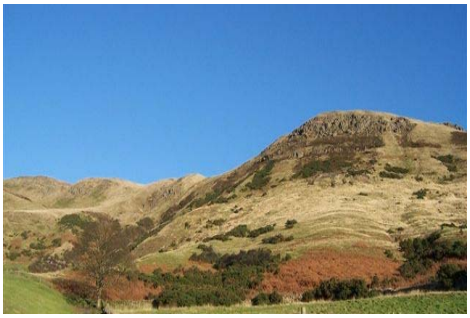
Purpose



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

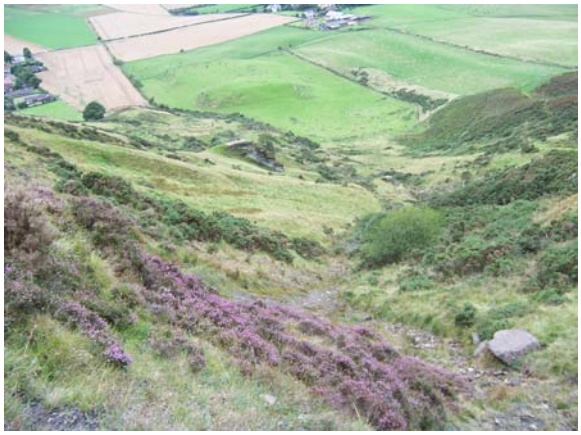
Bishop Hill was selected as a Site of Special Scientific Interest as it is one of the few upland areas in the Ochil Hills in Perth & Kinross which supports such a wide variety of upland habitats including unimproved calcareous grassland (associated with the disused limestone quarry workings) and relatively rich cliff and flush vegetation. Several locally uncommon plant species occur on the site.

Most of the higher plants of interest are associated with calcareous cliffs and grassland on the higher slopes and the small basic flushes (areas with groundwater seepage) and steep burnsides lower down. Two nationally scarce species, airy stonecrop and shady horsetail, and ten locally important species, including adder's tongue fern, moonwort, and floating clubmoss are found within the site. Small areas of blanket mire occur on the top plateau. Marshy grassland is found in small areas, typically confined to the edge of burns and spring-lines. Large areas of bracken have developed along the steep slopes on the site's western edge.

Geologically, Bishop Hill is of interest as it represents volcanic upland areas of lava with carboniferous sedimentary rocks south of the Highland boundary fault in Perth and Kinross. The scarp face of Bishop Hill contains excellent exposures of a large body of igneous rock known as the Midland Valley Sill, and the sedimentary rocks into which it was intruded. These rocks were formed during the Carboniferous period of geological time, when the crust of the Midland Valley of Scotland was stretched and thinned, forming a rift valley similar to the present day East African Rift. Volcanoes developed within this rift valley and large amounts of magma were erupted onto the Earth's surface. Some of this magma did not reach the surface, but instead spread out within the sedimentary rocks covering the valley floor. This magma cooled to form broad sheets of igneous rock called sills, of which by far the largest was the Midland Valley Sill which can be clearly seen in Bishop Hill.

Below the sill exposures, in Kinnesswood Row, the sedimentary rocks into which the sill was intruded can be seen. Here sedimentary rocks of Carboniferous age overlie older rocks dating from the Devonian period of geological time. The contact between the two rock units is an unconformity - it represents a break in deposition of the sediments. This is important in our understanding of the stratigraphy of the Midland Valley.

Above the sill exposures on Bishop Hill, in Clatteringwell Quarry, are exposures of limestone in which a fossil reef can be seen, and this gives abundant information about the environment in which these rocks formed.

Hairy stonecrop	Kinnesswood Row
	

Current condition of the natural features

The current condition of the upland habitat assemblage has not been fully assessed but the interest is threatened by encroaching bracken and gorse. As a management agreement has been recently agreed for the largest land holding of the site to address this, the site can be said to be recovering for this interest feature.

The principal factors that affect the rock exposure of the Lower Carboniferous [Dinantian - Namurian (part)] feature are the natural processes that occur in open moor land and rough pasture. In the short to medium term this environment is very stable and is unlikely to change significantly in response to purely natural factors. The site is likely to be in essentially the same condition when first researched and the key geological features of interest can be accessed with relative ease. Consequently the site condition of this feature in 2005 was considered to be good.

Similarly the Carboniferous-Permian Igneous feature is also very stable as the Midland Valley Sill is extensive and the rock exposures have remained unobstructed. This feature too can be considered in a good condition.

Natural features of Bishop Hill SSSI	**Feature condition (date monitored)**
Carboniferous - Permian Igneous	Not assessed
Lower Carboniferous [Dinantian - Namurian (part)]	Not assessed
Upland assemblage	Not yet complete

Past and present management

Current land management is broadly compatible with maintaining the conservation interest of the site. The SSSI forms part of three land holdings and is generally accessible but steep.

Most of the site has been used for rough grazing by sheep and sometimes cattle, both before and since its designation as an SSSI. The site is unimproved apart from the gentler, low slopes of the northern section, some of which have been ploughed and reseeded within the last 20 years. These improved areas are used for grazing and no longer hold any of their original botanical interest. The value of this site depends on its continued management as extensive, unimproved pasture.

The flush areas are seen as the most vulnerable areas of the SSSI. The main threat to them is damage by cattle poaching, particularly in dry summers when cattle may congregate around the few remaining wet areas to drink. The flushes should be monitored for poaching. Previous poaching of flush areas led to an exclosure being erected in 1987 but repeated cutting of the wire by people accessing the site made this untenable.

There are five disused limestone quarries near the flat summit of Bishop Hill, previously worked for agricultural use.

There is a Public Right of Way from Kinnesswood to the Golf Course which is partly within the SSSI. There is also public access from the south and east and Bishop Hill is used by hillwalkers, mountain bikers, para-gliders, model aircraft enthusiasts, and geologists.

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

1. To maintain condition and extent of the upland habitats including the quality and extent of the important unimproved calcareous grassland, basic flush, alkaline fen, and cliff vegetation habitats with their associated rare species of plants by ensuring habitat management is carried out as described below:
   - the maintenance of grazing by sheep and cattle at appropriate levels;
   - the monitoring of gorse regeneration and continuation of cutting and stump treatment;
   - the monitoring of the bracken area and treatment where necessary.
2. To maintain the natural rock exposures at the site by keeping them free from obstruction.
3. To maintain access to the rock exposures throughout the site.

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

None known.

Date last reviewed: 30 March 2010