

## CITATION

**CAM LOCH**  
**SITE OF SPECIAL SCIENTIFIC INTEREST**  
Highland (Sutherland)

Site code: 301

NATIONAL GRID REFERENCE: NC 221135

OS 1:50,000 SHEET NO: Landranger Series 15

1:25,000 SHEET NO: Explorer Series 439

AREA: 476.22 hectares

## NOTIFIED NATURAL FEATURES

### Geological:

<b>Structural and metamorphic geology:</b>	<b>Moine</b>
<b>Igneous Petrology:</b>	<b>Caledonian Igneous</b>
<b>Quaternary geology and geomorphology:</b>	<b>Quaternary of Scotland</b>

### Biological:

<b>Freshwater habitats:</b>	<b>Oligotrophic loch</b>
<b>Woodlands:</b>	<b>Upland birch woodland</b>

## DESCRIPTION

Cam Loch Site of Special Scientific Interest (SSSI) is located 1km north of Elphin in north-west Sutherland. The site is nationally important for its Moine and Caledonian Igneous geology, its Quaternary loch sediments, and for its low-nutrient loch and birch woodland habitats.

### Moine (geology)

The site includes excellent exposures of part of a major geological structure called the Moine Thrust that was formed during a period of mountain building 460-430 million years ago. The slopes of Cnoc an Leathaid Bhig expose a relatively small area of rock known as a 'klippe'. The Cam Loch Klippe was once part of a larger 'Caledonian thrust sheet' – a displaced rock mass that was driven westwards along a low-angled fault during a series of continental collisions. The Cam Loch Klippe has been isolated from other thrust sheet remnants by erosion. It is interpreted as being either part of the Ben More Thrust Sheet or a thrust sheet overlying the Ben More Thrust Sheet. It provides important evidence for the original extent of thrust sheets in the Assynt area, and for the relationship between folding and thrusting in the Moine Thrust Zone. It is also an important site for testing methods of three-dimensional analysis of thrust structures.

### Caledonian Igneous (geology)

The crags of Creag na h-Innse Ruaidhe, to the northeast of Cam Loch, contain exposures of a dyke about 1m thick, with a distinctive chemical composition known as grorudite. Grorudite only occurs in British Caledonian Igneous rocks, and even among those, is relatively uncommon. Dykes of this composition in the Assynt area occur only above the Ben More Thrust Plane, and probably formed between 439 and

430 million years ago. The occurrence of the gneiss dyke in the Cam Loch Klippe confirms that the klippe is part of a thrust sheet lying above the Ben More Thrust Plane. This is important for understanding the structure of the Moine Thrust Zone, as well as the relative timing of events during its formation.

### **Quaternary of Scotland (geology)**

The sediments on the floor of Cam Loch contain a valuable record of environmental changes during Devensian late-glacial times, between about 15,000 and 11,500 years ago. Pollen, diatom and chemical analyses, together with radiocarbon dating, show that the warming of the climate at the end of the Ice Age was interrupted twice by colder phases, the latter corresponding with the Loch Lomond Stadial. The site is a key reference locality for northwest Scotland, allowing comparisons with sites elsewhere in the British Isles and north west Europe.

### **Oligotrophic loch**

Cam Loch is a low-nutrient loch lying at 124m altitude. It is unusually rich in plant species for a low-nutrient loch, possibly as a result of the influence of the limestone geology nearby. The shallow waters around the edge of the loch, together with some of the open water areas, support a particularly diverse range of plant species including some with a very restricted distribution. Of the emergent species, common sedge *Carex nigra*, bottle sedge *C. rostrata* and marsh horsetail *Equisetum palustre* are locally abundant. Submerged species, including quill-wort *Isoetes lacustris* and shore-weed *Littorella uniflora* are widely distributed and the occurrence of the nationally scarce pillwort *Pilularia globulifera* is especially noteworthy. Several species of pondweed, including the nationally scarce long-stalked pondweed *Potamogeton praelongus*, occur in the deeper waters.

### **Upland birch woodland**

There are seven wooded islands in Cam Loch. The most significant area of woodland within the site is on Eilean na Gartaig. The tree and shrub layer is dominated by downy birch *Betula pubescens* with rowan *Sorbus aucuparia*, holly *Ilex aquifolium* and species of willow including goat willow *Salix caprea*, grey willow *S. cinerea* and eared willow *S. aurita*. Some of the smaller islands support alder *Alnus glutinosa*, bird cherry *Prunus padus* and juniper *Juniperus communis*. The islands have base-rich soils that give rise to a diverse field layer, contrasting markedly with the vegetation and soils of the surrounding moorland. The ground flora is exceptionally rich for a northern birch wood and includes ramsons *Allium ursinum*, goldilocks buttercup *Ranunculus auricomus* and bluebell *Endymion non-scriptus* as well as the blaeberry *Vaccinium myrtillus* that is more typical of acidic woodlands in the area.

### **NOTIFICATION HISTORY**

First notified under the 1949 Act: 1975 as Eilean na Gartaig SSSI

Re-notified under the 1981 Act: 21 November 1986 with an 357.4ha increase in area

Re-notified under the 1981 Act: 18 November 1996 with a 116ha increase in area.

Notification reviewed under the 2004 Act: 2 December 2010

### **REMARKS**

Measured area of site corrected (from 476 ha).

Part of Cam Loch SSSI is part of the Inverpolly, Loch Urigill and Nearby Lochs Special Protection Area (SPA) designated for the birds listed below:

Birds : Black-throated diver *Gavia arctica*

A small part of Cam Loch SSSI overlaps a small part Inverpolly Special Area of Conservation (SAC) which is designated for European habitats and species listed below.

Habitats : Acid peat-stained lakes and ponds  
: Acidic scree  
: Alpine and subalpine heaths  
: Blanket bog  
: Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels  
: Depressions on peat substrates  
: Dry heaths  
: Montane acid grasslands  
: Plants in crevices on acid rocks  
: Very wet mires often identified by an unstable 'quaking' surface  
: Western acidic oak woodland  
: Wet heathland with cross-leaved heath

Species : Freshwater pearl mussel *Margaritifera margaritifera*  
: Otter *Lutra lutra*

A small part of Cam Loch SSSI overlaps a small part of Inverpolly SSSI which is notified for blanket bog, oligotrophic loch, upland assemblage, upland birch woodland, Norwegian wormwood *Artemisia norvegica*, beetles, moths and breeding bird assemblage.