

## CITATION

**ARDMEANACH**  
**SITE OF SPECIAL SCIENTIFIC INTEREST**  
Argyll and Bute

Site code: 74

NATIONAL GRID REFERENCE: NM 440290

OS 1:50,000 SHEET NO: Landranger Series 48  
1:25,000 SHEET NO: Explorer Series 375

AREA: 3257.51 hectares

## NOTIFIED NATURAL FEATURES

Geological : Stratigraphy : Hettangian, Sinemurian, Pliensbachian  
: Stratigraphy : Cenomanian - Maastrichtian  
: Quaternary geology and geomorphology: Quaternary of Scotland  
: Igneous petrology : Tertiary Igneous

Biological : Coastlands : Maritime cliff  
: Upland habitats : Montane assemblage  
: Upland habitats : Subalpine calcareous grassland  
: Vascular plants : Vascular plant assemblage  
: Invertebrates : Slender Scotch burnet moth (*Zygaena loti*)

## DESCRIPTION:

Ardmeanach SSSI encompasses the Ardmeanach Peninsula on the south west coast of the island of Mull. The site is of national importance due to an array of biological and geological features.

Within Ardmeanach SSSI at the western shores of Aird na h-Iolaire there are exposures of extremely rare and important sedimentary rocks laid down at the beginning of the Jurassic period around 200 million years ago. Aird na h-Iolaire represents one of only 2 occurrences of lowermost Jurassic marine deposits known in Scotland. The section here developed, in Blue Lias lithologies, comprising alternating beds of limestones and shale, is the only good section in the Hebridean province with such early Jurassic Marine deposits. Aird na h-Iolaire is therefore a key site for allowing an understanding of the palaeoenvironment and palaeogeography of this area of Scotland in Jurassic times. Like the underlying marine 'Rhaetic' rocks the lowest, Hettangian age Lias seems to have been only deposited in the southern Hebrides; for at that time the northern areas of Skye were probably land. This is an important site for correlations with the classic Lias localities of southern England.

At the site's northern extreme, a deep infilled basin lies behind an end moraine formed by a Loch Lomond Readvance glacier, one of the lowest glaciers to have existed in Scotland during the Loch Lomond Stadial 12,900-11,500 years ago. The sediments preserved in the basin provide an exceptionally detailed record of environmental changes during the Holocene. Analysis of pollen contained in the sediments shows the development of open-habitat vegetation, heathland and trees during the early Holocene, a phase of woodland expansion during the middle Holocene and subsequent contraction of the woodland and its replacement by heathland and grassland.

The south-western part of the Ardmeanach peninsula provides perhaps the finest continuous and most representative section through the early part of the Mull lava sequence. Erupted around 63 million years ago, the earliest lava flows, known as the Staffa Lava Formation, are characteristically columnar basalt which in places flowed into bodies of standing water. Occasionally the lava flows engulfed large trees, preserving them as remarkable fossils, the most famous of these being MacCulloch's Tree. The Plateau Lava Formation covers the Staffa Lava Formation, and between 25 and 30 lava flows can be identified from the base of the Formation to the summit of Bearraich (432m). Each flow is generally less than 15 m thick and is marked by a terrace on the hillside. The two lava formations are chemically distinct.

At the north-east of Ardmeanach in the Allt na Teangaidh, there is a nationally important section of Cretaceous sediments including fossiliferous greensand, white sandstone and chalk, ranging from Cenomanian to Campanian in age. Representing the Morvern Greensand Formation, the Lochaline White Sandstone Formation and the Gribun Chalk Formation, these exposures are key to understanding the palaeogeography and palaeoenvironment of the Inner Hebrides during the late Cretaceous. This section compliments the exposures of Cretaceous rock between Clachandhu and Creag Mhor.

The SSSI includes vegetation from sea-level, over typical skirted basalt cliffs between 1-200m high, and then to a group of hill summits around 4-500m, via a series of stepped ledges with rock outcrops. The size and complexity of Ardmeanach SSSI allows for a high diversity of vascular plants and the site is one of the richest in the Hebrides, supporting over 400 species of flowering plants and ferns. Several of these are nationally scarce including hairy stonecrop *Sedum villosum*, alpine cinquefoil *Potentilla crantzii* and mountain avens *Dryas octopetala*.

Along the rocky coastline of Ardmeanach SSSI, low cliffs towards the shore support maritime communities. Red fescue *Festuca rubra* and sea thrift *Armeria maritima* dominated grasslands occur alongside maritime heath and roseroot *Sedum rosea*, sea spleenwort *Asplenium marinum* and sea plantain *Plantago maritima* can also be found within the rock crevice and cliff ledge communities.

Inland, and less influenced by salt spray, species-rich calcareous grasslands occur beneath and over outcropping basalt cliffs with a mixture of sheep's-fescue *Festuca ovina*, common bent-grass *Agrostis capillaries*, wild thyme *Thymus praecox*, common bird's-foot-trefoil *Lotus corniculatus* and common tormentil *Potentilla erecta* on the dry slopes.

The upper cliff ledges and exposed plateau feature montane assemblages composed of *Koenigia* fellfield, alpine flush, calcareous grassland, tall herbs, alkaline fen, spring-head, rill and flush habitats. These support arctic alpine plant communities including mountain avens *Dryas octopetala*, alpine saw-wort *Saussurea alpina*, moss campion *Silene acaulis* and alpine lady's mantle *Alchemilla alpina*. The most notable species is Iceland-purslane *Koenigia islandica*. Here, in one of its two British localities, it grows abundantly on wind-ablated gravel spreads at the southerly limit of its western European distribution.

The UK population of the slender Scotch burnet moth *Zygaena loti* is confined to the islands of Mull and Ulva, with the largest colonies occurring at the Burg on the Ardmeanach peninsula. Colonies of the moth are found on south and south-westerly facing short calcareous grassland.

## **NOTIFICATION HISTORY**

First notified under the 1949 Act: 1963 as McCulloch's Tree SSSI

Re-notified under the 1949 Act: 1974 as Ardmeanach SSSI

Re-notified under the 1981 Act: 28 February 1986

Notification reviewed under the 2004 Act: 31 March 2010

## **REMARKS**

Measured area of site changed from 3257 ha.

Part of Ardmeanach SSSI is part of Ardmeanach Special Area of Conservation (SAC), which is designated for the European habitats listed below.

Most of Ardmeanach SSSI is part of Cnuic agus Cladach Mhuile Special Protection Area (SPA), which is designated for the birds listed below.

Habitats:     Species-rich grassland with mat-grass in upland areas  
                  Tall herb communities  
                  Vegetated sea cliffs

Birds:         Golden eagle (*Aquila chrysaetos*)