



# CRUACHAN POWER STATION BIODIVERSITY INFORMATION



## OVERVIEW

Cruachan Power Station is one of only four pumped storage power stations in the United Kingdom. It was constructed during

the early 1960s and officially opened by Her Majesty the Queen in October 1965. Situated near Oban, Argyll, the station's turbine

hall has been constructed within the hollowed-out rock of Ben Cruachan. Only the impressive 316 metre-long dam at the top of

the mountain, the offices and visitor facilities are visible from the road, preserving the scenic beauty of the landscape.

## SITE DESCRIPTION

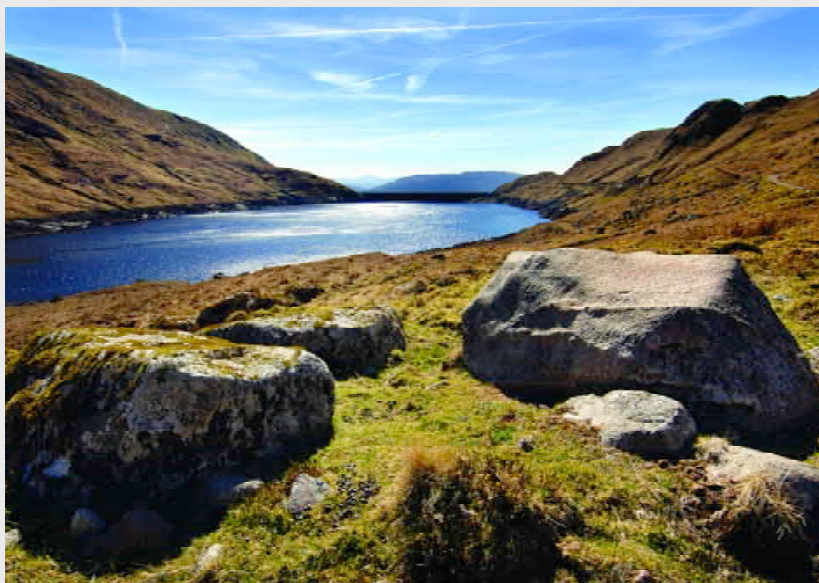
Cruachan's boundary encloses a wide range of habitats – from the reservoir high on the slopes of Ben Cruachan to the offices by the banks of Loch Awe.

The reservoir's catchment area includes almost 23 km<sup>2</sup> of upland moor and bog, with sparkling streams and scattered areas of natural woodland.

The station is adjacent to the Coille Leitire Site of Special Scientific Interest (SSSI) – a large area of mixed broadleaved woodland that runs along the north edge of Loch Awe.

The SSSI is also a component in the larger Loch Etive Woodlands Special Area of Conservation – considered to be one of the finest old Sessile Oak woodlands in the United Kingdom.

Loch Awe, the longest freshwater loch in Scotland, is a noted trout fishery while Ben Cruachan, at 1,126 metres, is the highest peak in Argyll and attracts ramblers and climbers.



■ Cruachan's upper reservoir, with the dam in the distance, has a special ecosystem

## PUBLIC ACCESS

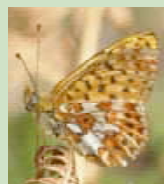
Cruachan Visitor Centre, adjacent to the power station's offices, is a popular tourist attraction that welcomes 60,000 members of the public each year.

The Centre is the starting point for a tour of the station's turbine hall in the heart of Ben Cruachan, and features an exhibition about the station and other forms of energy production.

There is a cafe and shop while visitors can enjoy views over scenic Loch Awe from a picnic area. For more details, visit: [www.visitcruachan.co.uk](http://www.visitcruachan.co.uk)

### PEARL BORDERED FRITILLARY

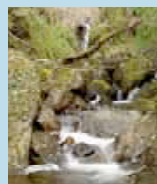
Cruachan is a stronghold for this threatened butterfly – a UK Biodiversity Action Plan (UK BAP) species. The fritillary has declined severely in the British Isles, leaving Argyll home to some of the most important sites in Europe. The colonies on Ben Cruachan's south-facing slopes and the wayleave along the route of Cruachan's grid connection, were only discovered in 1996.



### UPLAND OAK WOODLAND

The banks of Loch Awe and slopes of Ben Cruachan have one of the finest examples of Sessile Oak woods in the UK. The woodlands comprise mostly Oak and Birch with an underlayer of ferns and bracken that thrive in the high humidity.

Numerous burns and gullies dissect the site, such as the Falls of Cruachan (above), while the wood supports bird and invertebrate communities.



## PRIORITY HABITATS AND SPECIES

Cruachan and its landholdings are home to a range of habitats, birds, mammals, plants and insects that are listed for action as part of the UK Biodiversity Action Plan (UK BAP).

Cruachan's Biodiversity Action Plan (BAP), formed in 2005, stresses the station's commitment to work in harmony with this special environment.

To improve its understanding of local biodiversity, the station commissioned a wildlife survey in spring 2009.

The area is one of the most important for butterflies in Scotland, with a healthy population of the vulnerable Pearl-bordered Fritillary.

Scrub clearance operations, to maintain the powerline connection to Cruachan, helps the black-and-orange butterfly to thrive by creating woodland glades that support the fritillary's main foodplant, the Common Dog-violet.

Other UK BAP butterflies that occur include the Small Pearl-bordered Fritillary and Small Heath.

The 2009 survey found 45 species of birds at Cruachan – 20 of which were confirmed as breeding on site while a further 12 species may have nested.

Among the UK BAP birds that were found in spring/summer 2009 were Cuckoo, Skylark, Tree Pipit, Dunnock, Song Thrush, Wood Warbler, Spotted Flycatcher, Twite and Lesser Redpoll. Another priority species – the Black-throated Diver – was seen fishing in Loch Awe at Cruachan Visitor Centre.

The 2009 survey also found several invertebrates that have apparently never been recorded in Argyll before.



■ Palmate Newts, water beetles and three species of dragonfly breed in this pond south of the reservoir dam

These included the micro moth *Pyrausta purpuralis* and the macro moth Common Heath. A further "new" species for Argyll Mainland, *Sicus ferrugineus*, a cone-headed fly, appears genuinely rare in Scotland.

A population of Brook Lampreys – another UK BAP species – is found in the upper reservoir.

The eel-like lamprey is one of the oldest living creatures on the planet and exists at Cruachan at one of its most northerly sites in the UK.

Meanwhile, Otters live and breed in the clean freshwater habitat by the banks of Loch Awe and Common Lizards occur in the upland area near Cruachan Reservoir.

ScottishPower is a member of the Argyll and Bute Biodiversity Partnership – the group set up to produce action plans for priority species in the region – and attends its twice-yearly meetings.

## OUR BIODIVERSITY ACTION PLAN

Cruachan Power Station staff are implementing a biodiversity action plan (BAP) to protect and encourage the special habitats and wildlife species found in the station grounds and surrounding area.

The Cruachan BAP was established in 2005 to formalise the existing good work done by station staff to promote conservation and biodiversity.

The action plan stresses the station's commitment to minimising the impact of its operations on the landscape, and sets out a timescale for future positive actions.

However, the station and its employees have long maintained a close interest in the environment.

The station gardens around the offices were laid out in the late 1960s with a variety of trees and shrubs that have proven attractive to wildlife.

Efforts have continued to encourage the spread of native species.

In 2003, an area of garden ground was fenced off near the site's administration block to allow the natural colonisation of plant species.

Many species have emerged – including Oak, Rowan and Willow seedlings and wildflowers – that are being transplanted on site.

To encourage further floral diversity, the wild garden has been seeded with



■ Rowan saplings are planted above Loch Awe and, above right, Gavin Eisler of the Environment Team, in the wild garden

Bluebell and Wood Anemone. Native hardwoods – such as Alder, Hawthorn, Willow and Sloe – have also been planted on the west slope above the tailrace compound. In 2008, two large

Spruce trees were removed and the area is being planted with Hawthorn, Blackthorn and Yew.

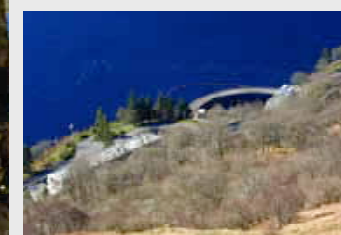
Where possible, garden waste is composted while the station strives to minimise the use of chemical herbicides and weedkillers.

The upland areas of Cruachan Reservoir and its catchment have their own special ecology, reflecting the area's high rainfall.

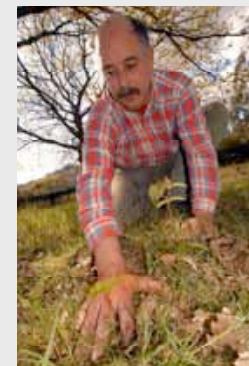
Meanwhile, the dam's water level can fluctuate by up to 10 metres per day due to the station's operations.

Heathers, sedges and mosses give way to tundra like conditions as the elevation increases. Sundew and Butterwort, two native "flesh eating" plants, are common around the dam.

Cruachan staff planted 40 young



■ Cruachan's offices and visitor centre at Loch Awe



## REMOVING INVASIVE SPECIES

Since 2000, considerable effort has gone into removing *Rhododendron Ponticum* – a non-native species that can be particularly invasive if left to spread unchecked.

Cruachan staff have been concerned at the potential impact on the nearby area of old Sessile Oak forest if the *Rhododendron* was allowed to spread.

Every year station staff cut back new growth of the shrub (right) to check its spread and we are replanting the site with native fruit and berry-bearing trees, including Apple, Plum, Rowan and Blackthorn.



## A TEACHING ROLE

A key element of the site biodiversity action plan is to help the spread of information on local biodiversity to a wider audience.

Cruachan Visitor Centre, on the banks of Loch Awe, is ideally placed to inform its thousands of customers about the wealth of wildlife on the doorstep.

The Centre, which attracted 65,000 visitors in 2009, underwent a major refurbishment in 2009. New displays were installed focusing on the station, energy production, sustainable forms of electricity production and how to reduce energy in the home.

Information boards have been erected in the grounds of the Visitor Centre giving details about mammal and bird viewing opportunities.

Meanwhile six nestboxes for birds have been erected around the site and a programme of wild bird feeding is enjoyed by both staff and visitors.

The Centre continued to provide visitors with close-up views of breeding Ospreys. The pair, which first nested at Loch Awe in 2008, raised one chick in summer 2009. A CCTV camera trained on the nest relayed live images to the centre, giving visitors a glimpse of the birds of prey as they raised a family.



■ Cruachan Visitor Centre features an interactive display on energy production

trees in 2005-06 to mark the 40th anniversary of the station's opening.

The native trees have been placed along the access road to the upper reservoir, to further improve the landscape.

Staff are made aware of the ongoing efforts for biodiversity through a station newsletter while the site maintains close contact with other stakeholders, including landowners and Loch Awe Fisheries Trust.

## CONTACT US

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