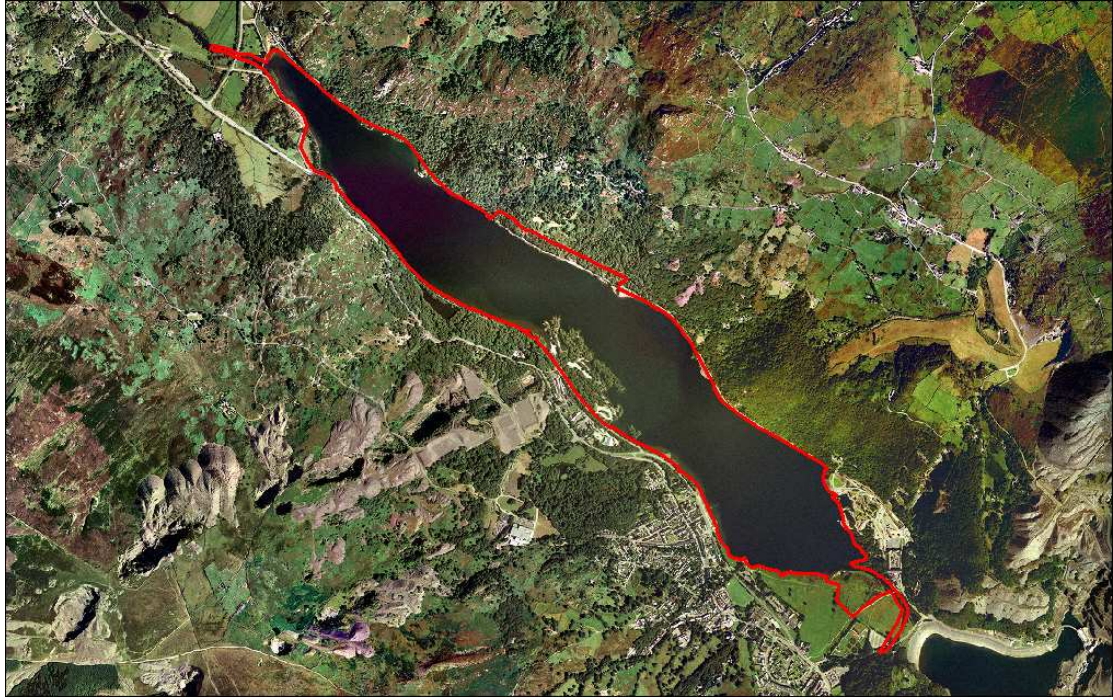


LLYN PADARN SITE OF SPECIAL SCIENTIFIC INTEREST



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YOUR SPECIAL SITE AND ITS FUTURE

‘Your Special Site and its Future’ is part of our commitment to improve the way we work with Site of Special Scientific Interest (SSSI) owners and occupiers. In it, we explain what is special about the wildlife on your site, and what care is needed to look after its wildlife into the future.

All SSSIs are considered to be of national importance and we recognise the crucial role that owners and occupiers play in their management and protection. We need you to share your views and knowledge of this site with us, to help safeguard it.

We hope that you will find ‘Your Special Site and its Future’ interesting and helpful. Please contact us if there is anything about the site and its management that you would like to discuss.

What is 'special' about Llyn Padarn SSSI?

Llyn Padarn has three special features:

- Arctic charr, a rare fish that has become isolated in some lakes after the last Ice Age ended. The Welsh populations of charr are a distinct race and the population at Padarn is genetically different from those in Llyn Cwellyn and Llyn Bodlyn.
- The nationally scarce water plant; Floating Water-plantain
- Cambrian rocks exposed in a railway cutting and inland outcrops.

Llyn Padarn SSSI is of national geological importance because the 600m-long section located alongside the Llanberis Lake Railway exposes a thick sequence of volcanic and sedimentary rocks of Cambrian age. These rocks were laid down approximately 540 million years ago and allow geologists to study the relationship between the Cambrian and underlying Precambrian rocks, as well as the environments that prevailed at his time. The site is also of historical interest, being the subject of controversy between geologists during Victorian times.

As well as the features listed above, Llyn Padarn has other habitats that contribute to the special interest. These include open water, semi-natural broad-leaved woodland and bracken. This mixture of habitats is important for much of the wildlife including pipistrelle bats, which forage in the woodland and Daubenton's bat, which is known to forage on insects above the lake. Otters and small numbers of wildfowl are seen using the lake and the outflow, Afon Rhythallt is one of the most important spawning sites for salmon and sea-trout in north Gwynedd. Llyn Padarn also contains other aquatic plants of interest, including spring quillwort. Further geological interest is found in the older Precambrian rocks which are found on the eastern shores of Llyn Padarn.

Unless specified below, management of this site should aim to look after these habitats and species as well as the listed features of interest.

What do we want Llyn Padarn to look like?

Llyn Padarn should be a pollution free lake of low to moderate nutrient status and should support a healthy population of the native race of Arctic charr. The lake outflow should continue to provide excellent spawning grounds for salmon and sea trout.

Floating water-plantain should continue to thrive in good numbers and the spring quillwort should also be present. Otters should feed on the lake fish and wildfowl should be present on the lake and the outflow.

The geological feature should be visible and accessible in order to allow further study and research. Maintaining at least the current level and continuity of exposure will thereby ensure that the bedrock geology at Llyn Padarn will continue to provide a key locality for geological research. The relationship between the Cambrian rocks of the Slate Belt and ancient Precambrian, Arvonian volcanic rocks should continue to be displayed well.

What management is needed on Llyn Padarn SSSI and why?

Although Llyn Padarn is an excellent place for wildlife and geology it will only remain so if the necessary management continues. CCW's aim is to work with you to ensure that this management is carried out.

What does this mean in practice?

There are many factors that could damage the special features at Llyn Padarn if they are not properly managed. These are the ones we regard as most important:

Water quality: Water quality is a key factor that affects floating water-plantain, spring quillwort and Arctic charr. To preserve these features, nutrient inputs should be reduced as much as possible and the lake should remain at a low to medium nutrient state. A tertiary sewage treatment plant occurs close to the lake and discharges storm water overflow into the lake. This combined with historic inputs of nutrients in the lake may pose a long-term threat to the lake and its wildlife. Algal blooms caused by increases in nutrients must not occur. Pollution of any form, including oil or fuel leaks, and batteries associated from boat usage of any sort (including models) may also have an adverse impact on water quality and must not occur. Pleasure boating on the lake also has the potential to cause disturbance by stirring up of sediment.

Water temperature: Any artificial increase in temperature could have an adverse impact on the population of Arctic charr. Any expansion of the Dinorwig Hydro Electric Power scheme will need to carefully assess whether this will result in an increase in water temperatures within Llyn Padarn.

Angling and stocking of fish: Stocking of any fish species related to arctic charr, including arctic charr not endemic to Llyn Padarn could affect the genetic integrity of the existing population and must not occur. Stocking of the lake with any other fish species has the potential to destabilise the ecological balance of the lake and could adversely affect the existing fish species. The sustainable use of the lake for fishing should be addressed through a Fisheries Management Plan between CCW, the owners and the Environment Agency. Such a plan would address the potential dangers of introducing other species of live fish as bait.

Disturbance to the lake edge: The lake edge and lake-side vegetation including submerged/aquatic plants could be damaged by disturbance. Possible sources of disturbance include flood defence work on the Afon Seiont, canoeists accessing the lake with trailers together with dredging of pools. The lake edge is an important fish spawning area and also for plants such as the nationally scarce floating water-plantain.

Engineering Works: Any activities that might obscure these rock exposures, for example the dumping of earth, spoil or other waste materials, and the buttressing and/or battering of the rock faces, should be avoided. CCW will liaise closely with the Llanberis Lake Railway to ensure that any work on the road will not impact adversely on the geological feature of interest. Engineering works such as boat moorings and other structures may also have a direct impact on the water plant interest.

Accessibility: Students and researchers need access to study the geological features found within Llyn Padarn SSSI. However, permission to access the site is entirely at the discretion of the landowner.

Finally

Our knowledge and understanding of wildlife is continually improving. It is possible that new issues may arise in the future, whilst other issues may disappear. This statement is written with the best information we have now, but may have to change in the future as our understanding improves, in particular, of the possible/probable impact of climate change. Any information you can provide on the wildlife of your site, its management and its conservation would be much appreciated.

If you would like to discuss any aspect of your SSSI, or have any concerns about your SSSI, please contact your local CCW office.

Your local office is:

**Countryside Council for Wales
Llys y Bont,
Ffordd y Parc
Parc Menai
Bangor
Gwynedd
LL57 4BN**

**Telephone: 01248 672500
Fax: 01248 679259**