

GALLOWAY HYDROS LOCH DOON FACTSHEET

Overview

Loch Doon is one of the two main storage reservoirs for ScottishPower's Galloway hydro-electric scheme.

During the scheme's construction, a dam was built at the north end of the loch in 1935.

This resulted in the loch's water level rising by almost 10 metres, increasing its surface area to 7.125 km².

Loch Doon is widely famed for the beauty of its landscape and historical and wildlife interests. ScottishPower, as a major landowner, works with local stakeholders to maintain the site's amenity.



A Dramatic History to Match the Landscape

Loch Doon, in East Ayrshire, is the largest freshwater loch in Southern Scotland. Situated six kilometres south of Dalmellington, the loch stretches 9km from north to south and supplies water for the River Doon – immortalised by Robert Burns in his poem *Ye Banks and Braes O' Bonnie Doon*.

Loch Doon has always been a key strategic site – with evidence of settlement by warlike people as long ago as the first century after Christ. Excavations of parts of the loch suggest early settlers lived in crannogs – waterside homes erected on stilts – and negotiated the waterbody and its surrounding marshes in log canoes.

In 1826, many important discoveries were made near Castle Island – the former site of Loch Doon Castle. Robert Burness in his *Common Place Book* (1873) writes: 'Some years ago, opposite to the grand entrance of Loch Doon Castle, there was found, at the bottom of the loch, seven ancient boats or canoes, hewn out of solid oak, and 24ft feet long by 4ft broad, in one of which were a battle-axe and war club, both apparently of great antiquity'. Carbon dating has traced these finds to the 1st century AD. Some of the relics can be seen at the Hunterian Museum in Glasgow.

Loch Doon Castle, the ancient seat of the Lords of Carrick, was built after 1275 on an island in the middle of the loch. Its shape followed that of the islet – resulting in it having 11 sides. It was a formidable fortress – surrounded by deep water and outwith the range of siege engines.

Legend has it that Robert the Bruce took shelter from the English army within its walls during the Wars of Independence. The castle was besieged at least three times, changed hands and was destroyed and rebuilt in its turbulent history. During construction of the hydro scheme, the castle was removed, stone by stone, to its current site before Castle Island was submerged.

In more recent times, the loch was the scene of extensive development during the First World War. In 1916, an aerial gunnery school range was constructed, using targets on rails that ran round the loch side – but the scheme was abandoned in 1918.

In October 1941 a Spitfire from 312 Czech Squadron crashed in Loch Doon while on a flight from RAF Ayr. The plane was recovered by Dumfries Sub Aqua Club in 1982 but they did not find the body of the pilot, Frantisek Hekl.

A Key Element to the Galloway Hydros

Loch Doon is the largest storage reservoir for the Galloway Hydros. The development of the scheme in 1935 resulted in the construction of a 299m long gravity dam to contain water from the loch's catchment. A 2.1km long tunnel was also built to divert water, when necessary, from the Bow Burn and Water of Deugh for storage in the loch.

This resulted in the loch's water level rising by almost 10m, expanding its size and changing its shape. The 1.9km long Doon-Deugh Tunnel was built to divert water from the loch to the River Dee to power the stations that make up the hydro scheme.

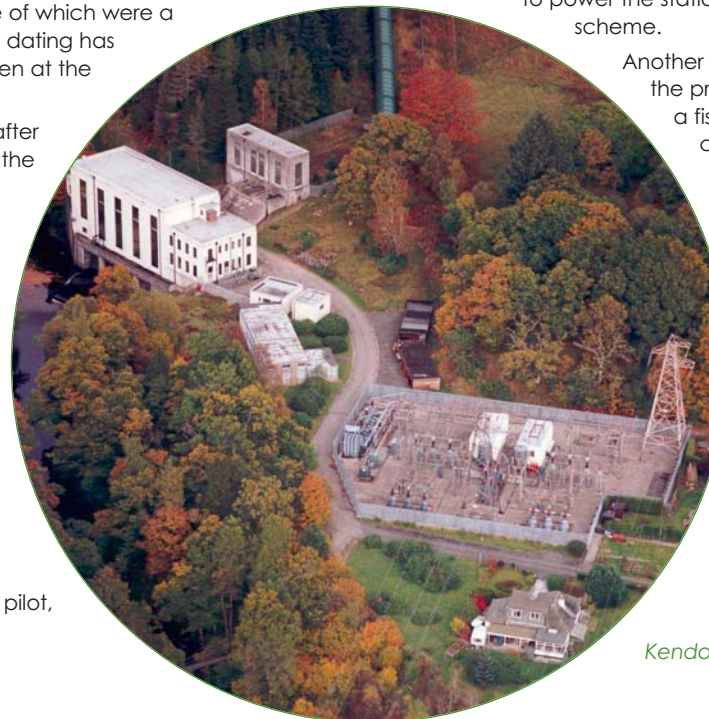


Loch Doon's fish pass

Another feature considered early in the project was the provision of a fish ladder to ensure Atlantic Salmon could continue to make their way upriver. Recognising that the loch's water level could vary by up to 13m, an ingenious circular fish ladder was built into the dam structure. Chambers in the ladder have been fitted with float-controlled sluice gates that enable fish to access the loch regardless of the water level. Compensation flow is maintained on the River Doon to enable Salmon to make their journey upstream.

The Galloway hydro-electric scheme consists of six stations and eight dams, plus tunnels, aqueducts and pipelines. Drumjohn power station was built in 1986 to capture power output from the water released from the needle valve at Carsphairn lane.

The scheme generates 109MW of clean, renewable electricity to power homes and businesses.



Kendoon Power Station

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Scenic Landscape and Rare Species

Loch Doon, surrounded by rivers, mountains, forests and moors, is recognised as an area of exceptionally high landscape value. In 1993, the loch was included in the designation by the Scottish Office of the wider Western Southern Uplands Environmentally Sensitive Area (ESA) in recognition of its landscape, natural history and historical features. It supports a wide range of wildlife, including several important species.

Loch Doon is scientifically important for its indigenous population of Arctic Charr – a relative of the Salmon. The loch is the last known site for the UK Biodiversity Action Plan species in Southwest Scotland and efforts are ongoing to ensure its conservation.

In 1986, the loch was notified as a Site of Special Scientific Interest for its Arctic Charr, and Scottish Natural Heritage have put in place a management plan for the fish. The local population is threatened by the increasing acidification of the waterbody due to land use practices. The management plan includes ongoing monitoring of numbers and the health of Charr and condition of the water in Loch Doon.

Loch Doon is the largest and best example of an oligotrophic (nutrient poor) standing water body in south Strathclyde. It supports a number of rare plant species including Slender Parsley-piert, Round-leaved Crowfoot and Osier. Whooper Swans visit its waters in winter and the surrounding area is home to birds such as Black Grouse, Buzzard, Peregrine, Stonechat, Meadow Pipit, Skylark and Reed Bunting.

Working in Partnership with our Stakeholders

ScottishPower works closely with stakeholders, including local communities, to help preserve the unique attractions of Loch Doon. Staff at the Galloway Hydros have regular contact with the Scottish Environment Protection Agency and work hard to deliver environmental compliance and minimise complaints.

We work with Scottish Natural Heritage, fisheries groups and wildlife organisations to protect the habitats and species on our sites.

And we are part of the local community, working with East Ayrshire Council, landowners and residents to meet issues that arise at the loch and plan for the future.

The Galloway Hydros is a member of the Dalmellington Partnership which was formed from the larger Doon Valley Local Rural Partnership in 1999. The Partnership aims to safeguard the area's environment whilst seeking improvements to the socio-economic, leisure and tourism infrastructure through the implementation of the Doon Valley Management Plan.



Taking Steps to Keep Loch Doon Beautiful for all its Visitors

Loch Doon area is popular with fishermen, walkers and campers - but the pressures created by leisure use have led to concerns about the environment.

The area was once described as an 'enormous free caravan park' with, at times, more than a hundred caravans pitched along the access road. Many decent caravanners have been visiting the loch for decades but there have been increasing concerns about litter, pollution, vandalism and antisocial behaviour. As a landowner, ScottishPower has a duty to manage its land in a responsible manner while ensuring public access.

East Ayrshire Council Local Plan, published in August 2010, states that, the construction of non-permanent dwellings and the permanent siting and residential use of static caravans, especially on sites where appropriate service facilities may not be available, is not supported by the Council.

In 2008, the members of the Dalmellington Partnership put in place a number of large boulders and signs along the loch road to stop unauthorised roadside caravan parking.

Meanwhile the Partnership, in conjunction with stakeholders including ScottishPower, have established a regulated seasonal caravan site at Loch Doon. This facility will help to ensure that Loch Doon remains a destination for caravanners whilst limiting the impact on the environment.

For more information on the Dalmellington Partnership, log on to www.dalmellington.net

*From top: Loch Doon;
Loch Doon dam*

Ranger's Successful Year

ScottishPower, in partnership with other landowners, hired Loch Doon Ranger Stephen Hearton in 2009 to patrol the loch and provide information to the public.

Stephen carries out litter management, reports antisocial behaviour and manages other site improvement projects. He has worked closely with East Ayrshire Council's Corporate Enforcement Unit to greatly reduce the number of illegally-sited caravans. This has resulted in a number of fixed penalty notices being issued to loch visitors in respect of anti-social behaviour.

Council Leader Douglas Reid said: 'The action taken at Loch Doon has been particularly successful.

The area has been regularly patrolled with a zero-tolerance approach taken to anti-social behaviour and crime.'