

Kinlochleven. The Electric Village

My Interest in the Village

My Father W.G Robertson was brought up in the Scottish Highlands in a village called Ballachulish, Argyllshire.

He was born in Glasgow. My Grandmother was originally from Walsall and her family moved to Glasgow when her Father's job in the Black Country Rolling mills moved up. My Grandfather was an African Missionary's Son who had just qualified as a Civil Engineer. His first job circa 1920 was as an engineer improving the highland roads around Glencoe, Kinlochleven and the Loch itself

They moved into a small ex-miners cottage in Ballachulish and he spent nine years there working on new roads and bridges. When the Job eventually finished his next Job was in Birmingham and the family left the Highlands.

As a boy my Father used to tell me tales about Highland life. They used to have a small cabin cruiser on the Loch for fishing also go on long highland walks. They lived in a small one storey cottage, my Grandmother used to get upset when the highland cattle used to venture into the village and eat the sheets on her washing line. He used to tell me about the Hydro Electric Power/ Aluminium Smelter nearby.

In 1953 they took me on Holiday to the Highlands. They showed me their old cottage and all the sites they used to frequent and the Aluminium Smelter at Kinlochleven. I was fascinated by the big pipes running down the mountainside side into the smelter. My grandfather worked a lot around Kinlochleven improving the roads which had originally been built in the first world war by German prisoners of war.

The Smelter was shut down in 2000. I have just read up on it and what a fascinating piece of Industrial Archaeology I have found it to be!

Smelting Aluminium uses large amounts of Electricity and the best site for a smelter is where hydroelectric power is available. The plant and associated dam, reservoir and workers village was built just for the smelter. Early access to the site was by boat and over the highlands by pack horse.

I have found a wonderful 30 minute YouTube presentation all about its history and its surrounding village which I thoroughly recommend you to watch.

<https://youtu.be/vVmwiHSRwO0>

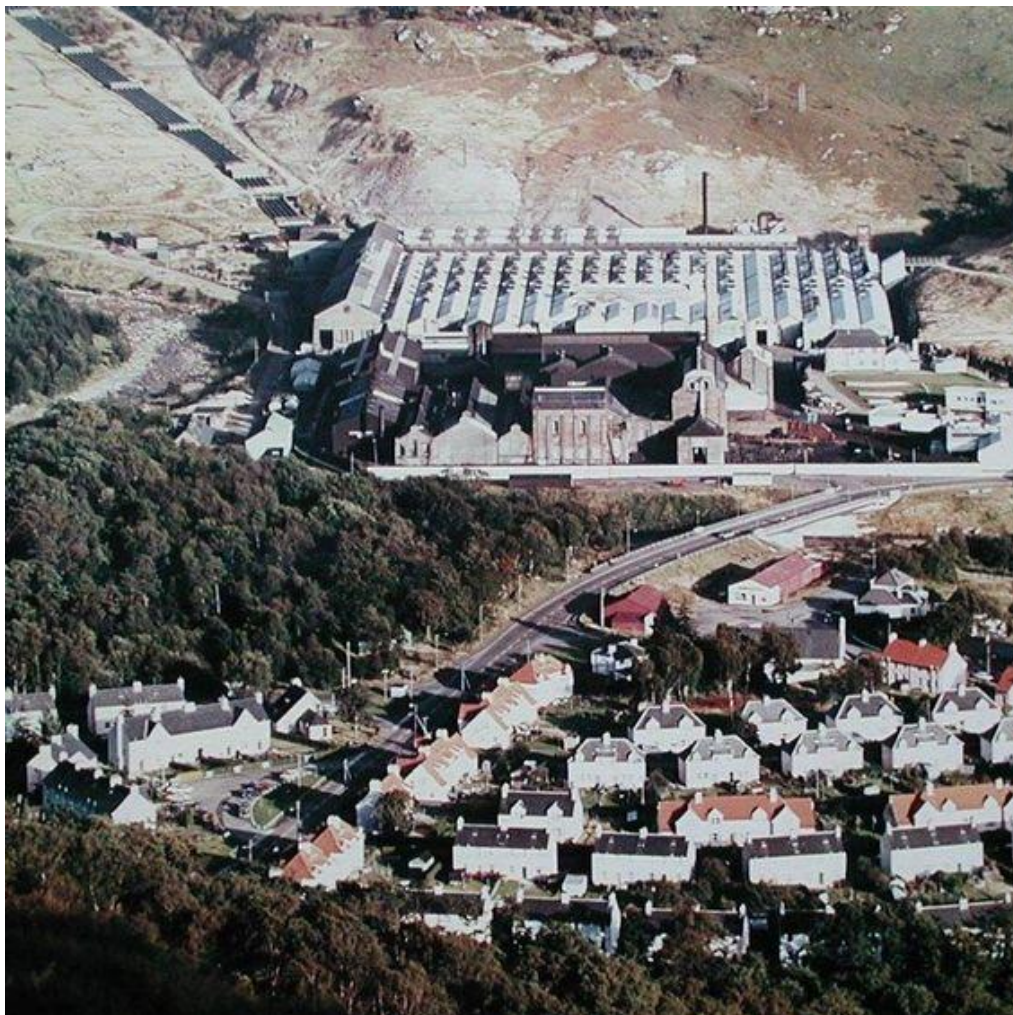
I returned to Glencoe 60 years later for a holiday and I shall be visiting the area again soon for not only the wonderful scenery but also the Industrial Archaeology which I have just learnt about.





Aluminium smelting works, Kinlochleven, Argyll The Kinlochleven Aluminium Works was the second works built by the British Aluminium Company Ltd, in 1905-09 to use the Heroult process for making aluminium by electrolysing a solution of alumina in aluminium fluoride (cryolite). Hydro-electricity was the only economic source of power on the scale needed. The works shown from the south east, in 1976. The sheds housing the electrolytic cells are to the right of the chimney, and the power station is at the rear. The tall building with the round-headed openings was built to make the carbon electrodes used in the electrolytic cells. The power station at Kinlochleven, which drew its water from the Blackwater Dam, produced electricity at low voltage, and with a high amperage, as required by the Heroult cells. Since the closure of the works, power generated at Kinlochleven has been transferred to the Lochaber works by the grid.







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Stangfjord, Norway; Larne Harbour; Milton, Staffordshire.



The Pelton Wheel

(Figure 1) is a water impulse turbine invented by Lester Allan Pelton in the 1870's. The Pelton wheel extracts energy from the impulse of moving water. Pelton's design improved on the many less efficient variations of impulse turbines that existed at that time. Pelton's paddle geometry was designed so that when the rim runs at $\frac{1}{2}$ the speed of the water jet, the water leaves the wheel with very little speed, extracting almost all of its energy, and allowing for a very efficient turbine. In the process, the water's momentum is transferred to the turbine.