

# An Archaeological description and survey of the Orrin Falls Hydro scheme, Fairburn Estate, Ross-shire – April 2015

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The Orrin Falls, GR NH 469517, are (or were) a series of attractive waterfalls within a gorge of the River Orrin. The natural rock is conglomerate and the total height drop from top to bottom of the gorge is roughly 15m. The first record of a hydro-scheme here is in 1898 when:

*John Stirling used estate workmen to build a turbine house at the Orrin Falls and one further up river under the supervision of Mr Bagot from Glasgow and electric light was installed (in Fairburn House) in 1898.*

<http://www.fairburn-estate.co.uk/history.html> The scheme seems to have gone through several phases before being abandoned probably in 1961 when the flow of water down the river was reduced due to the construction of the Orrin Dam, part of the wider Conon Valley Hydro scheme, in the higher reaches of the river. Nevertheless the Orrin Falls hydro-scheme was revived in the early 1980s and now provides electricity for Fairburn House (*information from Fairburn Estate*)

**Access to the land on which this site is situated is covered by the principles set out in the Scottish Outdoor Access Code. For further information go to [www.outdooraccess-scotland.com](http://www.outdooraccess-scotland.com)**

**NOTE: the site has many Health and Safety issues – cliffs, deep water, uneven slippery surfaces**

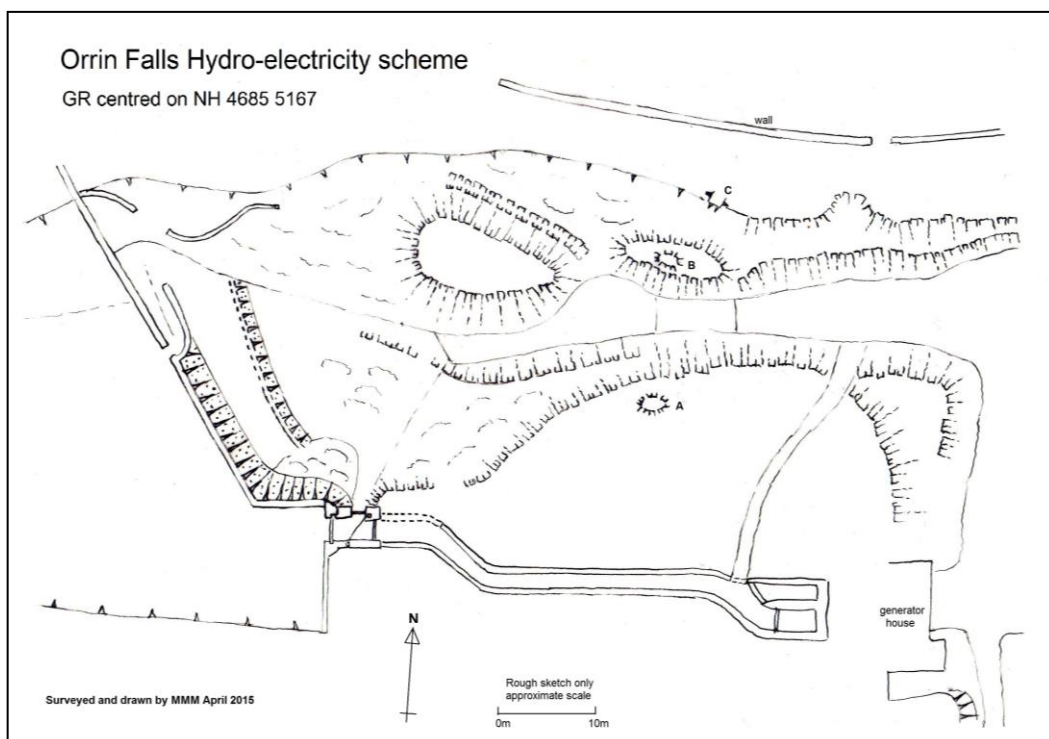
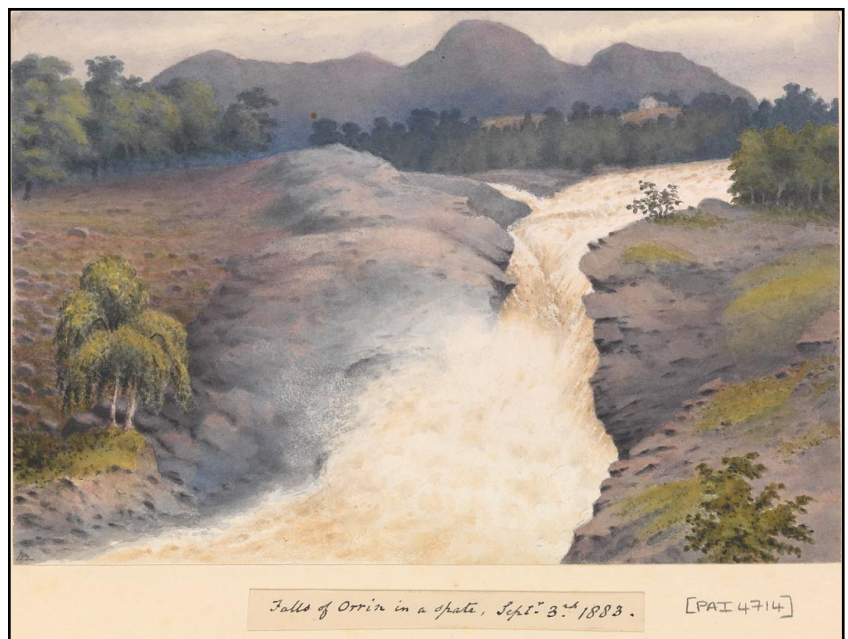
## Description

The hydro scheme is on the south bank of the gorge and comprises

1. a dam,
2. the remains of an earlier dam
3. a lade or channel
4. a generator house.

In addition there are several other features;

5. a rock-cut channel (on the north bank) probably intended as a salmon ladder
6. and the abutments of a footbridge



**The dam** is circa 50m in length and crosses the river obliquely from NW to SE. It is constructed of concrete and 3.5m height at its highest. On the downstream side there is sloping concrete buttressing with inclusions of rounded stones. At the north end of the dam there is a fish ladder - an overspill leads onto a sloping ramp 1.5m to 2m in width but some of the retaining wall of the ramp has been damaged in a recent spate (April 2015)

**The remains of an earlier dam** are seen to the east/downstream side of the present dam. Although ruined and with water flowing over, it appears to be of similar construction to the later dam, but is only 1m in height. The remains of a curving wall 0.8m high on the north bank of the river at this point are probably associated



*The dam, viewed from the north, with the remains of the earlier dam in the foreground*



*An early photograph of the dam circa 1900 – reproduced with the permission of Fairburn Estate*



*The dam viewed from the north with the fish-run in the foreground*

*The lade (right) viewed from the east and (below) the west sluice with metal grid and overhead hoist*



**The lade** is a concrete “box” channel roughly 50m in length; it is c.2m deep and 1.5m in width. There are three wooden sluices; two at the west end and one at the east end, two metal grids for catching floating debris (the one positioned diagonally is controlled by an overhead hoist) and two overflows, the one at the west end appears to be redundant. The east end of the lade sits 2m above the surrounding natural rocky surface and comprises a split channel of two short parallel sections; the S section has a sluice the east part of which is covered by wooden planking, the N channel appears to be redundant and is blocked off by a concrete wall.

**The generator house** is built into the slope at a much lower level to the lade. It was built in 1926 by Gilbert Gilkes & Co Ltd, Kendal (*information from Fairburn Estate*) probably on the site of an earlier one. It is constructed of dressed stone, roughly 11m x 5m x 12m high and accessed by a steep

climb down on the south side where there is a stone faced alcove 10m in height, possibly part of the original generator house

**A rock cut channel** on the north bank may be an early fish ladder possibly predating the hydro-scheme; it is at a higher level than is necessary today. It is roughly 20m in length, 1m in width and 1m deep.

*(Right) The generator house viewed from the SE*



*The central part of the gorge with the abutments A and B seen on either side of the waterfall – (above top) viewed from the west, and (above bottom) viewed from the east, the dam can be seen in the distance, and (right) an old photograph of the bridge (undated and reproduced with the permission of Fairburn Estate)*

**The abutments of a bridge** are situated in the middle part of the gorge above a waterfall. The bridge was probably built at the same time as the hydro-scheme to provide access to it. It is in two sections, at a slight angle to one another; the south abutment, (A on the sketch) is constructed of 2 large boulders with infill of concrete and small boulders; it measures 3m x 1.5m x 1m height. The north abutment (C) is a small platform 2m<sup>2</sup> with stone faced sides built into the north bank of the river and the middle abutment (B) is a small concrete and stone structure with evidence of old cables and pieces of the wooden deck on top of a rocky knoll on the edge of the gorge.

