

**Maldie Burn Hydro-Electric Scheme
Kylestrome Estate
Eddrachillis
Sutherland**

Pre-Construction Archaeological Work

**Sites 9, 11: Park Dyke and Sheep Pens: Measured and
Photographic Survey**



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For

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Maldie Burn Hydro-Electric Scheme, Kylestrome Estate, Eddrachillis, Sutherland

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Site name	Maldie
Site type	Park dyke and sheep pens
Location	NC 2508 3408
Project	Measured and photographic survey

1.0 Description and Background

The proposed Maldie Burn hydro scheme is situated within Kylestrome Reay Forest Estate in Sutherland. The scheme will store water in an existing loch and will involve the construction of the following:

- An intake weir at the outfall of Loch and Leathaid Bhuain;
- A semi-buried powerhouse which will house the turbine, generator and associated equipment;
- A buried pipeline to convey the water from the intake weir to the powerhouse;
- Temporary and permanent access tracks

The Highland Council as Planning Authority support the application subject to a number of conditions derived from their own consultation.

The direction is subject to the following planning conditions with reference to archaeology and cultural heritage:

Archaeology

12. Prior to the commencement of any development, the developer shall have undertaken a walkover survey with a representative selection of original digital photos and plans being provided for the approval in writing of the Planning Authority for all archaeological sites within the site boundary, or as may otherwise be agreed in writing with the Planning Authority.

The following features shall be covered:

1. East of Maldie Burn - all features impacted by the construction of the power house, tailrace and works compound should be subject to measured and photographic survey. All areas of the park dyke (site 11) impacted during the construction phase shall be reinstated to its original state.
2. West of Maldie Burn - the avoidance measures detailed in 12.5.4 to preserve in situ the various elements of site 3 shall be followed wherever practicable. If this section of track is to be widened and/or have passing places instated the contracted archaeologist shall be consulted at an early stage in the design process to ensure the impact on the historic environment is minimised .
3. If impact on any features associated with site 3 are considered unavoidable further mitigation measures shall be submitted to and agreed with the Planning Authority. Depending on the nature and preservation of the features to be impacted a

minimum of full measured and photographic survey followed by a watching brief during the construction phase will be necessary. Better preserved and / or less common features may require evaluation trenching and followed by full excavation if required, prior to the commencement of construction.

4. The existing turbine house and stone piers that currently support the present pipeline are of historic interest and shall be retained within the scheme.
5. Record photographs and accurate locational data for all features to be impacted (sites 27,28,29,30,31) shall be made available for HCAU.
6. The route of the underground cable to Achfarry shall be micro sited to avoid sites 32, 35, 37. All sites shall be clearly marked by the contracted archaeologist prior to works commencing in this area to avoid unnecessary and accidental damage to these sites.
7. If practicable the cable shall be located to the side of the 19th century stalkers path to avoid directly impacting this feature.
- 8.

2.0 Recording Background

This report covers work undertaken to cover condition 1, above. This condition refers to the following sites, as numbered in the original Cultural heritage chapter of the Environmental Impact Assessment

Site 9: Sheep Fank at NC 2508 3408. As recorded on the 1st edition OS map and probably dating to early 19th century, but appears to have been deliberately robbed of stone, possibly in the building of the turbine house. The robbed sections of walling are reduced to indistinct footings. Standard rectangular construction, divided into compartments but also incorporating the footings of a small rectangular building. This may be contemporary or may be an adapted earlier building associated with Grianan township

Site 11: Park Dyke, rig cultivation c/o NC 251 340.

Drystone dyking with turf caps enclosing a large area of former cornlands of the early modern settlement. The enclosure probably dates to 1818 when Charles Clarke obtained the tenancy of Maldie and added it to his sheep farm, and will be contemporary with the sheep fank (site 9) attached to its west side. Within the area enclosed by the dyke is a broad, poorly drained, peaty area where the traces of cultivation rigs are clearly visible. To the north and south is rising ground where at the break of slope are banks of field clearance stones, with piles of stones on the flank of the SE knoll. Beside a gateway in the north section of the wall are footings of a small building of uncertain age or function

These two features were interpreted as dating to the early years of sheep farming activity, possibly constructed on the instruction of Charles Clarke, who took on the tenancy of Kylestrome in 1801. However, they are not depicted accurately on maps until the 1st edition Ordnance Survey map of 1875, a date by which the sheep farm was no longer thriving and was being run by a manager. This map is, in fact, inaccurate in its depiction of the details of the sheep fank, failing to note the small building on the south west end. This would suggest that by 1875 this building was no longer in use and was certainly not roofed. The sheep wash on the west bank of the Maldie Burn is also not depicted on the 1873 map.

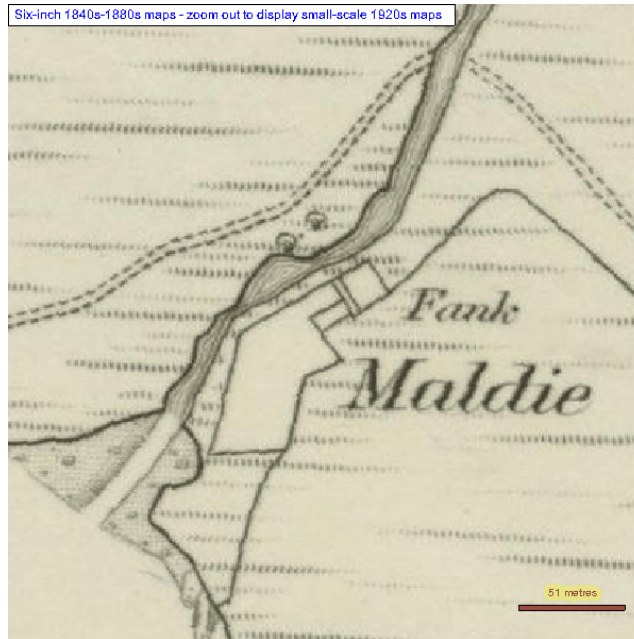


Fig 1. 1st Edition Ordnance Survey, 1873. The larger park dyke, which continues along the shore to the east, is not depicted as improved ground; only the smaller enclosure associated with the fank is shown as improved

Construction plans for the Hydro Electric scheme, produced by Halcrow Group Ltd for RWE Renewables, show both the immediately visible elements of these archaeological features and the proposed extent of impact from the development. The access road to the powerhouse will break through the park dyke at two points; a further section of the dyke will be removed during construction of the power house. The power house and access road are permanent structures which will be in place for the duration of the hydro scheme, it will not be possible to reinstate the park dyke directly along its original line, but the stone will be retained and it is hoped that new walling using this stone and in the original style can be designed into the landscape both to complete the enclosure of the park for the purposes of livestock management and to mask the more intrusive modern elements of the construction.

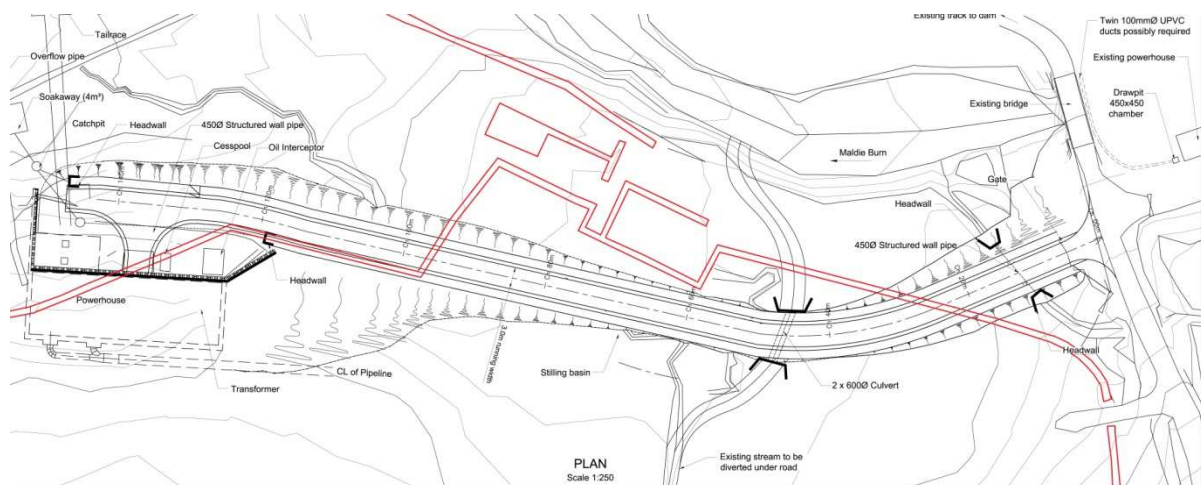


Fig.2 Construction elements, power house, access road, stream diversion, overlaid on plan which shows the more visible wall foundations of the sheep fank and park dyke, in red, as surveyed by Halcrow Group Ltd (Image aligned west to top, north to right)

3.0 Survey Method

The standing features, namely the drystone dyke of the park enclosure, were deemed to be adequately recorded on the Halcrow Group Ltd plan. The sheep fank, reduced to low and overgrown footings, was only partially recorded, so this was further measured by means of a plane table survey, carried out by C. Dagg and A. Welti.

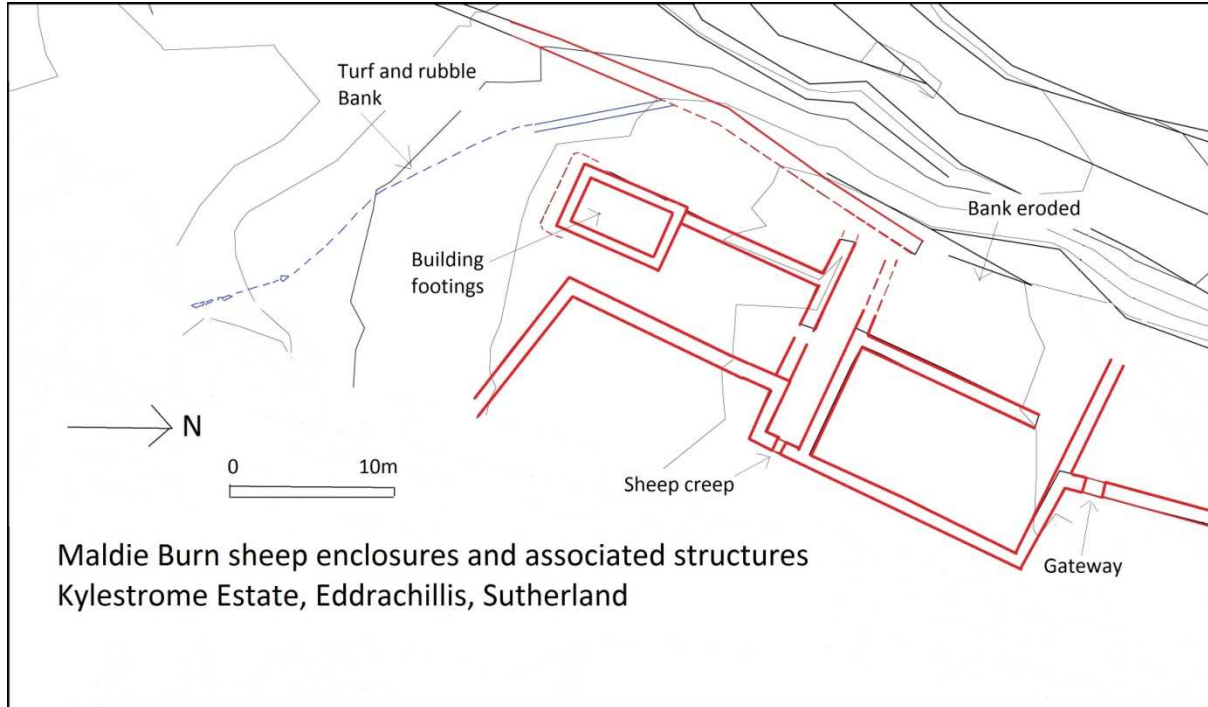


Fig 3. Additional features of sheep fank and earlier rubble dyke plotted by plane-table survey

4.0 Detailed Site Descriptions

4.1 Site 9, Sheep Fank

The walling of this group of features has been reduced almost to ground level, with little tumbled rubble, suggesting that the greater part of the stonework was deliberately removed. The most likely event for this is the construction of the first hydro power house in the 1920s, together with rubble piers supporting the pipeline and rubble piers to the bridge over the Maldie Burn. Some sections of wall of the fank are thus so reduced that they were not noted during recent pre-construction survey.

The fank follows a fairly standard shape, common in the North Highlands, of rectangular compartments, gateways and passageways allowing flexibility for sorting, lambing, shearing, smearing and other seasonal activities. There is no evidence for dipping. The structure on the west side of the burn, identified as a rare example of sheep wash, herded the sheep into the pool to wash the fleeces before shearing, at this date sheep were treated for parasites by smearing rather than dipping. The lack of an inserted dip structure suggests the fank had fallen out of use by the time dipping became common practice.

While fanks are frequently associated with small buildings, taken to be shepherds' shelters, the siting of the small building here is awkward and atypical. This would suggest that there was a building in this location before the construction of the fank, possibly associated with the post-Modern township of Grianan on the west side of the Maldie Burn.

Dimensions: Total length: 37m
Width: 16m
Building external length: 7.75m
External width: 5m
Width of walls at base: 1m

Features: There is one small sheep or lamb creep at the SE end of the small dividing passageway, through the dyke which is shared with the park enclosure. This creep measures 600mm in width and 840mm in height



Fig 4. Lamb creep at SE end of passage between enclosures

The present design for the power house and access track indicates that there is no intention to extend the construction area towards these features. The sheep fank and building will be protected behind the retained standing section of the park dyke, and will be clearly marked as an archaeological site.

4.2 Post-Mediaeval Dyke

The faint traces of a turf and rubble dyke, which probably originally ran along the full length of the east bank of the Maldie Burn, deviates east from the footings of the drystone dyke, runs approximately 24m SE then turns to run south for a further 14m, terminating in a distinctive pairing of two large boulders, after which it cannot be traced.



Fig 5. Remains of earlier rubble dyke in foreground

The south-western section of this feature lies within the construction area for the power house and will be removed, but a short section, adjacent to the small building attached to the sheep fank, should not be affected.

4.3 Park Dyke

The drystone dyke which forms the west, north and east sides of the Maldie park enclosure is almost complete, with the exception of small tumbled sections which appear to have occurred where there have been small sheep creep openings which have formed points of weakness.

The dyke is formed of rough, uncoursed rubble facing, infilled with small angular stones and capped with turf. A distinctive feature is the regularly spaced insertion of protruding through stones just over half way up the wall face. These generally protrude about 200mm and appear to be a stylistic feature rather than intended for use as stiles.

Two sections of the dyke will be permanently removed to allow construction of the access road. These sections do not contain any features such as gateways or lamb creeps.

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Appendix 1. Extract from Cultural Heritage chapter of Environmental Impact Assessment for Maldie Hydro scheme

Sheep Farming and the Clearances

By the mid 18th century the local tacksmen were taking the initiative in introducing sheep farming and displacing the subtenants. In 1780 Glendhu, with Glencoul, was let as a sheep farm by Lord Reay to MacKay of Bighouse, who sublet it to Colin MacDairmid from Argyll. Colin was connected to the MacKays by marriage, and as well as sheep, traded in cattle and was involved in the herring fishing. He went bankrupt in 1793, 'partly from inadvertency, and, the times being hard, unfortunate' and was replaced by Alexander Campbell, also from Argyll, who died in 1799. MacDairmid had held a stock of 600 ewes, Campbell 800.

In 1801 the farm was let to Charles Clarke, formerly tacksman at Clashneach near Durness, at a rent of £140 per annum. Clarke is probably responsible for the building of the mansion house at Glendhu as well as cottages for the shepherds for his increasing stock, and the large drystone enclosure. This enclosure is recorded on Burnett and Scott's map of 1831-2. In 1808 he was granted the tenancies of Mavidy (Maldie, or Grianan) and Kylestrome, but the annual rent went up from £140 to £380 and then to £480. By 1815 the end of his 15 year tenancy was approaching and he had to agree to an annual rent of £1400 for the next five years, until 1820, and thereafter £1600 until 1830 which would be the end of the next 15 year lease.

What became of the original population of Glendhu, and later of Grianan and Kylestrome, cleared by Clarke, is not recorded, but it is likely that they were mostly settled in Scourie and encouraged to take up fishing and kelp manufacture. It is possible that only one part of Kylestrome was taken on by Clarke, as a gravestone in the burial ground at Kylestrome records one Donald Mackay, who died in 1825 as having been tenant at Kylestrome

In 1818 Clarke stretched himself still further by taking the tenancies of Little Assynt, Achmore, Cromalt, Unapool and Kirkton in Assynt on the Neighbouring Sutherland Estate. In the summer of 1818 the painter William Daniell arrived at Glendhu in the course of his journey around the coast of Britain. He recorded his visit to Glendhu and the hospitality of Clarke in his diary:

'Mr Gunn having procured a boat at Unapool, the excursion was pursued to Glendhu, the residence of Mr Clarke, a gentleman grazier, who rents an extensive sheep farm of Lord Reay. It is estimated that the number of sheep maintained on this property amounts to twelve or fourteen thousand.

The next few years saw the end of the Napoleonic wars and an end to the boom years of sheep farming. Like several other farmers, Clarke went bankrupt in 1823. The Edinburgh Gazer records that Charles Clarke 'in Glendow, cattle dealer, and fish curer in the County of Sutherland' was sequestered on 23rd October 1823. He went to live at Oldney near Scourie and died there in 1831.

In 1829 the Reay estate was bought by the Sutherland family, who let Glendhu sheep farm in 1832 to the brothers William and James Gunn from Caithness. William resided at Glendhu but James returned to Caithness to farm Greenland. The rent was initially £1395, but this was reduced to £1085 as sheep prices fell. In 1841, however, the time of the first census return, James, not William was resident at Glendhu, together with a manservant, a maidservant and two house servants. Also at Glendhu were three other households: two shepherds and their families and a single woman. This indicates four separate habitable houses in 1841. The census also records a shepherd resident at Kylestrome and another at Achfary. Later valuation rolls also indicate that the Gunns were renting the grazing of Isle Rannich. The Admiralty chart of 1846-7 records two houses and the enclosure at Glendhu; the houses are marked 'Foxhunter's (to the west) and 'Shepherd's' (within the enclosure)

William Gunn farmed at Glendhu for thirty years until he was killed in an accident at Kylestrome in 1864. In that time his capital had grown from £500 to £25000. After his death his brother James took his nephew John Gunn as partner, but John died at Kylestrome a young man, sometime after 1875, and a manager was employed. The valuation roll of 1885-6 lists Jno. Thomson as farm manager resident at Glendhu, together with a ploughman, six shepherds and two boatmen. In the hands of the manager the farm began to lose money and when James was offered a new lease at a rent of £800 in 1886 he refused to take it. Nobody else came forward to take on the tenancy and the landlord, the Duke of Sutherland, had to take over the sheep stock. Glendhu was run for a year by the estate but the sheep were then removed and the 35000 acres of Glendhu were let as a deer forest to the Duke of Westminster.