



ROSS & CROMARTY ARCHAEOLOGICAL SERVICES

# Scatwell Lodge Hydro Scheme Scatwell Estate, Strathconon

## Archaeological Desk-based Assessment and Walkover Survey



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## **SCATWELL LODGE HYDRO SCHEME**

### **Archaeological Desk-based Assessment and Walkover Survey**

#### **Summary**

*An archaeological desk-based assessment and walkover survey was carried out on the 6<sup>th</sup> of August 2012 on behalf of Green Cat Renewables in advance of construction of a new hydroelectric scheme for Scatwell Lodge in Strathconon, Ross-shire. The work was undertaken to assess the nature and extent of any archaeology likely to be affected along the proposed buried pipeline route and within the areas to be affected during construction works in order to inform recommendations for the protection and management of any sites identified. No new archaeological sites were recorded during the survey. Two known sites, Loch a' Mhuilinn dam and the old kennels at Scatwell Lodge, at opposite ends of the pipeline route, were recorded using digital photography. The desk-based assessment has revealed that the area has been well-surveyed in the recent past by NOSAS, the results of which concurred with the present survey that no new sites would be affected by the scheme. As a result, no further mitigation measures are proposed.*

#### **1 Introduction**

- 1.1 An archaeological desk-based assessment and walkover survey was carried out in advance of the construction of a new 100kW mini hydro power electricity generation scheme near Scatwell Lodge, Strathconon (located between NGR NH 3992 5618 and NH 3846 5494) on behalf of Green Cat Renewables. The archaeological work was requested by the Highland Council Historic Environment Team (HET) as the proposed development lies within a landscape of significant Prehistoric and Post Medieval archaeological sites.
- 1.2 The construction work consists of four main elements<sup>1</sup>: renovation of Loch a' Mhuilinn dam, construction of a powerhouse, construction of a buried pipeline to the powerhouse and outfall, and a diversion to Allt nam Ballach burn (Figure 2). The new hydro scheme will take water from Loch a' Mhuilinn and run along the course of Allt a' Mhuilinn. The main route for the proposed pipeline will be located beneath the existing vehicle track to the loch<sup>2</sup>.

#### **2 Acknowledgements**

We wish to thank Ken Morris of Green Cat Renewables for commissioning the work and supplying base maps and associated information in advance of the survey. Fieldwork was carried out by Mary Peteranna. Ordnance Survey mapping is reproduced by permission of ProMap license #LIG1044.

#### **2 Site Location**

- 3.1 The proposed new hydro scheme is located between NGR NH 3992 5618 and NH 3846 5494 in Scatwell, Strathconon glen. Strathconon, located in the east part of Ross-shire, extends for 40km west from Dingwall, on the northeast coast of Scotland. The River Conon runs through the base of the glen near the northeast end of the development area, which is dominated by the steeply rising hills to the southwest (Figure 1).

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<sup>1</sup> Green Cat Renewables, 2012

<sup>2</sup> *Ibid*



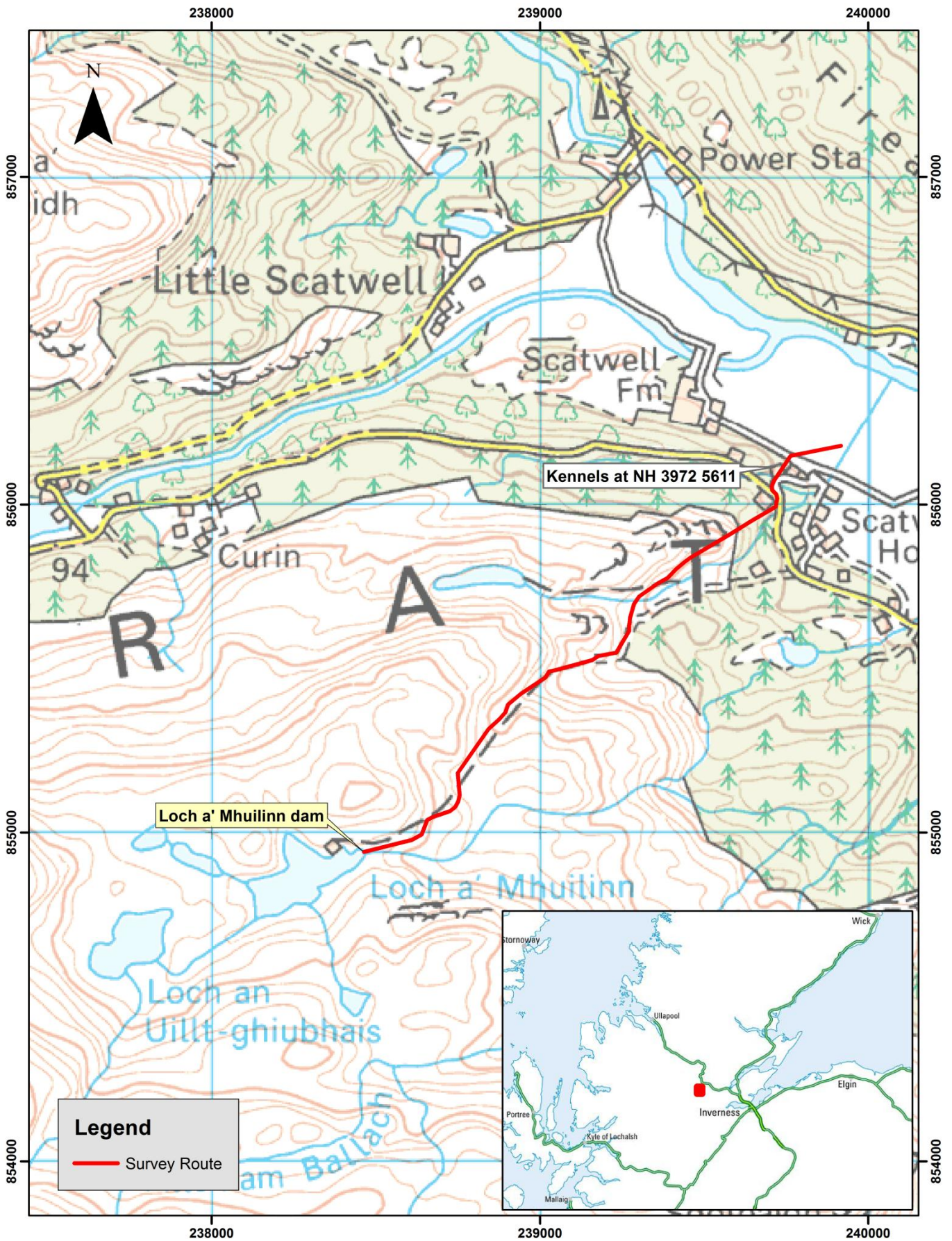


Figure1 Sitelocationshowingthe proposedburiedpipelineroute forthenew hydroscheme

Woodland plantation surrounds the low level terrain, which opens up, from 70-100m OD, to heather-covered rocky hillslopes rising to 330m OD at the highest point of the development. The proposed buried pipeline runs mostly below or in close proximity to an existing estate track running from Scatwell to Loch a' Mhuilinn. Borrow pits and other construction areas are located close to the pipeline route.

- 3.2 The underlying geology of the site is generally Moine psammite with significant igneous intrusions<sup>3</sup>. Rock outcrops are visibly scattered across the hills.

#### 4 Archaeological and Historical Background

- 4.1 Strathconon glen was once well-populated, during the late 1700s to early 1800s. Today, however, the glen has very few settlements and a 26-km long road runs past the remains of the Post Medieval settlements scattered along lower river terraces. The glen has been surveyed during recent years by North of Scotland Archaeology Society (NOSAS).
- 4.2 The name Scatwell, of Norse origin, may be applied to *skat* meaning tax and *vollr* meaning field. It may also be derived from *skati* meaning large timber or logs. However, there are no known Norse settlements in the strath, and the area may have simply been visited by Norse peoples from Sutherland and Caithness for the exploitation of timber resources<sup>4</sup>.
- 4.3 During the Medieval Period, a royal charter was granted to the Mackenzies in 1528 for the lands of Strathconon, Strathgarve and Strathbraan, which established clan seat in Ross-shire. The route through Strathconon served as a link between Mackenzie lands on the west coast and the east coast<sup>5</sup>.
- 4.4 During the late 18<sup>th</sup> century and early 19<sup>th</sup> century Strathconon was one of the most heavily settled areas in the Scottish Highlands. A demand for sheep and cattle during the Napoleonic Wars ceased when the war came to an end in 1815 and the revenue for the large population drastically diminished. There was a continual displacement of people to make way for sheep<sup>6</sup>. Strathconon is known historically for its illicit whisky production<sup>7</sup>.
- 4.5 A sporting estate was established at Scatwell after the mid-19<sup>th</sup> century and a new shooting lodge and associated infrastructure was built<sup>8</sup>.
- 4.6 Dr. William James Bell, owner of Scatwell House from 1864 to 1892 introduced one of the earliest hydroelectric schemes to the Highlands. He established a system of electric light in Scatwell House in 1889. Another hydro scheme was established at Conon Falls by the Ross-shire Electric Supply Company and Edward Blunt Mackenzie established in 1925<sup>9</sup>.

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<sup>3</sup> BGS, 2010

<sup>4</sup> Marshall, undated

<sup>5</sup> Scatwell House, 2012

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> Marshall, undated

<sup>9</sup> *Ibid.*



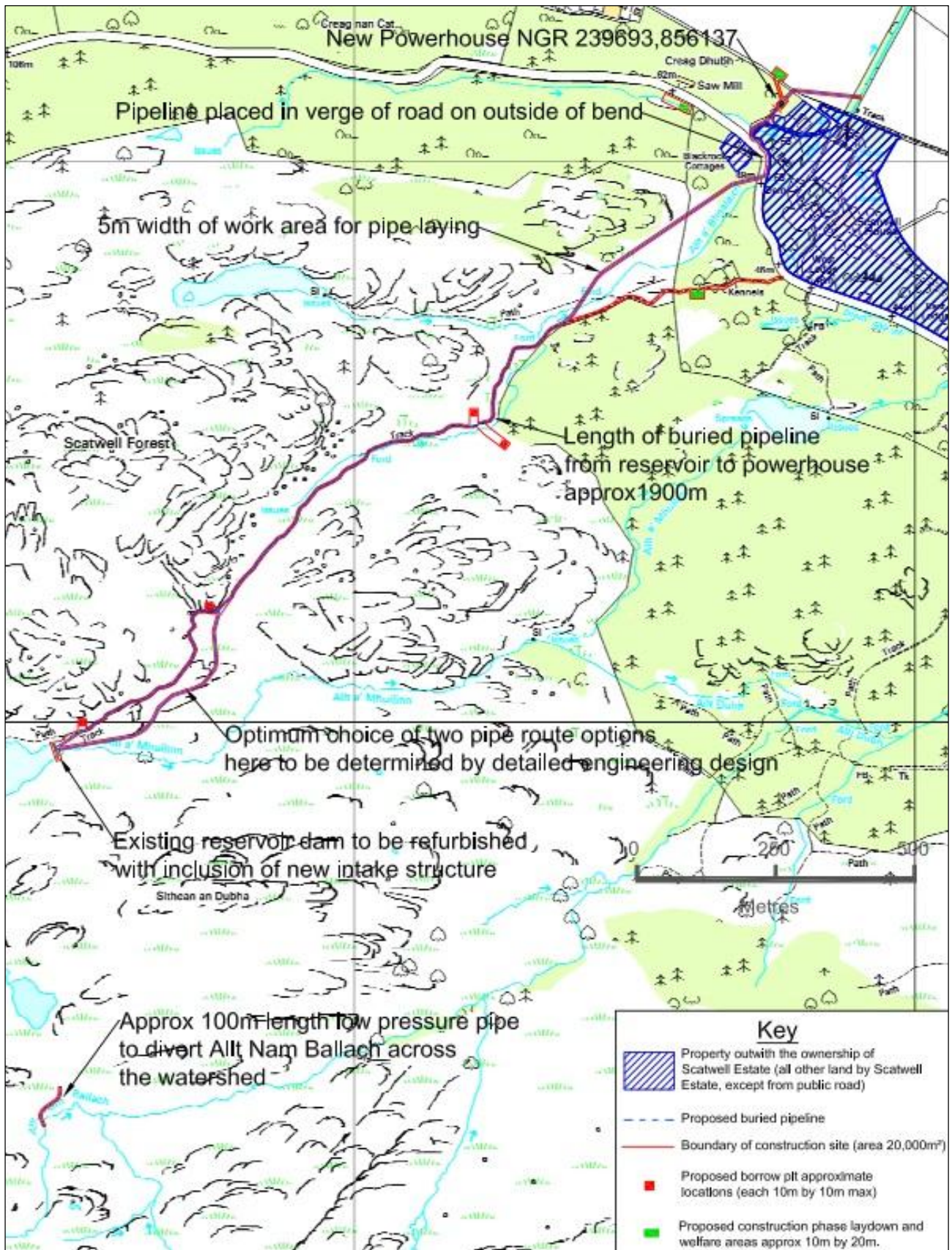


Figure2 Proposed layoutofthe ScatwellLodgeHydroScheme <sup>10</sup>

<sup>10</sup> Suppliedby GreenCatRenewables , August 2012



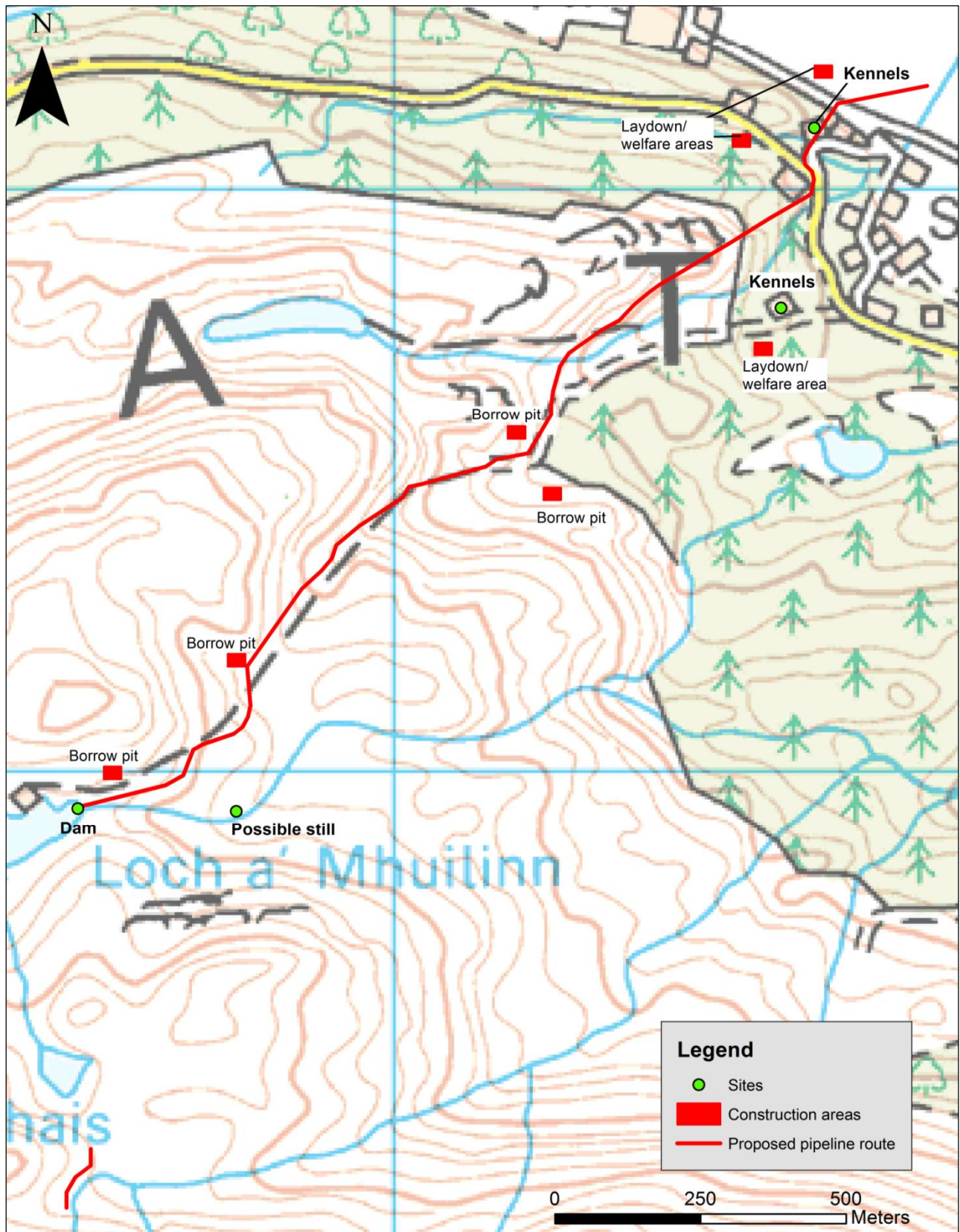


Figure3 Location of archaeological sites and development areas within the proposed Scatwell Lodge Hydro Scheme

## 5 Methodology

The overall aim of this archaeological walkover survey was to identify and record any archaeological sites or features that might be affected by the proposed new hydro scheme. This would enable informed mitigation measures and recommendations to be proposed to ensure that archaeological sites would not be damaged or destroyed during construction.

### 5.1 Desk-based Assessment

5.1.1 A desk-based assessment was conducted prior to commencement of the survey in order to assess the archaeological potential of the area based on previously recorded sites and any historical documentation.

5.1.2 A search was made of all relevant records from the National Monuments Record of Scotland (NMRS) and the Highland Council Historic Environment Record (HHER). Online aerial photographs were also checked for any relevant site information where possible, while cartographic and other written records were also assessed for information relating to the area proposed for survey, including the recent survey reports of Strathconon by NOSAS.

### 5.2 Walkover Survey

5.2.1 The development areas for the new hydro scheme at Scatwell were walked over and surveyed on the 6<sup>th</sup> of August 2012. The weather for the survey day was mostly cloudy with dry and windy conditions and the ground was dry underfoot, due to the recent spell of dry weather. Stands of very high bracken resulted in significant difficulty in identifying archaeological features at the northeast end of the routes south of the road. However, because this area was located on a steeply sloping scree-covered hillside, the potential for archaeological sites is very unlikely (Plate 1).



Plate 1 Dense bracken at NE end of pipe route

Plate 2 View NNE across the NE end of pipe route

5.2.2 Archaeological sites were recorded individually including using high-resolution digital photography where possible, while sketch survey drawings were reproduced where necessary. The individual site locations were plotted with a handheld GPS capable of sub-metre accuracy using ArcPad GIS software on a handheld Windows Mobile-based rover.

5.2.3 Survey and recording methods from the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) were employed and all work was conducted in strict adherence to the *Institute for Archaeologists (IfA) Code of Conduct*.



## 6 Results

The following sections present the results of the desk-based assessment and walkover survey.

### 6.1 Desk-based assessment

A desk-based assessment was carried out in advance of the walkover survey in order to assess the archaeological potential of the area based on previously recorded sites and any historical documentation. The area has been thoroughly surveyed by North of Scotland Archaeology Society (NOSAS), the results of which have been published in various reports and in the recent book *Strathconon, the History and Archaeology of a Northeast Highland Glen*, by Meryl Marshall and published by NOSAS.

#### 6.1.1 Cartographic sources

Mapping held at the National Library of Scotland (NLS) in Edinburgh was checked on-line.

6.1.1.1 William Roy's Military Survey of Scotland 1747-1755 shows an intensely cultivated and settled landscape at Scatwell<sup>11</sup>.

6.1.1.2 The first and second edition Ordnance Survey (OS) maps showing the development area were checked. None of the maps depicted the dam at Loch a' Mhuilinn nor the kennels at Scatwell Lodge and no other sites were noted along the proposed pipeline route.

#### 6.1.2 Highland Council Historic Environment Record (HHER)

A full search of the Highland Council Historic Environment Record (HER) produced the following sites within the landscape in close proximity to the survey areas:

**MHG54834                      NH 3848 5492                      Loch a' Mhuilinn - dam**

A substantial Victorian-period stone dam and sluice at the east end of Loch a' Mhuilinn, located 2km southwest of Scatwell House

**MHG54833                      NH 38727 54929                      Allt a' Mhuilinn – distilling site**

A probable still bothy located above the west bank of the Allt a' Mhuilinn in a wet area of rank heather below and east of the Loch a' Mhuilinn dam

**MHG54829                      NH 3956 5535                      Scatwell House – power station**

A small hydro scheme located on a NE-facing forested hillside above and to the SW of Scatwell House; utilises a system of burns, principally the Allt a' Mhuilinn and the Allt Dubh, which descend through the policies of Scatwell House and comprises an intake, pipe work, valve and generator shed

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<sup>11</sup> NLS 2012

## 6.2 Walkover Survey

The walkover survey revealed no new archaeological sites within the areas to be developed. There were two known sites at opposing ends of the pipeline route, Loch a' Mhuilinn dam and a disused kennels. Another disused kennels and a probable still site had been previously recorded by NOSAS (Figure 3). Since the dam and kennels would be affected by the development, both sites were recorded during the survey.

### 6.2.1 Loch a' Mhuilinn Dam

- 6.2.1.1 The dam, located at the east end of Loch a' Mhuilinn (NH 3848 5492), comprises double-faced drystone walling with a rubble core of small-medium stones (Plate 3). The stone had been sourced locally. The dam structure measures 24m long overall and 2.25m across at the widest point. It stands 0.65-0.80m high on the west side and 1.0-1.2m high on the east side.
- 6.2.1.2 The west wall face is well-built and stands nearly vertical above the stony loch shoreline. It comprises large flat slabs with mortar, much of which has worn away (Plate 4). The east wall face is significantly battered, falling away to the sloping, heather-covered ground surface (Plate 5). The dam structure curves slightly around the loch sides at the north and south ends and a metal gate appears to block the south end, although this may have been used as an outlet for water overflow.



Plate 3 – Loch a' Mhuilinn dam, facing SSE





**Plate4** Loch a Mhuilinn dam westface ,facingSE



**Plate5** Loch a Mhuilinn dam eastface ,facingSE



## 6.2.2 Scatwell Lodge kennels

6.2.2.1 Two disused buildings were located near the northeast end of the survey route at NH 3972 5611. The northeast building, a disused kennel, was proposed to be demolished during development of the hydro scheme to locate a new powerhouse.

6.2.2.2 The kennel building comprised pale green wood cladding with a corrugated iron roof and an attached concrete and metal mesh fence to the east side. The building measures 4.0m NE-SW by 2.7m and stands 2.0m high to the base of the roof (Plates 6 and 7).



Plate 6 Disused kennels near the northeast end of the survey route, facing WNW



Plate 7 Disused kennels near the northeast end of the survey route, facing NE



## 7 Discussion

- 7.1 The archaeological desk-based assessment and walkover survey of the proposed buried pipeline route, from the reservoir at Loch a' Mhuilinn to the powerhouse at Scatwell, was designed to be as short as possible to minimise the impact on the landscape. There were no archaeological sites identified along the length of the route or in the locations of the borrow pits and other construction areas. Only two known sites, Loch a' Mhuilinn dam at the southwest end of the pipeline route and the disused kennels at the northeast end of the route, had been previously identified and would be affected by the development. These sites were recorded and photographed during the survey. A third site, a second disused kennels, located near the construction access track, was also photographed, although this will not be affected by the development.
- 7.2 As per the information provided by the client<sup>12</sup>, Loch a' Mhuilinn dam will be refurbished. This will involve incorporation of an intake structure into the existing structure and rebuilding the eastern face of the dam in order to minimise leakage. During the survey, the dam was photographed in detail prior to the proposed refurbishment in order to provide a photographic record of this c.19<sup>th</sup> century site.
- 7.3 The disused kennels, located near the northeast of the pipeline route, is proposed to be demolished to allow for construction of the powerhouse in a location designed to cause minimal impact to the landscape. The kennels building was recorded and photographed during the survey in order to provide a record for the site prior to its demolition.
- 7.4 A diversion on the Allt nam Ballach (Figure 3), covering approximately 100m, will divert water into the Allt a' Mhuillin. It will comprise simple concrete box connected to a plastic buried pipeline. There are no known archaeological sites in this location, and it is highly unlikely that the construction will disturb any unknown, buried archaeology.

## 8 Recommendations

- 8.1 The developer had previously identified the two sites to be affected by the construction of the new hydro scheme and these were recorded during the archaeological survey, prior to them being impacted. It is not considered necessary by the current surveyor to have the demolition of the kennels or dam refurbishment monitored by an archaeologist.
- 8.2 The buried pipeline routes and location of borrow pits and construction areas were surveyed and found to be devoid of archaeology and the areas have a low potential for buried archaeological remains. Therefore no mitigation measures are recommended. However, the final decision rests with the Highland Council Historic Environment Team (HET).
- 8.3 The proposed hydro scheme at Scatwell in Strathconon is located in a region dense with abandoned Post Medieval settlement remains. If any unforeseen changes to the location of the development are made, it is highly recommended that an archaeologist be consulted prior to commencing groundworks.

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<sup>12</sup> Green Cat Renewables, 2012

## 9 References

Green Cat Renewables, 2012 *Scatwell Lodge Hydro Scheme: Design and Environmental Statement* (Rev. 7).

Highland Council Historic Environment Team (HET) 2010. HET Development Guidance, v 1.2.

[Http://www.highland.gov.uk/yourenvironment/conservation/archaeology/developmentguidance.htm](http://www.highland.gov.uk/yourenvironment/conservation/archaeology/developmentguidance.htm).

Highland Council Historic Environment Team 2012. *Highland Historic Environment Record (HHER)*. [Http://her/highland.gov.uk](http://her/highland.gov.uk)

Institute for Archaeologists (IfA) 2010. *By-laws of the Institute for Archaeologists: Code of Conduct*. Reading, IfA.

Marshall, M (undated) *Report of Phase One Scatwell and Lower Scatwell of a Project, Survey and Record Archaeological Remains in Strathconon, Ross-shire*. North of Scotland Archaeological Society (NOSAS) - November 2006 to April 2007

Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). April 2004. *Survey and Recording Policy*

The Scottish Government 2010. Scottish Planning Policy  
[Http://www.scotland.gov.uk/Resource/Doc/300760/0093908.pdf](http://www.scotland.gov.uk/Resource/Doc/300760/0093908.pdf)

## 10 Web-Based Sources

British Geological Survey (BGS) 2010 *Digmap625*, downloaded from [Http://bgs.ac.uk](http://bgs.ac.uk)

National Map Library of Scotland – <http://maps.nls.uk>

Scatwell House *A Short History of Strathconon Glen and Scatwell House*. Accessed on 18 August 2012 at: <http://www.scatwellestate.co.uk/scatwell-house-history/scatwell-house-history.html>



**APPENDIX 1 Index of Photographs**

<b>No.</b>	<b>Direction Facing</b>	<b>NGR</b>	<b>Notes</b>	<b>Taken By</b>	<b>Date</b>
1	N	NH3904 5529	View down Allta Bhealaich valley along northeast half of buried pipeline route	MKP	06/08/2012
2	N	NH3961 5590	View across steep, bracken-covered hillside at northeast end of buried pipeline route	MKP	06/08/2012
3	N	NH3846 5494	Locha 'Mhuilinn dam west wall face (loch to left)	MKP	06/08/2012
4	N	NH3846 5494	Locha 'Mhuilinn dam west wall face (loch to left)	MKP	06/08/2012
5	SE	NH3846 5494	Locha 'Mhuilinn dam west wall face (loch to right)	MKP	06/08/2012
6	ESE	NH3846 5494	Locha 'Mhuilinn dam west wall face, some mortar visible in wall	MKP	06/08/2012
7	NW	NH3846 5494	Looking NW over Locha 'Mhuilinn dam	MKP	06/08/2012
8	WNW	NH3846 5494	Looking WNW over Locha 'Mhuilinn dam	MKP	06/08/2012
9	SE	NH3846 5494	Locha 'Mhuilinn dam east wall face (loch to right)	MKP	06/08/2012
10	SSE	NH3846 5494	Looking S over Locha 'Mhuilinn dam (loch to right)	MKP	06/08/2012
11	SW	NH3846 5494	Looking SW over Locha 'Mhuilinn dam and the dam	MKP	06/08/2012
12	SE	NH3846 5494	Locha 'Mhuilinn dam west wall face (loch to right)	MKP	06/08/2012
13	SW	NH39665 55802	Disused kennels located at NH3966555802	MKP	06/08/2012
14	NW	NH3972 5611	Green shed located at NE end of buried pipeline route; situated to southwest side of disused kennels	MKP	06/08/2012
15	NW	NH3972 5611	Green shed located at NE end of buried pipeline route; situated to southwest side of disused kennels	MKP	06/08/2012
16	WNW	NH3972 5611	Green shed located at NE end of buried pipeline route; situated to southwest side of disused kennels	MKP	06/08/2012
17	WNW	NH3972 5611	Disused kennels located at NH39725611 at NE end of buried pipeline route; situated to northeast of green shed	MKP	06/08/2012
18	NE	NH3972 5611	Disused kennels located at NH39725611 at NE end of buried pipeline route; situated to northeast of green shed	MKP	06/08/2012
19	NE	NH3972 5611	Green shed and disused kennels in centre background	MKP	06/08/2012