



*Highland Archaeology Services Ltd*

Bringing the past and future together

## **Forss Windfarm (Cabling)**



## **Archaeological Watching Brief**

**March 2007**

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## **Archaeological Watching Brief**

### **March 2007**

<b>Report No.</b>	HAS070405
<b>Site Code</b>	HAS/FOR07
<b>Client</b>	Scottish and Southern Energy
<b>Planning Ref</b>	N/A
<b>Report Date</b>	20 June 2007
<b>Authors</b>	Paul Humphreys and John Wood

## **Summary**

*An archaeological watching brief was carried out during the installation of cables to connect wind turbines at Forss, Caithness to the National Grid. There are no recommendations for further archaeological work in this case.*

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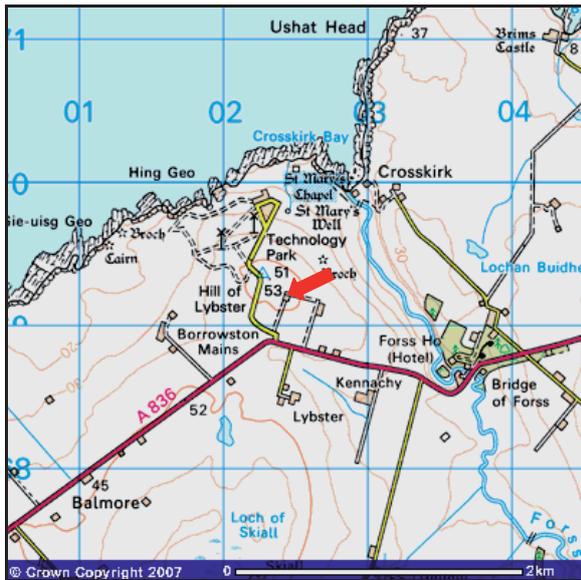
## Illustrations

*Cover: (Plate 1) Quarry and mounds of waste.*

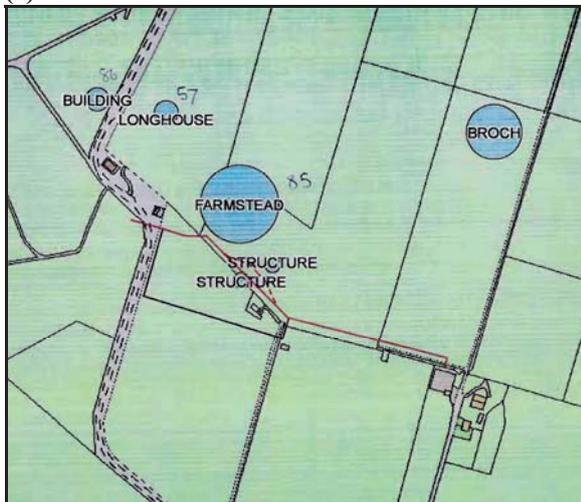
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## Location

The site is centred approximately at Ordnance Survey National Grid Reference ND 024 692. It is within the local authority area of the Highland Council, which is advised on archaeological matters by its Archaeology Unit staff based within the Council’s Planning and Development Service (HCAU).



(1)



(2)

### 1 Site Location

(2) Reproduced from material supplied by the Highland Council Planning and Development Service.

## Acknowledgements

We wish to thank Iain Richmond of Scottish and Southern Energy for commissioning the work, and Gemma Shannahan for assistance in the early stages. The archaeological fieldwork and photography was undertaken by Paul Humphreys, who also drew the plans; the project overall was managed by John Wood, who also undertook the desk-based assessment and edited this report. Mapping is reproduced here by permission of the Ordnance Survey under Licence 100043217

## Introduction

An archaeological watching brief was carried out in March 2007 by Highland Archaeological Services Ltd on behalf of the Scottish and Southern Energy on the installation of cables to connect a wind-farm at Forss to the National Grid. This report describes the work and presents the results. The weather and ground conditions were good and dry.

## Aims and objectives

- To minimise any possible delay or cost to the development by anticipating archaeological requirements as far as possible, timetabling and integrating archaeological recording work with the project, and dealing with any issues arising quickly and efficiently.
- To determine as far as possible the character, extent, condition, date and significance of any archaeologically significant remains; and to preserve these where possible and record where necessary in line with the Highland Council's Structure Plan, NPPG 5 and PAN 42.
- To ensure that any artefacts or human remains are dealt with in accordance with legal requirements and current Historic Scotland policy guidance.

## Archaeology and policy background

The planning and policy framework in this case included the Highland Council's *Structure Plan*<sup>1</sup>, and the Scottish Executive's *National Planning Policy Guidance Notes 5 (NPPG5)*<sup>2</sup> and 18 (NPPG18)<sup>3</sup>, and *Planning Advice Note 42 (PAN42)*<sup>4</sup> (SOEND 1994). The fundamental principles underpinning the above policies are set out in *Passed to the Future: Historic Scotland's Policy for the Sustainable Management of the Historic Environment (2002)*<sup>5</sup> and the *Burra Charter (Australia ICOMOS 1999)*.<sup>6</sup>

<sup>1</sup> <http://www.highland.gov.uk/yourenvironment/planning/developmentplans/structureplan/thehighlandstructureplan.htm>

<sup>2</sup> <http://www.scotland.gov.uk/Publications/1998/10/nppg5>

<sup>3</sup> <http://www.scotland.gov.uk/Publications/1999/04/nppg18>

<sup>4</sup> <http://www.scotland.gov.uk/Publications/1994/01/17081/21711>

<sup>5</sup> [www.historic-scotland.gov.uk/pasttofuture.pdf](http://www.historic-scotland.gov.uk/pasttofuture.pdf)

The Forss area is considered to be archaeologically sensitive: the route lay within an area where there are recorded archaeological sites, including an Iron Age broch c.250 metres to the north, and possible pre-clearance settlement remains further along the proposed route. There was therefore a potential for buried features to be affected by the cabling work.

The trench cut was to be circa 1500mm wide by 1200mm and of necessity required to follow a line taking it to within circa 20 m of a 19<sup>th</sup>.c Historic Rural Settlement site and within 2 metres of 2 amorphous mounds that may be of archaeological significance. A disused quarry and mounds of quarry waste were noted in the vicinity of the amorphous mounds.

## **Programme**

The work was designed to meet the brief supplied by the Highland Council Archaeology Unit.

### ***Desk Based Assessment***

A check of all relevant archaeological / historical records, maps and aerial photographs was undertaken. An online check was made of the Statistical Accounts, National Library of Scotland Map collection, National Monuments Record and Highland Sites and Monuments Record (SMR). The SMR was then checked for updates in the Council offices in Inverness, where the RAF 1947 aerial photographs were also examined. Historic Ordnance Survey mapping was also checked. The First Edition 1:10560 (6 inch) map of 1878 is reproduced below (Fig 2).

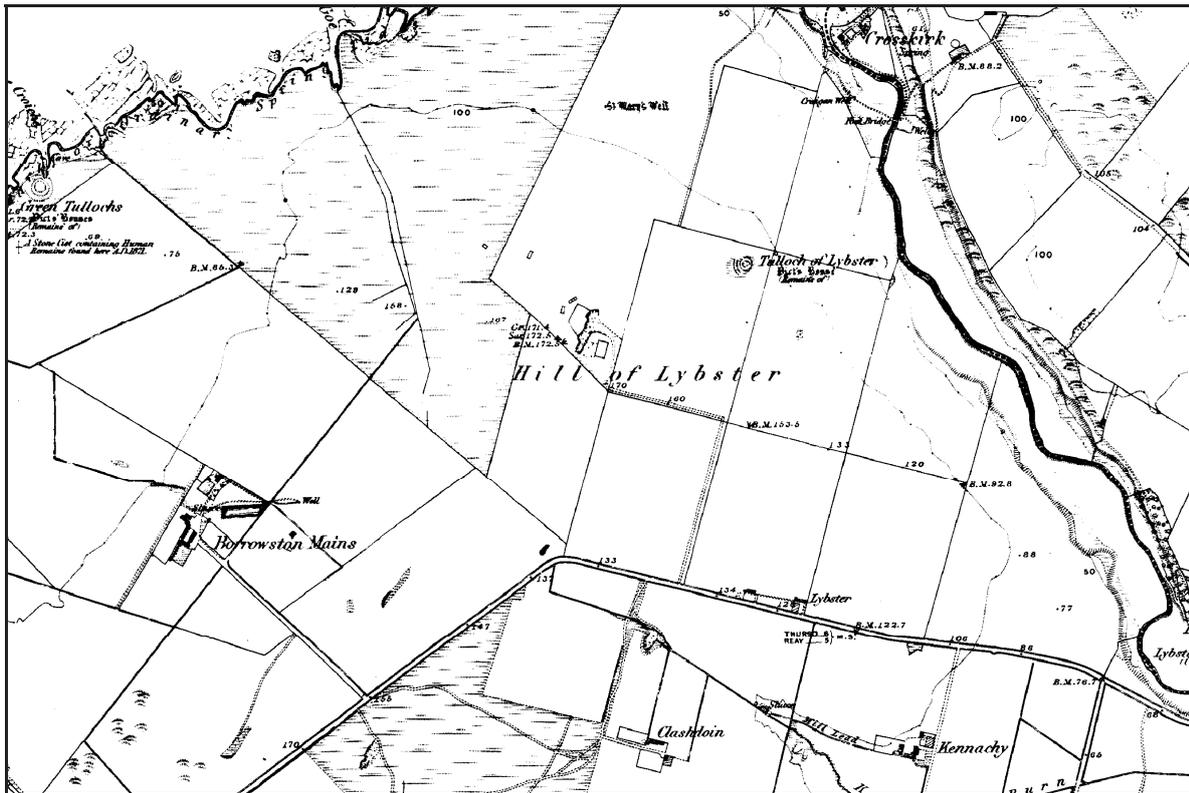
### ***Fieldwork***

#### **Site meeting**

A site meeting between archaeologists representing Highland Archaeological Services Ltd. and a representative of Southern Electricity was convened prior to the commencement of work to agree the route that the cable trench would follow in order to minimise the potential threat to the recorded archaeology. Particularly sensitive areas were marked off using pegs, hazard tape, and marking paint.

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<sup>6</sup> <http://www.icomos.org/australia/burra.html>



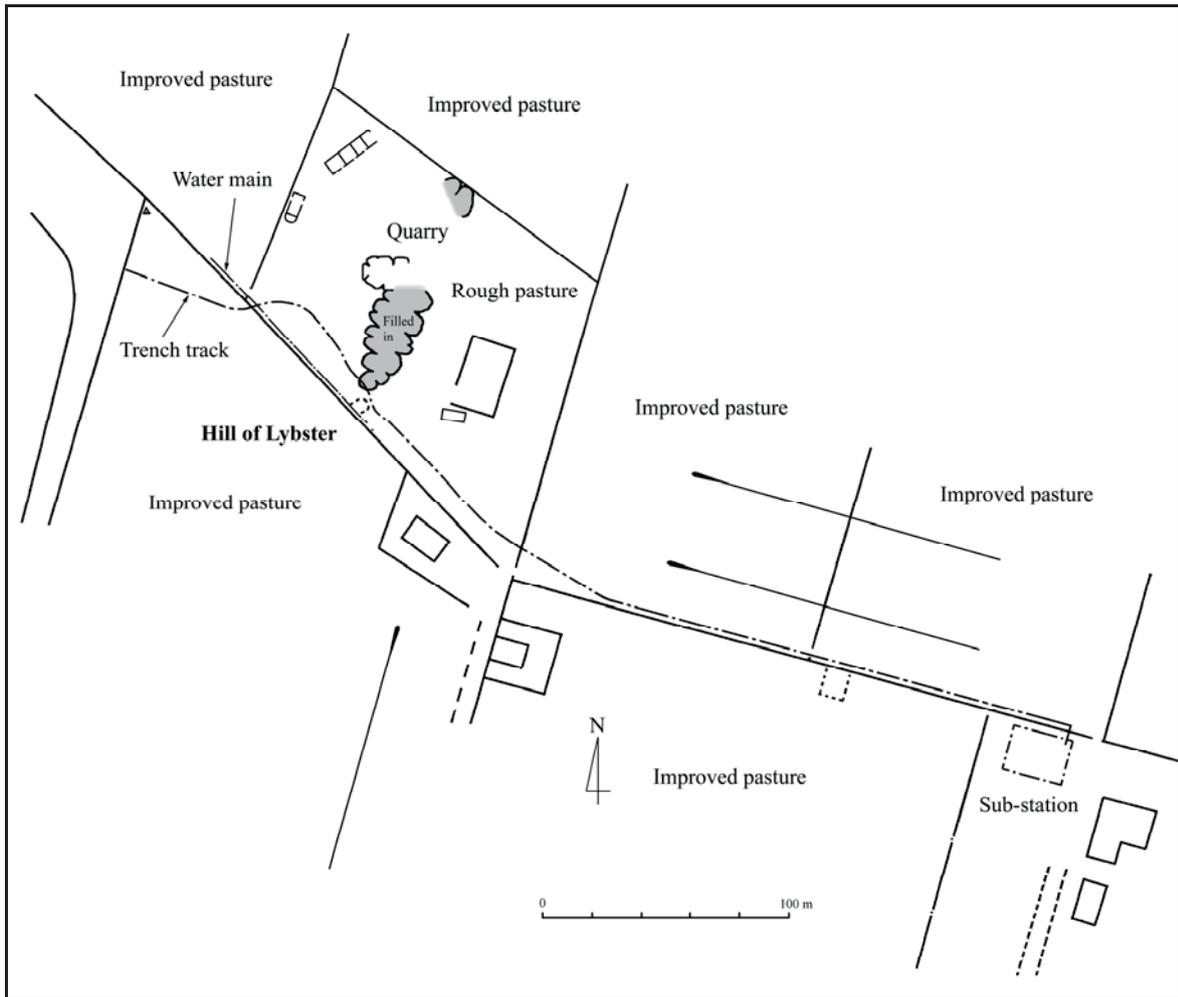
2 1st Edition OS 1:10560 map 1876 (not to scale)

### Walk-over DGPS survey

A survey of the principal features of the site was conducted using a Magellan (Thales) ProMark 3 GPS unit.

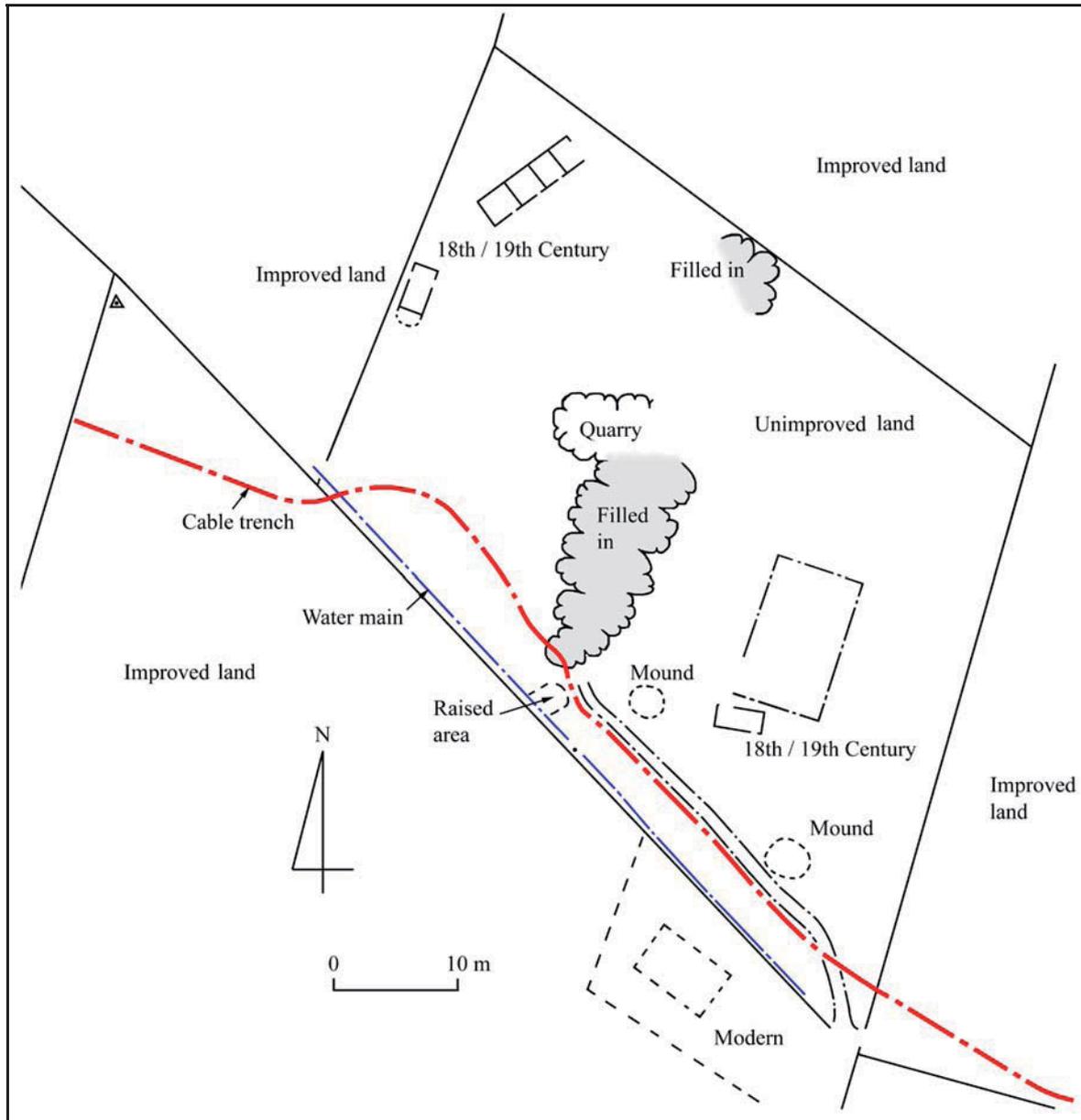
### Watching Brief

The trenching and cable-laying was carried out by M M Miller of Wick. The watching archaeologist consulted with Miller's site supervisor and both machine operators before work commenced to point out the marked out sensitive areas, and to explain the purpose and method of the Watching Brief, and what would happen if any archaeology was revealed.

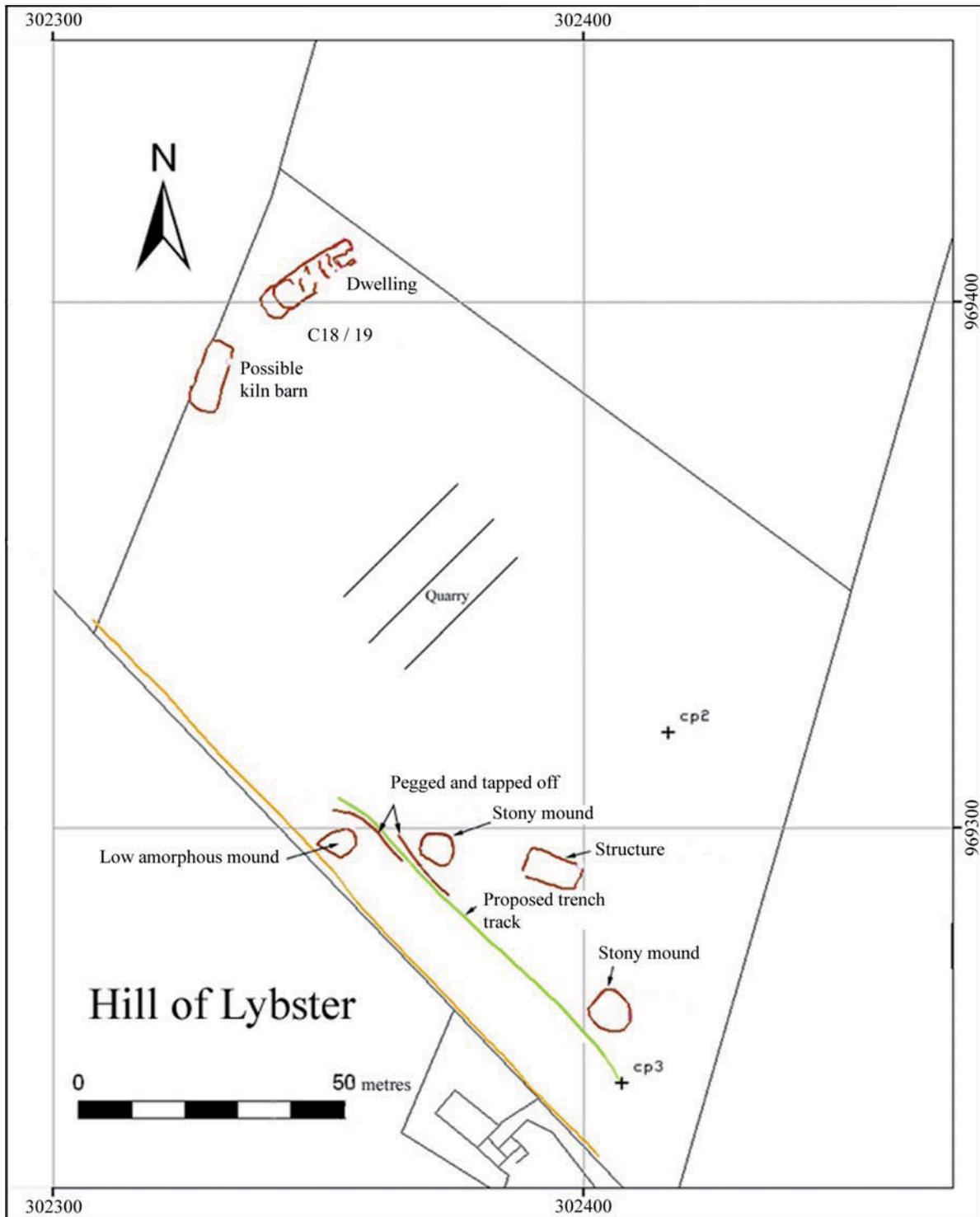


**3 Site layout: Hill of Lybster**

*(P.Humphreys)*



4 Trench line as cut  
(P.Humphreys)



5 Hill of Lybster – detail  
(P.Humphreys)

## Results

### ***Desk based Assessment***

The following sites were identified:

#### **Hill Of Lybster or Lybster Smallholdings**

HSMR No: Not found

NMRS Number: ND06NW 145.01

Type of Site: Defence/ Military/ Building; Radio Masts (Possible)

Map reference: ND 0225 6937

A building standing within a fenced enclosure was identified by the RCAHMS from a vertical air photograph (RAF 106G/Scot/UK133, 4093, flown 30 June 1946) immediately to the S of the A 836 public road about 400m W of Lybster Smallholdings.

The building is approximately 30-40m in length and also visible on the photograph are two triangular-shaped depressions extending N and NW. The depressions are of unknown use. Five possible mast bases are also visible in the S part of the enclosure.

The building is shown on the current OS digital 1:2500 scale map and was depicted as roofed on the OS 1:10560 scale map (1969). It was not affected by the work.

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#### **Hill Of Lybster**

HSMR No: Not found

NMRS Number: ND06NW 145.00

Type of Site: Defence/ Military/ Radio Station

Map reference: ND 0241 6919

A small radio station of probable WW II date was identified by the RCAHMS from a vertical air photograph (RAF 106G/Scot/UK133, 4093, flown 30 June 1946) on a track leading N from the A836 road to the postwar Wireless station (WT) 550m to the N (ND06NW 131).

two huts are visible with the small lattice mast immediately N of the hut at ND 02417 69195.

The post-war WT station lies within a fenced enclosure to the N.

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#### **Hill Of Lybster**

HSMR No: ND06NW0058

NMRS No: ND06NW 54

SITE TYPE: Structure;

Map reference: ND 0236 6928

In 1981 Roger Mercer noted "A rectangular grass covered structure, 4m E-W by 2m, with walls 0.5m thick with some stones showing."

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### **Tulloch of Lybster**

HSMR No: ND06NW0020  
NMRS No. ND06NW 20  
Site Type: Broch  
Map Ref: ND 0268 6947

In 1911 the RCAHMS noted, “The 'Tulloch of Lyster' broch has been cleared out and a wide gap made through the wall on the SE and NW, but small portions of the inner and outer wall faces are still visible. Its internal diameter is about 32 1/2ft, and its wall thickness, 14 1/2ft. There are slight remains of secondary buildings against the outer wall towards the E. A rampart, stone-faced on the inner side, with a ditch, formerly encircled the broch at a distance of 23ft, and the remains are still visible on the S and SW”.

According to Roger Mercer in 1981, the broch survives as a grass-covered mound about 20m by 1m high overall. Two outer ramparts with a medial ditch, are visible at a distance of 7m from the broch, and to the W is a sub-circular, grass-covered mound, 12 by 0.8m probably the remains of an outwork.

The broch lies to the north of the cabling trench and was not affected by the work.

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### **Hill Of Lybster**

HSMR No: ND06NW0059  
NMRS No: ND06NW 55  
SITE TYPE: Structure;  
Map reference: ND 0240 6930

Roger Mercer noted in 1981 “A rectangular, grass-covered enclosure 30 m NW-SE by 18m with walls 0.5m in height and thickness, of which some stones are visible. Attached on the W side is a structure measuring 9 by 4m.” The enclosure is visible on a RAF vertical air photograph (106G/Scot/UK133, 4093, flown 30 June 1946).

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### **Hill Of Lybster**

HSMR No: ND06NW0085  
NMRS No: ND06NW 122  
SITE TYPE: Farmstead;  
Map reference: ND 0235 6940

The RCAHMS First Edition Survey project (FESP) noted in 1995, “A farmstead comprising two unroofed buildings, one of which is a long building and has three compartments, and an enclosure is depicted on the 1st edition of the OS 6-inch map (Caithness 1876, sheet ix). It is not shown on the current edition of the OS 1:10,560 map (1969)”.

The farmstead is visible on a RAF vertical air photograph (106G/Scot/UK133, 4093, flown 30 June 1946).

## **Fieldwork**

The trenching commenced at the National Grid sub-station, progressing upslope traversed two fields of pasture (Illustration 6 below).



**6 (Plate 2) Lower pasture field and NG substation**

The soil profile on the lower slope comprised circa 20cm of humic plough soil, overlying a stony, clay-rich subsoil containing numerous clasts of mixed size and origin.

Heavy weathering of the slightly dipping bedrock over some sections resulted in there being no clearly defined interface between the base of the subsoil and the parent material (Illustration 7 below). Over these sections, the rock could be cut to the full depth by the machine bucket; over others, bands of harder rock were encountered that required to be broken-out by hydraulic pecker. The bedrock was very close to the surface over the full length of the trench.

The majority of the clasts within the subsoil were angular slabs derived from the local bedrock (upper Caithness flagstone group of the middle old red sandstones). The angular slabs were intermixed with rounded and faceted cobbles and boulders typical of glacially transported material (Illustration 8). Most of this material had been derived from the old red sandstones however igneous material was also present.



7 (Plate 3) Typical trench profile



8 (Plate 4) Geology: Mixed locally derived and glacially eroded clasts



9 (Plate 5) Hill crest rough pasture; bedrock close to surface



10 (Plate 6) Potential manuport

It was noted that the proportion of glacially transported clasts diminishes as the trench excavation approached the crest of the Hill of Lybster. This was attributed to late glacial solifluxion processes.

All the known archaeology potentially at risk was located in the field of unimproved rough pasture on the crest of the Hill of Lybster. In some sections the soil was very shallow; the turf peeling off the bedrock. The variability of the rock hardness continued over this section of trench.

## Observations

Both the trench-cut and spoil were examined for archaeological deposits and artefacts. One symmetrically rounded granite cobble, that was thought to be a potential manuport, was cleaned and examined for anthropogenic wear marks but none was found (Illustration 10 above).

In the lowest field, adjacent to the electricity sub-station, evidence of early anthropogenic soils buried by later slope-wash was looked for but none was evident.

On the crest of the hill, modern disturbance, notably the water main installation (Illustration 11 below), modern quarrying and subsequent infilling of the quarry was a significant factor in determining the localised surface topography and may account for the perceived archaeology in the area of the cable trench. One of the contractor's machine operatives reported his involvement in the infilling of the quarry with building rubble. This was confirmed by the archaeology.



11 (Plate 7) Water main



12 (Plate 8) Modern rubble from quarry in-fill



13 (Plate 9) Intermixed crushed shell in top soil

The only evidence for anthropogenic activity other than modern quarrying was a small lens of crushed shell intermixed with the top soil at a single location. The limited spread of the deposit suggested its use in lime mortar manufacture rather than agricultural improvement activity.

## **Conclusion**

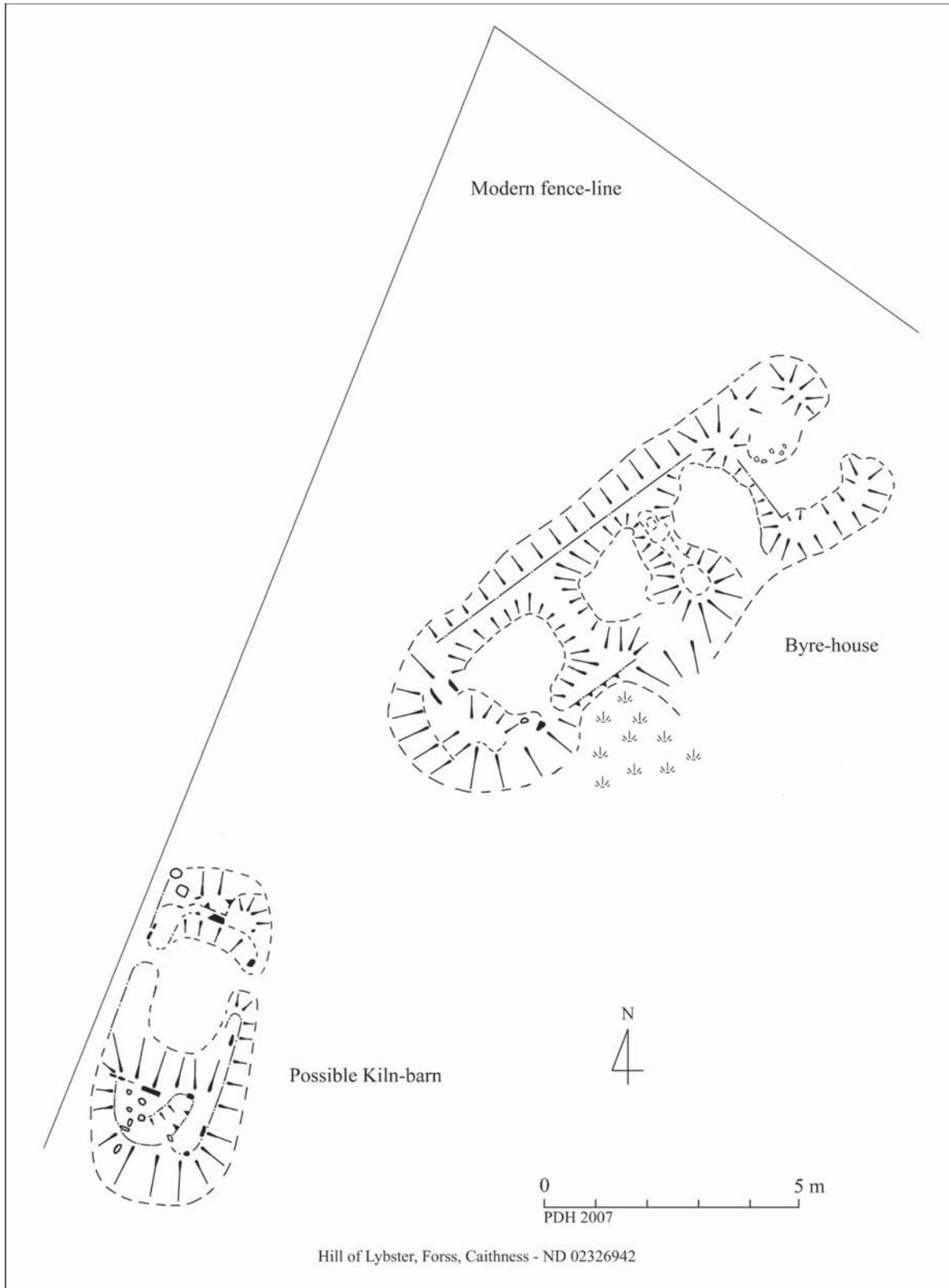
Modern quarrying and subsequent partial quarry in-filling activity casts doubt on the interpretation of the two mounds potentially threatened by the cable installation. Watching observations during the trench cutting did not reveal any anthropogenic deposits other than the small lens of crushed shell referred to above. The 18th / 19th century historic rural settlement remains were not compromised by the trenching work.

## **Historic Rural Settlement Remains**

During periods of watching brief inactivity arising from mechanical breakdown the opportunity was taken to record the 18th / 19th century historic rural settlement structures using taped-offset and triangulation. Two sites were recorded (Illustrations 14 – 23, below): the first comprising a single probable byre-house (3.5 x 17 metres internal) and an adjacent possible kiln barn (3.5 x 7 metres internal); the second a small outbuilding (3.5 x 7.5 metres internal) and possible hollow way bounding a vestigial enclosure.

## **Recommendations**

There are no recommendations for follow up work in this case.



14 Historic Rural Settlement Site 1



15 (Plate 10) Byre House, dwelling-end side elevation



16 (Plate 11) Byre-house, byre-end side elevation



17 (Plate 12) Byre-house, byre end gable elevation



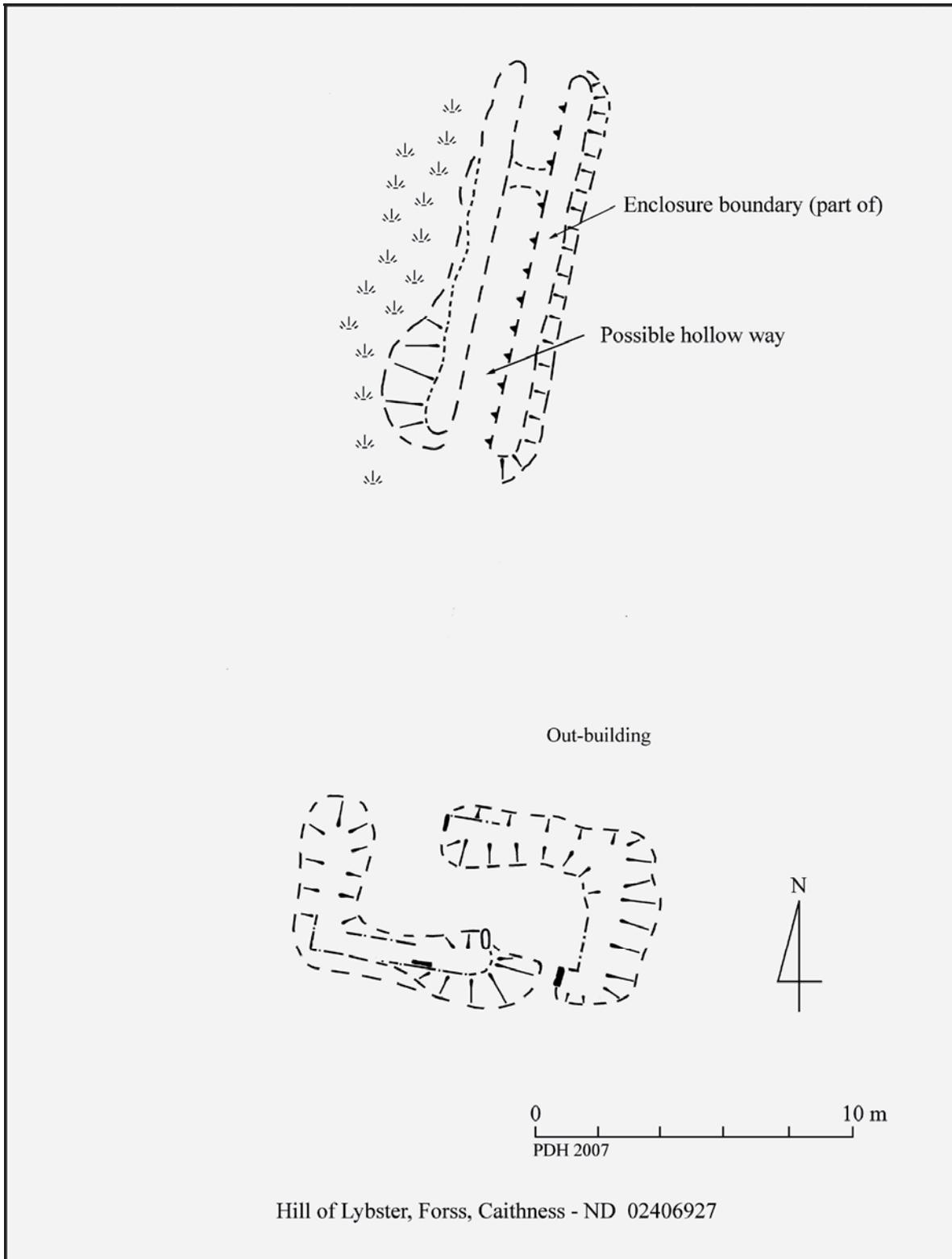
18 (Plate 13) Byre-house, dwelling-end gable elevation



19 (Plate 14) Possible kiln-barn, side elevation



20 (Plate 15) Possible kiln-barn, gable elevation



21 Historic Rural settlement site 2



22 (Plate 16) Outbuilding: gable elevation

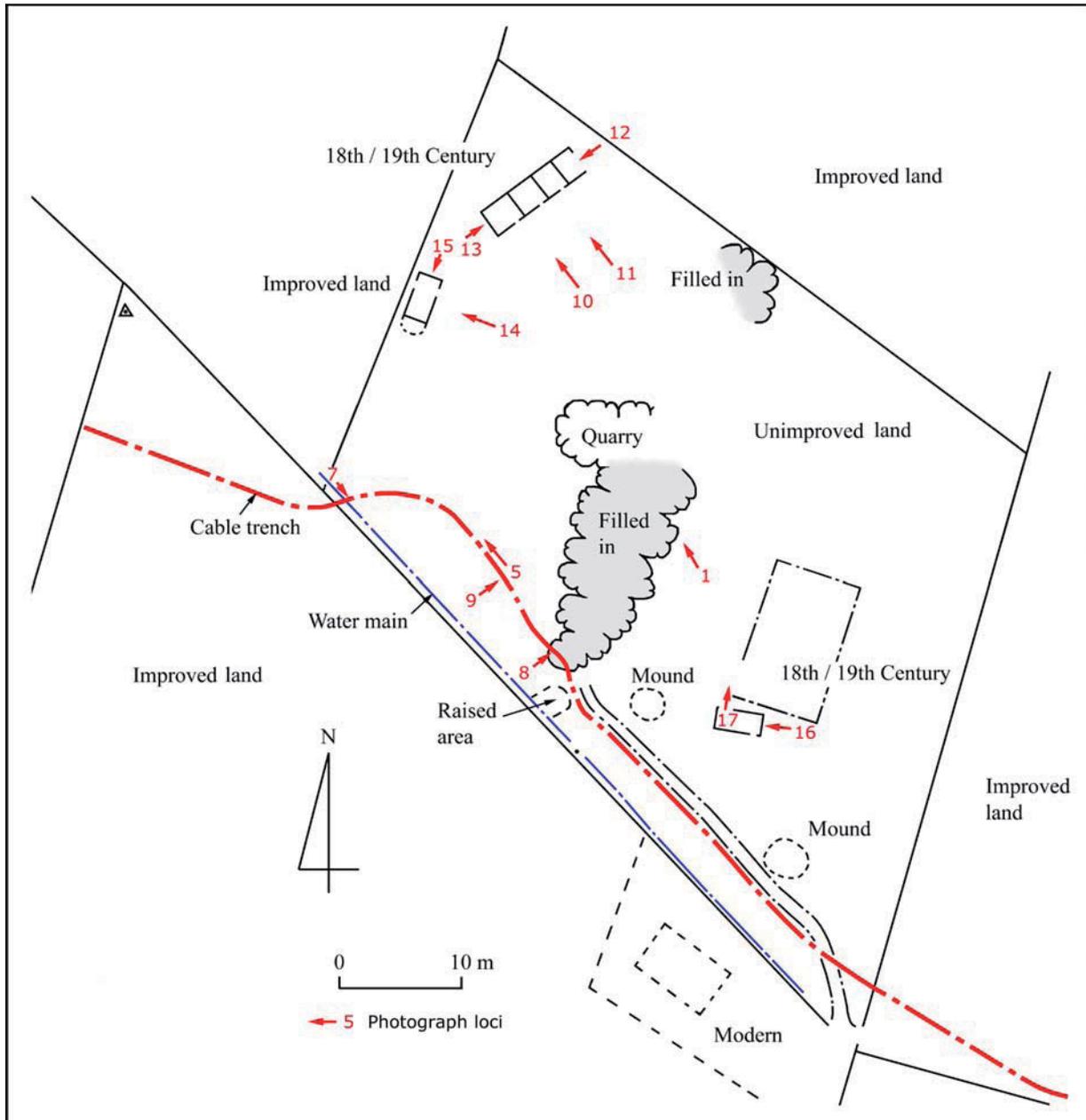


23 (Plate 17) Outbuilding: entrance and possible hollow way

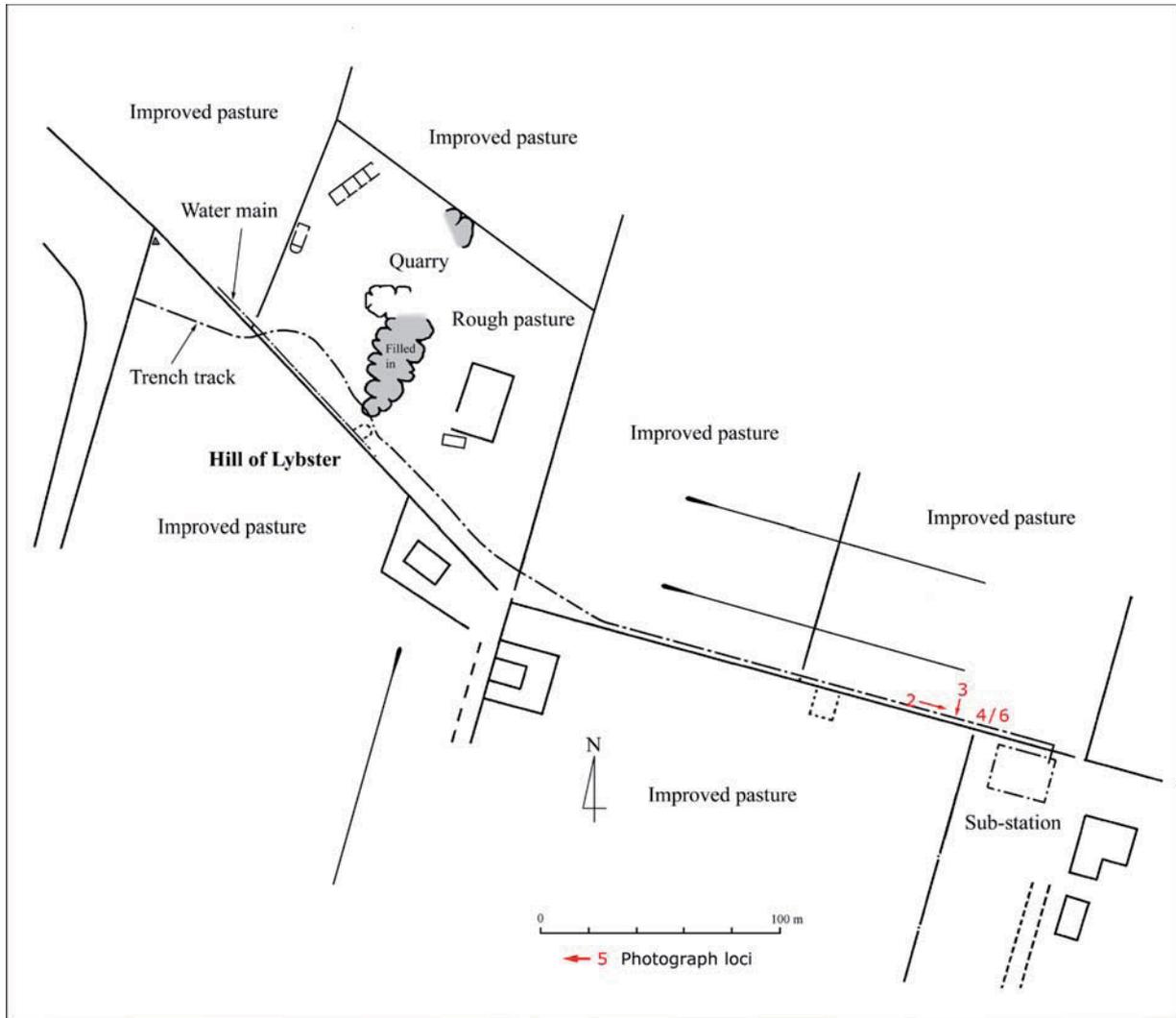
## Appendix 1: Photographs

A full set of photographs is included on the accompanying CDROM. Camera locations and direction of shot are indicated on the plans below.

No.	Notes	Taken by	Date
Plate 1	Quarry and mounds of waste	PDH	23/03/2007
Plate 2	Lower pasture field and NG sub-station	PDH	20/03/2007
Plate 3	Typical trench profile	PDH	20/03/2007
Plate 4	Mixed locally derived and glacially eroded clasts	PDH	20/03/2007
Plate 5	Hill crest rough pasture; bedrock close to surface	PDH	22/03/2007
Plate 6	Potential manuport	PDH	17/04/2007
Plate 7	Water main	PDH	22/03/2007
Plate 8	Modern rubble from quarry in-fill	PDH	22/03/2007
Plate 9	Intermixed crushed shell in top soil	PDH	22/03/2007
Plate 10	Byre-house, dwelling-end side elevation	PDH	23/03/2007
Plate 11	Byre-house, byre-end side elevation	PDH	23/03/2007
Plate 12	Byre house, byre-end gable elevation	PDH	23/03/2007
Plate 13	Byre-house, dwelling-end gable elevation	PDH	23/03/2007
Plate 14	Possible kiln-barn, side elevation	PDH	23/03/2007
Plate 15	Possible kiln-barn, gable elevation	PDH	23/03/2007
Plate 16	Outbuilding, gable elevation	PDH	23/03/2007
Plate 17	Outbuilding entrance and possible hollow way	PDH	23/03/2007



24 Photograph locations (1)



25 Photograph locations (2)