

Site Code: SBW02

Date: July 2007

Client: Kilbraur Wind Energy.

Kilbraur Wind Farm, Strath Brora, Golspie, Highland

Phase 1 Construction Programme:

Archaeological evaluation excavation of a clearance cairn

Jamie Humble

PROJECT SUMMARY SHEET (SBW02)

Client	Kilbraur Wind Energy
National Grid Reference	NC 76904 06808
Project Manager	Chris Lowe
Text	Jamie Humble
Illustrations	Caroline Norrman
Fieldwork	Elin Evertsson Jamie Humble Nick Moignard
Schedule	
Fieldwork	8 th to 18 th May 2007
Report	July 2007

Summary

This report presents the findings of an archaeological programme of works for the construction of the Kibraur Wind Farm, Strath Brora. The work was commissioned by Kilbraur Wind Energy and followed a specification by the Highland Council Planning and Development Service (Archaeology Unit).

The fieldwork was undertaken in May 2007 and comprised an archaeological evaluation of a rectilinear stony mound at NC 76904 06808 in the on-site borrow pit extension. The excavation of the cairn revealed it to be a simple clearance cairn, associated with Site 4/5 to the northeast.

No other archaeological features were identified in the surface preserved beneath the clearance cairn.

KILBRAUR WIND FARM, STRATH BRORA, GOLSPIE, HIGHLAND: RESULTS OF AN ARCHAEOLOGICAL EVALUATION OF A CLEARANCE CAIRN

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FIGURE 1. Site location

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1. INTRODUCTION

Headland Archaeology Ltd was commissioned by Kilbraur Wind Energy to undertake an ongoing programme of archaeological work during the construction of the Kilbraur Wind Farm, Strath Brora. This report presents the results of an archaeological evaluation of a rectilinear stony mound at NC 76904 06808 in the area of the on-site borrow pit extension.

The project was undertaken in accordance with a specification prepared by the Highland Council Planning and Development Service (Archaeology Unit)(Appendix 2) and followed a written scheme of investigation for the evaluation excavation (Lowe 2007b). This report follows detailed reporting of the cultural heritage within the area of the wind farm (Dalland & Lowe 2005; Geddes 2006; Hatherley 2006; Robertson 2006; Haston 2007a; Haston 2007b; Matthews 2007).

2. SITE LOCATION AND DESCRIPTION

The clearance cairn was located in the extension to the on site borrow pit and was situated in a firebreak within an area of forestry planted in the early 1990s (Figure 1)(Lowe 2007a). The rectilinear stony mound measured 11m by 4m aligned NW-SE with slightly tapered end and was covered in heather and grass. The SW edge of the mound was well defined and stood up to 0.80m high. The opposite NE side of the mound was less well defined and merged with the forestry ploughed ground adjacent.

The borrow-pit lies in an area of archaeological potential, with a possible burnt mound (Site 3) to the north and a large old settlement area marked by hut circles and cultivation remains principally in the form of small field clearance cairns (Sites 4 & 5) to the northeast.

3. OBJECTIVES AND METHOD

The objective of the evaluation of the stony mound was to ascertain the nature and extent of the feature prior to its destruction during site works.

The stony rectilinear mound was cleared of brush and dense vegetation before the overlying peat was removed in order to define its overall extent and form (Figure 2). Two hand-dug trenches representing a 20% sample of the feature were subsequently investigated. Trench 1 measured 5m by 1m and crossed the mound at its mid-point, where it is widest (Figure 3). Trench 2

measured 4m by 1m and ran from the SE end towards the centre of the mound (Figure 4). The excavated slots were positioned to clarify the nature of the mound, ascertain whether there was any structure to the stones and determine its archaeological significance.

4. RESULTS

After removal of the topsoil (101) and peat (102) the cairn was revealed to be roughly rectilinear with tapered ends and measured 11.8m SE-NW by 3.9m and reached a maximum height of 0.87m.

Trenches 1 and 2 showed that the cairn was made up of sub-rounded to sub-angular stones (104) of mixed geology that ranged in size from 0.10 to 0.60m in diameter with an average size of 0.20m. The largest stones were found towards the centre and base of the cairn.

The boulder interstices were filled by silt and decayed stone deposit (103) that had formed around the stones after the construction of the cairn especially at the base and top of the cairn with the central area being heavily voided. The stones of the cairn overlay and were embedded in a layer of iron pan overlying the natural sand (105) that sloped sharply from northeast to southwest.

5. DISCUSSION

The excavation of the cairn showed it to be a simple field clearance cairn associated with Site 4/5, a large prehistoric settlement consisting of three hut circles and around 50 small cairns to the northeast. This type of site is frequently encountered in upland Scotland with as many as 500 known systems in the county of Sutherland alone (Edwards 1978; Fairhurst & Taylor 1971; Yates 1984).

The clearance cairn appeared to be have been constructed around the largest stones that were either be in their original position or the first stones to be cleared from the cultivated areas as they were the most prominent and the largest obstacles to cultivation. The stones also appear to have been placed against a sharp natural slope, again utilising otherwise unworkable ground.

The presence of the cairn suggests that the land was used for cultivation. The absence of peat below the cairn implies that it was constructed during a period when the soil conditions were better than at present.

The location of Sites 4/5 on a SW facing slope would have proved important for the additional light and warmth. The gentle slope would have also given good drainage while still being easy to work (Yates 1984).

6. BIBLIOGRAPHY

- Dalland, M & Lowe, C 2005 *Kilbraur Wind Farm: further supplemental information Part II: Archaeology Sketch Plans and Notations*. Unpublished client Report, August 2005.
- Edwards, K. J 1978 'Excavation and environmental archaeology of a small cairn associated with cultivation ridges in Aberdeenshire', *Proc Soc Antiq. Scot*, **109**, 22-9.
- Fairhurst, H & Taylor, D.B 1971 'A hut-circle in Kilphedir, Sutherland', *Proc Soc Antiq. Scot*, **103**, 65-99.
- Geddes, G 2006 *Kilbraur Wind Farm, Strath Brora: Archaeological Watching Brief on trial pits in borrow pit area*. Unpublished Client Report, December 2006.
- Haston, S 2007a *Kilbraur Wind Farm: archaeological evaluation of a proposed borrow-pit; watching-brief on the groundworks of an access road and survey of Sites 102-104*. Unpublished client Report, January 2007.
- Haston, S 2007b *Kilbraur Wind Farm: archaeological excavation at the on-site borrow-pit*. Unpublished client Report, March 2007.
- Hatherley, C K 2006 *Kilbraur Wind Farm, Strath Brora: Archaeological Watching Brief on Preliminary Works*. Unpublished Client Report, October 2006.
- Lowe, C 2007a *Kilbraur Wind Farm: Additional archaeological survey for proposed extension to on site borrow pit*. Unpublished Client Report, January 2007.
- Lowe, C 2007b *Kilbraur Wind Farm, Strath Brora, Highland: archaeological programme of works in connection with the proposed extension to the on-site borrow pit*. Unpublished Client Report, March 2007.
- Matthews A 2007 *Kilbraur Wind Farm, Strath Brora. Phase 1 construction program: Archaeological watching brief of excavations for the Access track, Sub-station and other Groundworks*. Unpublished Client Report, April 2007.
- Robertson, A 2006 *Kilbraur Wind Farm, Strath Brora: Archaeological Watching Brief on Preliminary Works*. Unpublished Client Report, August 2006.
- Yates, M. J 1984 'Groups of small cairns in northern Britain – a view from SW Scotland', *Proc Soc Antiq Scot*, **114**, 217-234.

APPENDIXES

Photographic Register

Shot no.	Dir.	Description
1		ID shot
2	N	Pre-ex view of cairn
3	N	Pre-ex view of cairn
4	NW	Pre-ex view of cairn
5	SE	Pre-ex view of cairn
6	NE	Trench 1 topsoil and peat removed
7	SW	Trench 1 topsoil and peat removed
8	NW	Trench 2 topsoil and peat removed
9	SE	Trench 2 topsoil and peat removed
10	NE	Trench 1 Post-ex
11	SW	Trench 1 post-ex
12	SE	Trench 1 NW facing section (left hand side)
13	SE	Trench 1 NW facing section (middle)
14	SE	Trench 1 NW facing section (right hand side)
15	W	Trench 2 post-ex
16	E	Trench 2 post-ex
17	S	Trench 2 N facing section (W-end)
18	S	Trench 2 N facing section (E-end)
19	SE	Site fully exposed
20	NW	Site fully exposed
21	N	Site fully exposed
22	NE	Site fully exposed (SE half)
23	NE	Site fully exposed (NW half)

Context Register

No.	Description
101	Dark brown soft clayey silt with frequent roots. Topsoil in trench 1.
102	Dark brown to black compact silt and fibrous peat, heavily rooted with moderate inclusions of small sub-angular to angular stones. Peat deposit in trench 1.
103	Pale grey compact silt and gravel deposit, heavily rooted. Wind and water carried silt that has collected around the stones of the cairn after its construction with fragmentary and decayed stone mixed in.
104	Small to large sub angular to sub rounded stones of mixed geology that form the body of the cairn.
105	Medium brown coarse grained sand. Natural subsoil.
201	Topsoil in trench 2. Same as 101.
202	Peat deposit in trench 2. Same as 102.
203	Silt and gravel deposit in trench 2. Same as 103.
204	Stones in trench 2. Same as 104.

Drawing Register

No.	Type	Description
1	Plan	Trench 1 Pre-ex showing stones (104)
2	Plan	Trench 2 Pre-ex showing stones (204)
3	Section	NW facing section of trench 1
4	Section	NE facing section of trench 2
5	Plan	Cairn fully cleared of peat showing stones (104) and trenches 1 and 2 post-ex superimposed

APPENDIX 2

Kilbraur Wind Farm-Extention to the On Site Burrow Pit (Su-07-053)

Archaeological Evaluation, Detatiled Survey and Watching Brief

Highland Council Planning and Development Service

Archaeological Unit

1) Background

The application is for a proposed extension to the on site borrow pit to provide aggregate for the construction of Kilbraur wind farm. The proposal looks to extend the existing borrow pit to the south and west of its current location. The proposed development lies within an area where there are recorded archaeological sites: there is a potential for buried features to survive within the application site and to be impacted by the proposed development.

Three phases of work are required for the borrow pit extension at the site because there is a potential for finds or features of interest to be discovered during site works. The first phase will consist of an archaeological evaluation of the stony rectilinear mound (Feature C), as identified in the environmental statement (pg 7-5, 7.6.8-9), to assess its nature and extent. Any significant archaeological deposits identified will require to be excavated in advance of destruction. Phase 2 (which can run concurrently with Phase 1) will consist of a detailed survey and marking out of the extent of the two possible clearance cairns (Features A and B) on the southern boundary of the borrow pit extension, as identified in the environmental statement (pg 7-5, 7.6.6-7). This will be followed by Phase 3, a watching brief on all ground works of the borrow pit. A watching brief enables any discoveries to be recorded quickly and efficiently as they appear with minimum delay or disruption to the development.

2) Terms of Reference

This brief specifies what is considered to be the minimum acceptable standard of work; proposals that present a higher standard may be offered and accepted. It is assumed that this will form the basis of an agreed approach unless changes are agreed with Highland Council Archaeology Unit in writing before the start of any site works.

This brief has been produced for **Kilbraur Wind Energy**, who will be responsible for the work, including any tendering and contractual arrangements. It sets out in detail who is responsible for what, as well as the terms of reference, objectives, method, monitoring and reporting arrangements.

The work should be carried out by, or under the immediate direction of, a member of the Institute of Field Archaeologists to ensure that work is carried out to professional standards. The Archaeology Unit may refuse to accept work from, or otherwise take action against, archaeologists who fail to carry out work to these standards.

The Archaeology Unit would be pleased to comment on tenders submitted in confidence. Tenders should be accompanied by a project design, statement and evidence of competence, including the CV of the Project Director.

The brief has been produced specifically for this scheme based on documents supplied at the time it was issued. It is valid for one year from the date of issue.

Before site works start, the proposed arrangements, including a timetable for the work should be agreed with the Highland Council Archaeology Unit in writing.

3) Objectives

To identify and record any features or objects of archaeological importance that could be damaged or destroyed by this development, while minimising any delays or disruption to the development project.

4) Method

a) Desk-based Assessment

The work should be carried out with reference to the Cultural Heritage chapter of the Kilbaur Wind Farm Extension to the On Site Borrow Pit Environmental Statement. If this is not possible, a desk-based check of all relevant archaeological / historical records, maps and aerial photographs should be undertaken in the first instance. The following sources are recommended as a minimum:

- The Highland Council Sites and Monuments Record (SMR). *Please note - the online SMR 'Am Baile' is not designed for use in development control or for constructing management policy of sites. In order to source the full SMR information required for such studies all consultants should approach the Highland Council Archaeology Unit directly.*
- The National Monuments Record of Scotland (NMRS)
- Vertical stereo aerial photographic coverage held by RCAHMS and the Highland Council Archaeology Unit.
- Ordnance Survey map coverage from 1850 onwards, and any other readily available early cartographic sources held at the National Library of Scotland Map Library.
- Bibliographic references and early parish accounts.

b) Evaluation

The stony rectilinear mound (Feature C) located at NC 76904 06808, as identified in the Environmental Statement, requires evaluative excavation to assess the nature and extent of the feature.

The evaluation will comprise manual investigation of the mound. The feature must be cleared of any brash and/or dense vegetation. Once the overall form of the mound has been exposed, a series of exploratory slot trenches (or at least one quadrant trench) will be excavated by hand to reveal the makeup of the mound and identify any surviving archaeological deposits or features. The evaluation trenches should be sufficient in size and placement to adequately ascertain the nature of the above ground archaeology as well as the nature and extent of any associated below ground archaeology adjacent to the mound (a minimum of 20% of the upstanding remains should be exposed). Any possible dating material and soils should be sampled in a systematic manner. Any samples taken must be analysed and the results reported.

Close contact must be kept with the Archaeology Unit to allow a decision to be made regarding any further stages of work required to ensure 'preservation by record' of the feature. Depending on the nature of the archaeological remains uncovered by the evaluation, further phases of work, including full excavation, may be necessary.

c) Detailed Survey

Two possible clearance cairns (Features A and B) identified in the Environmental Statement and located at NC 76964 06736 and NC 76964 06748 respectively, require detailed survey and marking out.

A detailed survey aims to conduct a full measured survey and recording of a specified site or area. No excavation is to take place as part of this work.

The survey will include all surviving remains and associated features, in order to produce a scale plan of the site which will be accurately located and tied into the Ordnance Survey grid. Detailed written descriptions and photographs of each component of the site will be produced. Sufficient representative profiles should be obtained across all appropriate features to accurately record them.

The results of the survey, including all plans, will be interpreted and presented in a report illustrating the overall form and development of the site.

Features A and B will be marked out with a 5 meter buffer to avoid any unnecessary and accidental damage on these sites.

d) Watching Brief

A watching brief will be conducted by the Archaeological Contractor on all site ground-works associated with the borrow pit, so that any finds or features of importance can be recorded to professional standards.

The Archaeological Contractor will endeavour wherever possible to work with the main site contractor to ensure that any recording required is done with minimum delay to the site works. Those carrying out site clearance and excavation works will need to work closely with the archaeologist and provide all necessary access and other arrangements. Appropriate means of communication must be in place to ensure the smooth progress of the watching brief. The site contractor may need to use differing work practices on site than usual to enable the archaeologist to complete the work. For example:

- *Where excavating machinery is used, a straight-edged bucket must be used on a back-acting machine. Care will need to be taken to avoid over excavation, and the advice of the archaeologist on-site should be adhered to on this.*
- *Because the archaeologist must be able to record any archaeological remains encountered during the work to professional standards, site clearance works may take slightly longer than normal. This should be allowed for in the development project timetable.*

Each excavating machine needs to be watched by at least one archaeologist at all times (1:1 ratio). Work must not begin on site until this cover has been set up.

If isolated archaeological features or artefacts are identified during the watching brief, then the developer or his agents will be required to secure reasonable time and facilities for the archaeological contractor to record the features according to professional watching brief methodology.

Occasionally, more extensive excavation may be needed since there will be limited opportunities to preserve features in situ. If significant archaeological deposits are encountered during the watching brief, further operations must be halted and no further ground disturbance in that area may occur until a strategy has been agreed for appropriate further excavation or recording. In this event the Archaeological Contractor must immediately inform the developer, the main contractor and HCAU in order to agree an approach to a further phase of archaeological work.

Human remains must be immediately reported to the local police and to the Highland Council Archaeology Unit and should not be excavated as part of a watching brief.

Once areas have been cleared, and any archaeology present recorded, there should be no need for further archaeological work in these areas.

5) Report

A report must be produced which sets out the results of the work and makes recommendations for any required further work.

The Council will assume author's copyright unless advised otherwise. However, HCAU reserves the right to make the report available for reference and research purposes, either on paper, or electronically. The completed report will be made available for immediate public consultation for research purposes at the Highland Council Sites and Monuments Record, and through the public library service. The Archaeology Unit will acknowledge copyright in all cases.

a) Content

The report must include as a minimum:

- Location plan (bound into the report) showing the project area; area of watching brief; and relevant archaeological sites and features in the vicinity. The location plan must also show the position of features identified during the work.
- A detailed site background, including reference to previous work conducted in the wider area on similar developments and the results of such work.
- The circumstances and objectives of this work.
- An analysis of the project results drawing in comparative data; a statement regarding the potential for, and survival of, buried prehistoric sites in this area; and a statement of the significance of the results as per the Burra Charter.
- Scale plans, sections and photographs of all significant archaeological features noted.
- A full index to any records or other material generated by the project including the archive location.
- A list of finds, as appropriate, set out in the required format for Treasure Trove reporting.
- Details of the sampling and finds retention policies and their justification.
- A copy of this Specification for the required work, presented as an Appendice.
- Weather and other conditions affecting fieldwork.
- Proposals for presenting the results of the work to the local community where appropriate.

b) Distribution

The archaeologist appointed is responsible for making sure copies of the report have been received by the recipients listed below. The archaeologist appointed should allow for all costs when estimating for the work. We require archaeologists to submit satisfactory reports within the agreed deadline.

Apart from any copies required by the client, at least four copies of the project report must be produced by the archaeologist. These must be submitted to all of the following within 4 weeks of the completion of the field work.

- One paper copy for the Council's Area Planning and Building Standards Manager, District Council Offices, The Meadows, Dornoch, IV24 3SF.
- One paper copy to be deposited with the Council's Senior Librarian Information Co-ordinator, Libraries Support Unit, 31a Harbour Road, Inverness IV1 1UA. This will be available for public consultation through the public library service.
- One paper copy to be deposited with the Council's Assistant Curator (Archaeology), Museum & Art Gallery, Castle Wynd, Inverness IV2 3EB (*This copy will only be required if there are finds*).
- One digital copy for the Archaeology Unit, Planning and Development Service, Council Offices, Glenurquhart Road, Inverness IV3 5NX : The report should be

supplied by email or on a computer disc as a *pdf* file. Please ensure that all drawings and photographs are included.

c) Other Products of the Work

Where significant archaeology has been found, the archaeologist must arrange a presentation of the project results, to the local community within a year of the completion of the fieldwork. This is the responsibility of the Archaeological Contractor, and will not be funded by the Highland Council.

A brief summary of the results must be sent to the Council for Scottish Archaeology for inclusion in *Discovery and Excavation in Scotland*.

6) Monitoring

The archaeologist appointed is responsible for agreeing arrangements for monitoring with Archaeology Unit staff. We will monitor projects as necessary to ensure that minimum standards are met.

Prior notice of fieldwork starting dates - with contact names, telephone numbers and arrangements for access - must be given to the HC Archaeology Unit by the archaeological contractor.

Any unexpectedly significant or complex discoveries, or other unexpected occurrences which might significantly affect the archaeological work and /or the development must be notified by the archaeologist immediately to the applicant and the Senior Archaeologist. The finds or features must be left *in situ* until arrangements have been agreed for safeguarding or recording them. In the meantime work may continue on other areas of the site.

7) Finds

Chance finds can be made during any archaeological fieldwork. Archaeologists should note that advice and facilities for emergency conservation and temporary storage can be offered by Inverness Museum. All finds should be notified for Treasure Trove.

8) Insurance

The archaeologist appointed must take all necessary measures to conform with the Health and Safety at Work Acts and be covered by all necessary insurance. Section 24 of the Highland Council's revised Contracts Standing Orders states:

"All specifications issued by and contracts entered into with the Council in connection with the carrying out of work or the provision of services shall provide that the contractor holds a valid insurance policy, approved by the Council, for:-

1. Employers liability - minimum limit - £10m (statutory limit)
2. Public liability - minimum limit £5m.

9) General

The archaeologist agrees by undertaking this work to the terms of this brief, including the following:

The archaeologist appointed must:

- carry out the work according to the Code of Conduct, standards and guidance of the Institute of Field Archaeologists.
- agree a timetable for the work with the client and the HC Archaeology Unit.
- not comment to the press or other media without prior approval from the applicant and HC Archaeology Unit.

This brief has been produced by the Highland Council Archaeology Unit, to whom any enquiries should be addressed. No one else has authority to vary its terms.

Highland Council Archaeology Unit

Tuesday, 20 February 2007

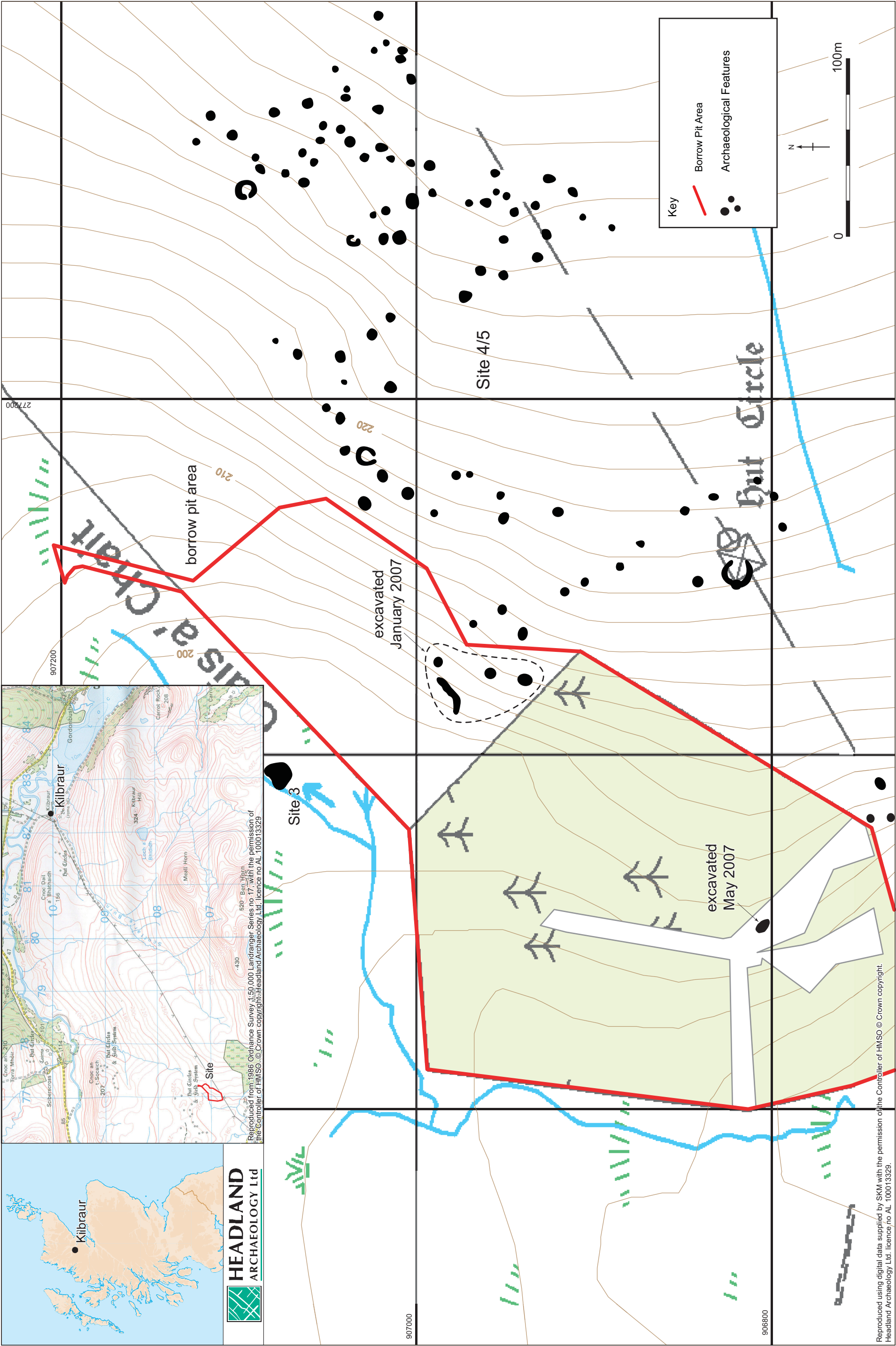


Figure 1: Kilbraur Wind Farm, Evaluation of cairn within borrow pit extension - Location plan.



Figure 2A: Cairn fully cleared of peat showing stones (104) and location of trenches 1 & 2 post-excavation superimposed.

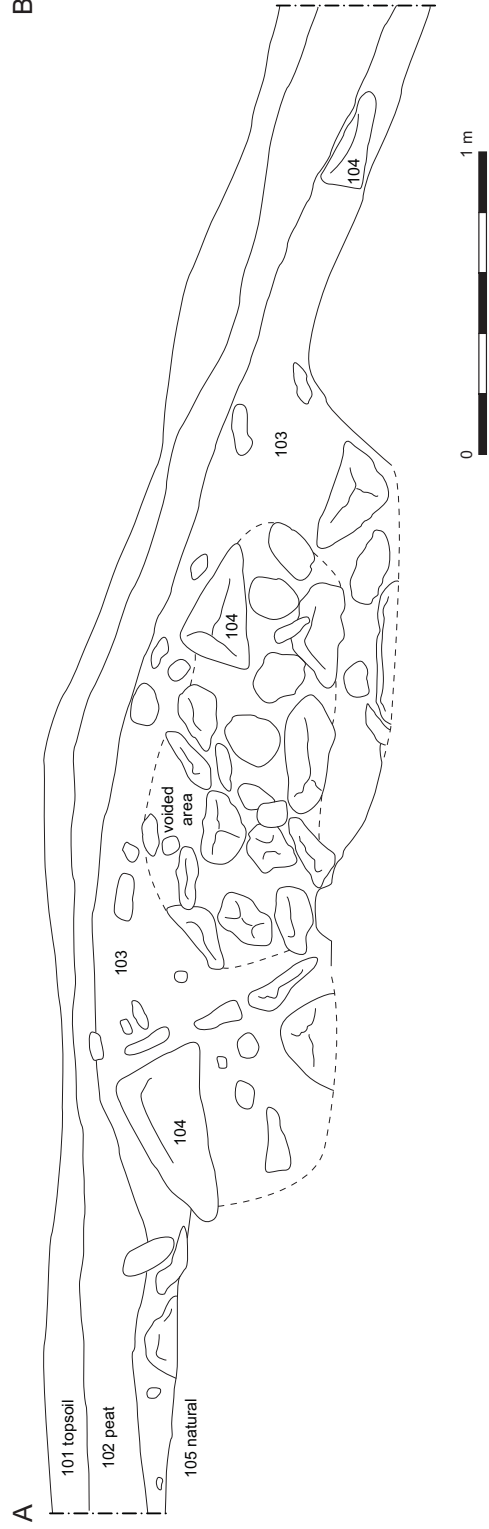


Figure 2B: Trench 1 northwest facing section.

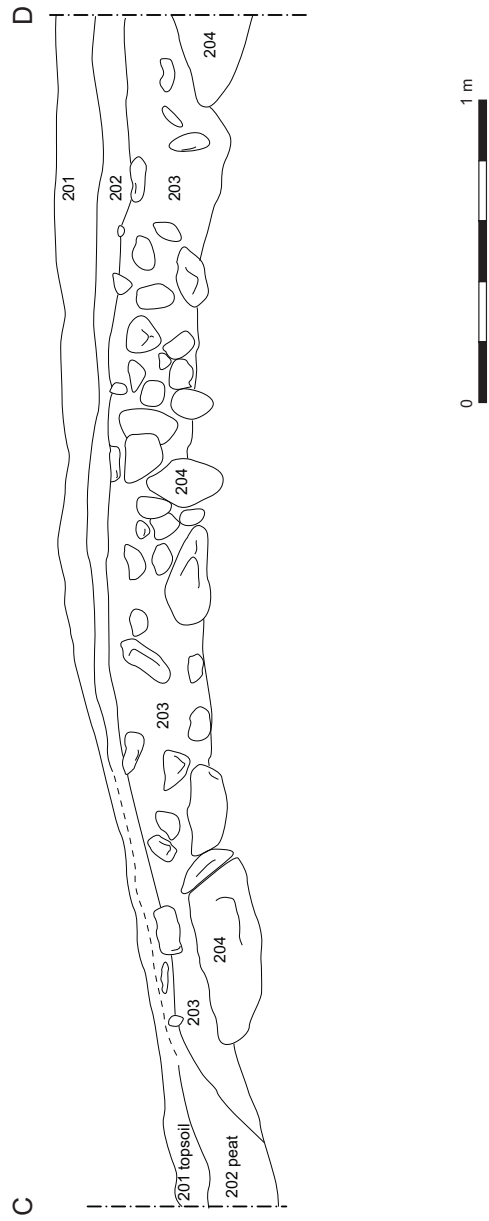


Figure 2C: Trench 2 northeast facing section.