

**Report of Archaeological Desktop
& Walkover Survey
Inverbain Hydroelectric Project
NG 78590/53885 to NG 78630/54818**

**By
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September 2002**

Introduction

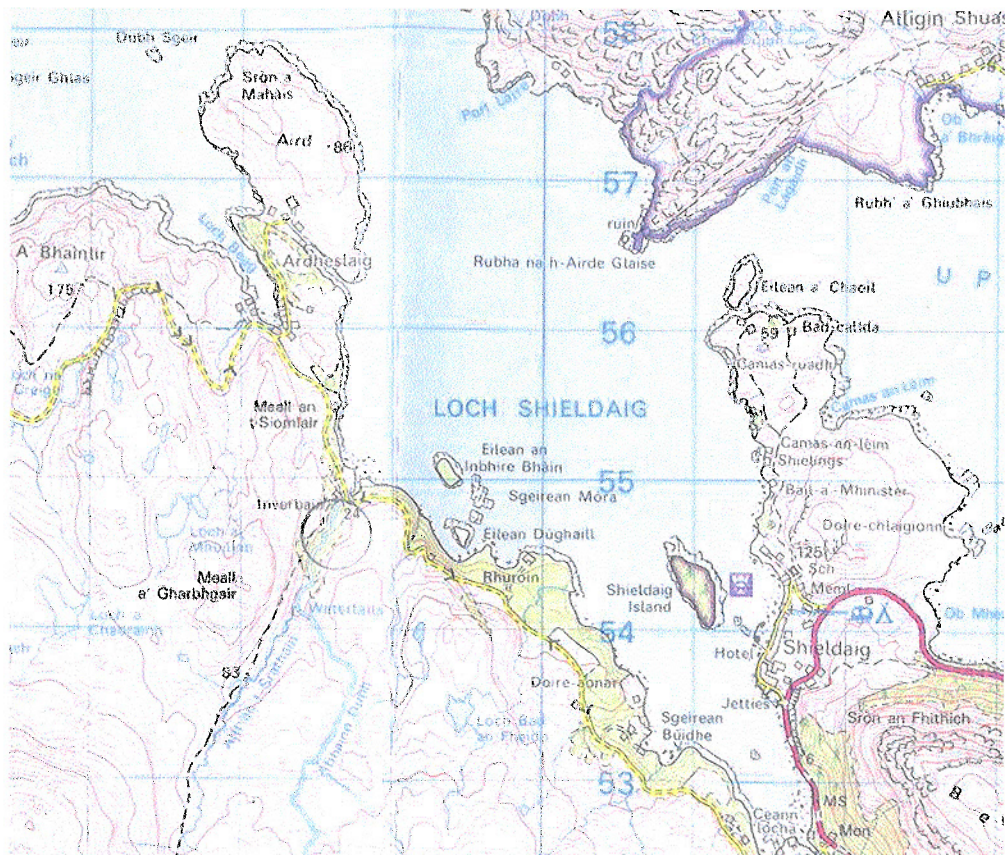
This report is for an archaeological desktop & walkover survey conducted on behalf of Innogy Plc by the author as part of the environmental impact assessment for the Inverbain Hydroelectric Project, by Sheildaig, Highland.

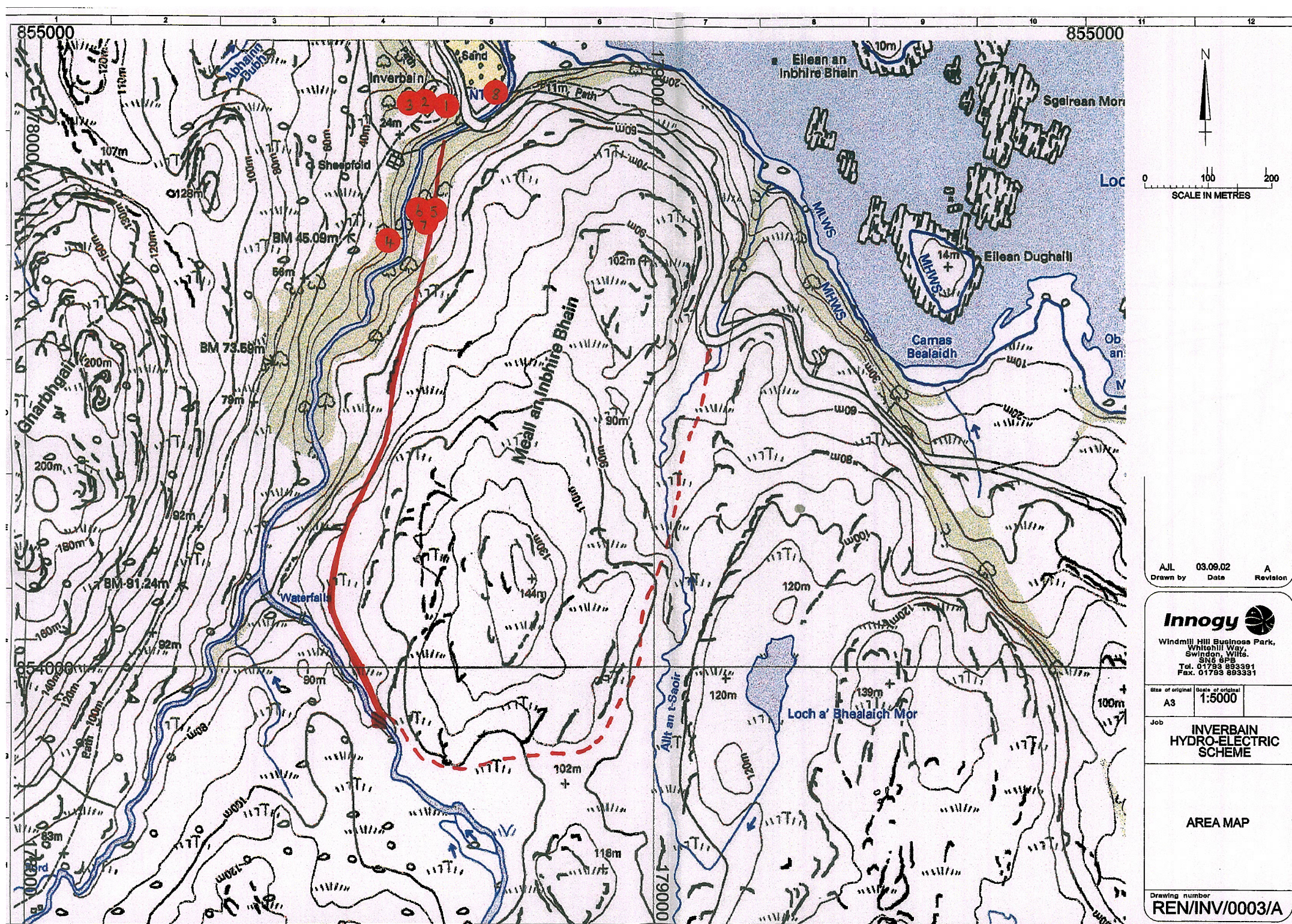
Acknowledgements

I would like to thank the following for their help during the work :

- Mr. N Richardson, of Innogy Plc;
- Staff of Highland Council Archaeology Unit;
- Staff of Highland Council Archives;
- Staff of the Royal Commission on the Ancient and Historic Monuments of Scotland, Edinburgh;
- Staff of the National Monuments Record of Scotland, Edinburgh;
- Staff of the National Library of Scotland Map Room.

Site Location





Objectives

The author was commissioned by Innogy Plc to conduct an archaeological desktop and walkover survey of the route of the Inverbain Hydroelectric pipeline with a 40m wide wayleave and associated access road with a 25 metre wide way-leave. This desktop to follow those guidelines as proposed by the Institute of Field Archaeologists (IFA, 1999) and to follow the enclosed specification as provided by Highland Council Archaeology Unit.

Desktop Results

A desktop survey was conducted using the following sources:

- Highland Council Sites and Monuments Record;
- National Monuments Record of Scotland, Edinburgh;
- Royal Commission on the Ancient and Historic Monuments of Scotland – aerial photograph collection;
- National Map Library of Scotland, Edinburgh;
- Highland Council Archives.

Both the aerial photography and the map coverage were very limited to the area of interest.

Aerial photographs, in particular the latest coverage was limited due to scale. Overall coverage was lacking with only the RAF coverage of 1947 being of use.

Map coverage was also limited as the 1st edition of 1880 (surveyed 1875) was almost the same as the 2nd edition of 1905 (revised 1902) and little survey work has been carried out in detail in the 20th century, with the next edition being late 1960's.

The following 8 archaeological sites were to be found on the route or in the vicinity of the pipeline (proposed new pipeline are highlighted in red on the accompanying maps with sites numbered, access road is marked as dotted red line).

Recommendations are given after each archaeological site.

HSMR – Highland Sites and Monuments Record
NMRS - National Monuments Record of Scotland
n/a – not available

Sites are as follows:

1 – Inverbain

HSMR – NG75SE 10

NMRS – n/a

Grid Ref: - NG 787/549

Type – Enclosure

Noted in HSMR of 'a circular enclosure lies to the E end of the road. J Aitken 25/4/01'.

Site is not marked on 1st edition OS of 1880 or 2nd edition OS of 1905.

Site lies well out-with pipeline route – site visit not made.

No recommendations to be made.

2 – Inverbain

HSMR – NG75SE 6

NMRS – NG75SE 5

Grid Ref: - NG 7864/5491

Type – Township, sheepfold

Noted in HSMR and NMRS of 'a township comprising 5 roofed buildings, 5 unroofed buildings and sheepfold are depicted on the 1st edition OS 6-inch (Ross 1881, sheet 91).

Two roofed buildings, 1 partially roofed building and a sheepfold are depicted on the current OS 1:10560 map (1969)'.

3 roofed buildings are depicted on the 2nd edition OS map of 1905, all marked on latest edition OS map. 2 of these buildings are not marked on the 1st edition OS. These 3 buildings are visible on aerial photograph of 1947 and other coverage. No other structures are visible on aerial photographs.

Site lies well out-with pipeline route – site visit not made.

No recommendations to be made.

3 – Inverbain

HSMR – NG75SE 2

NMRS – n/a

Grid Ref: - NG 786/549

Type – Settlement

Noted in HSMR of 'modern settlement on site of earlier settlement. NG 787/549 a circular enclosure lies to the E of the road. NG 786/553 rigs and an enclosure survive in the wood E of the road. J Aitken 4/5/01'.

Likely that this is a repeat of site 2 above and partially site 1. See site 2 for information.

Site lies well out-with pipeline route – site visit not made.

No recommendations to be made.

4 – Inverbain

HSMR – NG75SE 7

NMRS – NG75SE 6

Grid Ref: - NG 7857/5468

Type – Enclosure

Noted in HSMR and NMRS of 'an enclosure is depicted on the 1st edition OS 6-inch map (Ross 1881, sheet 91) but not shown on Os map of 1969 (1:10560)'.

Site is marked on 2nd edition OS map of 1905. Site is not visible on aerial photographs from 1947 to 1971 due to vegetation coverage.

Site lies well out-with pipeline route – site visit not made. Likely that this is a repeat of site 1 above.

No recommendations to be made.

5 – Inverbain

HSMR – n/a

NMRS – n/a

Grid Ref: - NG 78649/54747

Type – Circular structure

Walkover reveals a small structure of 2 small circular structures 2m in diameter with walls 0.4m thick and up to 0.4m high, one structure is open to the other. Aligned NNW-SSE.

Lies in area of dense bracken and may be associated with sites 6 and 7.

Site lies in direct line of proposed route, the following recommendations are to be made:

- *Route of pipeline to be moved to the west (up the slope) at least 10m away from site or new route corridor to be plotted between sites 6 and 7;*
- *Additional walkover survey to be conducted in early spring before bracken cover returns;*
- *Site to be marked off by barrier fencing during construction period. Archaeologist to inspect site before construction work is undertaken.*



View of circular structure facing N - scales 1m

6 – Inverbain

HSMR – n/a

NMRS – n/a

Grid Ref: - NG 78652/54743

Type – Rectangular structure

Walkover reveals a small rectangular structure aligned N-S 6m x 3m with rounded end walls with small circular structure at north end 1.5m in diameter both with walls 0.3m thick and up to 0.2m high. Lies in area of dense bracken and may be associated with sites 5 and 7.

Site lies in corridor of proposed route, the following recommendations are to be made:

- *Route of pipeline to be moved at least 10m away from site or new route corridor to be plotted between sites 6 and 7;*
- *Additional walkover survey to be conducted in early spring before bracken cover returns;*
- *Site to be marked off by barrier fencing during construction period. Archaeologist to inspect site before construction work is undertaken.*



View of circular structure at N end of building - scales 1m

7 – Inverbain

HSMR – n/a

NMRS – n/a

Grid Ref: - NG 78639/54731

Type – Clearance cairn

Walkover reveals clearance cairn 4m x 2m x 1m in height. Lies in area of dense bracken and may be associated with sites 5 and 6.

Site lies in corridor of proposed route, the following recommendations are to be made:

- *Route of pipeline to be moved to the west (up the slope) at least 10m away from site for new route corridor to be made between sites 6 and 7;*
- *Additional walkover survey to be conducted in early spring before bracken cover returns;*
- *Site to be marked off by barrier fencing during construction period. Archaeologist to inspect site before construction work is undertaken.*

View of cairn facing W - scales 1m



8 – Inverbain

HSMR – n/a

NMRS – n/a

Grid Ref: - NG 78756/54896

Type – Bridge abutment

Walkover reveals abutment of bridge by river edge, though no sign of abutment on opposite side of river? (Possibly landing jetty, though river is very shallow). 3m wide and up to 3m in height, track goes towards shore.

No recommendations to be made as should be unaffected by proposed scheme.



View of bridge abutments - scales 1m

Sites 5-8 are additional sites that were found as part of the walkover survey and are not recorded in the Highland Sites and Monuments Record or the National Monuments Record of Scotland, Edinburgh.

References

Highland Sites and Monuments Record database entries for NG75SE.

IFA (1999) By-laws, Standards and Policy Statements of the Institute of Field Archaeologists. Reading.

National Monuments Record of Scotland CANMORE entries for NG75SE.

OS Maps Consulted

Ross-shire Edition of 1880 (surveyed 1875) 6"-mile sheet 91.

Ross-shire Edition of 1905 (revised 1902) 6"-mile sheet 91.

OS map of 1969 for NG75SE 1:10,560.

Aerial Photographs Consulted

RAF CPE/Scot/UK 246 3041-3043, 4041-4043, 3051-3049	30-7-1947	1:10,000
RAF 58/RAF/2903 0010-0013	25-5-1959	1:14,000
OS OS/65/092 225-226 (end of run)	29-5-1965	1:10,000
OS OS/71/389 008-009	23-7-1971	1:27,000

Photographic Register

1 – View of circular structure – site 5 facing NE – scales 1m x 1m

2 – View of circular structure – site 5 facing N – scales 1m x 1m

3 – Detail of circular structure at north end of possible building – site 6 facing N – scales 1m x 1m

4 – View of clearance cairn – site 7 facing W – scales 1m x 1m

5 – View of bridge abutment – site 8 facing W – scales 1m x 1m

6 – View of bridge abutment – site 8 facing NW – scales 1m x 1m

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Innogy Hydro

Inverbain Hydro-electric Scheme

Requirements for Archaeological Study

Project Details

The proposed project is located in the catchment of the Abhainn Dubh at Inverbain, near Shieldaig, Wester Ross. The 100 m grid reference of the proposed power house site is NG 787 548, with an intake at approx. NG 786 539. The length of the intervening pipeline route is about 1100 m.

The approximate alignment of the proposed pipeline route has been marked with a series of bamboo stakes. The terminal points of the route at the intake and above the final drop to the Abhainn Dubh at the power house end are marked by two crossed stakes. At the power house end the pipeline would cross from east to west side of the Abhainn Dubh, probably on a bridge, to reach the power house.

There are two alternative power house sites which are being considered. Both are on the west (true left) bank of the Abhainn Dubh, adjacent to and on either side of the Shieldaig-Applecross road.

A separate all-terrain vehicle (ATV) access route is being considered for operational access to the intake from the Shieldaig/ Applecross road, leaving the road at NG 791 545. This would also be approximately 1100 m long, running across open moorland. For about two thirds of this distance it would follow a route already used occasionally by ATVs.

Study Area

The study area shall comprise:

- (1) the intake and both potential power house sites and land within 100 metres of these locations;
- (2) the intervening pipeline route and land within 100 metres on both sides of it (but excluding land on the west (true left) side of the Abhainn Dubh, except where covered under (1) above);
- (3) The possible ATV access route and land within 25 metres on both sides of it.

N.B. As the power house sites are immediately adjacent to the Shieldaig - Applecross road, immediate access to the power house sites would be entirely within (1) above.

Maps showing these routes and locations are attached (following by fax or 1st class post where this document is sent by e-mail).

Scope of Study

The Study shall meet the requirements of the brief produced by Highland Council:

"Brief for Archaeological Work: Archaeological Desk Study Assessment and Walk-over Survey: Produced for general use in electricity generation and distribution projects"

("the Highland Council brief"), a copy of which is attached, in so far as applicable to the scope of work set out below.

The Study shall comprise:

- (a) Desk-based assessment as per section 4 (a) of the Highland Council brief;
- (b) Walk-over survey and photographic record as per section 4(b), first paragraph, of the Highland Council brief;
- (c) Preparation of a report setting out the results of the work as per Section 4 (c) of the Highland Council brief, but the Contractor should not enter into discussions with Highland Council with regard to mitigation or recording arrangements (if required) without the prior agreement of Innogy's Technical Officer for the contract.

Because there is a possibility that the project might not gain planning permission (for whatever reason), any requirements of the Highland Council brief which would arise (or be liable to arise) only in the event of the project proceeding to construction, are to be identified and priced separately. It is recognised that the scope of work required during the construction phase will depend on the findings of the initial study and therefore it may only be possible to make a provisional estimate of the cost of this work .

The Contractor shall include for compliance with the requirements of Section 5 of the Highland Council brief in so far as relevant to the scope of work, and with the requirements of Section 6 of the brief with regard to reporting.

The Contractor shall include for producing and distributing copies of the report in accordance with Section 6 of the Highland Council brief, but such distribution to third parties shall not take place until the report has been reviewed by Innogy and the Technical Officer has approved its distribution.

Health and Safety

The Contractor must comply with Innogy's requirements on health and safety as well as all relevant statutory requirements. In particular, the Contractor will be required to submit a risk assessment to Innogy and obtain approval of this before undertaking any field work.

Programme

The earliest possible completion is required, at the latest a report should be with Innogy by the end of this month (September 2002).

Brief for archaeological work

**ARCHAEOLOGICAL DESK ASSESSMENT AND
WALK-OVER SURVEY**

*Produced for general use in electricity generation and
distribution projects*

**HIGHLAND COUNCIL
PLANNING AND DEVELOPMENT SERVICE**

Archaeology Unit

1) Background

Capital projects can impact on valuable features of historic and archaeological importance. Arrangements should therefore be made to avoid such features wherever possible. Where this is not practicable, they should be recorded before they are damaged or destroyed. This will need to be done by a qualified and experienced archaeologist.

In the highlands, there has been relatively little archaeological survey carried out but conditions have tended to mean that there can be a high survival of features and finds of all periods. These may be buried with only limited visibility above ground. There is therefore a need to establish the potential impact of projects on both recorded and unrecorded archaeology at the earliest possible stage so that an appropriate approach can be taken to preserving them wherever possible, or recording them where preservation is impractical.

The first requirement is therefore for a check of available records and aerial photographs. However, as many parts of the highlands have not been subject to systematic archaeological field survey, there is a potential for further unrecorded archaeology of all periods. A rapid walk-over survey should therefore be undertaken by an archaeologist at the earliest possible stage to assess the nature and extent of this potential. This should assess the likelihood of buried as well as surface remains, and indicate any areas of particular sensitivity. Similar walk-over surveys in similar areas elsewhere have revealed large numbers of visible, but previously unrecorded sites of all periods.

Although this brief is for a basic desk based assessment and walk-over survey, in some cases, field evaluation by trial trenching or geophysics may also be needed to establish the nature and extent of buried archaeological features. The advice of the archaeologist appointed should be followed in this, but the Archaeology Unit can advise if required.

A report should present the conclusions of this work and propose mitigation and recording arrangements to be followed in this scheme. Such arrangements might include re-routing to avoid key areas, excavation and recording of features, and / or an archaeological watching brief on site clearance and excavations for construction purposes.

2) Terms of Reference

The company commissioning the project as a whole will be responsible for the archaeological work, including any tendering and contractual arrangements.

This brief may be used to obtain estimates from archaeologists. It specifies what we consider to be the ***minimum*** acceptable standard of work; proposals that present a higher standard may be offered and accepted. *We will assume that this will form the basis of an agreed approach unless changes are agreed with us in writing before the start of any site works.*

It sets out in detail who is responsible for what, as well as the terms of reference, objectives, method, monitoring and reporting arrangements. The approach set out below aims to establish as far as possible the nature and extent of any features of archaeological interest likely to be affected at the earliest possible stage so that they can be preserved, or if necessary recorded before destruction.

The Archaeology Unit will be pleased to comment on tenders submitted in confidence if required. Any tenders should be accompanied by a project design, statement and evidence of competence, including the CV of the Project Director, and other staff where possible.

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. Where archaeological work is conducted in response to a planning condition or is commissioned by the Highland Council itself, 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 area to be covered is the entire wayleave, and includes any proposed ancillary works unless otherwise indicated.

The brief is based on details supplied at the time it was issued. However briefs have to be updated from time to time, so if any of these details do not apply when site works start, or fieldwork commences more than a year from the date below, please contact us to request the latest version. It may differ from previous briefs supplied by us for other projects.

Before site works start, the proposed arrangements, including a timetable for the work should be agreed with the Senior Archaeologist in writing.

3) Objectives

To identify the location, nature and extent of any features or objects of archaeological importance that would be damaged or destroyed by this project.

To assess the likelihood of buried as well as surface remains, and indicate any areas of particular sensitivity.

To propose arrangements for the safeguarding where possible (or recording where necessary) of any archaeological features or finds identified. These arrangements will need to be agreed by the Senior Archaeologist before the start of site clearance works.

To ensure that the need for archaeological conservation and recording are met without causing any unnecessary delay or disturbance to the project.

4) Method

a) Desk-based Assessment

An initial check of all relevant archaeological records and aerial photographs held in Inverness and Edinburgh will be needed. At least the following sources should be checked:

- *The Highland Council Sites and Monuments Record (SMR) (Inverness)*
- *The Highland Council Archives (Inverness)*
- *The National Monuments Record (Edinburgh)*
- *any locally held private archives*
- *any aerial photographic coverage*

b) Walk-over survey and photographic record

A walk over survey of the project area will be needed to enable identification of any upstanding remains, from any period (including 19th and 20th century features of historic interest, such as military or industrial archaeology). All individual features should be photographed and the features themselves and the location and direction of all photographs taken should be marked on a 1:2500 plan, keyed by means of Grid References to the Ordnance Survey mapping.

Before any construction work starts on site, the archaeologist should mark the limits of all features likely to be affected on the ground by temporary boundary flags or tape set at least 5m out from the nearest visible feature edge. This should help to avoid accidental damage by contractors or machinery on site.

c) Report

A report must be produced which sets out the results of the work and proposes appropriate arrangements for the safeguarding where possible (or recording where necessary) of any objects or features identified. Normally this report will be attached as an appendix to the Environmental Statement and any conclusions addressed in the Statement text. However separate copies of the archaeological report will also be needed (see below). Proposed mitigation and / or recording arrangements must be agreed by the Council's Senior Archaeologist before the start of site clearance works.

5) Monitoring

The archaeologist appointed is responsible for agreeing arrangements for monitoring with Archaeology Unit staff. We aim to monitor archaeological projects as necessary to ensure that, as far as possible, minimum standards are met. This is usually by unannounced site visit - alternative or additional monitoring arrangements may be made in individual cases.

Prior notice of fieldwork starting dates, with contact names and local addresses, telephone numbers and directions and other arrangements for access must be given to the Senior Archaeologist by the archaeologist contracted to carry out the work.

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. Such finds or features must not be disturbed until arrangements have been agreed for safeguarding or recording them.

6) Reporting

a) Project report

The archaeologist appointed is responsible for producing a report on the work, *and for making sure copies 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 3 weeks** of the completion of the field work.

- 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.
- Two copies for the Archaeology Unit, Planning and Development Service, Council Offices, Glenurquhart Road, Inverness IV3 5NX :
 - One paper copy
 - One copy of the complete report in Adobe Acrobat format (ie a pdf file). This can be supplied by email or on a computer disc. Please ensure that all drawings and photographs are included.

The report must include, as a minimum,

- Location plan showing the project area and archaeological sites and features affected. Grid references must be included.
- Circumstances and objectives of this work, including a copy of this specification.
- Weather and other conditions affecting fieldwork.
- Scale plans, and photographs of all archaeological features noted.

- A full index to any records or other material generated by the project including its location.
- A brief analysis of the project results drawing in comparative data as appropriate, and a statement of the significance of the results for future research. Note that a negative result may itself be significant.
- General comments and proposals for future archaeological projects arising from the carrying out of this project.
- A set of colour slides or print quality digital images illustrating the project progress from start to completion.
- A list of finds, set out in the required format for Treasure Trove reporting. Copies of the necessary forms are obtainable if required from the Council's Assistant Curator (Archaeology), Museum & Art Gallery, Castle Wynd, Inverness IV2 3EB.

b) Presentation

Where significant archaeology has been found, a presentation of the project results should be made to the local community within a year of the completion of the fieldwork. Arrangements must be agreed with the Senior Archaeologist.

c) DES

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

d) Copyright

The Council will assume author's copyright unless advised otherwise. However, the Archaeology Unit 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.

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 on consultation with the Conservation Officer and Assistant Curator (Archaeology). A list of services and table of costs are available from the museum.

Archaeologists undertaking fieldwork should notify the Council's Assistant Curator (Archaeology) at Inverness Museum, who will in turn notify local museums of the fact that there is archaeological work ongoing in the area. All finds should be notified for Treasure Trove before the report is submitted.

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 guidelines of the Institute of Field Archaeologists.
- agree a timetable for the work with the client and the Senior Archaeologist.
- not comment to the press or other media without prior approval from the Council's Senior Archaeologist.
- fully allow for prevailing weather conditions in northern Scotland.

Any Health and Safety incidents on site involving the archaeologist must be immediately notified to the Health and Safety Executive.

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

John Wood
2002

Senior Archaeologist

Wednesday, 18 September