

SUAT Ltd

archaeological
contractors



***An Archaeological Recording
and
Watching Brief
Achavanich Stone Setting
Caithness***

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NMR/CAM/AX01

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Contents

1.0	Non Technical Summary	Page 2
2.0	Introduction	Page 2
3.0	Archaeological Recording	Page 5
4.0	Conclusions	Page 6
5.0	Bibliography	Page 6

Illustrations

Illus 1	Location map of Achavanich Stone Setting	Page 7
Illus 2	Achavanich Stone Setting with position of cutting (plan of stones after Bramman <i>et al</i> 1982, 13)	Page 8
Illus 3	South facing section through road and bank	Page 9
Illus 4	West facing section through road and bank	Page 10
Illus 5	Copy of original scheduling map of site	Page 11

Appendix

Appendix 1	Brief for archaeological work	Page 12
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Editor	Damian Hind, BA (Hons), MA

*An Archaeological Recording
and
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Caithness*

1.0 Non-Technical Summary

SUAT Ltd (hereafter SUAT) were asked to carry out a watching brief and recording exercise during road-widening operations immediately beside Achavanich Stone Setting (Scheduled Ancient Monument 420), one of the major prehistoric monuments of Caithness. This watching brief was assigned SUAT site code AX01.

A machine-dug cutting had been made into a bank in which several of the standing stones on the western side of the setting are embedded. On being appraised of the situation, the Highland Council Archaeologist halted further work, to allow the exposed section to be recorded. The age of the bank and its relation to the stone setting were unknown, and this recording aimed to shed light on this phase of construction.

Recording showed that the bank was most likely to be associated with the construction of the road, rather than being a part of the monument.

2.0 Introduction

2.1 Background

During road widening works adjacent Achavanich Stone Setting, Caithness, a cutting was made into a bank on the western side of the monument. Several of the 40 remaining standing stones are embedded in this bank, and it was believed that the bank might relate to the construction of the monument.

On being appraised of the situation, the Highland Council Archaeologist halted further work, to allow the exposed section to be recorded. As the age of the bank and its relation to the stone setting were unknown, this recording aimed to shed light on this phase of construction.

The recording was carried out by Niall Robertson, of SUAT Ltd, over 24th–25th March 2003

2.2 Description of the monument

Achavanich Stone Setting (also called Achkinloch) is one of only two known monuments of its type in Scotland, both of which are in Caithness (Illus 1). The second, at Broubster (ND 048 609), is less well-preserved, and also considerably more remote. Achavanich by contrast is just beside the Sheppardstown road that runs between Lybster village and Achavanich on the A895 (ND 188 418). It was added to the Schedule of Ancient Monuments in 1933, and is number 420.

The setting consists of some 40 stones in the form of a truncated oval or 'U-shape' open to the south-south-east (Illus 2). It measures 68.5 m x 30.5 m, and may originally have comprised about 60 regularly-spaced standing stones. Around a third of this total have been removed or weathered away over the centuries. Some of the stones remaining in situ have been reduced to stumps, but most stand to their original height, on average 1.5 m. The stones are relatively thin slabs of the local flag, which readily splits into neat sub-rectangular blocks (see further below).

The stones are placed with their broad faces towards each other, so that their edges point away from the centre of the monument. Where they survive to their original height, it is noticeable that all but one has sloping top-edges. The higher end is consistently placed towards the centre of the setting. The exception is the most northerly of the stones. It is distinctly rectangular, and shows no sign of having originally had a sloping top. This difference is clearly deliberate, and must have had some unknown significance for the builders of the monument. The stone is further differentiated by having a cist-like structure at its foot.

The 'horse-shoe' setting has been compared to arrangements at certain other important prehistoric monuments, including Croftmoraig in Perthshire and even Stonehenge, although its opening to the SSE instead of the SW is untypical. The monument's purpose is unknown, it has been speculated that Achavanich and other prehistoric stone settings may have been laid out in such a fashion that surrounding landscape features could be used as foresights in astronomical observations. In fact prominent landmarks visible from the setting are few, though Mackie has suggested a possible alignment towards Mount Morven, visible to S in clear weather (1975, 223)

Achavanich Stone Setting is presumed to be Bronze Age in date, but has not been excavated in modern times, and no associated finds are recorded.

The Norse-derived place-name Stemster is of interest, as it is probably means 'stone(s) farm'. The Scandinavians who settled the area in the Early Medieval period evidently found the setting impressive to acknowledge it with a place name.

2.3 Monument setting

Examination of the monument on site suggests the possibility that its position may have had some relationship to Loch Stemster. This small loch (about 0.5 km x 0.5 km) is immediately to the north, and the slight ridge on which the stone setting stands overlooks it. The ridge runs SSE, and is one of a number of parallel ridges in a shallow valley, west of Stemster Hill. These run into the loch as narrow rocky promontories. The promontories' outcrops tend to weather into slabs of exactly the same shape and size as the standing stones, which were no doubt quarried there. They would only need to have been taken about 200 m up a slight slope to the monument site by its prehistoric builders.

The setting is surrounded by a horizon of higher land in every direction. The ridge on which it stands has lower land to east, west and south. This is however by no means a prominent locale and the stones cannot be seen at any great distance. To the west the land slopes down to an area of old peat workings, beyond which is another small body of water, Loch Rangag (not visible from the setting). To the north, the land falls down to the shallow valley in which Loch Stemster lies, and to the east, the stones are on the edge of a moderately steep slope down to a boggy hollow. On the ridge on the other side of this bottom is a ruinous chambered cairn of Neolithic date, probably several centuries older than the stone setting. The presence of these major monuments in close proximity may suggest that the Achavanich area was a sacred landscape for a long period. Towards the end of the ridge on which the chambered cairn is set, which is the longest of the promontories running into the loch, is what appears to be a sub-rectangular stone setting, with several large slabs set on edge, that seems unlikely to be of natural origin. It is possible that this is a further prehistoric monument.

The Sheppardstown road cuts through the western side of the ridge on which the setting stands. At the nearest point the edge of the tarmac is only about 5 m from the western line of standing stones. Between the road and the stones is a drainage ditch, and a bank in which the fence line is set (not at its highest point). This bank slopes down between, and partially envelops the eastern line of standing stones up to the point where they begin to turn northwards (see Illus 2 and 3). There is no corresponding bank to the north and east of the setting. On these sides of the monument the stones follow the edge of the ridge.

To the west of the road the ground surface is considerably lower than the interior of the stone setting: this was assumed to be the original ground surface. The fence west of the road is also set in a small bank, which is clearly formed from the upcast from the roadside ditch.

This suggests that the 'bank' enveloping the western line of stones is most probably the upcast from the cutting of the road and its accompanying ditch through the monument site: an operation which resulted in the unwitting burial of

part of the stone setting. The level of the road surface is notably lower than the interior of the monument, indicating a considerable amount of material must have been displaced when it was being laid out.

2.4 Archiving

The site records will be deposited with the NMRS, and at the same time, a summary of the site archive with several black and white prints and colour slides that best characterise the work undertaken and the discoveries made, will be submitted to Highland Council Sites and Monuments Record.

2.5 Acknowledgements

SUAT wish to thank John Wood, Highland Council Archaeologist for his co-operation and advice during this project.

3.0 Archaeological Recording

3.1 Description

A cutting some 25 m long had already been machine-excavated along the east side of the road (Illus 2) prior to arrival. It had been dug to approximately 0.5 m below the road surface, from the edge of the tarmac and about 2.5 m towards the stone setting, slightly short of the fence line. The road edge was neatly vertical and cut into stiff natural clay, with the eastern end of the cutting being more irregular, cut through loose deposits.

The excavation had removed the roadside ditch, which rendered the bottom of the trench boggy in places. Fortunately, the weather was dry for the two days the archaeologist was on site. The drainpipe that was to have replaced the ditch had already been inserted, but had been removed again to aid recording.

After initial photographic recording of the section, it was cleaned by trowel, photographed, and a 1:20 scale drawing made of a representative 12 m stretch (Illus 4). As the cutting appeared not to have disturbed archaeological deposits, it was considered unnecessary to draw it in its entirety.

3.2 Description of deposits

Recording was hampered by the highly disturbed nature of the section, which comprised of very loosely bonded upper deposits with a predominance of large stones. The deposits encountered are illustrated in Illus 4 and summarised below:

- 01 Turf.
- 02 Topsoil full of numerous loose stones.
- 03 Loose, friable shattered bedrock, approximately horizontal bedding planes, mixed with brown loam.
- 04 Clay mixed with rotten bedrock lying at all angles. Most of the clay was orange in colour due to oxidization, but it was white at the interface with 03 and 05.
- 05 Loose, friable shattered bedrock, approximately horizontal bedding planes, mixed with brown loam. Differentiated from 03 by its looser nature, possibly suggesting redeposited material.

The deposit 05 only differed from 03 in terms of its highly uncompacted nature, suggesting that it may have been recently disturbed, rather than built up over time.

No finds of any kind were recovered from any of the deposits.

A plan was made of the position of the cutting in relation to the stone setting (Illus 2). A sample of deposit 02 was taken, thereby allowing the opportunity for scientific dating of the bank if it was later deemed necessary.

The brief for the recording suggested that it would be advisable for the archaeologist to be present when the drainage trench was dug. In the event this proved unnecessary, as it was determined that excavation would only disturb natural deposits. Minor scarping of the top of the bank for stabilisation also only disturbed the turf and topsoil.

4.0 Conclusions

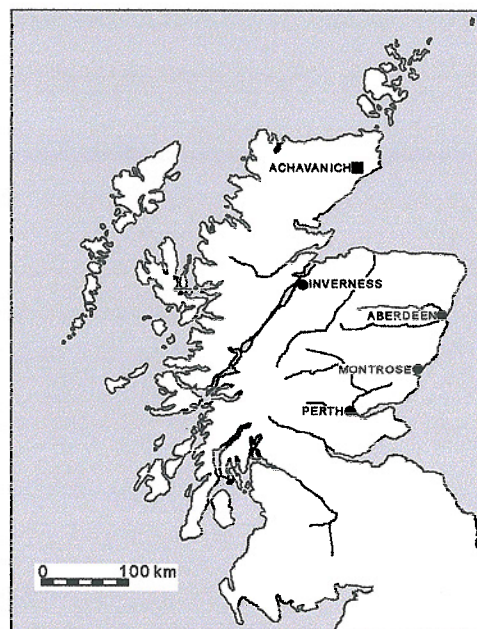
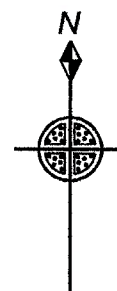
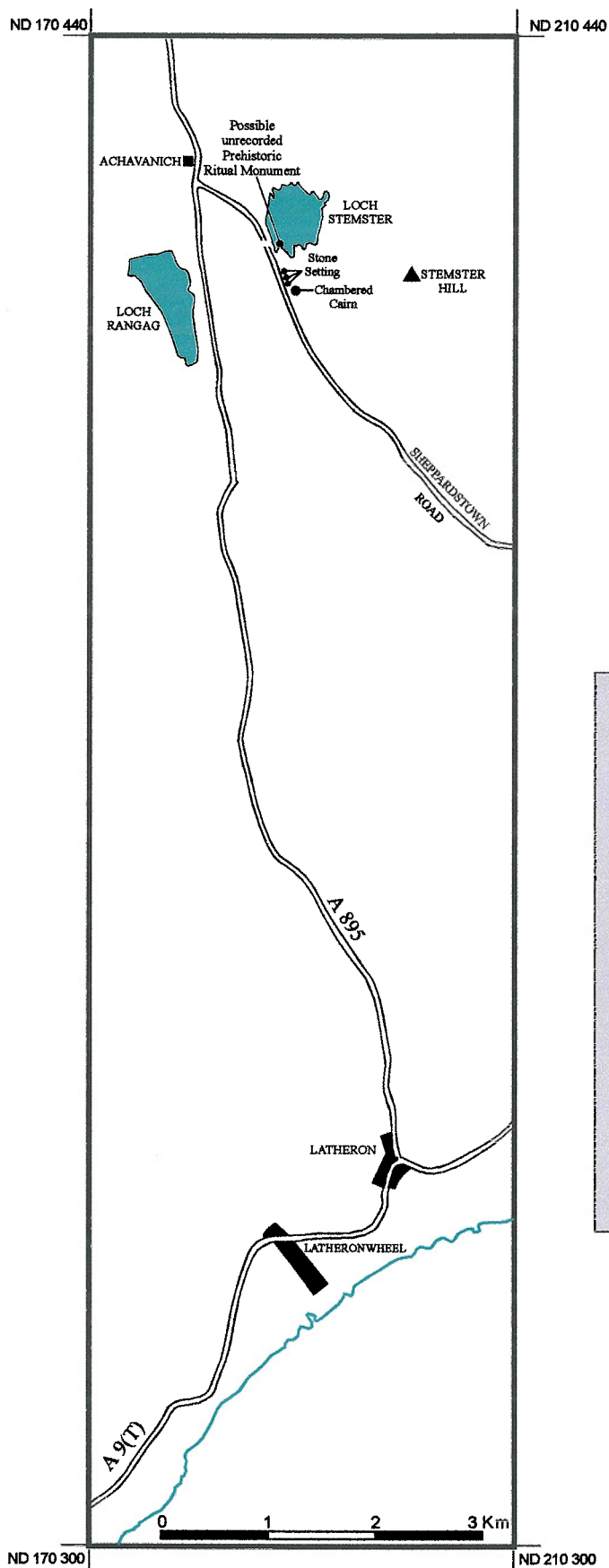
No archaeologically significant deposits or finds were recorded during excavations. The highly disturbed nature of the bank and the redeposited material (05) suggested that the bank were not ancient: this was further confirmed by the lack of banking around those parts of the monument that did not border the road. Most likely, the bank represents material resulting from the modern road construction.

5.0 Bibliography

Bramman, J. *et al* 1982 *Visits to Ancient Caithness*. Thurso.

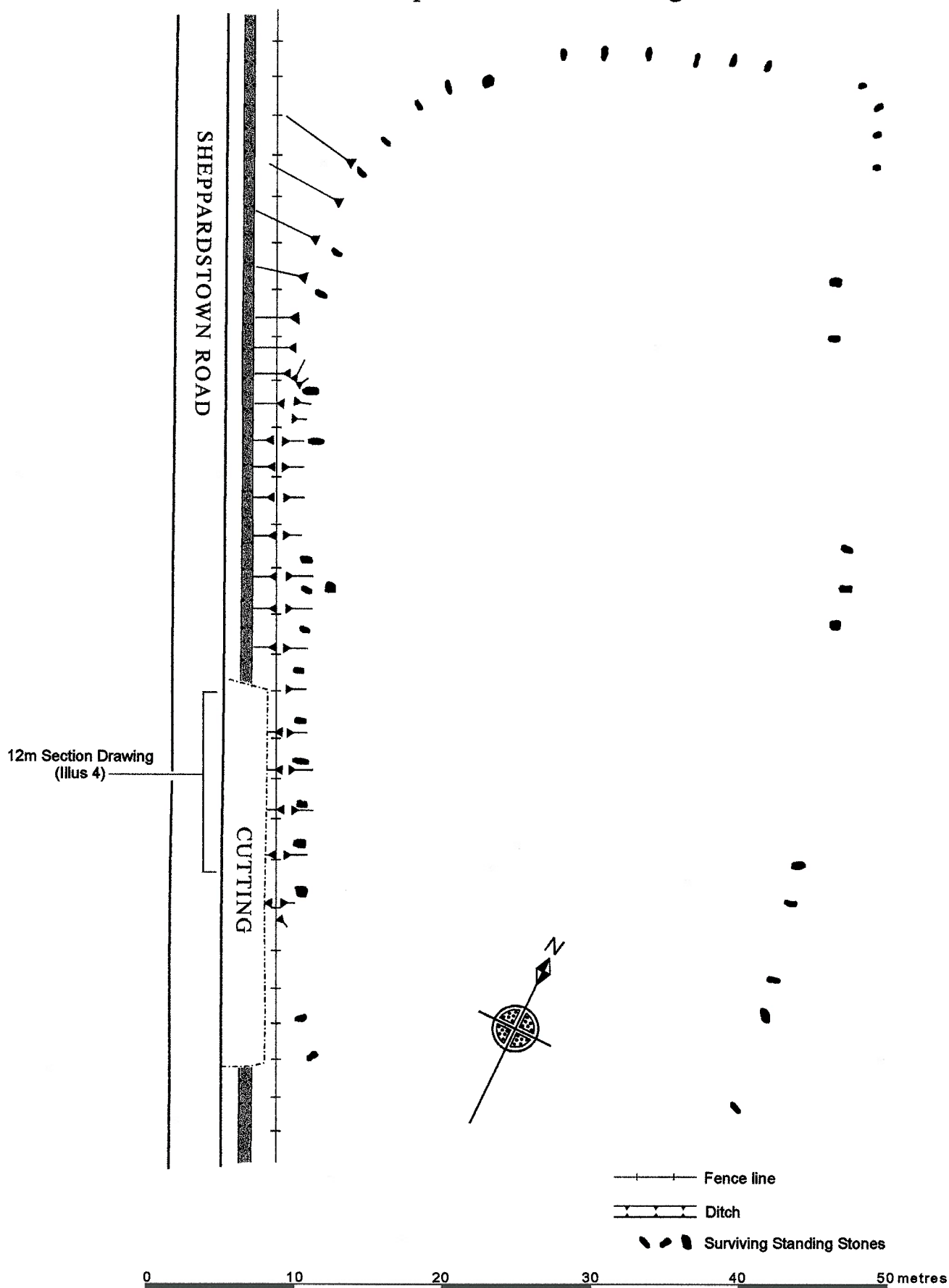
Mackie, E W 1975 *A guide to prehistoric Scotland*. London.

Location Plan Achavanich



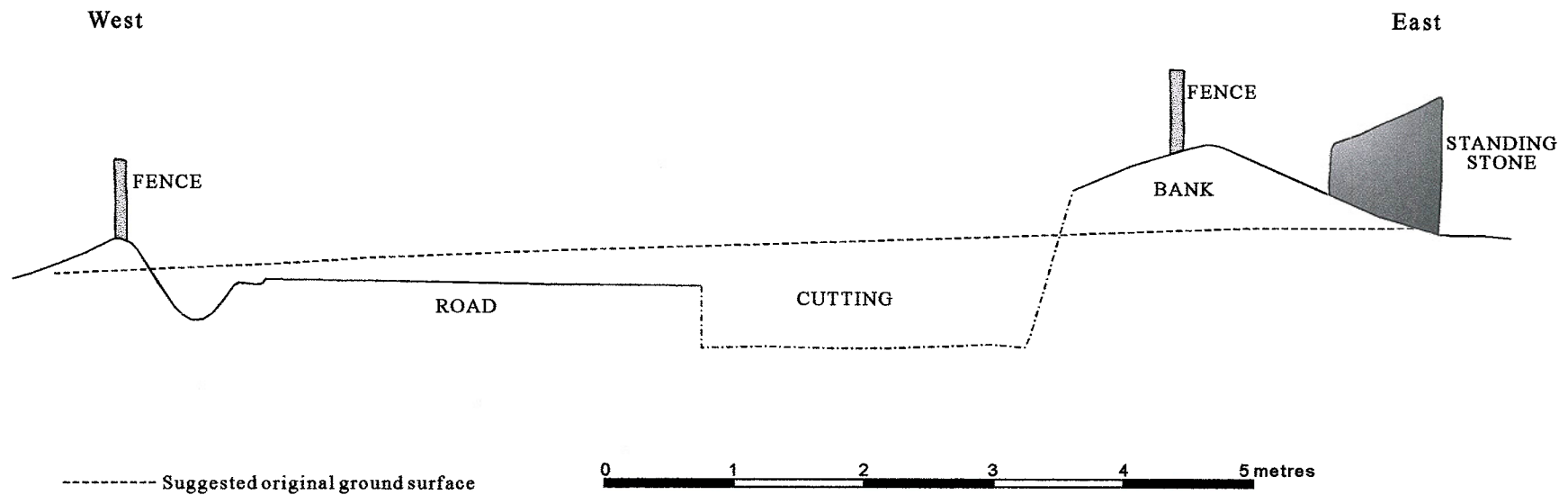
Illus 2

Stone setting with
position of cutting



Illus 3

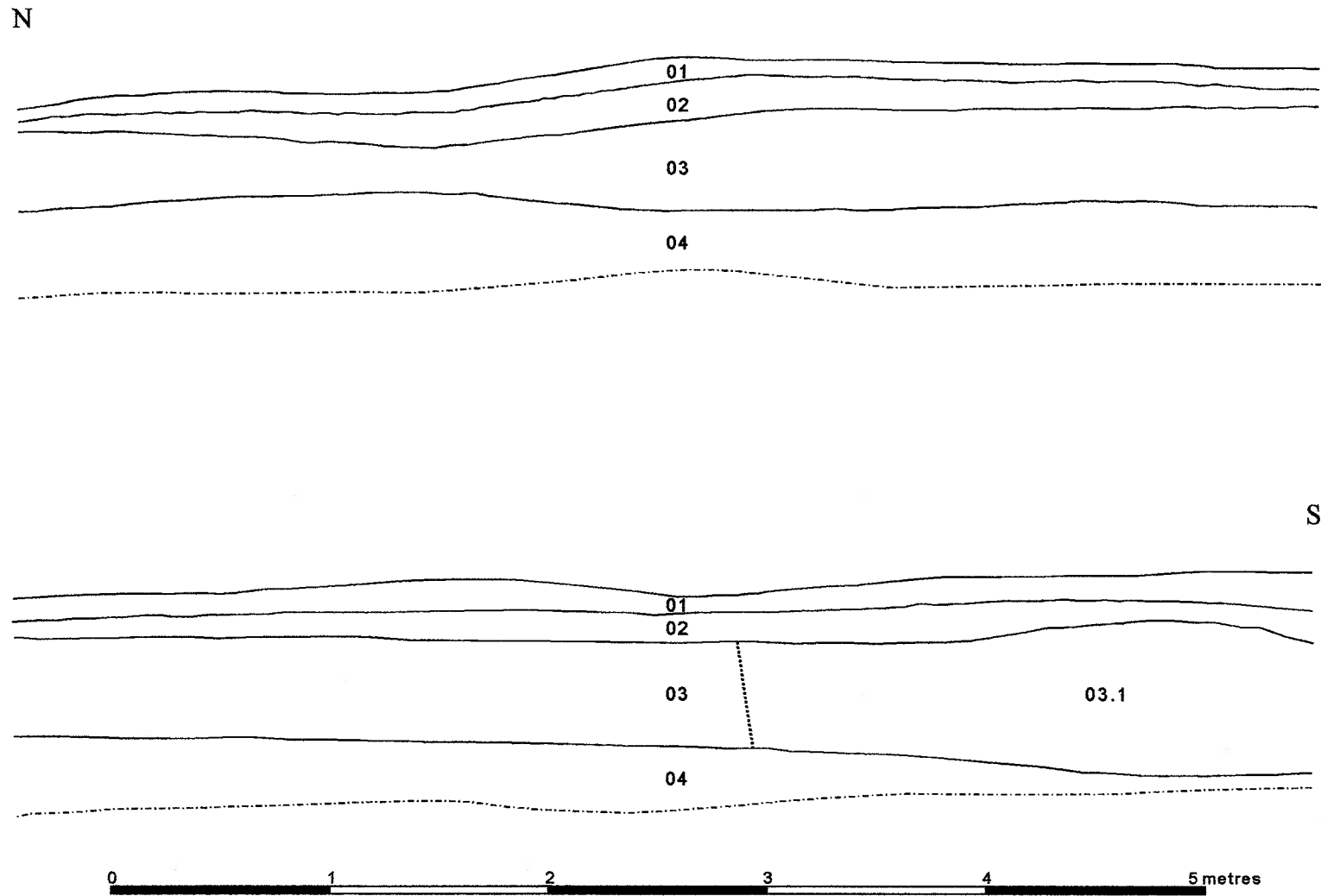
South facing section
through road & bank



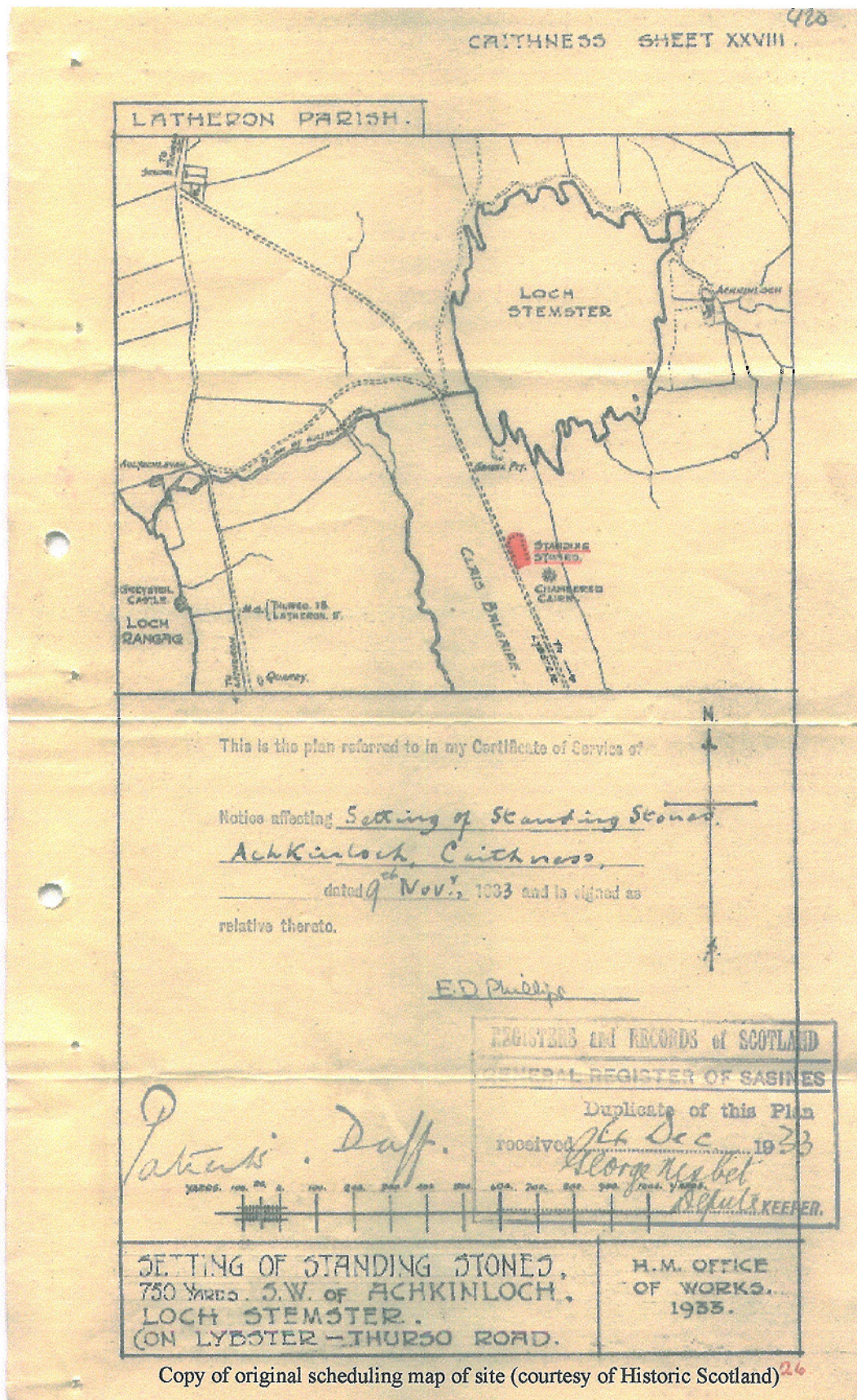
AX01

Illus 4

West facing section drawing
of cutting



AX01



Damian Hind

From: "David Bowler" <director@suat.demon.co.uk>
To: "Damian Hind" <dhind>
Sent: 19 March 2003 11:21
Subject: Fw: Achavanich Stone Setting, Caithness (Urgent)

— **Original Message** —

From: John Wood
To: AOC ; Cathy Dagg ; CFA ; GUARD ; Martin Wildgoose ; Steven Birch ; Stuart Farrell ; SUAT
Cc: Hilary White
Sent: Wednesday, March 19, 2003 10:49 AM
Subject: Achavanich Stone Setting, Caithness (Urgent)

Please advise whether you could undertake the work as in attached specification as a matter of urgency, and what the cost would be. It is basically a matter of recording a section. If at all possible we would like this done within the next few days. So a rapid response would be much appreciated.

John Wood



Brief for archaeological work at:

**ACHAVANICH
Caithness**

19/03/03



ARCHAEOLOGICAL RECORDING

PLANNING AND DEVELOPMENT SERVICE Archaeology Unit

1) Background

Achavanich Stone Setting (or Achinloch) (SMR and NMRS ND14SE0002; Scheduled Monument 420) lies immediately adjacent to the E of the minor Achavanich to Lybster road and to the S of Loch Stemster (NGR: ND 1880 4178). The setting is in a U-shape open at the S end with no indication that it was ever closed. There are 40 stones in all, 4 have fallen, 5 have split, and a number are small or very small, hidden by the grass.

It is described in the Highland SMR as follows:

"a setting of stones in the form of a truncated oval, open to the SE, which shows no sign of ever having been a completed oval. It measures 225ft long by 100ft and may originally have comprised about sixty stones of which about a third have either weathered or been removed. The stones are thick slabs of flag, standing to an average height of 5ft and set at intervals of about 8ft with their broad faces towards each other, not along the line. A cist measuring 5ft by 3ft 9ins, formed by four slabs set on edge stands against the most northerly stone of the setting.

*This monument, which can be compared only with the example at Broubster (ND06SW 19), should probably be assigned to the earlier part of the Bronze Age.
RCAHMS 1911; J Anderson 1886; R W Feachem 1963.*

An unusual setting of standing stones generally as described and planned. One or two stones along the E side outside the uprights, particularly in the NE corner suggest that there may have been a retaining kerb on this side, which is on the edge of an escarpment. The cist, roughly oriented N-S, is of the dimensions noted by the RCAHMS (1911), but is not composed of four slabs. The E side is composed of four upright slabs and one similar slab on the W side suggests that this side has been the same. There is no trace of the end stones. Elsewhere the tops of a few other stones in a similar position immediately outside the line of uprights suggests the presence of similar structures as yet uncovered.

Surveyed at 1:10,000.

Visited by OS (I S S) 20 April 1972.

Thirty-six flat, thin stones and snapped-off stumps. In fine weather the conspicuous Mt Morven is visible in the S over the nearby ridge and seems to be indicated by some of the stones. It may well be an astronomical foresight.
E W MacKie 1975.

A horse-shoe setting possibly comparable to the arrangement known within some stone circles, including Croft Moraig (NN74NE 12) and Broubster (ND06SW 19) as well as Stonehenge, although its opening to the SSE instead of the SW is untypical.
H A W Burl 1973"

The Highland Council is currently in the process of creating a lay-by at the site for the benefit of walkers and visitors. Excavations have taken place across the existing roadside ditch and extend close to the fence which divides the road from the standing stone rows.



Most of the excavation for the lay-by is complete, and the intention is to culvert the ditch in a pipe and build up material to form a surface. There is now an urgent need to record the exposed section archaeologically.

The excavator has cut down to almost 1m below road level. The drain pipe was put in but has now been removed again to facilitate recording. Some of the hardcore for the lay-by is however in place. The cutting has created a section through the bank which defines the W side of the monument, and this may be capable of yielding useful information about the construction sequence of the bank. Investigation may help clarify the long-debated question of whether the bank originated as part of the monument or simply as an artefact of road construction and maintenance.

The Highland Council now wishes to engage a qualified and experienced archaeologist to clean and record the fortuitous section.

The archaeological work will seek to identify and record any finds or features identified within the section, while avoiding over-excavation. An attempt should be made to answer the above question regarding the nature and date of construction of the bank beside the road. If the opportunity for advantageous sampling of soils or C14 dating material presents itself this should also be done. Costings should include a contingency amount for taking and analysing samples.

The archaeologist carrying out the evaluation will present a brief report containing the conclusions of this work.

This brief sets out who is responsible for what, as well as the terms of reference, objectives, method, monitoring and reporting arrangements.

2) Terms of Reference

This work is to be carried out for the Highland Council. All correspondence should be with the Council's senior Archaeologist in the first instance.

This brief 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 affected at the earliest possible stage.

Estimates 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 must be carried out by an archaeologist approved by the Council. This means that responsibility for all aspects must be taken by either an IFA Registered Archaeological Organisation or an individual Member of the IFA. Estimates for the work should include a note on how this requirement will be met.



Before site works start, the archaeologist appointed must contact the Council's Senior Archaeologist to agree arrangements including health and safety, site access and any other requirements.

3) Objectives

To identify and record the location, nature and extent of any features or objects of archaeological importance that may become visible in the section or other areas of the existing excavations following archaeological cleaning.

The Senior Archaeologist's attention must be drawn immediately to any exceptional discoveries so that arrangements can be agreed to deal with them quickly and effectively.

To make sure that the needs for archaeological conservation and recording are fully and expeditiously met while enabling the construction of the lay-by to be completed as soon as possible.

4) Method

a) ***Cleaning and recording of excavations***

The existing excavations for the lay-by will be thoroughly inspected for any archaeological

* evidence. Particular attention should be paid to the cut sections which should be cleaned by trowel, drawn to scale, and systematically photographed. The section should be drawn at a minimum 1:20 scale.

* **Sampling**

Once the section has been cleaned, the opportunity should be taken if practicable to sample any possible dating material and also soils in a systematic manner. Any samples taken must be analysed and the results reported.

* **b) Location Plan**

The location of the section and of any samples taken, and the full extent of the excavations must be indicated accurately on a scale plan, drawn at a minimum scale of 1:50.

c) Watching Brief

If it appears that any further excavation is required to complete the lay-by, an archaeological watching brief will be required.

d) Desk-based Assessment

A check of relevant aerial photographs and archive material held in The National Monuments Record (Edinburgh) will be needed.

5) 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. 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. The finds or features must be left until arrangements have been agreed for safeguarding or recording them. In the meantime work may continue on other areas of the site.

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 **six** 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 Dr. Noel Fojut, Historic Scotland, Longmore House, Salisbury Place, Edinburgh EH9 1SH
- One paper copy for Mr Richard Guest, The Highland Council, Transport, Environmental & Community Services, Market Square, Wick, Caithness
- 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 equivalent 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

If significant new archaeological information has been discovered, the archaeologist must arrange a presentation of the project results, 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 Guidance 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 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 Council's Senior Archaeologist, to whom any enquiries should be addressed. No one else has authority to vary its terms.

John Wood

Senior Archaeologist

Wednesday, 19 March 2003

19/03/03