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Pitfourie Standing Stone, Moulin, Perth & Kinross

Archaeological Investigation and Reinstatement

Report No. 3144

CFA ARCHAEOLOGY LTD

The Old Engine House
Eskmills Business Park
Musselburgh
East Lothian
EH21 7PQ

Tel: 0131 273 4380
Fax: 0131 273 4381
email: info@cfa-archaeology.co.uk
web: www.cfa-archaeology.co.uk

Author	Phil Karsgaard MA & Stuart Mitchell MA AIFA
Illustrator	Shelly Werner BSc MPhil PhD
Editor	Melanie Johnson MA PhD FSA Scot MIFA
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This document has been prepared in accordance with CFA Archaeology Ltd standard operating procedures.

**Pitfourie Standing Stone, Moulin,
Perth & Kinross**

Archaeological Investigation and Reinstatement

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1. INTRODUCTION

1.1 General

This report presents the results of archaeological investigation around, and re-erection of, the recently fallen Pitfourie Standing Stone, Moulin, Pitlochry (NGR: NN 9425 5942) (Fig. 1). The work was undertaken by CFA Archaeology Ltd (CFA) in March 2014. These works were undertaken in response to a Project Outline provided by Historic Scotland. The stone re-erection works were undertaken by Stockdale & Lyall Masonry, subcontracted to CFA.

1.2 Background

The Pitfourie Standing Stone, also known as the Dane Stone, is a Scheduled Monument (SM No 1534), comprising a single unsculpted block of quartzitic whinstone standing in gently sloping arable land. The stone fell from its socket in January 2014 and Historic Scotland therefore commissioned works to re-erect the stone following investigation of its socket. No previous archaeological investigation is known to have taken place at the monument. CFA applied for, and was granted, Scheduled Monument Consent by Historic Scotland on 14 March 2014, subject to the methodology outlined in CFA's Project Design dated 25 February 2014.

1.3 Objectives

The objectives of the project were:

- To provide a full record of the stone's socket and any other features within an area measuring 3m by 3m (9m²)
- To re-erect the stone within its original setting
- To report on the findings and provide a costed post-excavation research design.

These objectives were achieved through the following excavation strategy:

- Desk-based research will identify the correct orientation of the stone before it fell
- The fallen stone will be recorded as it lies in situ, including its relationship to the exposed socket, prior to being moved clear of the excavation area
- An area measuring 3m by 3m will be stripped of topsoil, centred on the stone socket
- The socket/setting, and any other features exposed, will be fully excavated
- The stone will be re-erected in its original socket where possible.

2. WORKING METHODS

2.1 General

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct.

2.2 Desk-based Assessment

Photographic records held by RCAHMS and other readily available sources were consulted prior to any fieldwork taking place. The photographs were used to ascertain the correct orientation of the stone for its re-erection.

2.3 Excavation

The stone's prone position was recorded through a scale plan and photographs by CFA staff. The stone was then cleared of the excavation area using a telehandler and soft lifting straps. The stone was moved approximately 5m to one side and laid on wooden battens. This work was supervised by the stone masons Stockdale & Lyall Masonry and recorded by the archaeologists.

A square trench measuring 3m by 3m, centred on the stone socket/setting, was excavated by hand, to reveal either the subsoil surface or the surface of the first significant archaeological horizon. Packing stones removed from the socket were stored separately from topsoil and archaeological fills, to allow their re-use as packing in the new socket.

All on-site recording was carried out according to standard CFA procedures, principally by drawing, by photography and by completing standard CFA record forms.

Finds were recorded by context; individually significant finds were recorded in three-dimensions using a sequence of unique Small Find numbers (SF). The *Guidelines for Project Directors: Dealing with Finds from Projects Sponsored by Historic Scotland* (Version 1.3 April 2006) were adhered to at all times.

The location of the trench was recorded using industry standard surveying equipment. CFA uses a Leica Builder Total Station to produce digital survey data. The survey data and any hand-drawn plans were accurately tied in to the Ordnance Survey National Grid using control points.

A programme of collection of soil samples and other appropriate material was undertaken for scientific dating and the recovery of palaeoenvironmental evidence.

2.4 Reinstatement

Prior to reinstatement, the correct orientation was verified. This work was supervised by the stone masons Stockdale & Lyall Masonry and recorded by the archaeologists.

The original socket was enlarged by hand excavation following agreement with Historic Scotland.

The socket was shuttered and a ring of concrete was poured to create a socket into which the stone could be received and then packed with stone to make it rigid but to still allow drainage into the subsoil without compromising the fabric of the stone itself.

The stone was lifted into a vertical position using telehandlers with appropriate straps and lowered into the excavated socket. The stone was held in place by the machine before packing it firmly using dry stone techniques.

A photographic record was taken of all works.

The trench was backfilled on completion of excavation with as dug material, and the site left in a tidy condition.

3. ARCHAEOLOGICAL RESULTS

3.1 Desk-based Assessment

Photographic records held by RCAHMS and other readily available sources were consulted prior to any fieldwork taking place. The photographs were used to ascertain the correct orientation of the stone for its re-erection.

The stone is recorded in the National Monuments Record of Scotland (no. NN95NW 9) as being "massive block of quartzitic whinstone 7'3" high. Several more stones are said to have stood here, some of which are supposed to be lying half buried in the field. All are smaller than the extant stone." (1908). Further reports in 1912 concluded that there was "no evidence for the site of a circle."

The record also indicates that, in 1975, there was noted to be some local confusion as to whether the name 'Dane's Stone' applied to this feature or another stone (NMRS no. NN95NW 11), and that the name is relatively recent

In 1975 the stone was described as being "a standing stone, 2.1m x 1.3m x 0.6m, increasing to 0.9m wide at ground level. There is no trace of further stones."

3.2 Excavation

After Scheduled Monument Consent for the works had been obtained by the CFA, the prone position of the stone was recorded (Fig. 2-4) and the stone moved under the supervision of Stockdale & Lyall Masonry. The stone was removed without damage and placed on wooden battens nearby.

A 3m by 3m trench (Fig. 5), centred on the visible surface remains of the socket, was laid out and the exposed socket and partially scattered packing stones were recorded prior to any excavation. The trench was then excavated by hand.

In the following paragraphs context numbers, summarised in Appendix 1, are in bold and parentheses.

The excavation revealed a thin, 0.10m thick skim of modern silty topsoil (**001**) covering the entire area of the trench, with the exception of the area of the stone socket itself (**004**). This was removed to expose the underlying subsoil (**002**), a mid-brown sandy silt containing frequent sub-angular stones and which extended across the trench except in the socket (**004**).

The upper surface of (**002**) was compacted and trampled, presumably by grazing animals, and was preserved at a slightly higher elevation immediately around the socket itself (Fig. 6). The subsoil deposit (**002**) thickened appreciably downslope to the south, with a maximum depth of 0.35m.

Subsoil (**002**) directly overlay the natural geological substrate (**003**), a mid-orange-brown gravelly sand. From (**002**) were retrieved a possible worked stone fragment (SF1) and fragments of quartz (SF2).

With the removal of the standing stone itself and light cleaning, the stone socket (004) and its associated packing stones (005) were revealed. The packing stones, relatively poorly-sorted small to medium sub-angular stones, had been disturbed by their exposure above ground (as visible in photographs of the stone prior to its fall) and by the falling of the stone. With the removal of loose and disturbed stones, a ring of in situ packing stones was revealed and recorded (Figs. 7, 8).

The packing stones (005) were removed by hand and the cut of the socket (004) revealed (Fig. 9, 10). The surrounding natural gravel (003), into which it had been cut, was loosely compacted and liable to crumbling and erosion; (004) therefore was not sharply defined. It appeared as a roughly oval cut oriented approximately N-S, some 1.25m long and 1.10m wide. It was preserved to a depth of 0.42m on its north side. It had a flat, irregular base and sloping sides with a gentle break of slope at its Southern extent, where the stone fell.

The packing stones (005) were contained within a mid-brown silty matrix (006), which formed a sparse fill of the socket cut. The fill (006) was fully excavated and sampled extensively. This fill was partially disturbed by animal burrows.

The top of the natural (003) was carefully cleaned by hand. It rose slightly in the middle of the trench around the socket and sloped away to all sides, suggesting attrition of the natural substrate over time, with the immediate area around the foot of the stone being slightly protected. Slight bioturbation was evident but no other cut features or deposits were noted in the excavated area.

3.3 Reinstatement

Prior to reinstatement, the correct orientation was verified.

The original socket was enlarged by hand excavation following agreement with Historic Scotland.

The socket was shuttered and a ring of concrete was poured to create a socket into which the stone could be received and then packed with stone to make it rigid but to still allow drainage into the subsoil without compromising the fabric of the stone itself.

The stone was lifted into a vertical position using two telehandlers with appropriate straps (Figs 11a-11c) and lowered into the excavated socket. The stone was held in place by the machine before packing it firmly using dry stone techniques (Figs 12a-12c).

The stone was installed vertically (Figs 13-15) at the request of Historic Scotland. It was also set c.0.3m deeper into the ground than prior to the time of collapse which more accurately reflects its likely original height as well as adding the required degree of stability.

A photographic record was taken of all works.

The trench was backfilled on completion of excavation with as dug material, and the site left in a tidy condition.

3.4 Finds, by Christina Hills

Finds were recovered from **002** and **006** and all were stone. A possible whetstone was recovered from **002** (SF1), which is possibly prehistoric. Two unworked quartz fragments were also recovered from **002** (SF2) and two pieces of stone, or possibly shale, were retrieved from **006** (SF3); these appear to be natural in origin

4. CONCLUSION

The Pitfourie Standing Stone, a Scheduled Monument, fell at the end of January 2014. Historic Scotland commissioned the investigation of the socket and the stone's re-erection.

A trench measuring 3m by 3m was excavated, centred on the stone's socket. The standing stone socket was found to be oval in plan, 1.25m by 1.10m by 0.42m deep, packed with sub-angular stones. The stone socket was nearly empty, containing a thin deposit around the packing stones. No further archaeological features were identified.

The stone was successfully re-erected following the excavation.

A summary statement of the results of this evaluation will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 6).

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports will be lodged with Historic Scotland and the Perth & Kinross Council Sites and Monuments Record.

APPENDIX 1: Context Register

Context No.	Description
001	Thin skim of mid-brown silty topsoil
002	Hard compacted stony mid-brown sandy-silt subsoil
003	Natural orangey-brown gravelly sand
004	Cut for stone socket
005	Packing stones
006	Fill of socket cut 004

APPENDIX 2: Photographic Register

No.	Description	From
1	View of fallen stone prior to removal	N
2	View of fallen stone prior to removal	W
3	View of fallen stone prior to removal	S
4	View of fallen stone prior to removal	E
5	Detail of socket and fallen stone pre-excavation	N
6	General view of fallen stone prior to removal	N
7	View of fallen stone pre-movement and excavation	SE
8	View of fallen stone pre-movement and excavation	S
9	View of fallen stone pre-movement and excavation	W
10-18	Working shots of stone shifting	Various
19	Pre-excavation view of exposed stone socket	S
20	Pre-excavation view of exposed stone socket	E
21-2	Socket 004 with stone scatter 006 after topsoil removal	S
23	Socket 004 with stone scatter 006 after topsoil removal	W
24	Stone socket 004 with packing stones 005 , deposit 002 removed in SW of trench	S
25-6	Stone socket 004 with packing stones 005 , deposit 002 removed in SW of trench	S
27	Stone socket 004 with packing stones 005 , deposit 002 removed in SW of trench	S
28-31	SW-facing section across stone socket 004 .	N
32	N end of trench with deposit 002 removed showing socket 004 with stone packing 005	S
33	N end of trench with deposit 002 removed showing socket 004 with stone packing 005	S
34	Socket cut 004 with stones 005 partially removed	S
35-8	Socket cut 004 post-excavation	S
39-40	Working shots: fitting straps to the stone prior to reinstatement	SE
41-42	Detail of concrete shuttered socket	Various
43-45	Working shots: moving stones using two telehandlers	N
46-47	View of prone stone prior to reinstatement	S
48-83	Documentary shots: setting the stone in position prior to reinstatement	Various
84-95	Documentary shots: setting the stone into its socket	Various
96-142	Documentary shots: packing the socket	Various
143-150	Documentary shots: Completion of reinstatement	Various
151-167	Reinstated stone	Various

APPENDIX 3: Drawings Register

Dwg No.	Sheet No.	Scale	Plan / Section	Description/contexts
1	1	1:20	Plan	Plan of fallen stone
2	1	1:20	Plan	
3	2	1:20	Plan	Plan of socket 004 and packing stones 005
4	2	1:20	Section	South-facing section through socket 004
5	2	1:20	Section	East-facing profile through socket 004
6	3	1:20	Plan	Post-excavation plan

APPENDIX 4: Finds Register

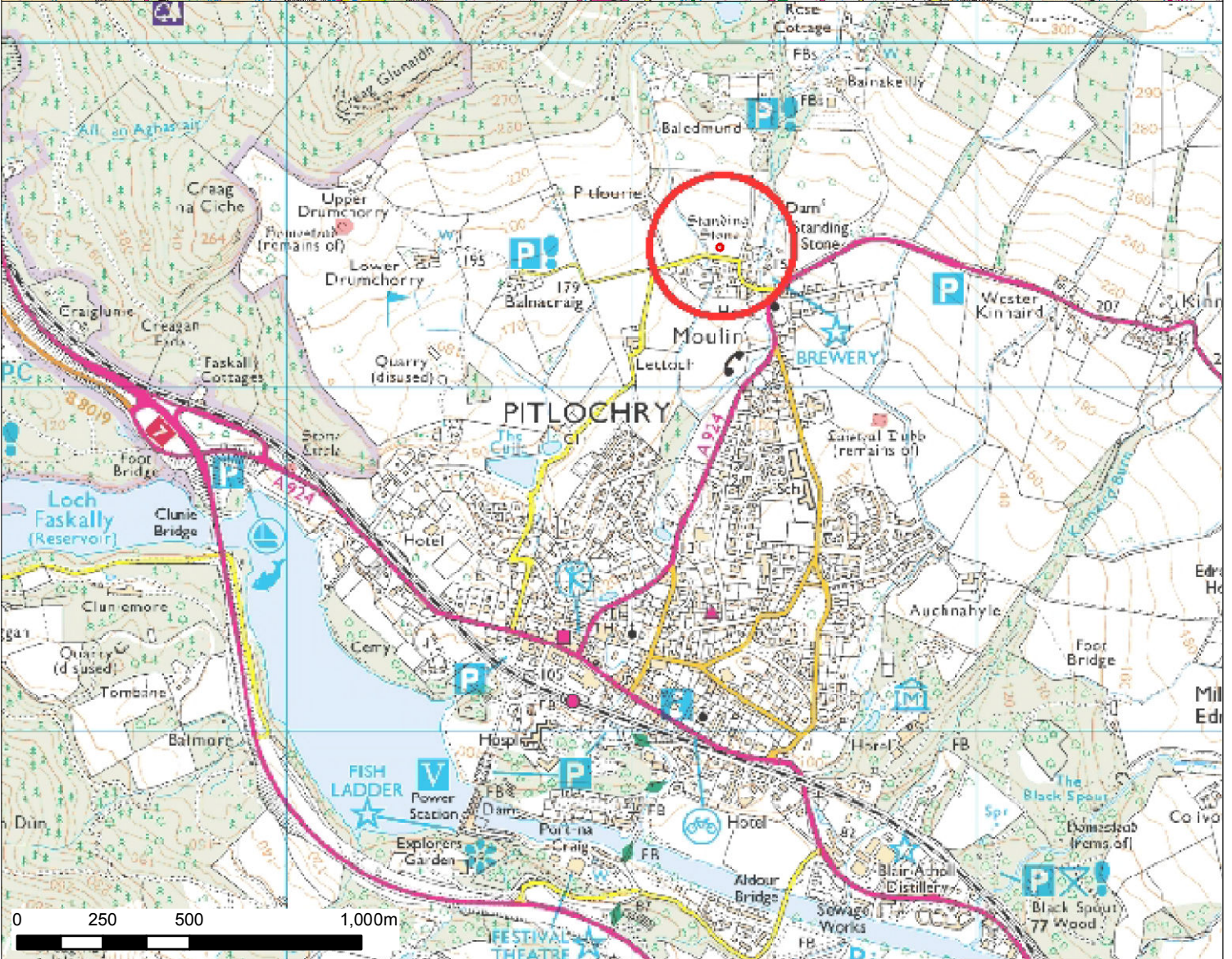
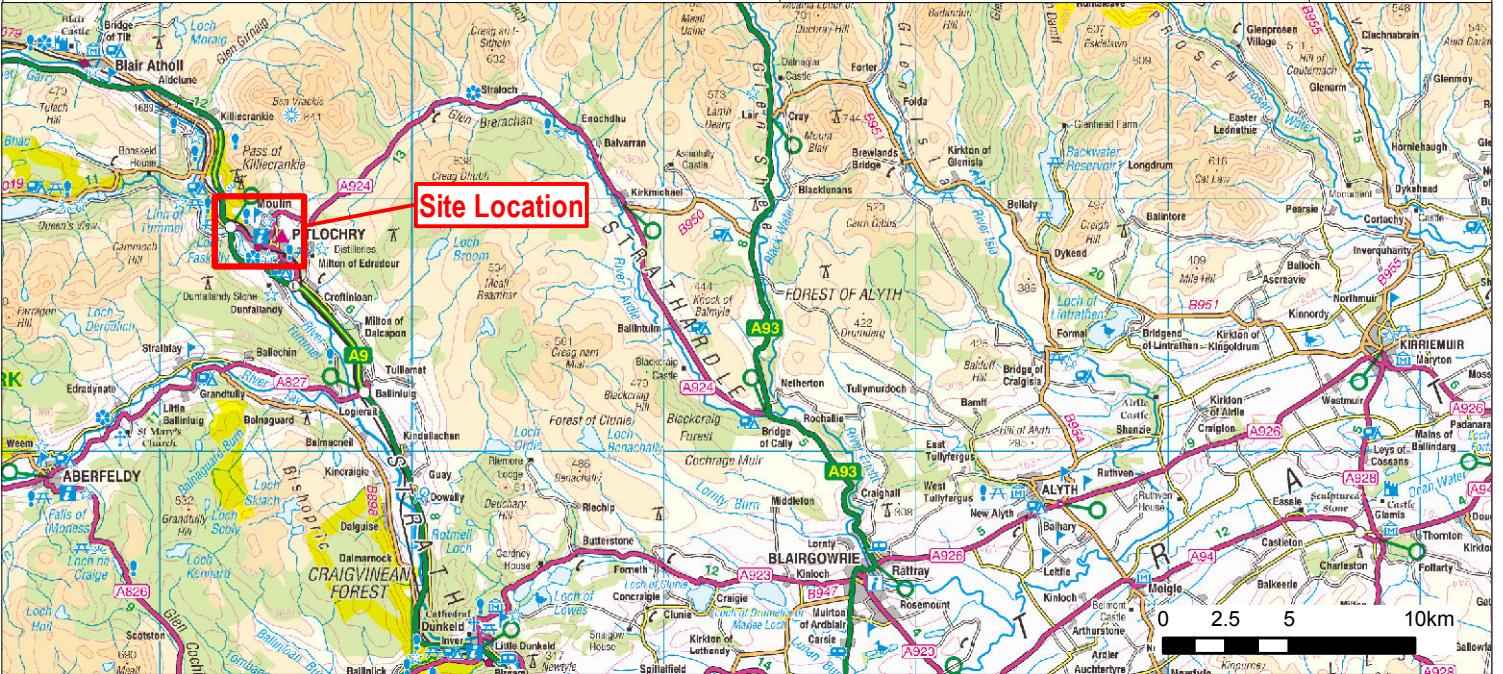
SF no	Context	Find type	No.	Wt (g)	Notes	Spotdate
1	002	Stone	1	106	Whetstone?	Prehistoric
2	002	Stone	2	124	Quartz-unworked	
3	006	Stone	2	8	Stone/shale -unworked	

APPENDIX 5: Samples Register

Sample No.	Context	Sample type	Volume (litres)
1	002	Bulk	10
2	006	Bulk	25

APPENDIX 6: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	Perth and Kinross
PROJECT TITLE/SITE NAME:	Pitfourie Standing Stone, Moulin, Perth & Kinross. Archaeological Investigation and Reinstatement
PROJECT CODE:	DANE
PARISH:	Moulin
NAME OF CONTRIBUTOR:	Karsgaard, P. & Mitchell, S.
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Excavation & re-erection
NMRS NO(S):	NN95NW 9
SITE/MONUMENT TYPE(S):	Standing stone
SIGNIFICANT FINDS:	
NGR (2 letters, 10 figures)	NN 94255 59410
START DATE (this season)	18/03/14
END DATE (this season)	31/03/14
PREVIOUS WORK (incl. DES ref.)	
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>Pitfourie Standing Stone, also known as The Dane's Stone or Dane Stone, is a standing stone of possible late Neolithic or Bronze Age date which stands in an arable field on the north edge of Moulin, Pitlochry. It is a Scheduled Monument.</p> <p>The stone fell over during February 2014 due to slow attrition of soil by agriculture and recent waterlogging of the ground. A trench measuring 3m x 3m was excavated centred on the socket, and the socket was fully excavated. No further archaeological features were identified. Following the excavation, the stone was re-erected in its socket.</p>
PROPOSED FUTURE WORK:	Post-excavation
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Historic Scotland
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	National Monuments Record of Scotland








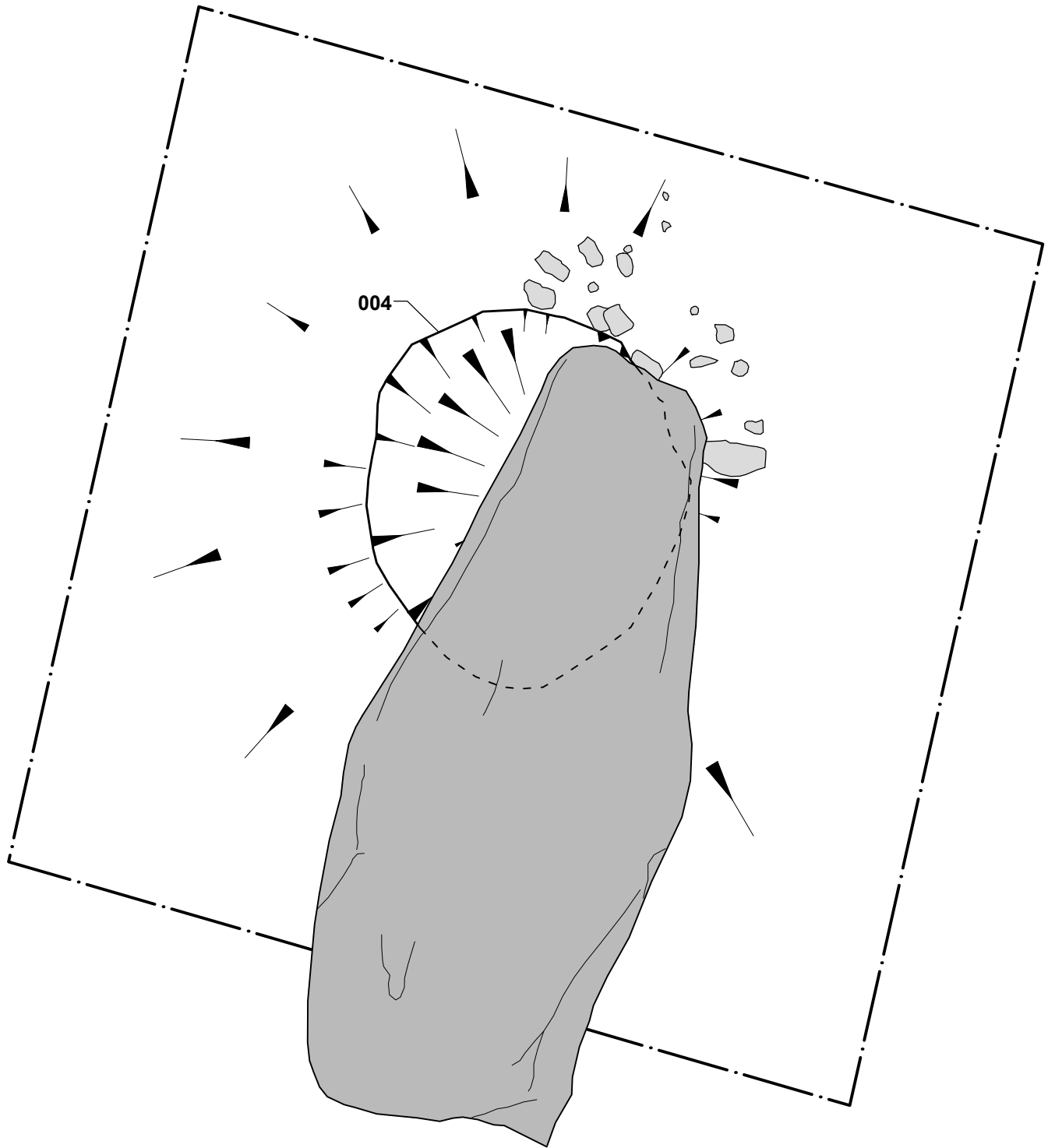
Key:  Site Location  Scheduled Monument area	Fig. No: 1	Revision:	Client: Historic Scotland
	Title: Location Map		
Scale at A4: 1:18,000	Project: Pitfurie Standing Stone, Moulin		
			CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park, Musselburgh East Lothian, EH21 7PQ T: 0131 273 4380 F: 0131 273 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk
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Fig. 2 - View of prone stone

Fig. No: 2	Revision: A	Project: Pitfourie Standing Stone, Moulin			CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park, Musselburgh East Lothian, Eh21 7PQ
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Key:



Fig No: 3 Revision: 0 Client: A

Title:
Plan showing prone stone in relation to excavation trench

Project:
Pitfourie Standing Stone, Moulin

Scale at A4:
1:20



CFA ARCHAEOLOGY LTD
The Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
t: 0131 273 4380
f: 0131 273 4381
e: info@cfa-archaeology.co.uk
w: www.cfa-archaeology.co.uk

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Fig. 4 - Stone being moved prior to excavation



Fig. 5 - View of trench with topsoil removed



Fig. 6 - View of trench with subsoil half-sectioned around socket



Fig. 7 - Socket fully excavated

Fig. No: 4-7		Revision: A	Project: Pitfourie Standing Stone, Moulin
Drawn by: SW	Checked: SM	Report No: 3144	Client: Historic Scotland



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CFA ARCHAEOLOGY LTD
The Old Engine House
Eskmills Park, Musselburgh
East Lothian, Eh21 7PQ


T: 0131 273 4380
F: 0131 273 4381
e: info@cfa-archaeology.co.uk
w: www.cfa-archaeology.co.uk

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Key:

-  Small Find



Scale at A4: 1:20

Fig No: 8	Revision: 0	Client: A
Title: Plan of trench		
Project: Pitfourie Standing Stone, Moulin		



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The Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
t: 0131 273 4380
f: 0131 273 4381
e: info@cfa-archaeology.co.uk
w: www.cfa-archaeology.co.uk

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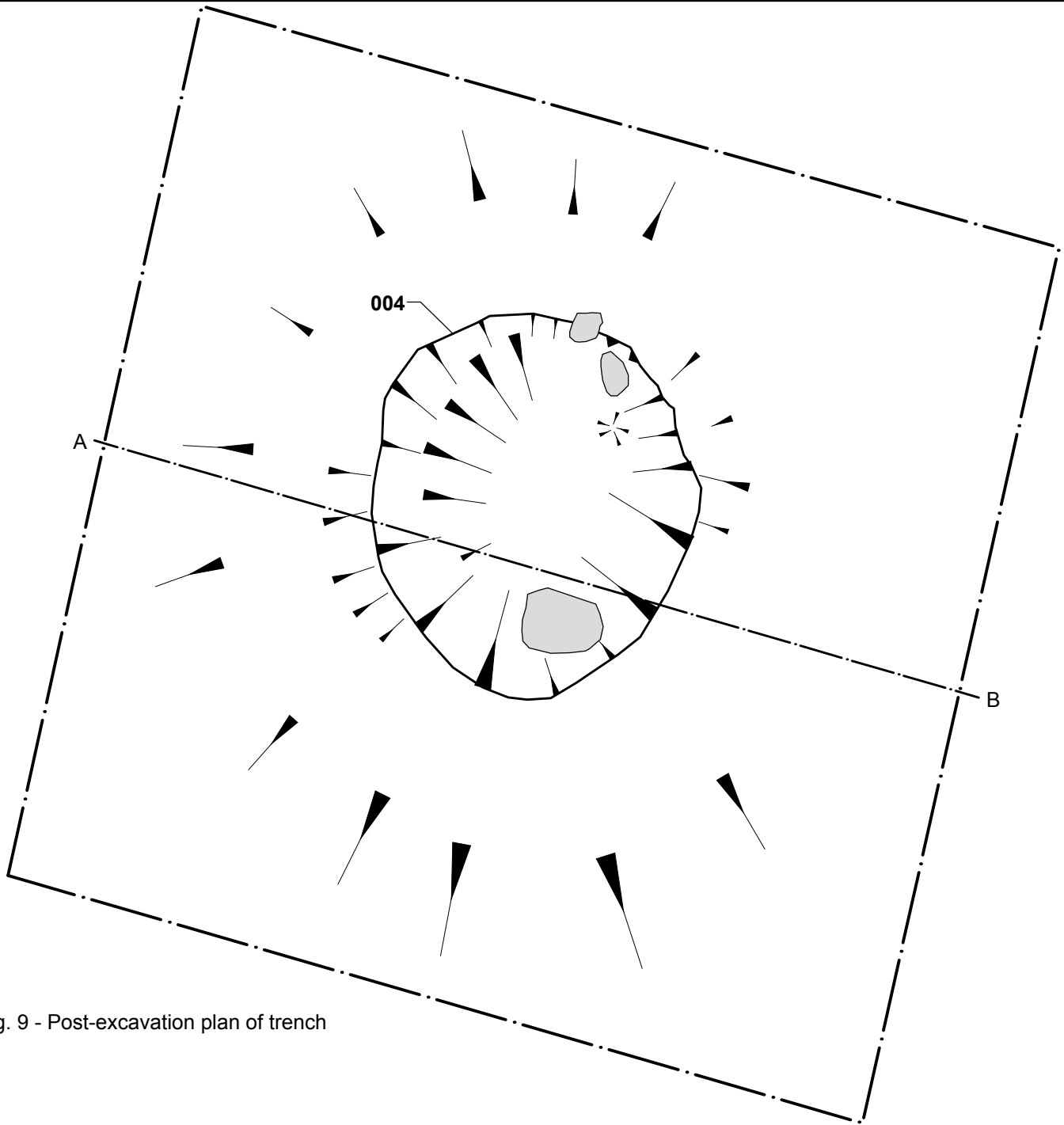


Fig. 9 - Post-excavation plan of trench

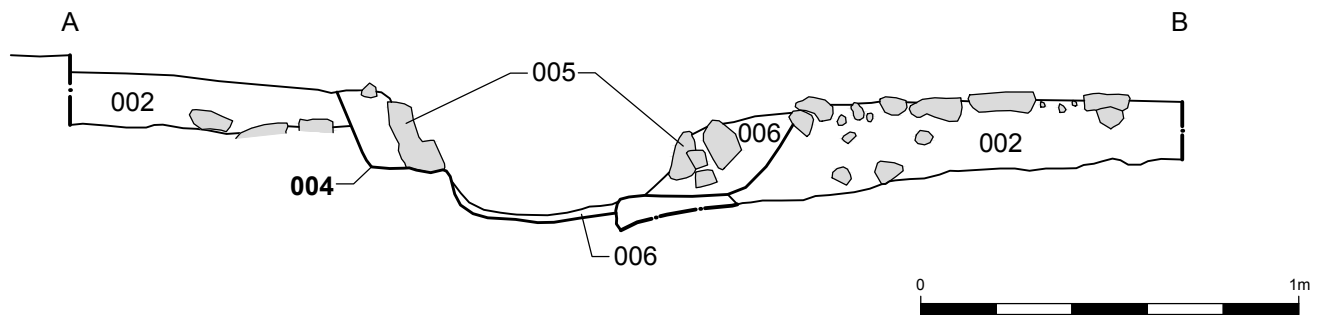


Fig. 10 - Section/profile of socket



Key:		Fig No: 9-10	Revision: 0	Client: A
		Title:		
Scale at A4: Plan 1:20	Project: Pitfourie Standing Stone, Moulin			
				CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park Musselburgh East Lothian, EH21 7PQ t: 0131 273 4380 f: 0131 273 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk
		Drawn by: SW	Checked: SM	Report No: 3144



Fig. 11a - Reinstatement: working sequence



Fig. 11b - Reinstatement: working sequence



Fig. 11c - Reinstatement: working sequence



Fig. 12a - Packing stones into the socket



Fig. 12b - VPacking stones into the socket



Fig. 12c - Packing stones into the socket

Fig. No: 11-12		Revision: A	Project: Pitfourie Standing Stone, Moulin
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The Old Engine House
Eskmills Park, Musselburgh
East Lothian, EH21 7PQ

T: 0131 273 4380
F: 0131 273 4381
e: info@cfa-archaeology.co.uk
w: www.cfa-archaeology.co.uk

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Fig. 13 - Pitfourie Standing Stone from the west

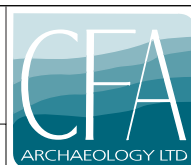


Fig. 14 - Pitfourie Standing Stone from the east



Fig. 15 - Pitfourie Standing Stone from the south

Fig. No: 13-15		Revision: A	Project: Pitfourie Standing Stone, Moulin
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The Old Engine House
Eskmills Park, Musselburgh
East Lothian, Eh21 7PQ

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F: 0131 273 4381

e: info@cfa-archaeology.co.uk
w: www.cfa-archaeology.co.uk

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