Archaeological Services
University of Durham

The Traprain Law Environs Project, East Lothian, Scotland: Phase 2

Evaluation at Standingstone (TST02) Data Structure Report

on behalf of
Historic Scotland
Dickinson College
University of Durham

ASUD Report 956
March 2003

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Contents

1. Summary

The project

1.1 This report presents the results of an evaluation of a curvilinear cropmark enclosure near Standingstone, East Lothian. The evaluation formed part of the wider Traprain Law Environs Project.

1.2 The aims of the evaluation were to determine the state of preservation of archaeological deposits and to obtain environmental samples and dating evidence, in order to assess the potential for larger scale excavation at a later date and to provide information of assistance in the cultural resource management of the site.

1.3 The works were generously funded by Historic Scotland.

Results

1.4 The evaluation comprised a single trench, which contained a number of features cut into the subsoil. The main enclosure ditch was excavated, as well as two internal gullies and three postholes.

1.5 Environmental samples were collected from appropriate deposits. No artefacts were recovered during the evaluation.

Recommendations

1.6 The site contains well-preserved archaeological deposits and has a high research potential. It would be suitable for larger scale excavation as part of the Traprain Law Environs Project.

2. Project background

The Traprain Law Environs Project

2.1 The overarching aim of the Traprain Law Environs Project (TLEP) is to investigate aspects of the archaeological landscape around the fortified hilltop site of Traprain Law in order to permit the analysis of economy and society during the 1st millennia BC and AD. The first phase of the project comprised the geophysical investigation of 30 cropmark sites within the vicinity of Traprain Law, comprising 2 multi-vallate, 12 rectilinear and 13 curvilinear enclosures, as well as 2 ring-ditches and 1 possible building cropmark (Hale *et al.* 2002 and in press). Phase 2 of the TLEP, a programme of excavation of a sample of these sites, began in 2002. The evaluation at Standingstone formed a part of this phase.

Site description and status

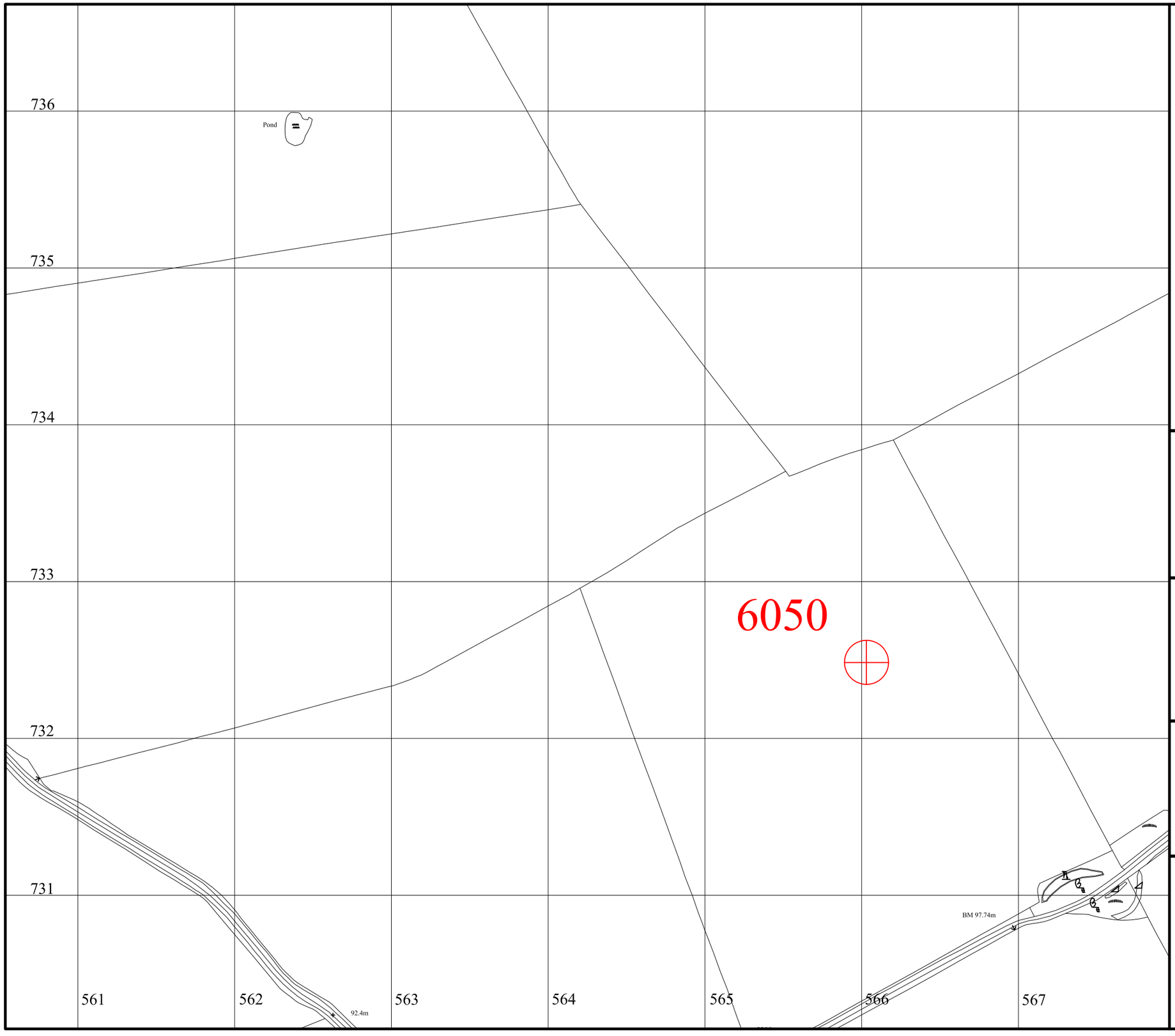
2.2 This enclosure at Standingstone, of presumed Iron Age date, is one of a number of such enclosure sites near Traprain Law, none of which have been excavated to date. It is a typical example of the curvilinear enclosure type in this area.

2.3 The site is located at NGR: NT 5659 7325 (Figure 1) and comprises a curvilinear cropmark enclosure of c.0.2ha. The site occupies a gentle west-facing slope in set-aside at *c.*110m AOD, 2km south-west of Traprain Law. The cropmark is situated on Carboniferous extrusive trachyte, forming part of the Garleton Hills Volcanic Rocks, which is overlain by Boulder Clay.

2.4 The site has been recorded on aerial photographs numerous times over the last fifty years, by various bodies including the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). Figure 2 shows a rectified aerial photograph and interpretation of the site, supplied courtesy of RCAHMS.

2.5 The geophysical survey here confirmed the presence and location of a curvilinear enclosure, measuring *c.*50m in diameter. The APs show approximately three-quarters of an enclosure and this was confirmed by the geophysical data. Although the site is located over extrusive trachyte rock, the upper boundary of the bedrock appears to be at a greater depth than the bottom of the enclosure ditch, since the ditch appears as a positive magnetic anomaly which almost certainly reflects an earth-cut, soil-filled ditch as opposed to a rock-cut one. A curvilinear negative anomaly to the north and east of the enclosure may reflect the remains of another, larger enclosure.

2.6 A very weak, circular positive magnetic anomaly was detected in the centre of the enclosure ditch. This is also interpreted as a ditch feature, perhaps associated with a roundhouse. There is a high concentration of small positive and dipolar magnetic anomalies in the interior of the enclosure. These anomalies probably reflect soil-filled pits and ferrous/fired materials respectively, and could indicate the presence of some small-scale industrial activity at the site.



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The Traprain Law Environs Project Phase 2

Standingstone evaluation

Figure 1

Location of the Standingstone site

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0 100m

Scale 1:2500

site location

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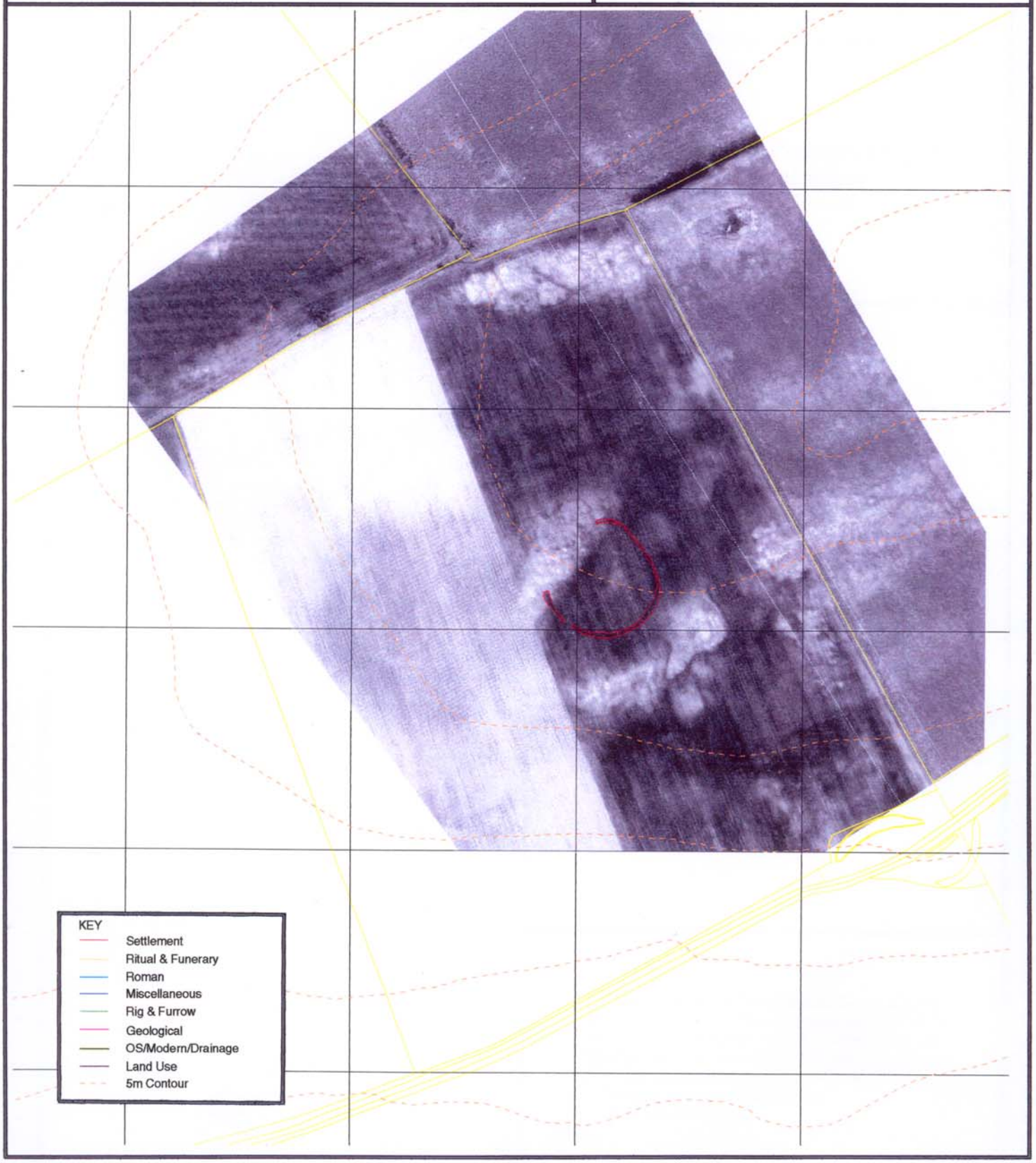
Traprain Law Environs Project Phase 2
Standingstone evaluation

Figure 2
Rectified aerial photograph

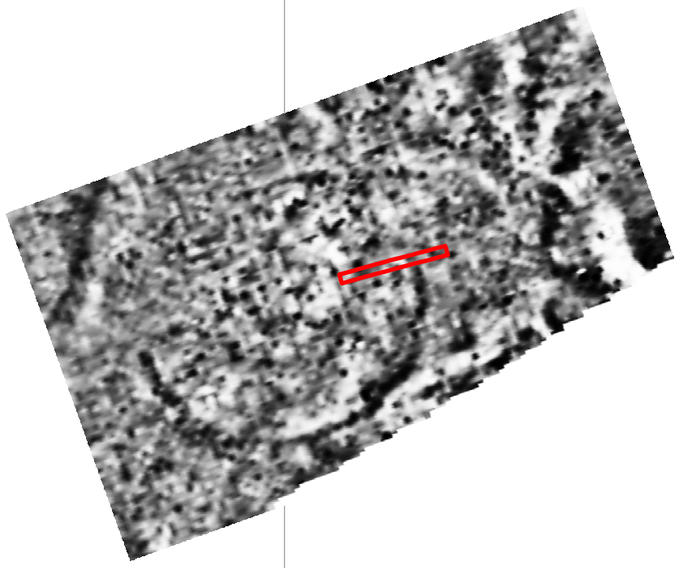
Computer plot from aerial photographs.
Use only with caution.

John Sinclair House
16 Bernard Terrace
Edinburgh EH8 9NX

Plot origin **356400 672900**
AP Neg. No. **EL3490**
Mapsheet **NT57SE 45**
Site **Standingstone**
Region **Lothian**
District **East**
Scale **1:2500**
Date **30.5.02**
SGS PTO **K.H.J. Macleod**



733



732

731

565

566

BM 97.74m

567

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Standingstone evaluation

Figure 3

Location of the evaluation trench on the geophysical survey greyscale

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0 50m

Scale 1:1000

trench location

2.7 Several other relatively intense, diffuse geomagnetic anomalies were detected outside the area of the enclosure and are interpreted as being geological in origin.

2.8 The enclosure is a Scheduled Ancient Monument (number 6050), and is recorded on the NMRS as number NT 57 SE 045.

Objectives

2.9 The specific objectives for this evaluation were:

- to confirm the existence of archaeological features suggested by air photography and geophysical survey
- to obtain information about subsoil conditions and preservation
- to sample features for material culture and environmental remains which would provide information about the date and nature of the activities represented
- to assess the potential for larger scale excavation in 2004
- to assist with the future management of the monument

Dates

2.10 The evaluation was conducted in April 2002. This report was prepared in February 2003.

Personnel

2.11 The evaluation was carried out by Peter Carne, David Graham and Duncan Hale. This report was prepared by Duncan Hale with illustrations by Linda Bosveld and David Graham. Environmental samples were processed by Claire Pickin and assessed by Jacqui Huntley.

Acknowledgements

2.12 Funding for the evaluation was generously provided by Historic Scotland, with help in kind from the University of Durham. We are very grateful to the farmer, Mr Stuart Drysdale, for permission to excavate, and to Olwyn Owen and Patrick Ashmore (Historic Scotland), Bridget Simpson (East Lothian Council) and staff at RCAHMS for advice and assistance with the project as a whole.

Archive

2.13 The site code is TST02, for Traprain Standingstone 2002. On completion of the overall project, the archive will be deposited with Historic Scotland for transfer to the Finds Disposal Panel and the National Monuments Record for Scotland (NMRS).

3. The evaluation

Standards

3.1 The evaluation and reporting has been conducted in accordance with the Institute of Field Archaeologists *Standard and guidance for archaeological field evaluation* (revised 2001) and in accordance with Scheduled Monument

Consent granted by Historic Scotland (dated 18th April 2002) under the Ancient Monuments and Archaeological Areas Act 1979.

Excavation methods and results

3.2 A single trench was excavated across the eastern side of the enclosure ditch. This trench measured 18m in length and 1.5m in width. The existing ploughsoil was removed by a mechanical excavator fitted with a toothless ditching blade, under strict archaeological supervision. The trench sampled the ground outside the enclosure as well as some of the interior.

3.3 Both trench sections were cleaned and the north-facing section was drawn at 1:10. Environmental samples were collected from fill contexts within features. The trench plan was recorded and tied-in to known, mapped Ordnance Survey points using a Wild T1000 total station survey instrument and SDR33 datalogger.

3.4 The excavation was recorded using the ASUD Iconic Formation Process Recording System, an advanced version of single context recording. The strength of the system relies on the explicit recognition of formation process traits on site during excavation. Photography was by bracketed colour transparency and monochrome 35mm stills, which were processed by our in-house photographer, Mr T Woods.

3.5 The trench was backfilled and re-instated as agricultural land. No artefacts were recovered during the evaluation.

4. Excavated features

4.1 The natural subsoil across the trench comprised a friable orange clay (02), of probable glacial origin. This was overlain by 0.25-0.3m of orange/brown ploughsoil. All exposed features lay beneath the ploughsoil and were cut into the natural subsoil.

4.2 The enclosure ditch (F15) was excavated to its base, at a depth of 0.7m (1.0m from the existing ground surface). The ditch measured 2.52m in width at the top of the subsoil, and had a shallow V-shaped profile (Figures 4 & 5). The inner side of the ditch was noticeably steeper than the outer side. Two fill layers were present in the ditch: the lower fill (17) comprised a friable-loose dark brown silty clay loam with 5% sub-angular stone inclusions, <0.1m maximum dimension, and 1% charcoal; the upper fill (16) was a friable red-brown silty clay loam with no inclusions. No features were identified immediately east of the ditch, outside the enclosure.

4.3 A number of features were identified and excavated to the west of the main ditch. A gully (F08) measuring *c*.0.3m in width was excavated 0.75m west of, and apparently concentric to, the main ditch. The gully was shallow, 0.1m in depth, and filled by a friable light orange-brown silty clay loam (07). The gully terminated near the northern side of the trench.

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section line

0 2m

Scale 1:50

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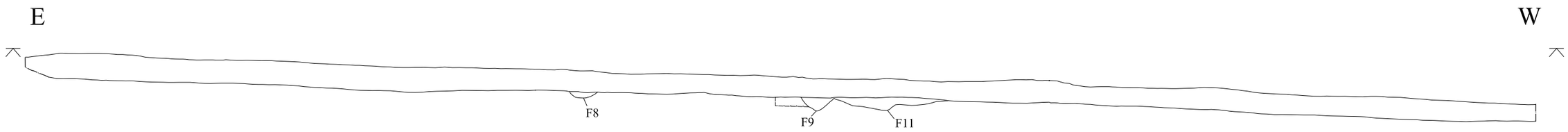
Standingstone evaluation

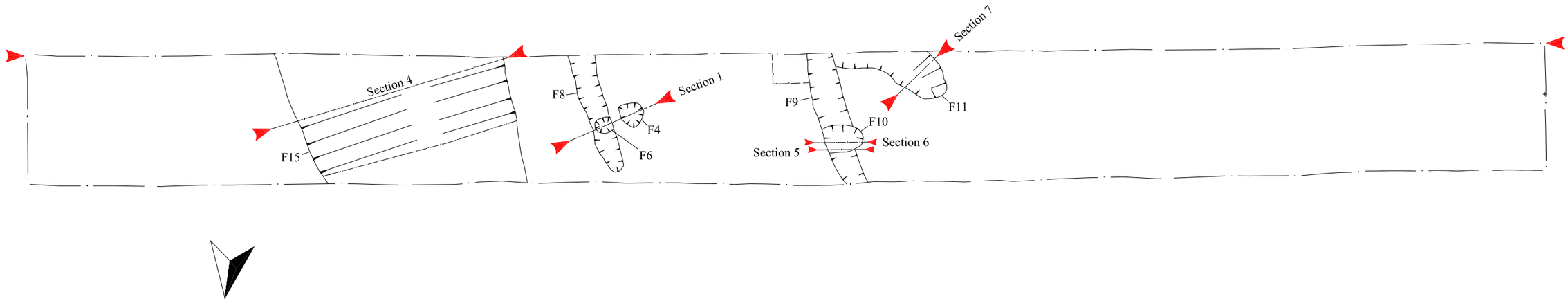
Figure 4

Section 2 and Plan 3 of the Standingstone evaluation trench

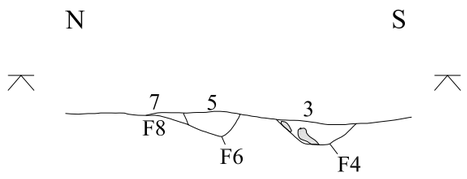
Section 2



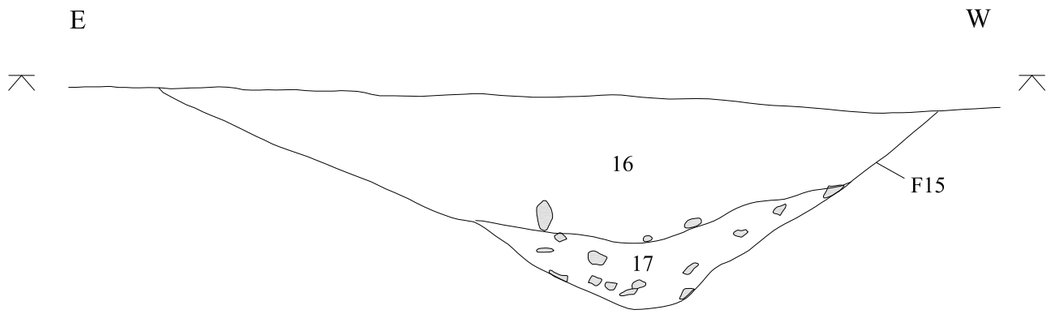
Plan 3



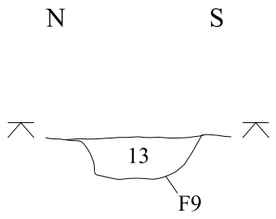
Section 1



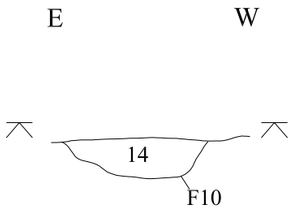
Section 4



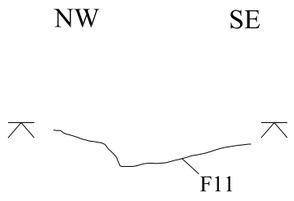
Section 5



Section 6



Section 7



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The Traprain Law Environs Project Phase 2

Standingstone evaluation

Figure 5

Sections 1, 4, 5, 6 and 7

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Scale 1:20

stone

4.4 Gully F08 was cut by a small post/stakehole (F06) measuring *c*.0.18m in diameter. Its fill (05) was almost indistinguishable from the fill of the gully 07. No other postholes were identified in the gully although a second posthole (F04) was excavated immediately west of F06, just outside the gully. This posthole was slightly larger, with a diameter of c.0.28m, and deeper (0.12m), and was filled with a friable dark orange-brown silty loam (03). Charcoal and small fire-cracked stones were present in the fill.

4.5 A second gully (F09) was identified *c*.3.5m inside the main ditch, and again appeared to be concentric with the ditch. This U-shaped gully measured 0.4m in width and 0.12m in depth and was filled by a compact-friable dark brown silty loam (13), which included one small angular stone and frequent charcoal flecks. This gully was cut by a probable posthole (F10) measuring 0.55m in diameter and 0.1m in depth. The posthole was filled by a friable dark brown silty loam (14) with two stone inclusions.

4.6 A shallow, irregularly-shaped feature (F11) was identified and excavated immediately west of gully F09. The feature measured up to 0.2m in depth and was filled by a dark brown-black friable silty loam with very frequent charcoal flecks and frequent small sub-angular stones. No artefacts were recovered and the function of the feature remains unknown.

5. The environmental evidence

The samples

5.1 Six bulk sediment samples were recovered from six contexts at the site (03, 07, 12, 13, 16 and 17). Each of these contexts comprised a discrete fill layer.

Objectives

5.2 The objective of the environmental assessment was to determine the nature, extent and potential of the plant macrofossil evidence at the site in terms of environmental, economic and dating evidence.

Methods statement

5.3 Sub-samples of between 6-13,000ml were manually floated and sieved through 500μm mesh sieves. The residues were retained, described and scanned using a magnet for ferrous fragments. The flots were dried slowly, then scanned at x50 magnification for waterlogged and charred botanical remains. Plant macrofossils were identified by comparison with modern reference material held in the Environmental Laboratory, Department of Archaeology, University of Durham.

Results

5.4 **Context 03**. Approximately 6 litres (5.9kg) yellow brown loamy sand processed. Small flot of somewhat silty and abraded charcoal. Selection of seeds and cereal remains: Culm nodes – 2, *Chenopodium album* (fat hen) – 2, *Stellaria gramineae* – 1, glume base – 2, Emmer spikelet fork – 1, Emmer glume base – 4, *Trticum dicoccon* type (emmer) grain – 2, hulled *Hordeum* – 2.

5.5 **Context 07**. 7 litres (7.6kg) yellow brown loamy sand processed. Mat of modern roots produced with vast numbers modern seeds. 1 charred wheat grain and another of indeterminate cereal were badly preserved and may be contemporary with deposition. The two fragments of charred barley rachis node were sufficiently well preserved, and the lateral hairs on one only partially charred, that they are both considered modern intrusions.

5.6 **Context 12**. 9 litres (8.3kg) brown loamy sand processed. Small flot of modern roots and only a little, poorly preserved, charcoal produced. No seeds seen in >=1mm fractions. No further action (nfa).

5.7 **Context 13**. 9 litres (8.5kg) brown loamy sand processed. Small flot of iron-stained poorly preserved charcoal and modern roots produced. Large numbers modern *Chenopodium album* seeds. No charred seeds in >=1mm fraction. Nfa.

5.8 **Context 16**. 11 litres (10.6kg) yellow brown silty loam processed. Small flot of very silty charcoal with some mineral concretions produced. Heather wood present. Generally poor preservation. No seeds in >=1mm fraction. Nfa.

5.9 **Context 17.** 13 litres (12.2 kg) yellow brown silty loam processed. Small flot of modern roots and poorly preserved charcoal produced. No seeds in >=1mm fractions. Nfa.

Discussion

5.10 At best rather limited numbers of charred plant remains were retrieved from some of the samples (contexts 03 & 07). It is clear however that both hulled barley and emmer wheat were being used by the occupants of this site with suggestions that the latter might have been grown locally. Preservation is rather poor although chaff fragments and weed seeds have survived as well as the more robust cereal grain.

Recommendations

5.11 The results do show potential of at least some deposits to produce charred plant remains which would contribute especially to the debate of when emmer was replaced by spelt wheat in this geographical region. Processing adequate quantities, preferably 50-60 litres of sample, should also produce sufficient remains to determine the nature of crop husbandry practices at these upland sites. Data would be comparable with lowland sites of Port Seton and further south in Northumberland as well as with those from south of the River Tyne (Huntley & Stallibrass, 1995; van der Veen, 1992).

5.12 Unfortunately there is not enough evidence to determine whether specific context types should be targetted and thus all ditch/pit fills and stratified layers should be sampled. It would be acceptable to process 5-10 litres of each in the first place for an assessment but the remaining material must not be discarded until that assessment has been completed.

6. Conclusions

6.1 The evaluation was carried out partly to determine the suitability of the site for larger scale excavation at a later date as part of the Traprain Law Environs Project.

6.2 The site has been shown to contain well preserved deposits associated with the enclosure. As such, it has a high research potential and would be suitable for larger scale excavation.

7. References

Hale, DN, Haselgrove, CC, & Fitts, L (2001) Geophysical survey on enclosure cropmarks in the environs of Traprain Law, East Lothian. *Archaeological Reports 1999/2000* 23, University of Durham and University of Newcastle upon Tyne, Durham.

Hale, DN, Haselgrove, CC, & Fitts, L (in press) Geophysical survey on enclosure cropmarks in the environs of Traprain Law, East Lothian – Part II. *Archaeological Reports 2001/2002* 24, University of Durham and University of Newcastle upon Tyne, Durham.

Huntley, JP (2000) The charred plant remains. pp 157-176. appendix 16, pp254-270. (PSE). In *Excavations at the later prehistoric site of Port Seton East, Lothian.* (eds C.C. Haselgrove & P. Lowther). Historic Scotland, Edinburgh.

Huntley, JP & Stallibrass, SM (1995) *Plant and vertebrate remains from archaeological sites in northern England: data reviews and future directions*, Research Report No. 4 edn. Architectural and Archaeological Society of Durham and Northumberland, Durham.

van der Veen, M (1992) *Crop husbandry regimes: an archaeobotanical study of farming in northern England 1000 BC - AD 500* J.R.Collis publications, Department of Archaeology and Prehistory, Sheffield.

Appendix 1: Context register

Summary list of contexts. The • symbols in the columns at the right indicate the presence of finds of the following types: P pottery, B bone, M metals, F flint, S slag, O other materials.

No	Description	P	B	M	F	S	O
01	Ploughsoil						
02	Natural subsoil						
03	Fill of posthole F04						
F04	Posthole cut						
05	Fill of posthole F06						
F06	Posthole cut						
07	Fill of gully F08						
F08	Gully cut						
F09	Gully cut						
F10	Posthole cut						
F11	Feature cut						
12	Fill of feature F11						
13	Fill of gully F09						
14	Fill of posthole F10						
F15	Ditch cut						
16	Upper fill of ditch F15						
17	Lower fill of ditch F15						

Appendix 2: Plans and sections register

Plan /section N^{o}	Scale	Context
S1	1:10	Features F04, F06, F08
S2	1:10	Trench section, north facing
P3	1:20	Plan of trench
S4	1:10	Features F15, F16, F17
S5	1:10	Features F13, F9
S6	1:10	Features F10, F14
S7	1:10	Feature F11

Appendix 3: Sample register

Context N^{o}	Description of Material	Reason for sampling	Number of bags
03	Dark orange-brown silty loam	Macros	1
07	Light orange-brown silty clay-loam	Macros	1
12	Dark brown/black silty loam	Macros	1
13	Dark brown silty loam	Macros	1
16	Red-brown silty clay-loam	Macros	1
17	Dark brown silty clay-loam	Macros	1
13	charcoal	R-C	1

Appendix 4: Photographic registers

Black and white

Frame N^{o}	Area	Context / Plan / Section	Looking N/S/E/W
13-15	1	Features F04, F06, F08 pre-ex	E
16-18	1	Features F04, F06, F08 post-ex	E
19-21	1	Features F09, F11 post-ex	S
22-25	1	Ditch F15 post-ex	S / S / E / E
26-28	1	General post-ex shots	S

Colour

Frame N^{o}	Area	Context / Plan / Section	Looking N/S/E/W
13-15	1	Features F04, F06, F08 pre-ex	E
16-18	1	Features F04, F06, F08 post-ex	E
19-22	1	Features F09, F11 post -x	S
23-26	1	Ditch F15 post-ex	S / S / E / E
27-29	1	General working shots	Various
30-33	1	General post-ex shots	S

Appendix 5: Stratigraphic matrix